

VAHİDE TEKE AKAY

THE ROLE OF QUALITY OF MOTIVATION AND MINDSET ON TEACHING
STYLE IN ENGLISH LANGUAGE INSTRUCTORS

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Dedicated to my son, *Başar Efe AKAY*, the only person who knows what my heart sounds like from the inside...

The Role of Quality of Motivation and Mindset on Teaching Style in English
Language Instructors

The Graduate School of Education
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Vahide Teke Akay

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The Role of Quality of Motivation and Mindset on Teaching Style in English

Language Instructors

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May, 2023

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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ABSTRACT**THE ROLE OF QUALITY OF MOTIVATION AND MINDSET ON TEACHING
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Master of Arts in Curriculum and Instruction

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May, 2023

The present experimental study tested whether inducing English language instructors' autonomous or controlled motivation and their fixed or growth mindset about teaching ability influence their autonomy-supportive versus controlling teaching style. A hundred and fifty-six English language instructors working at the preparatory programs of state and non-profit foundation universities in Turkey participated in the study. The results of t-tests showed that participants in the autonomous motivation and growth mindset conditions endorsed their conditions to a larger extent than the teachers in controlled motivation and fixed mindset conditions. However, Factorial ANOVA indicated that neither the main effect of each condition nor the interaction of the conditions predicted the participant English language instructors' autonomy-supportive or controlling teaching style. Furthermore, supplementary analyses revealed that teachers from non-profit foundation universities and younger teachers reported higher autonomy-supportive teaching style than teachers from state universities and older teachers. The findings are discussed in terms of their methodological and educational implications.

Keywords: Self-Determination Theory (SDT), quality of motivation, autonomous motivation, controlled motivation, implicit theories of ability, autonomy-supportive teaching, controlling teaching style

ÖZET

İNGİLİZCE ÖĞRETİM GÖREVLİLERİNİN MOTİVASYONLARININ NİTELİĞİNİN VE ÖĞRETİM YETENEĞİNİN KÖKENİ İLE İLGİLİ ÖRTÜLÜ İNANÇLARININ ÖĞRETİM STİLLERİNE ETKİSİ

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Bu çalışma İngilizce öğretim görevlilerine otonom ya da kontrol motivasyon ve öğretim yetenekleri konusunda sabit ya da geliştirilebilen zihniyet telkin etmenin onların öğrencilerine karşı sergiledikleri otonomi destekleyici ya da kontrolcü öğretme stillerini etkileyip etkilemediğini ölçen deneysel bir çalışmadır. Bu çalışmaya Türkiye'deki devlet ve kâr amacı gütmeyen vakıf üniversitelerinin İngilizce hazırlık programlarında görev yapan yüz elli altı İngilizce öğretim görevlisi katılmıştır. Bağımsız grup t-testi otonom motivasyon ve geliştirilebilen öğretim yeteneği kondisyonlarındaki katılımcıların kondisyonlarını kontrol motivasyon ve sabit öğretim yeteneği kondisyonlarındaki katılımcılara kıyasla daha yüksek oranda benimsediklerini ortaya çıkarmıştır. Ancak, Faktöriyel Varyans Analizi (ANOVA) dört kondisyondan her birinin ya da bu kondisyonların birbirleriyle olan etkileşiminin ana etkisinin katılımcı İngilizce öğretim görevlilerinin otonomiye destekleyici ya da kontrolcü öğretim stillerini yordamadığını ortaya koymuştur. Ayrıca, ek analizler yaşça daha genç öğretim görevlilerinin ve kâr amacı gütmeyen vakıf üniversitelerinde görev yapan öğretim görevlilerinin daha yüksek düzeyde öğrenci otonomisini destekleyici öğretme stillerine sahip olduklarını göstermiştir. Çalışmanın bulguları içerdikleri metodolojik ve eğitimsel çıkarımlar açısından ele alınmıştır.

Anahtar kelimeler: Öz Belirlenim Teorisi, motivasyonun niteliği, otonom motivasyon, kontrol motivasyon, örtülü yetenek inançları, otonomiye destekleyici öğretim stili, kontrolcü öğretim stili.

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TABLE OF CONTENTS

ABSTRACT	iii
ÖZET.....	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	ix
CHAPTER 1: INTRODUCTION	1
Background	3
Quality of Motivation from SDT's Perspective	3
Teachers' Autonomy-Support from SDT's Perspective.....	6
The Implicit Theories of Ability.....	9
Problem	11
Purpose.....	12
Research Question.....	13
Significance.....	13
Definition of Key Terms	14
CHAPTER 2: REVIEW OF RELATED LITERATURE.....	15
Introduction.....	15
Quality of Motivation and Motivating Style	16
Teachers' Mindsets and Their Personal and Professional Outcomes.....	26
Teachers' Quality of Motivation and Their Teaching Mindsets Combined.....	35
Conclusion and Hypotheses	37
CHAPTER 3: METHOD	38
Introduction.....	38
Research Design.....	38

Context	39
Participants	40
Instrumentation	41
Independent Variables (Manipulations)	41
Dependent Variable	44
Validating the Study Materials	46
Method of Data Collection	46
Methods of Data Analysis	50
CHAPTER 4: RESULTS	52
Introduction	52
Comprehension Check	52
Manipulation Check	53
Main Results	55
Supplementary Analyses	56
CHAPTER 5: DISCUSSION	58
Introduction	58
Overview of the Study	58
Discussion of Major Findings	60
Understanding and Endorsement of the Experimental Conditions	60
Did Quality of Motivation and Mindset Affect Teaching Style?	62
Type of School and Teaching Style	69
Age, Teaching Experience, and Teaching Style	69
Implications for Practice	69
Implications for Further Research	71
Limitations	72

REFERENCES.....	74
Appendix A	86
Induced Condition 1: First Half of the Participants.....	86
Induced Condition 1: Second Half of the Participants	88
Induced Condition 2: First Half of the Participants.....	90
Induced Condition 2: Second Half of the Participants	92
Induced Condition 3: First Half of the Participants.....	94
Induced Condition 3: Second Half of the Participants	96
Induced Condition 4: First Half of the Participants.....	98
Induced Condition 4: Second Half of the Participants	100
Appendix B	102
Condition 1: Teaching Style Questionnaire (First Half of the Participants)	102
Condition 1: Teaching Style Questionnaire (Second Half of the Participants)....	103
Condition 2: Teaching Style Questionnaire (First Half of the Participants)	104
Condition 2: Teaching Style Questionnaire (Second Half of the Participants)....	105
Condition 3: Teaching Style Questionnaire (First Half of the Participants)	106
Condition 3: Teaching Style Questionnaire (Second Half of the Participants)....	107
Condition 4: Teaching Style Questionnaire (First Half of the Participants)	108
Condition 4: Teaching Style Questionnaire (Second Half of the Participants)....	109
Appendix C	110
Situations in School Questionnaire: The 6 Vignettes.....	110
Appendix D	112
Ethical Approval.....	112
Appendix E.....	113
Consent Form	113

LIST OF TABLES

Table		Page
1	Results from the Comprehension Questions.....	52
2	Participants' Agreement with the Induced Condition	54



CHAPTER 1: INTRODUCTION

My father was a construction worker. His biggest motivation was to provide for his children's schooling and make sure we were well educated. Seeing him working so hard for us under difficult conditions was overwhelming and the best thing I could do in return was to be successful and make him proud. For most of my years as a student, this has been my motivation. After becoming a teacher, I started contemplating on the reasons why other people do what they do and thus my dedicated search has begun.

In particular, I have sought to understand what motivation is. Motivation is the force that comes from within and arouses us to action throughout our lives. Starting from infancy, individuals are fueled by this internal force to engage in certain activities in different walks of life. Motivation has a strong influence on behavior and learning as when one is motivated, even the most complicated tasks seem enjoyable and manageable.

Motivation is particularly essential in professional domain as it is responsible for engagement in work and wellbeing. Constituting one of the largest groups of workforce, teachers are known to engage more in their classes when they are motivated to do their job, which can lead to higher achievement along with positive feelings about their work. Teachers' motivation for teaching can be influenced by a variety of internal factors such as their interests. Alternatively, external, or environmental factors such as the school setting can affect motivation. Initial research on motivation focused on the quantity of motivation. But now, we know better. Now we know that the quality rather than the quantity of motivation is what

matters and harvests the most favorable outcomes (Ryan & Deci, 2017; Vansteenkiste et al., 2009).

Teachers, as creators of the classroom climate, are the key elements in any school setting and have a significant impact on their students' achievement and wellbeing. Being a student in pursuit of success, I had many teachers that left a strong influence on me. I particularly remember the two of them; my mathematics teacher and English teacher, who had contradicting beliefs about success. While my math teacher thought some students have mathematical reasoning ability and some others do not, my English teacher thought everybody can learn English as long as they make enough effort and study regularly. My math teacher believed I was not good at math, and there was not much to do to change it. In time, I have adopted her views about myself and avoided math ever since. My English teacher, on the other hand, believed that with effort and guidance, I can learn English very well. The fact that she believed in me helped me believe in myself and I kept working. It should come by no surprise that thanks to my English teacher's support, I have become her colleague.

After becoming an English teacher, myself, I came to understand that my beliefs about my own ability could influence my teaching style as well. I realized that my tendency to improve my teaching ability through effort made me believe in my students' voices. Their perspective is valuable feedback for my improvement and therefore, I put particular effort on listening to them. Looking into the effect of teachers' quality of motivation and beliefs about the malleability of abilities on their teaching style constitutes the direction of my research.

Background

A vast amount of research has been conducted to acquire a scientific understanding of human motivation and many theories have emerged. For the current study, I adopted the Self-Determination Theory (SDT; Ryan & Deci, 2017), one of the most important empirical theories of human motivation, to conceptualize teachers' quality of motivation and quality of their teaching style. I also adopted the Mindset Theory (Dweck, 2006) to conceptualize teachers' beliefs about their teaching ability. Through these two theoretical frameworks, in this study, I investigated the effects of teachers' quality of motivation and implicit theories of their teaching ability on their teaching style.

Quality of Motivation from SDT's Perspective

SDT's focus resides in the assumption that when born, humans come with a natural inclination to grow, to flourish and to blend in with society. These inner motivational inclinations along with the social and contextual factors that support - or hinder - people's psychological growth constitutes the essence of this theory. Despite being primarily a psychological theory, SDT has strong implications for learning, which make it critical for education as well (Ryan & Deci, 2017). SDT started as a theory narrowly focused on intrinsic motivation (Deci & Ryan, 1980) and over the past four decades, it has evolved into a broad and empirically based framework on human psychology encompassing six mini theories, namely Cognitive Evaluation Theory (CET), Organismic Integration Theory (OIT), Causality Orientations Theory (COT), Basic Psychological Needs Theory (BPNT), Goal Contents Theory (GCT), Relationships Motivation Theory (RMT). This multipart theory contrasts with earlier approaches to understanding motivation as a single entity. For example, drive theories by Hull (1943, as cited in Ryan & Deci, 2017)

and the cognitive theories of motivation focused mostly on the amount or the level of motivation (Ryan & Deci, 2017). In this regard, SDT is substantially different because rather than focusing on the quantity, SDT places its emphasis on *the quality of motivation*. There are various types of motivation differing not only in content but also in character, the sources that trigger them, the accompanying feelings, and their behavioral outcomes (Ryan & Deci, 2017).

SDT hypothesizes that motivation types fall along a continuum of autonomy versus control. Certain types of motivation are completely volitional as they demonstrate the person's interests while other types are totally external since the person is doing something merely because he or she feels obligated to do so. The most autonomous form in the continuum is *intrinsic motivation* (Deci & Ryan, 1980; Ryan & Deci, 2017), which can be defined as behaviors or activities done because they are interesting and enjoyable such as playing games or eating a cake. Intrinsically motivated behaviors are themselves rewarding because of the accompanying feelings of satisfaction and joy while performing those activities. Therefore, it is probably intrinsic motivation that drives our learning throughout our lives. *Extrinsic motivation*, on the other hand, refers to the behaviors or activities that are performed not because they are interesting or fun, but because there is a reward, approval, or an outcome at the end that individuals value. The extrinsic motivation is divided into four subtypes according to the level of control or autonomy the behavior is regulated. (Ryan & Deci, 2000; 2020)

According to SDT, one controlled and non-autonomous form of extrinsic motivation is *external regulation*, which refers to behaviors that are mandated from the outside and dependent on rewards or punishments. Externally motivated behaviors are performed only when a reward or a form of punishment is expected. In

the absence of these positive or negative outcomes, the behavior generally stops. An example for this form of motivation could be an employee who works overtime because it is financially rewarding. The other controlled form of extrinsic motivation is *introjected regulation*, which concerns the behaviors performed because the individual partly internalizes the external forces and is motivated by an internally controlling force such as feeling guilt, shame or anxiety when not performing certain behavior. These first two forms of extrinsic motivation are controlled and non-autonomous in nature. (Ryan & Deci, 2017)

Ironically enough, certain forms of extrinsic motivation are autonomously enacted. One of them, *identified regulation* takes place when the individual personally and willingly identifies with the value and importance of certain behavior. Through the process of identification, the individual considers the behavior personally important and/or valuable and shows a greater amount of willingness and volition to do it. The last and the most autonomous form of extrinsic motivation is *integrated regulation*, when the behavior is both identified to be valued by the individual and in harmony with the individual's other primary values and beliefs that constitute the *self*. When integration of a behavior is achieved, it is completely embraced, and the individual feels a high degree of volition even though the motivation does not come from within. While controlled forms of extrinsic motivation are located next to a-motivation, which means absence of motivation; autonomous forms of extrinsic motivation fall to the neighboring categories to the intrinsic motivation in the continuum of perceived autonomy. (Ryan & Deci, 2017)

Numerous studies provide empirical evidence for the strong connection between autonomous motivation and optimal academic outcomes especially with students. For instance, in an early experiment, Grolnick and Ryan (1987) found that

controlling conditions resulted in higher levels of rote learning whereas non-controlling (i.e., autonomous) conditions resulted in enhanced interest and greater conceptual learning in fifth grade students. Similarly, more recent studies conducted by Guay et al. (2010), and León et al. (2015) found that when students are autonomously motivated, they invest greater effort in their studies, which in turn increases their academic achievement.

Although fewer in number, there are studies in the educational settings which have focused on teachers' quality of motivation to teach (i.e., autonomous or controlled) and how it affects their teaching style. To illustrate, a study conducted by Roth et al. (2007) showed that autonomous motivation for teaching strongly predicts an autonomy-supportive teaching style. In other words, the participant teachers who were fueled by autonomous motivation to do their job were reported by their students to be more autonomy-supportive, which resulted in students' having more autonomous motivation to learn. Pelletier et al. (2002) focused on the opposite end of the motivation continuum in their study. They found teachers who experience pressure from control mechanisms such as curriculum and performance standards in schools reported to have more of a controlled motivation to teach and in turn adopt a more controlling teaching style towards their students (Pelletier et al., 2002).

Teachers' Autonomy-Support from SDT's Perspective

SDT has contributed much to our understanding of human motivation by positing that human beings are not born as *tabula rasa*, instead; they are born with conditional inner motivational resources that need a supporting climate in order to thrive and are undermined in a non-supportive environment (Ryan & Deci, 2000; 2017; 2020). According to SDT, there are three *basic psychological needs* that must be supported for social development to take place and psychological wellbeing to be

maintained: *autonomy*, *competence*, and *relatedness*. Fostering these basic psychological needs creates a foundation for people's positive functioning, development, achievement, and personal wellbeing (Ryan & Deci, 2000; 2017; 2020). From the SDT perspective, autonomy is the feeling of determining, leading, and owning one's own actions. Competence is the sense of mastery, success, and growth. The third and the last basic psychological need, relatedness, is the feeling of belonging and being part of a society, or a culture (Ryan & Deci, 2020). Studies show that fostering individuals' basic needs increase their motivation, engagement in learning, and thus their achievement (e.g., Leenknecht et al., 2017).

One of the most significant factors to create a supportive classroom environment is the motivating style of the teacher. Building a classroom climate that supports basic psychological needs of students is possible with adopting an autonomy-supportive teaching style (Aelterman et al., 2014; Reeve, 2006). This is primarily because students of autonomy-supportive teachers demonstrate greater autonomy, which in turn results in enhanced intrinsic motivation (Bao & Lam, 2008; Reeve et al., 2003), greater engagement in learning activities (Patall et al., 2019; Reeve et al., 2004), higher wellbeing (Tian et al., 2014) and higher achievement (Black & Deci, 2000; Guay & Vallerand, 1996).

In conditions where these basic psychological needs are thwarted in the classroom, the motivation, engagement, and wellbeing of the students are harmed and thus decrease. For instance, Assor et al. (2002) found that when the participant students' need for autonomy was undermined by directly controlling teacher behaviors, these students experienced negative emotions leading them to a-motivation.

According to Reeve and Jang (2006), teachers are considered autonomy-supportive when they foster the bond and harmony between the students' inherent motivational resources and their daily learning activities. There are several autonomy-supportive practices such as shaping the learning material according to students' needs and interests, giving students freedoms of choice within reasonable limits, giving detailed feedback, using non-controlling language, showing empathy, and providing rationales (Reeve, 2006; Reeve et al., 1999; Reeve & Jang, 2006). Additional autonomy-supportive instructional practices are listening to students carefully, creating opportunities for individual work, giving students more voice, having students work on materials or make conversations actively, encouraging effort and persistence, praising improvement and mastery, offering hints when students need help, being responsive to students questions and comments, showing empathy to students and acknowledging their negative comments (Deci et al., 1982; Flink et al., 1990; Reeve, 2006; Reeve et al., 1999).

Fully acknowledging the significance of teachers' need supportive teaching style on their students' motivation, SDT strongly emphasizes that teachers, like all individuals, have basic psychological needs which need to be supported so that they can be need supportive towards their students (Ryan & Deci, 2020). Certain practices by school administration can promote teachers' autonomous motivation for teaching such as including teachers to the decision-making process, being responsive to teachers' social and professional needs, delegating responsibilities and authority, creating an organizational climate fostering teachers' needs for relatedness and competence.

Research showed that teachers' autonomous motivation to teach is associated positively with enhanced autonomy-supportive teaching style (Roth et al., 2007). In

turn, students who perceived their teachers to be more autonomy-supportive reported higher levels of autonomous motivation to learn (Roth et al., 2007). Furthermore, a study by Nie et al. (2015) found that more autonomy support teachers receive from school administration predicted greater autonomous motivation to teach and job satisfaction whereas lower perceived autonomy support was associated positively with work stress, external regulation, and a-motivation.

What is equally important as the quality of teachers' motivation is their implicit beliefs about intellectual abilities. At times, individuals inevitably come across challenges in their academic and social life and how they react to these challenges differs from one individual to another. While some of them show signs of vulnerability such as feeling threatened, avoiding challenges, and giving up; some others show signs of resilience by looking for ways to overcome the obstacles (Yeager & Dweck, 2012). Whether or not a person shows resilience depends on various factors, one of which might be the way individuals interpret these obstacles. This interpretation process depends largely on the *implicit theories* the individuals possess (Yeager & Dweck, 2012).

The Implicit Theories of Ability

The implicit theories, also referred to as *mindsets* by Dweck (2006), are the central beliefs and assumptions about the malleability of human characteristics. The implicit theories of teachers and students can be described as either entity or incremental. The ones orienting towards the entity theory, also known as fixed mindset, view intelligence as a fixed, unchangeable ability that cannot be improved (Dweck, 2006; Dweck et al., 1995). A person is either smart or not, and there is not much to be done to change it. In case of failure, these individuals attribute their failure to lack of ability and blame themselves for not being smart enough. In

contrast, students, and teachers with incremental theory, also known as growth mindset, believe that their intellectual ability can be substantially developed with effort and guidance over time (Yeager & Dweck, 2012). When these individuals fail, they attribute their failure to lack of effort instead of lack of ability. Therefore, they try to find ways to overcome the obstacles by working harder, finding better strategies, and getting help from other people. (Yeager & Dweck, 2012)

Mindsets that students and teachers hold about intellectual abilities predict their achievement in the long run, especially in the face of school-related challenges. Intervention experiments have provided sufficient empirical evidence on the possibility of changing students' mindsets and guiding them to adopt a growth mindset (Blackwell et al., 2007). Teachers have a critical role in this guiding process.

Teachers' mindsets about their students' abilities have a huge impact on students' overall motivation and achievement. Teachers with more of a fixed mindset tend to diagnose their students' abilities as stable traits and mostly do not expect changes over time (Rattan et al, 2012). They believe some students are highfliers and some are low achievers. Teachers orienting towards growth mindset, on the other hand, believe in their students' potential to improve their intellectual abilities with hard work, good strategies, and good mentoring (Yeager & Dweck, 2012). Rather than labelling students as good at something or not, teachers with a growth mindset attribute success to effort and failure to lack of effort.

The increasing recognition of the influence of teachers' beliefs about their students' abilities has led to considerable amount of research, yet the studies exploring the effect of teachers' mindsets about their teaching ability are fewer in number. In one such study, Gero (2013) investigated the relation between teachers' beliefs about their teaching ability and their teaching practices. Gero (2013) found

that teachers with more of a growth mindset exert greater effort to try new methods to improve their teaching ability whereas their entity-oriented colleagues believe teaching ability is innate and thus put in less effort to improve their teaching.

Problem

In the preceding background I provided an overview of autonomous and controlled motivation from the SDT perspective. I also argued that when teachers are fueled by autonomous motivation, they adopt an autonomy-supportive teaching style. Moreover, from the perspective of Mindset Theory (Dweck, 2006), I explained that when teachers adopt a growth mindset for their students' ability, they orient them toward self-improvement through effort. Being the only research to combine quality of motivation and mindset to the best of my knowledge, Vermote et al. (2020) showed that when teachers are engaged in teaching because they find it challenging and personally meaningful (autonomous motivation) and when they believe that students' ability is malleable (growth mindset) they are more supportive of students' needs. But what is the role of teachers' growth mindset about their *own* teaching ability on their teaching style? From the perspective of the Mindset Theory (Dweck, 2006), when teachers adopt an incremental belief about their teaching ability, they are more likely to persevere in difficulties they face in their profession and improve their teaching. But how is this incremental belief reflected in their behavior towards their students?

I argue that teachers' beliefs about the malleability of their teaching skills also affect their motivating style toward students. When teachers perceive growth in their teaching through effort, they do not see their students as those who mirror their fixed strengths or fixed weaknesses. Instead, they see their students as those who will provide valuable feedback about the quality of their teaching. In this sense, they are

more likely to give voice to students in their classrooms. Also, they are more likely to see their students as valuable collaborators and thus support their autonomy.

However, a review of the literature has revealed that, with the exception of studies that examine the relation of teacher autonomous motivation to autonomy-supportive teaching, no studies have investigated the relation of growth mindset about teaching ability to autonomy-supportive teaching. The results of this study could inform teachers' professional development and initial training by proving that teachers' personal characteristics such as the quality of their motivation and the beliefs about their teaching ability could influence their motivating style. In addition to improving training teachers in teaching methods, cultivating teachers' positive personal attributes could further enhance the quality of their teaching.

Purpose

The primary purpose of this study; therefore, is to test the effect of teachers' quality of motivation and mindsets about their teaching ability on their teaching style. The study is quantitative in nature as an experiment was conducted to further extend the findings of Vermote et al.'s (2020) correlational study. This extension intends to provide evidence for a true cause-effect relationship between teachers' quality of motivation, their mindset, and their teaching style. A 2x2 experiment was conducted with English language instructors working at preparatory English programs in state and non-profit foundation universities in Turkey. The participants were randomly assigned to four conditions in which one form of motivation (i.e., autonomous or controlled) and one form of mindset (i.e., fixed or growth) were induced through fictitious texts that seem like a journal article. Afterwards, two instruments measuring the participant instructors' teaching style were implemented. Through statistical analysis, the effects of induced autonomous versus controlled

motivation and fixed versus growth mindset were measured on teachers' motivating style in terms of autonomy support.

Research Question

This study addresses one main research question in the following:

What is the effect of English language instructors' quality of motivation and mindset about teaching ability on their autonomy-supportive teaching style?

Significance

SDT by Edward L. Deci and Richard M. Ryan, and the implicit theories of ability by Carol S. Dweck are two fundamental theories that shed light on motivation, mindsets, and learning as a process. Numerous studies have been conducted within the framework of each theory. However, studies combining these two theories are relatively few in number. One of the very few is the one conducted by Vermote et al. (2020). This study investigated the relationship between teachers' quality of motivation and mindset and their teaching style. However, as mentioned before, Vermote et al. (2020)' study is a correlational study and does not provide enough evidence to establish a causal relationship. Being experimental in nature, the present study provides evidence about whether teachers become more need supportive toward their students when they are autonomously motivated to teach and hold more of a growth mindset about their teaching. It is then possible to design effective programs for teachers to facilitate them to develop those qualities. Therefore, the teachers in the higher education may benefit from this study in terms of revisiting their own motivational tendencies and beliefs about their teaching abilities to improve their teaching styles and to be more supportive of their students' needs.

Definition of Key Terms

Autonomous motivation: The type of motivation enacted with a sense of volition, willingness, and choice, moving people to engage in a self-determined behavior that is consistent with their interests and integrated values (Deci & Ryan, 1980; Ryan & Deci, 2000; 2017).

Autonomy-supportive teaching: Teaching that facilitates the congruence between students' inner motivational resources and their daily classroom activities by manipulating learning activities to better accommodate students' interests, being responsive to students, listening more, being supportive, praising improvement and mastery, being flexible, creating opportunities for independent work, using non-controlling and informational language, avoiding giving answers and directives, refraining from criticism (Reeve, 2003; 2006; Reeve & Jang, 2006)

Controlled motivation: The type of motivation enacted with a sense of obligation and pressure that accompanies engaging in a behavior for reasons external to the self, such as extrinsic rewards, approval, or avoiding punishment or guilt (Deci & Ryan, 1982; Ryan & Deci, 2000; 2017).

Entity theory (i.e., fixed mindset): The belief that human qualities such as intellectual ability are fixed traits that cannot be changed. (Dweck, 2006; Dweck, et al, 1995; Yeager & Dweck, 2012)

Incremental theory (i.e., growth mindset): The belief that human capacities are malleable traits that can be developed over time with effort. (Dweck, 2006; Dweck et al., 1995; Yeager & Dweck, 2012)

CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

With close to 85 million worldwide, teachers are among the biggest workforces in the world according to this year's figures (World Bank, 2023). Additionally, UNESCO states that by 2030, 69 million new teachers need to be recruited so that every child in the world can access primary and secondary education (UNESCO, 2022). Constituting such a huge group of employees and still growing immensely, teachers play a critical role in building the world's future. To understand the motivational dispositions of this large group of people is highly significant. Besides, when the strong relation of teacher motivation to student motivation is taken into account, the significance of exploring how teachers' thoughts and feelings about their own motivations to engage in instruction influence their teaching behavior grows even bigger. The following review thus showcases when teachers have autonomous motivation to teach, this is reflected in their teaching because they adopt a more autonomy-supportive teaching style toward their students. Similarly, teachers' implicit beliefs regarding the nature of intellectual abilities also have a large influence on their teaching style. Hence, the following review also features research that shows when teachers believe that students' or their own intellectual abilities can be improved in time with effort, they invest more effort to keep learning, try different methods to develop themselves in their profession, and believe in their students' potential to greater achievement.

This chapter is organized by reviewing literature related to the study's research question. Initially, studies related to teachers' quality of motivation and its

relation to their motivating style are reviewed. Then, studies related to implicit theories of ability and their association with teaching style are featured. Finally, only a couple of studies known to combine both teachers' quality of motivation and implicit theories of ability as predictors of teaching style are discussed. Reviewing the literature related to these variables supports the purpose of the study which is to test how educator's teaching style is affected by their autonomous motivation to teach and their mindsets about the malleability of their teaching ability.

Quality of Motivation and Motivating Style

Compared to the rich literature focusing on teachers' motivating style and its effects on students' academic achievement and wellbeing, there is a notable scarcity of research focusing on teachers' quality of motivation. As suggested by SDT, the quality of motivation refers to different sources of or reasons for an individual's intentional action (i.e., autonomous or controlled) and accompanying feelings (Ryan & Deci, 2020). There are some studies that found the link between teachers' quality of motivation and their teaching style. Following, several of these studies are highlighted beginning with ones that investigate the social-contextual factors and narrowing down to the studies that look into personality traits affecting teachers' quality of motivation.

Regarding social-contextual factors, researchers note that several are responsible for teachers' inclination to adopt either an autonomy-supportive or a controlling teaching style. For this study, the most relevant school-based factors are complying to a curriculum, emphasis on grades, and pressure from school administrators and thus will be featured. In their meta-analysis of the literature on teacher motivation, Slemp et al. (2020) concludes workplace context plays a critical role in that autonomy-supportive leadership style predicts need satisfaction and

autonomous motivation among teachers. In a study conducted with elementary school teachers, Roth et al. (2007) provided evidence of school-related factors by examining teachers' experience of autonomous motivation for teaching and its relation to teaching style. They found autonomous motivation for teaching to be closely associated with decreased exhaustion and increased personal accomplishment in teachers. More importantly, the results indicated that teachers who were autonomously motivated to teach were rated as more autonomy-supportive by their students. In other words, autonomous motivation for teaching promoted their autonomy-supportive teaching behavior. Roth et al. suggest that to promote autonomy-supportive teaching, it is particularly important to support and respect teachers' need for autonomy. This is primarily because teachers display a greater tendency to internalize the value of supporting their students' autonomy and greater willingness to learn various ways to be autonomy-supportive if their own autonomy as teachers is fostered. Another study that confirmed these findings was conducted by Katz and Shahar (2015) who found when teachers value teaching and teach out of enjoyment, they are more inclined to appreciate the value their students' autonomous motivation to learn and thus teach in a more-autonomy supportive fashion. They conclude believing that autonomous motivation is the desirable quality of motivation for students' learning was positively correlated with employing autonomy supportive practices in the classroom (Katz & Shahar, 2015).

A more recent study by Collie et al. (2016) yielded parallel results on teachers' psychological functioning dynamics at work. Findings suggest when teachers work environment is perceived to be autonomy-supportive, they are more inclined to feel need satisfaction, which in turn predicted well-being and job satisfaction.

There are a few studies focusing on social-contextual factors within a Physical Education (PE) setting. For instance, Taylor and colleagues (2008) investigated the environmental and personal antecedents of PE teachers' use of three motivational strategies, namely taking students' perspective, giving students effective help and support, and providing rationales. The results suggest job pressure, autonomous causality orientations and the degree of student self-determination predict to what extent teachers' basic psychological needs are satisfied, which in turn influenced how self-determined they are in their teaching (Taylor et al., 2008). In a later study, Taylor et al. (2009) looked into how various aspects of the teaching context influenced teachers' quality of motivation. They found that certain aspects such as the emphasis on student assessment, teachers' performance evaluations, and conforming to other teachers' methods served to undermine teachers' need for autonomy. In turn, these PE teachers became more likely to use a motivating style that thwarts student's psychological needs (Taylor et al., 2009).

Perceived autonomy-support is a clear indicator of adopting an autonomy supportive teaching style not only with in-service teachers, but also with pre-service ones. In a recent study, Martinek et al. (2020) found that when pre-service teachers at university experience autonomy-support, they report increase in both their degree of autonomous learning behavior and autonomous orientation. This increase is in turn positively related to participant pre-teachers' inclinations towards teaching in a more autonomy-supportive fashion. In other words, the pre-service teachers whose need for autonomy is supported during their university education are more likely to adopt an autonomy supportive teaching style when they start working (Martinek et al., 2020).

There are also several experimental studies conducted in the PE context measuring the effects of intervention programs on teachers' autonomy-supportive behavior. One of the interventions proven to be successful in yielding optimal results is Autonomy-supportive Intervention Program (ASIP) (Cheon et al., 2012, 2018; Reeve & Cheon, 2016). In all three experiments, the participant teachers who were assigned to experimental condition received three sessions of the intervention program (ASIP), which had a positive effect on their beliefs about the effectivity and feasibility of autonomy-supportive teaching. Also, these teachers in the experimental condition were found to significantly improve the quality of their motivating style as was confirmed not only by their self-reports but also by their students' ratings while their colleagues in the control group maintained their pre-existing motivating styles. The ASIP intervention was found to have a strong effect on improving PE teachers' autonomy-supportive behavior both in the short and the long term. The two resources that mediated this difference were gains in teaching and intrinsic instructional goals, both of which were intervention-induced. In all three experiments, it was checked whether the manipulation was successful by looking at the differences between participants' pre- and post-intervention reports and students' reports of perceived autonomy-supportive and controlling teaching at three different points during the school year. Additionally, in Cheon et al. (2012), trained observers rated participant PE teachers' daily teaching practices during the first semester. The significant differences between participants' pre- and post- reports and the students' ratings indicate that the manipulation was successful in all three experiments. (Cheon et al., 2012, 2018; Reeve & Cheon, 2016).

Another intervention again in the PE context measured the effects of a one-day professional development training on fostering students' need for autonomy and

competence (Aelterman et al., 2014). PE teachers in the experimental group received the training while the ones in the control group did not. The results suggested even a one-day intervention can change PE teachers' beliefs and their teaching behavior positively regarding autonomy support and provision of structure (Aelterman et al., 2014).

Yet a different experiment by Guay et al. (2016) tested the effects of a different professional development workshop focusing on five teaching practices which are collaboration, autonomy, structure, involvement, and authentic tasks (CASIS) on second-grade teachers and their students. The findings revealed significant differences in adoption of the taught pedagogical practices between teachers in the experimental group and control group. Put differently, students of teachers who received CASIS reported greater intrinsic motivation towards learning French writing whereas the pupils whose teachers were assigned to the control group showed a decrease in intrinsic regulation (Guay et al., 2016).

Compared to autonomy-supportive teaching, controlling teaching remains an understudied construct. However, understanding the dynamics of controlling teaching is essential to eliminate its antecedents and undesirable outcomes not only for teachers but also for their students. In their study, Pelletier et al. (2002) sought to test whether teachers become more controlling towards their students when they are directly pressured by school-based factors such as complying to a curriculum, performance standards, colleagues, or pressure coming from unmotivated students. The results indicated that when teachers experience pressure, they become less self-determined toward work because their need for autonomy is thwarted. Decreasing self-determination toward work had a mediating effect on orienting toward a controlling teaching behavior in class. In other words, when these teachers are fueled

by controlled motivation to teach, they are more likely to adopt a more controlling teaching style toward their students.

Pelletier and Sharp (2009) reviewed the social-contextual conditions that drive teachers to orient towards a more controlling teaching style instead of an autonomy-supportive one. They suggest teachers are not immune to administrative pressures; these pressures could be in the form of curricular restrictions, time limitations, or rewarding the teacher for student achievement. When teachers perceive these pressures, they demonstrate greater level of controlling behavior in the classroom. Teachers are likely to do so because the pressures undermine their autonomy and their motivation toward work; and this in turn, may result in teachers' being more controlling with their students. Pelletier and Sharp (2009) acknowledge the fact that it is not possible to eliminate all time constraints or performance evaluations. Instead, they focus on *how* these limits are set and communicated to teachers.

Soenens et al. (2012) also looked into the antecedents and results of psychologically controlling teaching and their findings were similar to those of Pelletier and Sharp's (2009). Regarding the antecedents, the results showed perceived pressures from above and from within were directly associated with controlling teaching while pressure from below was not found to relate. As for the results of this motivating style, the findings indicated a strong negative association between controlling teaching and students' deep-level cognitive and meta-cognitive strategy use, which were strong indicators of academic achievement (Soenens et al., 2012).

In addition to social-contextual factors, teachers' personal dispositions also influence their motivating style. Unfortunately, not much is known about the

possible personality traits that make a teacher orient towards an autonomy-supportive or controlling motivating style. What we know based on the published literature is teachers' instructional goals, their motivational orientations, certain character traits, their beliefs, and their culture act as antecedents to these teachers' interpersonal motivating styles in the classroom.

Jang (2019) reported four studies with different sample teachers confirming the direct link between teachers' instructional goals and their motivating fashion. Teachers' intrinsic goals to teach (i.e., personal growth and relationship growth) were positively related to their adoption of an autonomy-supportive teaching style while extrinsic instructional goals (i.e., high scores and assured success) were linked positively to the extent these teachers rely on a controlling motivating style (Jang, 2019).

Another antecedent of the motivating climate teachers create in the classroom is their own motivational orientations. Exploring the relation between PE teachers' motivational orientations and their teaching style, Van den Berghe et al. (2013) found that control-oriented teachers engaged less in need-supportive teaching style. In fact, these teachers had more need-thwarting practices observed and adopted a more controlling and cold teaching behavior toward students.

Van den Berghe et al. (2014) conducted another study in PE context examining the associations between teachers' quality of motivation and their need-supportive teaching behavior, their need satisfaction at work and burnout. The results first showed autonomous motivation for teaching was positively associated with experiences of need satisfaction at work; this result confirms the idea that need satisfaction is the fuel for teachers to do their jobs out of interest and enjoyment as well as identifying with the importance of their job. Secondly, autonomous

motivation predicted a more need-supportive teaching style; this finding is also consistent with the idea that autonomous motivation energizes teachers to teach their students in need-supportive ways. The third finding of the study suggested autonomous motivation negatively predicted burnout, which is again in line with the notion that autonomous motivation has a reviving effect on teachers' functioning.

A causal relationship is also established between teachers' quality of motivation to teach and their students' motivational orientations to learn. Following the experiment, Radel et al. (2010) concluded students who were taught by an allegedly volunteer teacher (i.e., autonomous motivation to teach) reported a higher degree of intrinsic motivation to learn compared to the students that were taught by an allegedly paid teacher although both teachers taught the very same lesson following the standardized practices. The findings suggest, in addition to teachers' motivating style, students' perceptions of their teachers' motivation to teach play a role in the degree of their intrinsic motivation to learn.

Regarding the personality-based antecedents to teachers' interpersonal motivating style, Reeve et al. (2018) found that core personality traits such as openness to experience and agreeableness predicted teachers' characteristic autonomy-supportive teaching style even before these teachers attended the intervention program on autonomy-support. Also, surface traits, which are defined as malleable and experience-based characteristic adaptations such as autonomy causality orientation and personal growth initiative (Reeve et al., 2018), strongly predicted teachers' adopting an autonomy-supportive teaching style after the intervention program. In contrast, personality traits such as authoritarianism and the control causality orientation predicted teachers' characteristic controlling motivating style before the intervention. The level of controlled causality orientation also

explained why teachers resisted to the intervention program and maintained their controlling teaching style after the intervention. With these findings, Reeve et al. (2018) shed light on the relation between teachers' personal traits and their classroom motivating styles.

Similarly, the study by Aelterman et al. (2019) showed that teachers who were autonomously motivated to teach and experienced need satisfaction reported higher degrees of autonomy support and structure. Autonomous motivation to teach was found to positively correlate with attuning and guiding approach, which yielded the most favorable outcomes. Also, this quality of motivation for teaching was strongly and negatively associated with maladaptive teacher behaviors such as depersonalization among teachers and adopting an abandoning approach towards students (Aelterman et al., 2019).

In their meta-analysis, Slemp et al. (2020) also looked into certain character traits and found that regardless of the demographic variables which showed non-significant associations, extraversion was found to be moderately or largely related with autonomous motivation.

Reeve and colleagues (2014) investigated two understudied antecedents of teachers motivating style, namely teachers' beliefs and national culture. As suggested by the researchers, these two determinants are not distant from each other as teachers' culture also might help shape their beliefs. Three constructs of teachers' beliefs (i.e., how effective, how easy to do, and how normative a particular motivating style is) and the influence of collectivist and individualist cultures on teachers' motivational preferences were included in the study. According to the data, both teacher beliefs and cultural context predicted the motivating style. When teachers believed in certain motivating style to be effective, easy to implement, and

the common practice, they are oriented towards that style. Moreover, national collectivism positively predicts controlling teaching as teachers from collectivist societies reported creating a more controlling motivational climate in the classroom while their counterparts in individualistic societies reported creating a more autonomy-supportive climate. This was found to result from the fact that teachers in collectivist nations tend to find controlling teaching to be more effective, more commonly applied, and easier to implement.

In another study looking into cultural differences, Hein et al. (2012) looked into how teachers' motivational orientations are associated with their classroom behavior across five different cultures. Teachers from Spain were found to be more intrinsically motivated to teach, reported adopting a more student-centered approach, and using a more productive teaching style. Their colleagues from Lithuania reported they were more externally motivated compared to the remaining four cultures and they relied more on teacher-centered practices and showed a more frequent use of reproductive teaching style.

Unfortunately, there is a dearth of research on autonomy orientations of Turkish teachers. One of the few studies was recently reported by Bagci and Aydin (2021) who worked with English language teachers in the preparation program of a state university, a very similar context to that of the present study. Bagci and Aydin explored the relations between these teachers' their autonomy orientations and their gender, experience, and educational background. The participant teachers were found to be only moderately autonomy-supportive which is considerably lower than the optimal range and closer to the range of controlling teaching. Additionally, the findings revealed that female teachers were significantly more autonomy-supportive than their male colleagues. Also, younger teachers were found to be more autonomy

supportive while teachers with the greatest experience reported to be more controlling in their style. Lastly, non-ELT graduates were found to be slightly more autonomy-supportive than ELT graduates (Bagci & Aydin, 2021).

As all the aforementioned studies suggest, teachers translate their personal way of functioning and motivational orientations into the interpersonal style they use with their students. How they themselves are motivated determines the way they choose to motivate their students. For instance, when teachers are fueled by external pressures like school-based factors or by internal pressures such as the controlled motivation they have, they tend to highlight similar pressuring elements such as external rewards or threatening while motivating their students. In the following section, the association between teachers' implicit beliefs about their teaching ability and their professional outcomes will be featured.

Teachers' Mindsets and Their Personal and Professional Outcomes

Mindsets, or implicit theories are the psychological lenses through which individuals see the world around themselves (Dweck, 2006; Dweck et al., 1995; Yeager & Dweck, 2012). Like all individuals, students hold either fixed or growth mindset and these implicit beliefs they possess about their intellectual abilities have been found to bring about academic and psychological outcomes (Dweck, 2006; Yeager & Dweck, 2012). Fortunately, experiments conducted in mindset framework have shown that it is possible for students to adopt more of a growth mindset and optimal outcomes with tailored intervention programs. Therefore, one should not be surprised by the abundance of mindset interventions in the field of educational psychology. One of the recent experiments tested the effects of a growth mindset of personality on outcomes related to peer defending (Derr & Morrow, 2020). In the personality condition, participants were exposed to a reading-based task to promote

growth mindset of personality while participants in the athleticism condition were exposed to a similar task on athleticism. Following the task, all participants were presented with a scenario of a college student bullied by peers and completed instruments on peer defending. The manipulation was successful as the participants who read about the malleability of personality endorsed growth-oriented beliefs to a greater extent compared to those who were exposed to growth mindset inducing task on athleticism. The findings showed having growth-oriented beliefs about personality could help people defend their victimized peers via defender self-efficacy.

A different experiment also conducted in the peer context examined the effects of peer mindsets on learning outcomes by randomly assigning students either to growth or fixed mindset conditions in which they were asked to complete a problem-solving task and a survey (Sheffler & Cheung, 2020). In both conditions, there were trained false participants (confederates) endorsing either growth or fixed mindset depending on the condition. These confederates naturally blended certain expressions inducing fixed or growth mindset into their conversations. The results showed that the manipulation was successful as there were no significant differences in participants' pre-existing mindsets across the two conditions. After the treatment, however, participants in the growth mindset condition reported rather increased task value. In other words, having peers with a growth mindset helped participants become more growth-oriented and engage in a difficult task with more effort and less anxiety (Sheffler & Cheung, 2020).

One of the earliest experiments in the higher education context was conducted in 1999 by Hong and colleagues who looked into the effects of university students' implicit theories of intelligence on their attributions of perceived failure.

Following conceptual ability test, the students were informed that they performed poorly and asked for reasons of their poor performance. The findings indicated students holding an incremental view of intelligence attributed their poor performance to lack of effort, which is a malleable causal factor of performance while entity theorists attributed their poor failure to lack of ability, which is a more stable causal factor of performance (Hong et al., 1999).

In a more recent experiment, Dinger and Dickhäuser (2013) provided convincing evidence for the effects of mindset theories on students' achievement goals. At the end of the study, the results showed that participants in the growth mindset condition reported higher inclinations towards mastery goals whereas students in the fixed mindset condition reported higher orientations towards performance goals.

Smith and Capuzzi (2019) reported the results of a mindset intervention designed to reduce anxiety in a statistics course. Students who received the intervention reported being more growth-oriented, having lower anxiety and greater academic achievement compared to students who did not (Smith & Capuzzi, 2019).

In the language teaching context, which is a more relevant field to the topic of the present study, mindset interventions found significant effects of holding an incremental view of intelligence about foreign language learning on students' academic performance and resilience in the face of difficulties both in secondary and higher education contexts. Molway and Mutton (2020); for instance, found that it is indeed possible to alter 9th grade students' implicit theories of intelligence about learning a second language with the help of a tailored intervention program not only in the short term, but also in the long run. The students who received growth-mindset intervention demonstrated positive changes in their responses to classroom

challenges as well as sharp declines in their inclinations to feel depressed or give up in the face of difficulties (Molway & Mutton, 2020). In higher education, Lou and Noels (2016) tested the effects of priming fixed or growth mindset on university students' goal orientations and how they respond to failure. They found that even when controlled for their language competence, students in the growth mindset condition reported greater endorsement of mastery goals, more adaptive responses to failure, and intention to keep learning the language while students in the fixed mindset conditions reported greater endorsement of performance-approach goals, helpless responses to failure and fear (Lou & Noels, 2016).

As showcased so far, students hold their own implicit beliefs about intellectual abilities, but they are also largely influenced by how people around them, especially their teachers view those abilities. This could be attributed to the fact that teachers reflect their implicit beliefs into their teaching approaches and the way they interact with their students. Massa et al. (2014) concludes that as teachers' views of intelligence are closely related to those of their students, it is of utmost importance for teachers to promote the malleability of intellectual abilities in order to encourage their students in terms of effort, strategic learning, and perseverance in academic challenges. Therefore, it is noteworthy how teachers view intelligence and ability is reflected in their judgements, classroom practices, and how they approach their students in times of academic failure.

Although so many studies have so far investigated the role of students' mindsets or teachers' mindsets about their students' abilities, the dearth of research investigating teachers' mindsets about their own teaching ability is noteworthy. Yet, there are some recent studies focusing on this issue and its role personal outcomes such as emotions, their quality of motivation, and well-being, and participation in

professional development activities. In the following, several of these studies will be highlighted.

To begin with, Frondozo et al. (2020) looked into the relation between teachers' mindsets about their teaching abilities and work engagement through teacher emotions. They found that when teachers hold incremental beliefs about their teaching ability, they have a larger degree of control over improving their teaching ability. Being in charge of teaching ability and the malleable nature of it encourage teachers to feel more positively about their job, enjoy being in the classroom, and show greater work engagement as a result of their enjoyment. In other words, as teachers with a growth mindset view their teaching abilities as malleable traits, they view teaching tasks as opportunities to improve their teaching skills, which leads these teachers to enjoy these tasks more and have higher work engagement. Fixed mindset teaching, on the other hand, predicted more anxiety and anger (Frondozo et al., 2020). This is probably because entity theorists view teaching ability as a stable trait these teachers feel they have little control over their teaching capabilities. They rather believe they are "cut out" for the job or not, which is risky in either case as when they believe they are good teachers, they tend to put little effort in improving themselves and keeping up with new practices. When they believe they are not "cut out" to be teacher, they tend to feel frustrated, anxious, and again put little effort to improve their practices. The findings of Frondozo et al. (2020) suggest that enhancing growth teaching mindset is highly significant in that it opens doors for positive emotions and optimizing work engagement. In a similar study with pre-service and practicing teachers, Fives and Buehl (2008) found very similar results and suggest pre-service teachers should specifically be informed about the potential hazards fixed mindset teaching poses. To illustrate, if they hold fixed mindset

teaching, pre-service and novice teachers may question themselves and their self-efficacy might dampen in challenging situations in the classroom (Fives & Buehl, 2008).

In another study, Nalipay et al. (2021a) investigated whether teachers' mindsets about their teaching ability would be associated with their work engagement through their quality of motivation towards teaching (i. e. autonomous motivation, controlled motivation, and amotivation). The researchers found that holding a growth mindset about teaching ability was positively associated with autonomous motivation for teaching while it was negatively associated with amotivation. Findings of the study by Nalipay et al. also revealed that growth teaching mindset predicted better work engagement among teachers through autonomous motivation. These results suggest that when teachers view teaching as a malleable skill and believe it can be improved and developed, these teachers are inclined to teach for self-determined reasons such as enjoying what they do or finding value in teaching. As can be concluded from Nalipay et al., (2021a), some teachers are oriented towards a fixed mindset and view their abilities as fixed traits that cannot be changed much. They either believe they are good at teaching or not and either way, they do not invest much effort to improve themselves as teachers. This seems to result from the fact that when they think they are born to be one, they believe they do not need any improvement. If entity theorist teachers believe they are not cut out to be a teacher, they again do not put in a lot of effort because they do not believe they can change much. Some other teachers, on the other hand, adopt more of a growth mindset and view their teaching abilities as malleable. These teachers believe they have greater control over developing their teaching abilities because being good at teaching can be learned and improved with hard work and guidance.

The final study focusing on the personal outcomes associated with teachers' mindset about their teaching ability was also conducted by Nalipay et al. (2021b). The researchers slightly shifted their focus and investigated the relation between teachers' implicit beliefs about their teaching ability and their well-being. The results revealed that growth teaching mindset strongly and positively predicted personal well-being among in-service teachers while fixed mindset about teaching ability did not predict any of the wellbeing dimensions. Based on the findings, Nalipay et al. (2021b) suggest when teachers believe they can improve their teaching ability, they tend to view their teaching experiences in a way that brings about positive feelings. For instance, teachers with a growth mindset teaching are inclined to interpret a bad teaching performance as a learning experience instead of a failure. Therefore, learning from this bad performance is accompanied by feelings of hope, which is one of the dimensions of wellbeing (Nalipay et al., 2021b). Alternatively, when a teacher with a growth mindset has a good teaching performance, they can view it as progress towards achieving their goal to become a good teacher, which again brings about positive feelings such as joy or pride (Nalipay et al., 2021b).

In addition to positive personal outcomes, recent research has shown that holding a growth teaching mindset also predicts greater participation in professional development activities. This is probably because when teachers believe that they can improve their teaching abilities through hard work and guidance, they are more likely to exert more effort into teaching-related tasks. Teachers likely see these tasks as developmental opportunities which will help them further improve their teaching skills. In this direction, three studies are highlighted in the following.

Thadani et al. (2010; 2015) conducted two studies on whether implicit theories teachers hold about their teaching ability predict their willingness to

participate in professional development activities. In the former study (2010), Thadani and colleagues found that college instructors who hold a growth mindset about teaching report more willingness to engage in professional development practices. In a later study, Thadani and her colleagues (2015) extended further the findings of the previous study and included a behavioral measure of professional development (PD) interest. In this second study, Thadani et al. (2015) examined whether the relation between teachers' mindsets about their teaching skills and their interest in PD activities held up after a PD session. The findings showed that implicit theories teachers hold about their teaching ability predicted both teachers' self-reported interest and behavioral outcomes in professional learning activities to a large extent. In other words, Thadani et al. (2015) concluded that instructors with teaching growth mindset had higher self-reported interest as well as higher preferences for collaborative, self-examining PD activities. On the other hand, the entity theory instructors hold about their teaching ability predicted less self-reported interest in PD and higher preferences for formal PD activities. Instructors with a fixed teaching mindset were more likely to act defensively especially when they believe themselves to be of lower ability. These instructors tend to select easy PD tasks over difficult ones or refuse a tutorial that can help them improve themselves on a task (Thadani et.al, 2015).

As part of his doctoral research, Gero (2013) focused on the role of teachers' teaching mindset on professional learning. Gero found that teachers' goal orientation, sense of self-efficacy, and most importantly, their beliefs about the nature of teaching ability indeed affect their attitudes about and engagement in professional learning activities. In this study, teachers' conceptions on the nature of their teaching ability were the most significant predictors for participating in professional learning

activities. Incremental teaching mindset positively predicted teachers' reflective practice and valuing lesson observation. Entity teaching mindset, on the other hand, negatively predicted teachers' reflective practice and these entity theorists did not express valuing lesson observation. The study also showed a close association between teacher mindset and teacher self-efficacy.

In conclusion, some of the highlighted studies in the present review suggest teachers' beliefs and ideas about the nature of their teaching ability has a strong influence on personal level such as on teachers' emotions, wellbeing, and quality of motivation. Growth teaching mindset is associated with positive emotions, higher wellbeing, and autonomous motivation; while fixed teaching mindset predicts negative feelings, lower wellbeing, and controlled motivation or amotivation. In addition, teachers' conceptions about the nature of their teaching ability were found to affect them in professional level as well. Incremental theorists tend to have higher work engagement and higher interest in professional activities whereas entity theorists are more inclined to engage less in work and report lower interest in professional learning activities. The findings of the studies in this review are noteworthy as they provide strong connections and evidence for the relation of teaching mindsets to teachers' personal and professional endeavors. However, none of the highlighted studies have investigated the influence of teachers' mindsets about teaching ability on their teaching style. In the following section, three studies that looked into the relation between teachers' quality of motivation, teachers' mindsets about their students' abilities and their teaching style are featured.

Teachers' Quality of Motivation and Their Teaching Mindsets Combined

After an extensive review of the literature, it appears only few studies have so far investigated the relation between teachers' motivation to teach (i.e., autonomous motivation, controlled motivation, and amotivation), their mindset (i.e., fixed and growth), and their teaching approach. In the first study, Escriva-Boulley and colleagues (2021) worked with a large sample of primary school teachers to investigate the relations between five types of pressure (i.e., from above, from below, and from within) and these teachers' motivating style in terms of need support. The findings suggest perceived student disengagement as pressure from below and being fixed mindset oriented as pressure from within predicted need thwarting teaching style. When these two types of pressure are limited, teachers report to be more autonomously motivated to teach and thus adopt a more need-supportive style towards their students (Escriva-Boulley et al., 2021).

Similarly, in an attempt to shed light on the underlying processes behind autonomous or controlling motivational climates teachers foster, Leroy et al. (2007) found personal determinants such as teachers' self-efficacy, their implicit beliefs and seniority as well as environmental factors including work pressure are directly or indirectly responsible for the motivational climate in the classroom. The findings showed while high self-efficacy, seniority, and growth mindset had a significant positive relation to autonomy-supportive climate, work pressure and holding an entity theory had a significant direct relation to creating a controlling climate (Leroy et al., 2007).

Conducted by Vermote et al. (2020), this study focused on the role of higher education instructors' quality of motivation and their beliefs about the malleability of their students' abilities on their motivating and demotivating teaching style. Vermote

et al. (2020) employed the circumplex model from Aelterman et al. (2019) in which there are four types of (de)motivating teaching style differing in their level of need supportiveness and directiveness (i.e., autonomy support, structure, control, and chaos). In addition, the model has eight subareas -two subareas per motivating style: participative and attuning, guiding and clarifying, demanding and domineering, and abandoning and awaiting. The results showed that teachers' motivation and their mindset strongly predicted their teaching approach (Vermote et al., 2020).

Autonomous motivation and growth mindset positively predicted more motivating teaching approaches such as guiding and attuning. In contrast, controlled motivation, amotivation and fixed mindset were positively associated with demotivating approaches like domineering and abandoning (Vermote et al., 2020).

The present study is different from Vermote et al. (2020) in two ways. Initially, Vermote et al. (2020) focused on teachers' mindset about the nature of their students' abilities. However, the present study looks into teachers' implicit beliefs about the malleability of their teaching ability. Furthermore, Vermote et al. (2020) was correlational in nature. In the present study, an experiment will be conducted to provide a true cause-effect relationship between teachers' motivation, their mindset, and their teaching style.

As showcased in this chapter, like all individuals, teachers transfer their own motivational orientations into their teaching style. In other words, how they themselves are motivated predicts how they motivate their students. Also, whether teachers believe their teaching abilities are subject to improvement or not also seems to play a significant role in how much effort they put forth to enhance their teaching abilities. For this reason, I hypothesized that these two variables combined would have an effect on how autonomy-supportive or controlling these teachers are in class.

Based on the findings of the present study, professional learning activities and initial training programs can be designed to cultivate and foster teachers' autonomous motivation and growth mindset teaching within the teaching profession. Thus, successful implementations of educational innovations can be promoted.

Conclusion and Hypotheses

In the light of previous research indicating the relation between teachers' quality of motivation, we can conclude teachers reflect their own motivational orientations into their interpersonal motivating styles when they interact with their students. We can also conclude based on the literature that teachers' implicit beliefs of ability relate to how they view academic achievement, to what they attribute failure and how they support their students. To this end, the present study was meant to establish a causal relationship between teachers' quality of motivation, implicit theories of ability and their teaching style. I hypothesized that participant teachers who were induced by the autonomous motivation and growth mindset condition would report the highest levels of autonomy-supportive teaching style. I also hypothesize that participants who were induced by the controlled motivation and fixed mindset would report the lowest levels of autonomy-supportive teaching style.

CHAPTER 3: METHOD

Introduction

The purpose of this study was to test whether English teachers' quality of motivation and mindset affect their teaching style in terms of autonomy support. In this chapter, the research design of the study, data collection, and the plan of data analysis are presented.

Research Design

This study is quantitative in nature and is conceptualized as an experiment. According to Fraenkel et al. (2012), experimental study is regarded as a rather powerful research methodology, and it is the only type of research in which the researcher attempts to affect a specific variable through manipulations. In an experiment, the researcher tests the effect(s) of one or more independent variables on the dependent variable(s). The participants of an experiment are randomly assigned to two groups, which are the treatment group and the control group. The treatment group receives a certain kind of treatment while the control group has no treatment. This design enables the researcher to conclude if the treatment has an effect on a specific variable. In certain types of experiments, there is a treatment group and a comparison group. Both of these groups receive different kinds of treatment, and the results are compared. Another unique characteristic that sets experimental research apart from all other types is manipulation. The researcher determines the nature of the treatment, the participants, and the duration of the experiment. The researcher manipulates one or more independent variables in order to see the influence on the

dependent variable(s). This makes experimental research the best method to establish cause-affect relationships between variables.

For this reason, in order to test the effects of English teachers' quality of motivation, and these teachers' mindset about their teaching ability on their teaching style, I chose an experimental research design to employ in the present study.

Specifically, in the present study, a 2x2 (2 types of motivation x 2 types of mindset) experiment was conducted. Participants were randomly assigned to one of the four conditions below:

First condition: autonomous motivation and growth mindset

Second condition: autonomous motivation and fixed mindset

Third condition: controlled motivation and growth mindset

Fourth condition: controlled motivation and fixed mindset

Context

Most state and non-profit foundation universities in Turkey offer bachelor's degree programs in which medium of instruction is partially or completely English: Lectures are conducted in English, and students study resources in English; moreover, the assignments and the exams are in English. Therefore, students who enroll in these programs need English proficiency to pursue their studies.

To determine if newly enrolled students have this proficiency, at the beginning of the academic year they take an English proficiency exam. The content and format of this exam changes from one university to another. The students who get a passing grade from this exam are directly placed in their departments. For those whose level of proficiency is insufficient, universities offer a one-year preparation program in which their university freshmen study English only and improve their language skills. During the preparation program, students take only English classes,

and they need to pass the university's proficiency exam to be able to pass to their departments. In these programs, instruction is provided by English language instructors.

In some universities, the preparation program follows a whole-year curriculum. In others, modular system is in practice, and students are placed in different levels based on their language skills. Within the modular system, students are placed into a level according to the results of placement exam and study in that level for a couple of months. Every academic year, they start teaching English to university freshmen and at the end of the year the students take the exit exam. If they successfully pass their level, they move on to the next level and take the proficiency exam at the end to pass to their departments.

English language instructors working in these preparation programs typically have earned degrees in majors such as English Language Teaching (ELT), British Culture and Literature, American Culture and Literature, Linguistics, and English Translation and Interpretation programs. Except for those with degrees in ELT, English majors need to participate in a Teaching English as a Foreign Language (TEFL) program to work as an English language instructor at universities. Also, to be qualified to work as a language instructor, they need to earn high scores from exams such as Test of English as a Foreign Language Internet Based Test (TOEFL IBT), International English Language Testing System (IELTS), Yabancı Dil Bilgisi Seviye Tespit Sınavı (YDS), or an equivalent proficiency exam to demonstrate their English proficiency and be qualified to work as a language instructor.

Participants

In the present study, participants were English language instructors working in the preparation programs of state and non-profit foundation universities located in

Ankara and Istanbul. Of the 156 participants ($M_{age} = 33.6$), 136 worked in non-profit foundation universities located in Ankara ($M_{age} = 33.4$). The remaining 20 participants ($M_{age} = 34.9$) worked in state universities located in Ankara and Istanbul. The mean teaching experience for all the participants was 10 years ($M_{exp} = 10.33$). Gender wise, 122 participants were female (78%) and 34 of them was male (22%). The majority of the participants were Turkish (91%), followed by participants from other nationalities such as Americans (4.5%), British (1.3 %), Iranian (1.9%), Ukrainian (0.6%), and Albanian (0.6%).

Instrumentation

Being experimental in nature, the present study used instruments to assess both of the independent variables and the dependent variable. Further information about these instruments is provided below.

Independent Variables (Manipulations)

At the beginning of the experiment, to induce the quality of motivation and mindset, participants were asked to read a one-page-long fictitious text that looked like a journal article (Appendix A). This text included some information on two make-believe studies that were said to be recently conducted. One of these imaginary studies was about quality of motivation, and the other one was about mindset. The format and the layout of the text was identical for all the participants in all four conditions. The opening paragraph of the text and the two subheadings were also identical in all four conditions. However, for each condition, half of the participants received the studies in the opposite order. To illustrate, half of the participants read the study on quality of motivation, which was followed by the mindset study, while the other half first read the mindset study and moved onto reading the study on quality of motivation. The same procedure was applied to all four conditions in order

to make sure that there were no order effects of the manipulated variable on teaching style of the participants in the same condition.

Regarding the content of the text, the findings of the presented studies were in line with the type of motivation and mindset that I was trying to induce in each condition (Appendix A). In the first condition, I was inducing autonomous motivation to teach and growth mindset. Therefore, the findings of the motivation study showed that when teachers are interested in the subject they teach, find a personal meaning in teaching, and enjoy it (i.e., when they autonomously motivated), they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. As I was inducing growth mindset in this condition, findings of the second study showed that teaching ability is malleable in nature and can be improved to a great extent with intentional effort, practice, and guidance.

In the second condition, autonomous motivation to teach and fixed mindset were induced. Therefore, participants in this condition read the same findings for the motivation study as the participants in the first condition. However, to induce fixed mindset, the findings of the mindset study showed that teaching ability stayed relatively constant over a decade although many things changed in participants' environment including their participation to professional development activities. Findings also showed personal attributes that define teaching ability seem to have a strong dispositional component that is either inherited or determined during the first few years of one's life.

In the third condition, controlled motivation and growth mindset were induced. For this reason, findings of the motivation study showed that when teachers are interested in improving students' performance to satisfy principals and parents or

to be admired by them, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. In the mindset study, the findings were the same as the growth mindset study in the first condition. They showed that teaching ability is malleable in nature and can be improved to a great extent with intentional effort, practice, and guidance.

In the final condition, controlled motivation and fixed mindset were induced. Consequently, in the motivation study, participants read that when teachers are interested in improving students' performance to satisfy principals and parents or to be admired by them, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. For the mindset study, participants read teaching ability stayed relatively constant over a decade although many things changed in participants' environment including their participation to professional development activities. Findings also showed personal attributes that define teaching ability seem to have a strong dispositional component that is either inherited or determined during the first few years of one's life.

Following the fictitious text that looked like a journal article, participants were given the first instrument, which was comprised of two comprehension check items. They were multiple choice questions with four options which were designed to check if participants read the fictitious text and understood the findings of the studies. The content of the items and the four options differed from one condition to another. Also, in each condition, the second half of the participants received the items in opposite order.

Then, the participants moved onto answer the next couple of items that were developed in order to measure participants' agreement with the findings of the two

studies (manipulation check). Two Likert type scale items with five answers ranging from 1 (completely disagree) to 5 (completely agree) were designed to see the extent of their agreement with the findings. The participants were once again reminded of the findings of the studies in the manipulation text.

Dependent Variable

Once the participants completed the comprehension and agreement items, they were given the first of the two dependent variable instruments: The teaching style questionnaire (Appendix B). This instrument was developed for the present study. The profiles of two different teachers were given as two parts of a statement. On the left side of the page, the description of a controlling teacher was given as follows:

Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.

On the right side of the page, the autonomy-supportive teacher profile was given, and it was described as follows:

Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need

to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.

In the instructions, the participants were reminded of the results of the two studies they read in the text and were told to think about themselves as teachers. Then, they were asked to read both of the profiles and decide if they are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like them, the participants were asked to mark whether this profile is really true, true, or sort of true for them (Appendix B).

The second instrument was an adapted version of Situations-in-School (SIS) questionnaire developed by Aelterman et al. (2019). The original SIS questionnaire had 15 teaching scenarios that teachers commonly come across in the classroom. For each scenario, four motivating styles by teachers were given. These 15 authentic teaching situations were ecologically valid for secondary school teachers (Aelterman et al., 2019); however, for the present study, some items had to be removed and some items needed to be reworded in order to make SIS more ecologically valid in the higher education context. Therefore, six scenarios from the original SIS questionnaire were adapted and reworded to be used in the present study (Appendix C). Furthermore, four ways of handling each teaching scenario were again reworded and were reduced to two ways, which are autonomous and controlling. In the instructions, the participants were first reminded of the fact that there are no right or wrong answers. Then, they were asked to indicate to what extent each way of handling the situation in the scenario does or does not describe them. As there were

six teaching scenarios and two ways of handling each situation, the participants marked 12 items using a 7-point Likert type scale. Six items corresponded to autonomy-supportive teaching style in handling the situation (e.g., “Invite students to suggest a set of guidelines that will help them to feel comfortable in class”; $\alpha = .73$) and six items corresponded to controlling teaching style in handling the situation (e.g., “Post your rules. Tell students they need to follow all the rules. Tell students about the results of disobeying the rules”; $\alpha = .74$). Participants were asked to circle a number near 1 if the way of teaching does not describe what they would do in the given situation. They circled a number near 4 if the way of teaching somewhat described their style, and they circled a number near 7 if the way of handling the situation described what they would do extremely well.

Validating the Study Materials

All the materials of the experiment including the fictitious texts, the comprehension check items, the agreement items and the two questionnaires were first sent to two experts for review and feedback. Upon their suggestions, necessary changes have been made in the content, the layout, and the format of the instruments. One of the experts was a PhD candidate who works on mindset theory (Dweck, 2006) and motivation from the SDT (Ryan & Deci, 2020) perspective. The other expert was an assistant professor with a strong background in SDT and research methods.

Method of Data Collection

Once the experiment design and the instruments were prepared and reviewed by the experts, I obtained ethical approval from Bilkent University Ethical Committee (Appendix D). After getting the approval, I printed the materials of the experiment. To make the instructions clearer and follow the participants' progress, I

printed the four pages in different colors. The fictitious text was printed in white. The page which includes comprehension and agreement items was printed in pink. The teaching style questionnaire was printed in light blue, and the final paper, the SIS questionnaire, was printed in green. All the materials were put in plastic bags in the above order and a small piece of paper with four demographic questions was attached to each plastic bag. Next, I printed the materials for 40 participants in each of the four conditions, which makes 160 in total. I then put the materials in a box following the order below:

First condition: autonomous motivation + growth mindset

Second condition: autonomous motivation + fixed mindset

Third condition: controlled motivation + growth mindset

Fourth condition: controlled motivation + fixed mindset

First condition: growth mindset + autonomous motivation (reversed order)

Second condition: fixed mindset + autonomous motivation (reversed order)

Third condition: growth mindset + controlled motivation (reversed order)

Fourth condition: fixed mindset + controlled motivation (reversed order)

After all these preparations, the data collection process began. With the approval and the design of the study, I started contacting the directors and administration of preparatory programs in non-profit foundation and state universities through e-mail.

The first of the non-profit foundation universities asked for the details of the study and a copy of the ethics approval. Upon reviewing the materials, the administration ran the data collection request by their board and decided to give permission. Then, I sent an email to all the instructors working in the preparatory program inviting them to choose the most convenient time for them using an online

calendar. Data collection lasted a full week from Monday to Friday. I used an empty classroom and conducted the experiment in groups of at least 15 instructors at a time. I provided the necessary materials such as pencils for the participants and wrote the instructions on the board before participants arrived. In the classroom, participants were asked to sit at a one-meter distance from one another so they would not discuss the content of the experiment among themselves. The participants first read the consent form (Appendix E) and signed it. I collected the consent forms in mixed order and put them in a separate box. Then, I briefly described the study without getting into detail and participants started by answering demographic questions regarding their nationality, gender, age, and teaching experience. Then, I asked them to read the journal article carefully and answer a couple of questions related to the article. When all the participants read the text, I told the participants to move on to the next (pink) page to answer two comprehension questions and two agreement items. Then, participants were asked to continue with the next (blue) page and read the instructions carefully. At this point, I reminded participants of the utmost importance of choosing one of the profiles. When they were done, the participants moved onto the final instrument (the green page). After giving the instructions of the SIS questionnaire, the I kindly reminded the participants of the fact that this is the only paper printed front and back. I moved around the class making sure all participants marked both of the ways for each scenario and see the rest of the instrument on the back of the page. When the participants were done, they put their plastic bag in a separate box and left. From this institution, 75 instructors in total participated in the experiment.

The second institution was another non-profit foundation university asking me to prepare a research proposal attaching the ethical approval, the design of the

experiment, and all the materials. Upon reviewing the materials, this university invited me to collect data. The data collection took place in a meeting room with 15 participants. Director of the Foreign Languages Department was interested in the results of the study and invited me to conduct another session of data collection with the rest of the instructors providing that I will present them the results in an in-house speech. A few weeks later, I conducted another session with 30 instructors. In total, 45 participants took part in the study from this institution.

The third university that invited me to collect data was again a non-profit foundation university and they also asked to see the ethical approval and the experiment materials. I followed the same procedure with this university and collected data from 16 instructors in total.

The final non-profit foundation university asked me to apply to their own ethical committee with the research design and all the materials, and I did so. However, this prolonged the process, and it took months for the university to complete the process. Due to not hearing from them for four months, I anticipated that I would not be able to reach the required number of participants and thus decided to design the experiment online. The main purpose here was to reach more participants by sending the link to instructors working in state universities. The primary reason for this is preparatory programs in state universities work on teach-and-go policy. Instructors only stay on campus if they have classes to teach, and when they finish their classes, they leave school. It would be possible for the experiment to be conducted this way. After careful consideration and an extensive amount of work to make the online experiment instruments identical to hard copy ones, I prepared the experiment on an online survey software (Qualtrics) and sent the link to one state university located in Ankara and another state university located in

İstanbul. In total, 30 instructors participated in the online study, but 20 of them completed the experiment. I deleted the incomplete responses leaving data from 20 participants. Out of these 20 teachers, 16 of them worked in the state university located in Ankara, and four teachers were from Istanbul.

Methods of Data Analysis

The nature of the experiment, which requires looking into effects of two independent variables on a single dependent variable, guided me to choose Factorial Analysis of Variance (ANOVA) design to test the effect(s) of quality of motivation and mindset about teaching ability on teachers' teaching behavior. In a Factorial research design, researcher(s) systematically vary the levels of independent variables to form experimental conditions (Collins et al., 2009).

The present study used a 2x2 Factorial design, in which there are two factors and two levels. By crossing the two factors, 2x2 Factorial design forms all combinations of the two levels and factors and thus creates four experimental conditions (Collins et al., 2009). Using a Factorial design has significant advantages. First and foremost, it allows the researcher(s) to examine the interactions between factors unlike simpler experiments in which a single factor is manipulated at a time. Another benefit of a Factorial design is that it increases efficiency to a great extent since multiple factors can be manipulated at a time and thus requires less experimental subjects (Collins et al., 2009).

In the present study, I also used independent samples *t*-test to compare the means of agreement in mindset and motivation conditions and check whether manipulation was successful (manipulation check). Independent samples *t*-test was also used in a supplementary analysis to check the difference in autonomy-supportive teaching between instructors from private and non-profit foundation

universities. Finally, hierarchical multiple regression analysis was conducted as a supplementary analysis where I tested whether age, teaching experience, or their interaction with the conditions predicted autonomy-supportive or controlling teaching style.



CHAPTER 4: RESULTS

Introduction

The purpose of the present study was to test the effect of English language instructors' quality of motivation and mindset about their teaching ability on teaching style in terms of autonomy-support in preparatory programs in non-profit foundation and state universities located in Ankara and Istanbul. To this end, an experiment designed to test the effects was conducted with 156 participants and the results are presented in this chapter.

Comprehension Check

Participants were asked to read a text to induce the quality of motivation and mindset depending on the condition they were assigned to. For validity reasons, I checked if they read the texts by asking two comprehension questions following the texts.

Table 1

Results from the Comprehension Questions

Conditions	Number of participants	Correct answers
Growth	77	69 (89.6%)
Fixed	79	74 (92.4%)
Autonomous	76	71 (93.4%)
Controlled	80	38 (47.5%)

As can be seen in Table 1, in growth conditions, a total of 77 participants read the growth mindset text and 69 of them (89.6%) answered the comprehension

question correctly. In fixed mindset conditions, out of 79 participants who read the fixed mindset text, 73 teachers (92.4%) answered the comprehension question correctly. Table 1 shows that in both mindset conditions, the rate of participants' correct answers indicating an exposure of the participants to the respective conditions was significantly high. In the autonomous conditions, 76 people read the text, and 71 of them (93.4%) answered the comprehension question correctly. Again, the percentage of the participants who read the text was relatively high as in previous conditions. When it comes to the controlled conditions; however, a total of 80 participants read the text and only 38 of them (47.5%) answered the comprehension question correctly. Different from the previous conditions, 52.5% of the participants did not seem to either read or understand the controlled motivation text although the text was identical with the autonomous motivation text in format, the language level, and the vocabulary range. Of the 156 teachers who received the conditions, a total of 106 teachers (67.9%) carefully read the conditions.

Manipulation Check

For validity reasons, I tested whether the participants endorsed the induced conditions using a manipulation check. Following the comprehension questions, the participants were asked two questions measuring their agreement to the results of the studies they read. After all the participants that answered the comprehension questions incorrectly were excluded from the data, I checked the means of agreement in growth and fixed conditions. Then, I checked the means of agreement in autonomous and controlled conditions.

Table 2*Participants' Agreement with the Induced Condition*

Condition	<i>M</i>	<i>SD</i>	<i>t</i> (<i>df</i>)	<i>p</i>
Growth	4.0	1.1		
Fixed	2.7	1.1	6.26 (104)	<.001
Autonomous	4.3	1.1		
Controlled	3.2	1.1	4.72 (104)	<.001

As the purpose of the experiment was to make participants endorse the induced condition, the means of agree-growth and agree-fixed were expected to be both considerably high and not to be significantly different from each other. However, as can be seen in Table 2, the results showed a low mean for the fixed mindset agreement ($M = 2.7$), while the mean of agreement with the growth mindset condition was higher ($M = 4.0$). In order to test whether this difference is significant, I ran an independent sample *t*-test which showed the difference was indeed significant ($t(104) = 6.26, p < .001$) indicating that the participants in the fixed condition agreed significantly lower with their condition compared to the participants in the growth condition.

Similarly, in accordance with the aim of the study, the mean of agreement with the autonomous motivation and the controlled motivation were expected to be both considerably high and not to be significantly different from one another. Yet, the results in Table 2 showed that the mean of agreement with the autonomous motivation was $M = 4.3$ while the mean of agreement with the controlled motivation was found to be $M = 3.2$. In order to test whether this difference was significant, I ran an independent sample *t*-test, which indicated the difference was indeed significant

($t(104) = 4.72, p < .001$) demonstrating that the participants in controlled condition agreed to a significantly lower extent with their condition compared to the participants in the autonomous condition.

The problem with the manipulation check was that not many participants agreed with the fixed mindset or controlled motivation condition.

Main Results

Although the conditions were not endorsed by the participants, I used Factorial ANOVA to test whether there are differences in the independent variables as a function of the motivation conditions, the mindset conditions, or their interaction.

I ran Factorial ANOVA to test whether autonomy-supportive teaching assessed by Situations-in-School (SIS) questionnaire (Aelterman et al., 2019) can be predicted by quality of motivation, the mindset, or the interaction of these two. According to ANOVA results, the groups did not differ in terms of autonomy-supportive teaching as a function of the conditions. Factorial ANOVA showed neither the main effect of quality of motivation ($F(1,102) = 0.81; p = .369$), nor the main effect of mindset ($F(1,102) = 0.47; p = .496$) was significant. In addition, the main effect of their interaction was also not significant ($F(1,102) = 0.25; p = .620$), either. Next, I tested whether controlling teaching assessed by SIS can be predicted by quality of motivation, by mindset, or the interaction of the two. In line with the ANOVA results, the groups also did not differ in terms of controlling teaching as a function of the conditions. Factorial ANOVA showed no significant effect of quality of motivation ($F(1,102) = 0.39; p = .533$), and no significant effect of mindset ($F(1,102) = 0.03; p = .863$). Furthermore, the main effect of their interaction was also not significant ($F(1,102) = 0.56; p = .455$).

Factorial ANOVA was run to test if autonomy-supportive teaching assessed by the bipolar teaching style question can be predicted by quality of motivation, mindset, or the interaction of the two. Similar to the previous findings, Factorial ANOVA showed no statistically significant effect of quality of motivation ($F(1,90) = 2.19; p = .142$), and no significant effect of mindset ($F(1,90) = 1.78; p = .185$) as a function of the conditions. Furthermore, the main effect of their interaction was also not significant ($F(1,90) = 1.10; p = .297$).

The final analysis was conducted to test whether controlling teaching assessed by the bipolar teaching style question could be predicted by quality of motivation, mindset, or the interaction of the two. Factorial ANOVA yet again showed no significant effect of quality of motivation ($F(1,8) = 0.12; p = .737$), and no significant effect of mindset ($F(1,8) = 0.12; p = .737$) as a function of the conditions. Furthermore, the main effect of their interaction was also not significant ($F(1,8) = 0.12; p = .737$).

Supplementary Analyses

The first supplementary analysis was conducted to see if there is a difference between the instructors in terms of autonomy-supportive teaching style as a function of the school. For the teachers working at non-profit foundation universities, the mean of autonomy-supportive teaching style is $M = 2.5$, while for the teachers from the state universities the mean is $M = 1.7$. I ran an independent sample t -test to check if the difference is significant and the results showed that the difference is indeed significant ($t(137) = 4.30, p < .001$). The instructors teaching in non-profit foundation universities scored significantly higher in the coordinator teaching style than the state university instructors. However, there was no significant difference

between private university instructors and their colleagues in the state universities in terms of autonomy-supportive and controlling teaching assessed by SIS.

I conducted the second supplementary analysis to test whether age or teaching experience or the interaction of them with the conditions predict autonomy-supportive or controlling teaching. Hierarchical multiple regression analysis showed that both age and teaching experience negatively predicted autonomy supportive teaching assessed by SIS ($B = -0.04$, $SE = 0.01$, $p = .003$; $\beta = -.41$ for age; $B = -0.05$, $SE = 0.02$, $p = .003$; $\beta = -.42$ for experience), but neither the conditions nor the interaction of the conditions with age or teaching experience were found to be significant predictors of teaching style.

CHAPTER 5: DISCUSSION

Introduction

In the light of the extant literature on Self-Determination Theory (Ryan and Deci, 2020) and Mindset theory (Dweck, 2006), I sought to test the effects of teachers' quality of motivation and mindset about their teaching ability on their teaching style in terms of autonomy support.

Overview of the Study

Based on a wealth of research indicating the effects of quality of motivation and mindset on individuals in educational contexts, I hypothesized that teachers who are fueled by autonomous motivation to conduct lessons with and hold a growth mindset would teach in a considerably more autonomy-supportive fashion compared to teachers fueled by controlled motivation to conduct lessons with and hold a fixed mindset. As featured earlier, there is a scarcity of research combining motivation with mindset in the published literature. Also, there is a need for establishing a true cause-effect relationship between motivation and mindset, and their effect on teaching style. To this end, I designed a 2x2 experiment (2 types of motivation x 2 types of mindset) in which I tested the effects of two independent variables (i.e., quality of motivation and mindset about teaching ability) on the single outcome variable, which was an autonomy-supportive teaching style. Using convenience sampling, I collected data from a total of 156 English language instructors working in English preparatory programs of state and non-profit foundation universities located in Ankara and Istanbul. The participants were randomly assigned to one of the four conditions below:

First condition: autonomous motivation and growth mindset

Second condition: autonomous motivation and fixed mindset

Third condition: controlled motivation and growth mindset

Fourth condition: controlled motivation and fixed mindset

In each condition, participants were presented with a fictitious text to induce the quality of motivation and mindset within that condition. After reading the text, they answered two comprehension questions to check their understanding of the text. Then, two agreement items measured participants' agreement with the results of the studies they read (manipulation check).

Following the comprehension questions and the manipulation check, the participants completed the first instrument which was designed to measure the outcome variable. This instrument consisted of one bipolar question with two different teacher profiles one of which was the protagonist (controlling) and the other was coordinator (autonomy-supportive). The participant teachers were asked to read both the profiles and choose the one that is most like them. Then, they decided whether that profile was really true, true, or sort of true for them.

The second instrument was used to measure the teaching style and was the adapted version of SIS questionnaire by Aelterman et al. (2019). It consisted of six situations teachers commonly face in the classroom. For each situation, two ways a teacher might handle the situation were given. The participants were asked to use numbers one to seven to indicate the extent to which each way described what they do in the classroom (with one being "Does not describe me at all" and seven being "Describes me extremely well").

When the data collection process was completed, I ran the analyses. The preliminary analyses were conducted to check the number of participants who read

and understood the text by looking at their responses to the comprehension questions. I excluded the incorrect responses from the analyses. Then I checked participants' agreement with the results of the studies they read. Lastly, I checked participants' responses to the two instruments measuring their teaching style. First, I analyzed the teacher profile instrument and looked into the function of the condition. Then, I analyzed the responses for the SIS questionnaire as a function of the participants' condition.

Discussion of Major Findings

The present study looked into the effects of teachers' quality of motivation and their mindset about their teaching ability on their teaching style. The research question, therefore, was what the effects of English language instructors' quality of motivation and their mindset about their teaching ability on their teaching style are.

Understanding and Endorsement of the Experimental Conditions

The nature of the study has led me to check whether the experimental conditions were endorsed by the participants. The manipulation check revealed that the endorsement was not successful in all four conditions. While the endorsement was considerably high in autonomous condition and growth mindset, it was relatively low in controlled motivation and fixed mindset. This means that participants in the autonomous motivation and growth mindset agreed to a large extent with what they read, while most of the instructors in controlled motivation and fixed mindset did not agree with what they read. Moreover, in the controlled motivation condition, slightly over half of the participants (52%) failed to answer a comprehension question correctly. Thus, it remains unknown whether the instructors in this condition failed to either read or to understand the text. Yet, the way the comprehension question in the controlled motivation condition was phrased was identical to the way the

comprehension question in the autonomous condition was phrased. I cannot, therefore, exclude the case that the wrong answer to the comprehension question of the controlled motivation condition was due to confirmation bias. Perhaps the participants in the controlled motivation condition were biased because of their own beliefs. Confirmation bias is described as favoring a certain piece of knowledge that is aligned with one's already existing beliefs and remaining relatively unmoved by any information that contradicts our previously existing notions (APA Dictionary of Psychology, n.d.; Cherry, 2022).

To provide further insights into these findings, information about the condition is provided below. The question in the controlled motivation condition reads as in the following:

All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:

- a) Satisfying school administration and parents
- b) Feeling admired by their colleagues
- c) Teaching out of interest or enjoyment (correct answer)
- d) Making students perform higher in tests

For this question, the participants probably could not accept that “teaching out of interest or enjoyment” did not predict increased time in lesson planning and preparation as it contradicted their previous beliefs about teachers' functioning.

The nature of the manipulation check might also have played a role in lack of endorsement by the participants in some of the conditions. The manipulation check in my study consists of only two items measuring the participant teachers' agreement on the results of the two studies they read. Instead of having only two, a higher number of items could have been employed to acquire more information on

participants' endorsement of the conditions. In other experiments, for instance, manipulation check was employed in the form of a pre-test containing many items to check participants' pre-existing notions prior to the intervention. (e.g., Aelterman et al., 2014; Cheon et al., 2018; Guay et al., 2016; Reeve & Cheon, 2016). Moreover, Cheon et al. (2012) additionally employed a trained observer to observe and rate the participant teachers' everyday teaching following the intervention to check if their teaching approach was indeed manipulated by the intervention. All in all, having more data on the degree to which the participants endorsed their induced condition would have helped me to draw clearer conclusions about the manipulation.

Did Quality of Motivation and Mindset Affect Teaching Style?

The overall findings suggest participant instructors in the controlled motivation and fixed mindset conditions did not endorse the induced conditions to a large extent and thus the induced quality of motivation and induced teaching mindset failed to affect their motivating style in the classroom. In other words, the motivation conditions, the mindset conditions, or both had no statistically significant effect on teachers' motivating styles in the classroom.

Regarding the two supplementary analyses, however, the results indicated significant differences. The first analysis was independent samples *t*-test, which showed a significant difference between the participants in terms of teaching style as a function of the school. That is, teachers working in non-profit foundation schools scored significantly higher in autonomy-supportive teaching style compared to the instructors working in state universities. Yet, a parallel difference was not found in autonomy-supportive teaching style assessed by SIS. The second analysis was hierarchical regression analysis which showed age and experience as significant predictors of autonomy supportive teaching style. To clarify, participant instructors

who are older and have a greater amount of teaching experience tend to teach in a less autonomy supportive fashion compared to the younger participants with fewer years of experience.

To better understand the results, it will help to review other experiments of a similar nature carried out within the SDT and Mindset frameworks, respectively. There are five experiments that are centrally relevant to the present study in terms of inducing certain motivating or teaching style through intervention. Three experiments measured the effects of Autonomy-supportive Intervention Program (ASIP) on teachers' quality of motivating style with PE teachers (Cheon et al., 2012, 2018; Reeve & Cheon, 2016). Guay et al. (2016) measured the effects of a professional development workshop called CASIS with second-grade teachers, and Aelterman et al. (2014) measured the effects of a one-day professional development workshop on PE teachers' autonomy-supportive teaching style. What all these five intervention programs have in common is that when the intervention program was induced, the endorsement by participants was successful.

These experiments are different from my study in three ways. To begin with, the participant teachers were exposed to the conditions for a longer period of time as they attended three or four training sessions in autonomy-supportive teaching at different points during the school year. Second, in these experiments, the changes in teachers' motivating style were assessed by multiple informants which are the participant teachers, their students, and even a trainer observer in Cheon et al. (2012) who observed teachers' everyday teaching following the intervention. The final difference is the proximity between independent and the outcome variables.

The success of these five interventions could partially be attributed to the intensive nature of the ASIP, CASIS program, and the professional development

workshop. ASIP intervention was implemented in three different sessions over the school year and each of those sessions lasted two to three hours (Cheon et al., 2012, 2018; Reeve & Cheon, 2016). CASIS intervention program had four sessions and again, each session took almost three hours (Guay et al., 2016). The professional development training was a whole day event during which the participant teachers were exposed to considerable amount of information (Aelterman et al., 2014). In other words, the participants in the experimental conditions in all five intervention studies were highly exposed to the induced condition for multiple times. In my study, however, the exposure to the condition was merely through a brief reading material in one session of approximately 15 minutes. In the light of these five intervention studies, it can be concluded that the induction process in the present study might have been successful had the participants been exposed to the material to a larger extent.

Apart from the frequency and the length of exposure, the nature of the induced material could also explain why participants in the present research did not endorse their condition. In ASIP, CASIS and professional development workshop interventions, the participant teachers were not only introduced a large amount of knowledge including prior research, but they also engaged in various activities ranging from hands-on experience to focus groups with their fellow colleagues (Aelterman et al., 2014; Cheon et al., 2012, 2018; Guay et al., 2016; Reeve & Cheon, 2016). In the present study, on the other hand, the induced material was a one-page text that looked like a journal article summarizing the results of two fictitious studies. The participants read the text in approximately five minutes and then answered two comprehension questions along with two agreement items. Although the text that looked like a journal article seemed authentic and convincing, a short reading

material may not have been as sufficient as a visual or an auditory material.

Therefore, it might have helped the participants to be induced more if they had received a larger amount of information in the forms of visual, auditory materials.

Also, the participants in the present study were not allowed to discuss the results among themselves as there were participants from different conditions in the same room and the text in each condition had different content to induce the specific condition. The induction process could have been more successful or if the participants had engaged in group discussions, or other activities.

But perhaps the most important reason behind the success of the aforementioned five experiments could be the proximity between the independent and the dependent variables. In all the studies, the effects of an intervention program that aimed to increase the autonomy-supportive behavior was again measured by a difference in participants' autonomy-supportive teaching (Aelterman et al., 2014; Cheon et al., 2012, 2018; Guay et al, 2016; Reeve & Cheon, 2016). In the present study, however, the independent variables were teachers' quality of motivation and their mindset about their teaching ability. The outcome variable was their autonomy-supportive teaching style, which turned out not to be a very good proxy outcome to fixed mindset, in particular and to motivation. Other outcome variables might have been more easily affected by the condition; variables such as teaching efficacy, intrinsic instructional goals, desire to participate in professional development activities, or the amount of time spent on professional development. However, participants' teaching style, which is something that has been established for years may not be easily affected by only reading a text.

Many other experiments conducted within the Mindset framework (Dweck, 2006) revealed desired and significant results (e.g., Derr & Morrow, 2020; Dinger &

Dickhäuser, 2013; Hong et al., 1999; Lou & Noels, 2016; Molway & Mutton, 2020; Sheffler & Cheung, 2020; Smith & Capuzzi, 2019). This success seems to have resulted from the intensive content of the interventions consisting of scientific knowledge on the plasticity of the brain, the incremental nature of intellectual abilities, and prior research (Dinger & Dickhäuser, 2013; Lou & Noels, 2016; Molway & Mutton, 2020; Smith & Capuzzi, 2019). Two of these interventions were implemented in three or more sessions (Lou & Noels, 2016; Molway & Mutton, 2020). Others were conducted in a one-time but longer sessions that took over an hour (Derr & Morrow, 2020; Dinger & Dickhouser, 2013; Smith & Capuzzi, 2019).

Another contributing factor could be the wide range of materials used in the intervention. One of the interventions used trained people as confederates to induce mindset (Sheffler & Cheung, 2020), and others employed different materials including visual and auditory (Lou & Noels, 2016; Molway & Mutton, 2020; Smith & Capuzzi, 2019). There were other interventions that, like the current study, relied solely on reading-based materials. The study by Dinger and Dickhäuser (2013) for instance, had readings about the origins of Leonardo da Vinci's and Einstein's intelligence, similar to what Bergen did back in 1991 (Bergen, 1991). Also, Derr and Morrow (2020) employed a reading-based task to induce fixed or growth mindset. Although these two studies used reading-based materials, they were still able to get conclusive evidence thanks to including sufficient amount of theoretical support in their reading materials. As can be seen, reading-based inductions are more commonly applied in mindset interventions and yield desired results if supported with scientific knowledge to help participants endorse their condition.

There have been other studies where the intervention did not yield the desired results. Looking at another experiment with inconclusive results might shed light on

what went wrong in the current study. The outcomes of the study by Orosz et al. (2017) showed students who received the intervention did not report improvement in their incremental beliefs, motivation, and their grade point average (GPA). Instead, they reported improvement in their incremental personality beliefs for a short period of time. The failure to manifest the desired long-term effects of this intervention can partially be attributed to the different sample profile, which included students with diverse levels of achievement rather than one only with low achievers. Inappropriate timing was also reported to be an inhibiting factor for the endorsement of the conditions as the intervention started in the middle of the school year. Lastly, the underscored theoretical knowledge on the malleability of intellectual abilities in the intervention material was reported to be another cause of the failure to manipulate students' implicit theories of ability (Orosz et al., 2017).

Consequently, based on a review of past successful and non-successful studies, there could be a variety of reasons why the current intervention failed. A contributing factor to the current study might be the background of the teachers. Of the 156 participants, almost all have completed their graduate studies in the fields of English Language Teaching (ELT) or educational sciences as a must to work as an English language instructor at a university. This means that almost all participants are at least familiar with the quality of motivation and mindset framework or have prior knowledge of these concepts. This familiarity or prior knowledge appears to have resulted in the impairment of the induction process. Furthermore, 136 (87%) of the participants work in non-profit foundation universities where there are regular professional development practices, so these instructors are regularly updated about the modern methods and approaches in teaching. Also, in these private universities, taking students in the center of education, approaching the students with tolerance

and understanding are of utmost importance. In short, students are the focus in these universities, and it is a requirement for the instructors to understand students' needs and fulfill them. Therefore, due to the context they work in, it is highly probable that these instructors had already developed an autonomy-supportive teaching style.

It is also important to consider that the nature of manipulation check in the present study could have influenced the results in a negative way. The other previously mentioned studies that used both motivation and mindset interventions implemented more comprehensive manipulation check instruments to ensure that the endorsement resulted from the intervention and not from outside factors. In Cheon et al. (2012) for instance, in addition to a pre-test, a trained observer functioned as the second manipulation check instrument by monitoring the participant teachers' daily teaching practices for a couple of months following the intervention. Similarly, Hong et al. (1999) conducted interviews in their mindset intervention with participant students to check if they figured out or become suspicious about the true purpose of the experiment. Many other experimental studies that used both motivation and mindset frameworks employed pre-tests with at least several items to check if the manipulation was successful (e.g., Aelterman et al, 2014; Cheon et al., 2012; Derr & Morrow, 2020; Dinger & Dickhäuser, 2013; Guay et al., 2016; Molway & Mutton, 2020; Reeve & Cheon, 2016; Sheffler & Cheung, 2020). Being more comprehensive in nature, pre-tests are more likely to function as better manipulation check instruments than the two Likert-type items in this study.

The final determining factor for the inconclusive findings of the current research could be lack of proximity between one of the independent variable and the outcome variable. In particular, teaching mindset about teaching ability as one of the independent variables might have impaired the design of the study since teaching

mindset is not a very effective proxy variable to teachers' motivating style in the classroom. Having a more relevant proxy variable could have resulted in more conclusive results measured by teaching style questionnaire and SIS.

Type of School and Teaching Style

The first supplementary analysis revealed significant differences in teaching profile as a function of the school. Participant teachers working at non-profit foundation schools reported notably higher autonomy-supportive teaching assessed by choosing between a controlling and an autonomy-supportive teaching profile than teachers working in state universities. This finding can be explained by the contextual differences between state and non-profit foundation universities such as having less professional development activities than non-profit foundation universities, and not prioritizing satisfying students' needs as much as non-profit foundation universities do.

Age, Teaching Experience, and Teaching Style

The second supplementary analysis also indicated age and teaching experience as important predictors of participants teaching style. It was found that teachers who are older and have greater teaching experience tend to be less autonomy-supportive in their teaching while novice teachers or teachers with a fewer years of experience tend to teach in a more autonomy-supportive fashion. This finding is partially in line with recent research conducted in another university in Turkey that found English teachers with a greater amount of teaching experience are more inclined to teach in a more controlling fashion (Bagci & Aydin, 2021).

Implications for Practice

In the light of the findings, several implications for practice are showcased in the following. The data shows autonomy-supportive teaching is already high enough

for the instructors teaching in non-profit foundation institutions from which the data was collected. It is clear that they are already familiar with the basic principles of autonomy-supportive teaching. Since these teachers already comprehend the essence of teaching, to further promote the autonomy-supportive practices of these teachers they will need more sophisticated professional development practices. Even teachers inclined to support student autonomy will face challenges. Therefore, school-based learning and reflection groups could help these instructors overcome daily aversive situations that may threaten their autonomy supportive teaching. Such school-based practices can be learning groups where they will discuss and reflect on their experience.

A further professional development practice that could be implemented within these institutions is mentoring project. In one of the non-profit foundation universities from which the data was collected, a mentoring project has been implemented for a couple of years. As I work at this university, I had the chance to participate in the mentoring project. Within the mentoring project, experienced instructors volunteer to show the ropes to newly recruited and mostly novice teachers. Each experienced volunteering instructor is matched with a newly recruited instructor at the beginning of the academic year. Throughout two semesters, this pair of instructors conduct meetings, classroom observations, as well as communicate or meet in short notice if needed. From my personal experience, I can say that this collaboration is as fruitful for the experienced teacher as it is for the new coming teacher. Therefore, a mentoring project of a similar nature would be more adaptive and remedial for these universities than traditional seminars or conferences.

The data confirms that the rate of endorsement was high in the growth mindset condition which means that these instructors can be good mentors for their

students as well to adopt more of a growth mindset about their intellectual abilities. As prior research suggests, students embrace their teachers' implicit beliefs on their intellectual abilities (Rattan et al., 2012). Therefore, it is safe to say instructors teaching in these universities will facilitate their students to adopt more of an incremental belief and increase their students' autonomous motivation as these teachers themselves highly appreciate autonomous reasons for teaching. We can conclude that these instructors set a very good example for their students.

Regarding the instructors working at state universities, professional development practices that enable these teachers to become more autonomy-supportive in their teaching are recommended. In particular, state universities could consider implementing the Autonomy-Supportive Intervention Program (ASIP) in order to equip their instructors with practical tools and strategies to teach in a more autonomy-supportive fashion (Cheon et al., 2012, 2018; Reeve & Cheon, 2016).

Implications for Further Research

Perhaps the most important implication for further research is choosing a more comparable proxy outcome variable to measure the effects of teachers' quality of motivation and their teaching mindsets. An alternative outcome variable could be teacher self-efficacy, intrinsic instructional goals, the desire to participate or time spent on professional development practices.

Additionally, a different strategy or method to induce the conditions is recommended. Using a variety of materials including videos, auditory materials or trained confederates could be more effective in inducing the conditions. As showcased in the discussion of main findings, the duration of the induction should also be increased in order to ensure the endorsement process.

Another recommendation would be changing the order of the instruments that measure the outcome variable (i.e., teaching style questionnaire and SIS questionnaire) in order to prevent participants from generalizing their teaching fashion with the teaching profile question first. Further explanation is provided in the limitations.

The final implication for future research is conducting the present experiment with a different sample from state universities. This is mainly due to the difference in participants' teaching style as function of the school. Although teachers from state universities constitute only 13% of the total sample, significant mean differences were found in their teaching style assessed by teaching profile questionnaire. It can be concluded, therefore, that running the experiment in state universities would yield different results. Also, with teachers of younger students working in K-12 state schools, especially those working in less privileged areas who do not have access to resources to follow modern methods and approaches in teaching would benefit greatly from the results of an experiment of this nature. The findings of such a study would contribute substantially to both the field and the practice.

Limitations

There are several limitations of the current research. First off, the results of the outcome variable are based on the instructors' self-reports. In order to have more reliable outcomes, further research might employ triangulation methods such as including students' reports and classroom observations. There is a possibility that the instructors know what autonomy-supportive teaching is, but do not fully implement it in class.

Another limitation of the study is the order of the instruments that were used to measure the outcome variable. The participants were first presented the Teaching

Style questionnaire (Appendix B). This instrument consisted of one bipolar question in which two different teacher profiles (i.e., the protagonist and the coordinator) were presented. The participants were asked to read them both and choose the profile that is most like them. Then they decided whether this profile is really true, true or sort of true for them. The second instrument was the SIS questionnaire which consisted of six authentic teaching scenarios commonly occur in the classroom (Appendix C). Each scenario was followed by two different ways for a teacher to handle the situation. The participants were expected to read the scenario and decide how much each way of handling the situation describes what they do in the classroom. The order of these two instruments may have caused a problem because the participants first made a general statement about their teaching style by choosing either the controlling or the autonomy-supportive teacher profile. After making such a general statement about themselves, the participants may have had difficulty in acknowledging their certain teaching practices that fall into the other profile. For instance, for a participant who chose the autonomy-supportive teacher profile, it might have been difficult to acknowledge some controlling behavior, and this might have damaged the data. Therefore, further research should present the participants with the SIS questionnaire first, so they could more objectively describe their classroom behavior.

The final limitation of the current study is the confirmation bias which explains the high number of incorrect answers in controlled motivation condition. It seems that the participants were not affected by the piece of information which suggested “finding personal meaning in teaching” is not one of the reasons that motivate teachers. As this piece of information contradicted teachers’ previous notions and beliefs, they seem to have remained relatively unaffected by it.

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Appendix A

Induced Condition 1: First Half of the Participants

Friday
Feb 18, 2022

Journal of Teaching Practice

Volume #57,
Issue #2

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Motivation Behind Teaching

In Study 1, Lauren Rigby and Timothy Davis (2021) worked with a large sample of high school teachers and investigated their quality of motivation to teach. They used a comprehensive instrument which consisted of various reasons for teaching. The reasons included but not limited to being interested in the subject, satisfying the school administration, finding value in lesson planning, and feeling admired by or popular among colleagues. Following the Reasons for Teaching Questionnaire (RTQ), participant teachers were asked to report their teaching behavior in terms of time spent on lesson planning, preparation of materials, and activities. In addition, data was collected from their students and the school administrators. The results showed a significant correlation between certain reasons for teaching and the increased effort in teaching. For instance, the study found that when teachers are interested in the subject they teach, find a personal meaning in teaching, and enjoy it, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. On the other hand, satisfying the school administration and parents was associated with less time and effort on lesson planning and preparation of less sophisticated materials and activities.

Origins of Teaching Ability

Study 2 investigated how teaching attributes are acquired. In his longitudinal study, Knowles (2019) had slightly over 1000 teacher participants from different states across the US and examined their teaching behavior for 10 years. The data collected for this study includes demographic information, teachers' performance rates taken from the school administration, and students' ratings of their teachers. At the end of the study, Knowles found that regardless of their cultural, social, and ethnic backgrounds, some of the participant teachers demonstrated considerable improvement in their personal attributes such as responding to students' needs while others failed to do so. After observing the participant teachers for a decade, Knowles found that teaching ability is highly malleable in nature and can be improved to a great extent with intentional effort, practice, and guidance. Many things in participants' environment shifted in those 10 years, including their participation to professional development activities, personal effort to develop their teaching ability, asking for students' feedback about teaching style, and taking risks to include new practices into their teaching. As a result, these teachers' teaching abilities were found to improve considerably by the end of the study. According to Knowles, good teachers are made, not born.

In the light of the recent developments above, it seems clear that teaching out of interest and enjoyment, and teaching effort are of utmost importance for teachers to thrive.

Ryan Morgan & Jerome Berglund

Follow-up questions:

1. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Finding a personal meaning in teaching
 - b) Finding their subject interesting
 - c) **Making their principals or parents happy**
 - d) Enjoying teaching

2. In his longitudinal study, John Knowles (2019) found that
 - a) Social background is a determining factor on teachers' teaching ability.
 - b) **Some teachers improved their teaching ability a lot within 10 years.**
 - c) Teaching ability is either inherited or determined at a very young age.
 - d) The intentional effort and guidance seem to play little role on teaching ability.

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about an increase in teaching effort out of interest in the subject and personally meaningful reasons?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about the improvement of teaching ability through effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Induced Condition 1: Second Half of the Participants

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Feb 18, 2022

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Motivation Behind Teaching

In Study 2, Lauren Rigby and Timothy Davis (2021) worked with a large sample of high school teachers and investigated their quality of motivation to teach. They used a comprehensive instrument which consisted of various reasons for teaching. The reasons included but not limited to being interested in the subject, satisfying the school administration, finding value in lesson planning, and feeling admired by or popular among colleagues. Following the Reasons for Teaching Questionnaire (RTQ), participant teachers were asked to report their teaching behavior in terms of time spent on lesson planning, preparation of materials, and activities. In addition, data was collected from their students and the school administrators. The results showed a significant correlation between certain reasons for teaching and the increased effort in teaching. For instance, the study found that when teachers are interested in the subject they teach, find a personal meaning in teaching, and enjoy it, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. On the other hand, satisfying the school administration and parents was associated with less time and effort on lesson planning and preparation of less sophisticated materials and activities.

In the light of the recent developments above, it seems clear that teaching effort, and teaching out of interest and enjoyment are of utmost importance for teachers to thrive.

Jerome Berglund & Ryan Morgan

Follow-up questions:

1. In his longitudinal study, John Knowles (2019) found that
 - a) Social background is a determining factor on teachers' teaching ability.
 - b) **Some teachers improved their teaching ability a lot within 10 years.**
 - c) Teaching ability is either inherited or determined at a very young age.
 - d) The intentional effort and guidance seem to play little role on teaching ability.

2. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Finding a personal meaning in teaching
 - b) Finding their subject interesting
 - c) **Making their principals or parents happy**
 - d) Enjoying teaching

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about the improvement of teaching ability through effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about an increase in teaching effort out of interest in the subject and personally meaningful reasons?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Induced Condition 2: First Half of the Participants

Friday
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Origins of Teaching Ability

Study 2 investigated how teaching attributes are acquired. In his longitudinal study, John Knowles (2019) had slightly over 1000 teacher participants from different states across the US and examined their teaching behavior for 10 years. The data collected for this study includes demographic information, teachers' performance rates taken from the school administration, and students' ratings of their teachers. At the end of the study, Knowles found that regardless of their cultural, social, ethnic, and even educational backgrounds, some of the participant teachers demonstrated personal attributes such as responding to students' needs while others failed to do so. After observing the participant teachers for a decade, Knowles found that participants' teaching ability did not change much in ten years. Many things in participants' environment shifted in that time including their participation to professional development activities, but their teaching ability stayed relatively constant. Ineffective teachers remained ineffective and vice versa. Knowles (2019) concluded that "personal attributes that define teaching ability such as responding to students' needs seem to have a strong dispositional component that is either inherited or determined at a very young age. The environmental factors seem to play little role on these attributes. According to Knowles, good teachers are born, not made."

In the light of the recent developments above, it seems clear that teaching out of interest and enjoyment, and innate teaching ability are of utmost importance for teachers to thrive.

Ryan Morgan & Jerome Berglund

Follow-up questions:

- 1. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:**
 - a) Finding a personal meaning in teaching
 - b) Making their principals or parents happy**
 - c) Finding their subject interesting
 - d) Enjoying teaching

- 2. In his longitudinal study, John Knowles (2019) found that**
 - a) Participant teachers improved their teaching ability a lot within 10 years.
 - b) Educational background is a determining factor on teachers' teaching ability.
 - c) Participant teachers' teaching abilities remained relatively constant in 10 years.**
 - d) The environmental factors seem to play a significant role on teaching ability.

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about an increase in teaching effort out of interest in the subject and personally meaningful reasons?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about the unchanged teaching ability despite experience, practice, and effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Induced Condition 2: Second Half of the Participants

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In the light of the recent developments above, it seems clear that innate teaching ability and teaching out of interest and enjoyment are of utmost importance for teachers to thrive.

Jerome Berglund & Ryan Morgan

Motivation Behind Teaching

In Study 2, Lauren Rigby and Timothy Davis (2021) worked with a large sample of high school teachers and investigated their quality of motivation to teach. They used a comprehensive instrument which consisted of various reasons for teaching. The reasons included but not limited to being interested in the subject, satisfying the school administration, finding value in lesson planning, and feeling admired by or popular among colleagues. Following the Reasons for Teaching Questionnaire (RTQ), participant teachers were asked to report their teaching behavior in terms of time spent on lesson planning, preparation of materials, and activities. In addition, data was collected from their students and the school administrators. The results showed a significant correlation between certain reasons for teaching and the increased effort in teaching. For instance, the study found that when teachers are interested in the subject they teach, find a personal meaning in teaching, and enjoy it, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. On the other hand, satisfying the school administration and parents was associated with less time and effort on lesson planning and preparation of less sophisticated materials and activities.

Follow-up questions:

1. In his longitudinal study, John Knowles (2019) found that
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 - b) Educational background is a determining factor on teachers' teaching ability.
 - c) Participant teachers' teaching abilities remained relatively constant in 10 years.
 - d) The environmental factors seem to play a significant role on teaching ability.

2. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Finding a personal meaning in teaching
 - b) Making their principals or parents happy
 - c) Finding their subject interesting
 - d) Enjoying teaching

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about the unchanged teaching ability despite experience, practice and effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about an increase in teaching effort out of interest in the subject and personally meaningful reasons?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Induced Condition 3: First Half of the Participants

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In the light of the recent developments above, it seems clear that teaching out of social appreciation and approval, and teaching effort are of utmost importance for teachers to thrive.

Ryan Morgan & Jerome Berglund

Follow-up questions:

1. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Satisfying school administration and parents
 - b) Feeling admired by their colleagues
 - c) **Teaching out of interest or enjoyment**
 - d) Making students perform higher in tests

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 - a) Social background is a determining factor on teachers' teaching ability.
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Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about an increase in teaching effort out of the desire to satisfy parents and principals?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about the improvement of teaching ability through effort?

1	2	3	4	5
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 - a) Social background is a determining factor on teachers' teaching ability.
 - b) **Some teachers improved their teaching ability a lot within 10 years.**
 - c) Teaching ability is either inherited or determined at a very young age.
 - d) The intentional effort and guidance seem to play little role on teaching ability.

2. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Satisfying school administration and parents
 - b) Feeling admired by their colleagues
 - c) **Teaching out of interest or enjoyment**
 - d) Making students perform higher in tests

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about the improvement of teaching ability through effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about an increase in teaching effort out of the desire to satisfy parents and principals?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Induced Condition 4: First Half of the Participants

Friday
Feb 18, 2022

Journal of Teaching Practice

Volume #57,
Issue #2

An ever-growing body of research has investigated teaching. Particularly in the last decade, a number of comprehensive studies have been reported in the United States and in Europe. These studies focus primarily on the motivation behind teaching and the origins of teaching ability and provide the clearest answers so far in the ongoing debate. The two most significant of them have recently been published by Harvard scholars, Lauren Rigby and Timothy Davis (2021), and John Knowles (2019). Summaries of these studies are presented below.

Motivation Behind Teaching

In Study 1, Lauren Rigby and Timothy Davis (2021) worked with a large sample of high school teachers and investigated their quality of motivation to teach. They used a comprehensive instrument which consisted of various reasons for teaching. The reasons included but not limited to being interested in the subject, satisfying the school administration, finding value in lesson planning, and feeling admired by or popular among colleagues. Following the Reasons for Teaching Questionnaire (RTQ), participant teachers were asked to report their teaching behavior in terms of time spent on lesson planning, preparation of materials, and activities. In addition, data was collected from their students and the school administrators. The results showed a significant correlation between certain reasons for teaching and the increased effort in teaching. For instance, the study showed that when teachers are interested in improving students' performance to satisfy principals and parents or to be admired by them, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. On the other hand, reasons such as interest in the subject they teach was associated with average time spent on lesson planning and preparation of less sophisticated materials and activities.

Origins of Teaching Ability

Study 2 investigated how teaching attributes are acquired. In his longitudinal study, John Knowles (2019) had slightly over 1000 teacher participants from different states across the US and examined their teaching behavior for 10 years. The data collected for this study includes demographic information, teachers' performance rates taken from the school administration, and students' ratings of their teachers. At the end of the study, Knowles found that regardless of their cultural, social, ethnic, and even educational backgrounds, some of the participant teachers demonstrated personal attributes such as responding to students' needs while others failed to do so. After observing the participant teachers for a decade, Knowles found that participants' teaching ability did not change much in ten years. Many things in participants' environment shifted in that time including their participation to professional development activities, but their teaching ability stayed relatively constant. Ineffective teachers remained ineffective and vice versa. Knowles (2019) concluded that "personal attributes that define teaching ability such as responding to students' needs seem to have a strong dispositional component that is either inherited or determined at a very young age. The environmental factors seem to play little role on these attributes. According to Knowles, good teachers are born, not made.

In the light of the recent developments above, it seems clear that teaching out of social appreciation and approval, and innate teaching ability are of utmost importance for teachers to thrive.

Ryan Morgan & Jerome Berglund

Follow-up questions:

1. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Satisfying school administration and parents
 - b) Feeling admired by their colleagues
 - c) **Teaching out of interest or enjoyment**
 - d) Making students perform higher in tests

2. In his longitudinal study, John Knowles (2019) found that
 - a) Participant teachers improved their teaching ability a lot within 10 years.
 - b) **Participant teachers' teaching abilities remained relatively constant in 10 years.**
 - c) Educational background is a determining factor on teachers' teaching ability.
 - d) The environmental factors seem to play a significant role on teaching ability.

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about an increase in teaching effort out of the desire to satisfy parents and principals?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about the unchanged teaching ability despite experience, practice, and effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Induced Condition 4: Second Half of the Participants

Friday
Feb 18, 2022

Journal of Teaching Practice

Volume #57,
Issue #2

An ever-growing body of research has investigated teaching. Particularly in the last decade, a number of comprehensive studies have been reported in the United States and in Europe. These studies focus primarily on the origins of teaching ability and the motivation behind teaching and provide the clearest answers so far in the ongoing debate. The two most significant of them have recently been published by Harvard scholars, John Knowles (2019) and Lauren Rigby and Timothy Davis (2021). Summaries of these studies are presented below.

Origins of Teaching Ability

Study 1 investigated how teaching attributes are acquired. In his longitudinal study, John Knowles (2019) had slightly over 1000 teacher participants from different states across the US and examined their teaching behavior for 10 years. The data collected for this study includes demographic information, teachers' performance rates taken from the school administration, and students' ratings of their teachers. At the end of the study, Knowles found that regardless of their cultural, social, ethnic, and even educational backgrounds, some of the participant teachers demonstrated personal attributes such as responding to students' needs while others failed to do so. After observing the participant teachers for a decade, Knowles found that participants' teaching ability did not change much in ten years. Many things in participants' environment shifted in that time including their participation to professional development activities, but their teaching ability stayed relatively constant. Ineffective teachers remained ineffective and vice versa. Knowles (2019) concluded that "personal attributes that define teaching ability such as responding to students' needs seem to have a strong dispositional component that is either inherited or determined at a very young age. The environmental factors seem to play little role on these attributes. According to Knowles, good teachers are born, not made.

Motivation Behind Teaching

In Study 2, Lauren Rigby and Timothy Davis (2021) worked with a large sample of high school teachers and investigated their quality of motivation to teach. They used a comprehensive instrument which consisted of various reasons for teaching. The reasons included but not limited to being interested in the subject, satisfying the school administration, finding value in lesson planning, and feeling admired by or popular among colleagues. Following the Reasons for Teaching Questionnaire (RTQ), participant teachers were asked to report their teaching behavior in terms of time spent on lesson planning, preparation of materials, and activities. In addition, data was collected from their students and the school administrators. The results showed a significant correlation between certain reasons for teaching and the increased effort in teaching. For instance, the study showed that when teachers are interested in improving students' performance to satisfy principals and parents or to be admired by them, they report increased time and effort on lesson planning, are better prepared for their class, and prepare more sophisticated materials for their students. On the other hand, reasons such as interest in the subject they teach was associated with average time spent on lesson planning and preparation of less sophisticated materials and activities.

In the light of the recent developments above, it seems clear that innate teaching ability and teaching out of social appreciation and approval are of utmost importance for teachers to thrive.

Jerome Berglund & Ryan Morgan

Follow-up questions:

1. In his longitudinal study, John Knowles (2019) found that
 - a) Participant teachers improved their teaching ability a lot within 10 years.
 - b) Participant teachers' teaching abilities remained relatively constant in 10 years.
 - c) Educational background is a determining factor on teachers' teaching ability.
 - d) The environmental factors seem to play a significant role on teaching ability.

2. All the following reasons predicted increased time in lesson planning and preparation in the study by Rigby and Davis (2021) except:
 - a) Satisfying school administration and parents
 - b) Feeling admired by their colleagues
 - c) Teaching out of interest or enjoyment
 - d) Making students perform higher in tests

Below, there are two questions regarding the two studies you read. Please indicate the degree of your agreement with each statement. Remember that there are no right or wrong answers.

To what extent do you agree with the results of Study 1 about the unchanged teaching ability despite experience, practice, and effort?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

To what extent do you agree with the results of Study 2 about an increase in teaching effort out of the desire to satisfy parents and principals?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree

Appendix B

Condition 1: Teaching Style Questionnaire (First Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) when teachers are motivated by personally meaningful reasons such as interest in their subject, they put more effort in their teaching and (ii) teaching ability can be significantly improved through effort. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Really true for me	True for me	Sort of true for me	BUT	Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.	Sort of true for me	True for me	Really true for me
☐	☐	☐			☐	☐	☐
Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.							

Condition 1: Teaching Style Questionnaire (Second Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) teaching ability can be significantly improved through effort and (ii) when teachers are motivated by personally meaningful reasons such as interest in their subject, they put more effort in their teaching. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Really true for me	True for me	Sort of true for me	Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.	BUT	Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.	Sort of true for me	True for me	Really true for me
☐	☐	☐				☐	☐	☐

Condition 2: Teaching Style Questionnaire (First Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) when teachers are motivated by personally meaningful reasons such as interest in their subject, they put more effort in their teaching and (ii) teaching ability remains relatively stable over time. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Really true for me	True for me	Sort of true for me	Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.	BUT	Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.	Sort of true for me	True for me	Really true for me
☐	☐	☐				☐	☐	☐

Condition 2: Teaching Style Questionnaire (Second Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) teaching ability remains relatively stable over time and (ii) when teachers are motivated by personally meaningful reasons such as interest in their subject, they put more effort in their teaching. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

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☐	☐	☐				☐	☐	☐

Condition 3: Teaching Style Questionnaire (First Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) when teachers are motivated by reasons such as feeling admired by administration and colleagues, they put more effort in their teaching and (ii) teaching ability can be significantly improved through effort. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Really true for me	True for me	Sort of true for me				Sort of true for me	True for me	Really true for me
☐	☐	☐	Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.	BUT	Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.	☐	☐	☐

Condition 3: Teaching Style Questionnaire (Second Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) teaching ability can be significantly improved through effort and (ii) when teachers are motivated by reasons such as feeling admired by administration and colleagues, they put more effort in their teaching. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Really true for me	True for me	Sort of true for me			Sort of true for me	True for me	Really true for me	
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Condition 4: Teaching Style Questionnaire (First Half of the Participants)

Teaching Style

Instructions

The studies you read showed that (i) when teachers are motivated by reasons such as feeling admired by administration and colleagues, they put more effort in their teaching and (ii) teaching ability remains relatively stable over time. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Really true for me	True for me	Sort of true for me			Sort of true for me	True for me	Really true for me	
☐	☐	☐	Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.	BUT	Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.	☐	☐	☐

Condition 4: Teaching Style Questionnaire (Second Half of the Participants)

Instructions

The studies you read showed that (i) teaching ability remains relatively stable over time and (ii) when teachers are motivated by reasons such as feeling admired by administration and colleagues, they put more effort in their teaching. Now think about yourself as a teacher. Below you will find the profiles of two different teachers. Please decide if you are more like the teacher described on the left side of the statement or more like the one on the right side. After choosing the side that is most like you, please mark whether this profile is really true, true, or just sort of true for you.

Teaching Style

Really true for me	True for me	Sort of true for me			Sort of true for me	True for me	Really true for me	
☐	☐	☐	Some teachers feel that they are the protagonists of the classroom. They know what is best for their students, what to teach, and how in order to make students learn the subject. They believe that if students follow their instructions, they will succeed. They also believe that students should obey the classroom rules. As they know what students need, the success they are preparing them for will make students happy and satisfied. Therefore, having students with discipline is important to these teachers. They believe that principals, colleagues, and parents will be satisfied with their teaching.	BUT	Other teachers feel that they are the coordinators in the classroom. They try to find out what is best for their students, what to teach, and how in order to help students discover their potentials. They believe that if students discover how to learn a subject, they will succeed. They also believe that students need to communicate their needs to teachers and set up their rules in the classroom. By doing so, students will feel happy and satisfied. Therefore, having students with initiative is important to these teachers. It is enjoyable and personally important for them to see their students building their own learning conditions.	☐	☐	☐

Appendix C

Situations in School Questionnaire: The 6 Vignettes

Instructions

The *Situations in School* questionnaire lists 6 different teaching situations that commonly occur during classroom instruction. For each situation, two ways a teacher might handle that situation are presented. There are no right or wrong answers. Instead, you are asked to indicate how much each way of handling the situation does or does not describe what *you* would do in similar situations. If the way of teaching describes extremely well what you would do to handle the situation, then circle a number near 7 for that item. If the way of teaching does not describe at all what you would do, circle a number near 1. If the way of teaching only somewhat describes your teaching, circle a number near 4, using the following 7-point scale:

1	2	3	4	5	6	7
Does not describe me at all			Somewhat describes me			Describes me extremely well

1. Classroom Rules

You are thinking about classroom rules. So, you:

- 1 2 3 4 5 6 7 Post your rules. Tell students they need to follow all the rules. Tell students about the results of disobeying the rules.
- 1 2 3 4 5 6 7 Invite students to suggest a set of guidelines that will help them to feel comfortable in class.

2. Non-Responsive Students

You ask your students a challenging, but a doable question to involve them in the lesson. However, as during the previous lesson, you get only silence, as no student answers your question. You ...

- 1 2 3 4 5 6 7 Name a student and you urge that student to answer your question.
- 1 2 3 4 5 6 7 Ask students to discuss the question with their neighbor and then invite them to share their answer within their groups.

3. Students Complain

At a difficult point in the lesson, students begin to complain. In response, you:

1 2 3 4 5 6 7 Accept their negative feelings as okay. Assure them that you are open to their input and suggestions.

1 2 3 4 5 6 7 Insist they pay attention. They must learn this material for their own good.

4. Anxiety Surfaces

During a class assignment, you notice that some students are showing signs of anxiety. Sensing that anxiety, you:

1 2 3 4 5 6 7 Acknowledge that they look anxious and stressed. Invite them to voice their sense of unease.

1 2 3 4 5 6 7 Insist that they must act in a more mature way.

5. Transition to a New Activity

One learning activity ends and you are about to make the transition to a new learning activity. You:

1 2 3 4 5 6 7 Command the students to hurry up and finish the old activity.

1 2 3 4 5 6 7 Be patient; confirm that those who are still working hard may have the time they need to finish up.

6. Test Results

You have finished scoring a test. Several students scored low again, even though you paid extra attention to this material last week. You...

1 2 3 4 5 6 7 Insist that low scores are unacceptable to you. Tell students that they must score higher for their own good.

1 2 3 4 5 6 7 Listen with patience to what the students say about the test performance.

Dear Hocam, this is the end of the questionnaire. Thanks a million for your valuable contribution. The results will be shared with you in the near future.

Appendix D

Ethical Approval



APPENDIX - A

Bilkent Üniversitesi

Akademik İşler Rektör Yardımcılığı

Tarih : 8 Mayıs 2022

Gönderilen : Vahide Teke Akay

Tez Danışmanı : Aikaterini-Aliki Michou

Gönderen : H. Altay Güvenir
İnsan Araştırmaları Etik Kurulu Başkanı

Konu : "The Role of ..." çalışması etik kurul onayı

Üniversitemiz İnsan Araştırmaları Etik Kurulu, 8 Mayıs 2022 tarihli görüşme sonucu, "The Role of Quality of Motivation and Mindset on Teaching Style in English Language Instructors" isimli çalışmanız kapsamında yapmayı önerdiğiniz etkinlik için etik onay vermiş bulunmaktadır. Onay, ekte verilmiş olan çalışma önerisi, çalışma yürütücüleri ve bilgilendirme formu için geçerlidir.

Bu onay, yapmayı önerdiğiniz çalışmanın genel bilim etiği açısından bir değerlendirmedir. Çalışmanızda, kurumumuzun değerlendirmesi dışında kalabilen özel etik ve yasal sınırlamalara uymakla ayrıca yükümlüsünüz.

Kovid-19 salgını nedeniyle konulmuş olan kısıtlamaların yürürlükte olduğu süre içinde, tüm komite toplantıları elektronik ortamda yapılmaktadır; aşağıda isimleri bulunan Bilkent Üniversitesi Etik Kurulu Üyeleri adına bu yazıyı imzalama yetkisi kurul başkanındadır.

Etik Kurul Üyeleri:

Ünvan / İsim	Bölüm / Uzmanlık	
Prof.Dr. H. Altay Güvenir	Bilgisayar Mühendisliği	Başkan
Prof.Dr. Erdal Onar	Hukuk	Üye
Prof.Dr. Haldun Özaktaş	Elektrik ve Elektronik Müh.	Üye
Doç.Dr. Işık Yuluğ	Moleküler Biyoloji ve Genetik	Üye
Dr. Öğr. Üyesi Burcu Ayşen Ürgen	Psikoloji	Üye
Dr. Öğr. Üyesi Didem Özkul McGeoch	İletişim ve Tasarımı	Yedek Üye
Dr. Öğr. Üyesi A.Bariş Özbilen	Hukuk	Yedek Üye

Kurul karar/toplantı No: 2022_05_08_04

Appendix E

Consent Form

Dear Participant,

This research study has been designed to investigate English language instructors' perceptions about their teaching. The study is being conducted by _____ under the supervision of _____ and _____.

Should you accept to take part in the study, you will read a text around a page and anonymously answer a short questionnaire which takes approximately 5 minutes to fill out. Your responses will be kept confidential. Participation is voluntary and you have the right to withdraw at any time. The relation with your institution will not be affected if you do not participate or if you withdraw your participation. There are no foreseeable risks to your participation in this research.

If you have any questions regarding the research, please contact _____, or _____, or _____.

The results will be published and shared with all participants through e-mail after the study is completed. If you are interested in the results of our study, you can provide your e-mail address to receive a debriefing. If you are willing to participate in this study, please sign the statement of consent below. Thank you for taking part in this research project.

Statement of Consent

I have read the information above, and I give consent to participate in this project.

Name Surname:

E-mail:

Signature of the Participant

Date

This consent form is obtained by _____.

Signature