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Academic Self-Efficacy of University Students Studying Music: A Structural Equation Model Approach

Research Article

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ABSTRACT

There is an ever growing interest on self-efficacy in literature since Bandura introduces social cognitive theory. Current studies focus on learning abilities, academic skills, and coping with stress and exam anxiety. Reminding that self-efficacy is a cognitive process and task-specific, there is a scant literature on developing self-efficacy of the students studying music. Hence, this study aims to identify the determinants and consequences of academic self-efficacy of university students studying music by means of a structural equation model. The findings of the study are in compliance with prior studies. However, this study includes mindfulness as a determinant of self-efficacy and motivation for individual instrument class and discusses the interaction. To conclude, researchers and academicians are kindly asked to develop a mindful-based intervention program strengthened with smarter goals to promote self-efficacy and motivation for individual instrument class.

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Keywords:
Academic self-efficacy, Motivation, Mindfulness, Daily goals, Music education

Introduction

Instrument education could be described as "the whole set of methods created to reach musical expression based on technical basis" Herdem (2018: 945). The instrument training, which requires integrating physical, cognitive and emotional skills together in a coordinated way, is a very difficult process. In order to produce successful performance, instrument training is a planned, intensive and regular course that requires long hours of practice in a certain discipline, and it is very important to go on practicing in a progressive and regular pattern without any interruption. It is well-known that when the practice is somehow disrupted, it is reflected negatively on the performance of the instrument as soon as possible. Therefore, students isolate themselves in order to increase their concentration and solely focus on individual instrument playing. Sternberg and Williams' (2002) research reveals that students' motivation will help them to have a regular

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working pace of the instrument study process. Students attending music teaching and/or conservatory are all aware that the success is hidden in frequent practices. However, they don't know how to cope with distractors. Zimmerman and colleagues (1992) stress that self-efficacy beliefs of the students regulate their persistence in case of challenges as well as the effort they demonstrate. The students with higher self-efficacy study harder and overcome difficulties easier (Schunk and Pajares, 2002). Therefore, there has been a growing interest on studies related to self-efficacy beliefs of the students (Zimmerman and Schunk, 1989; Schunk, 1991; Pajares, 1996; Zimmerman, 2000; Urdan and Schoenfelder, 2006). In fact, it is obvious that self-efficacy is a critical factor predicting academic performance of the students (Schunk, 1995; Pajares, 1996; Bandura, 2012).

To our best understanding, there are scant literature on motivation for individual instrument class (Girgin, 2015; Herdem, 2019), daily goals (Bakioğlu and Çapan, 2015: 65), and mindfulness with regard to self-efficacy of university students studying music. Moreover, literature on self-efficacy recalls future studies to determine the factors affecting academic success of the students (Bandura and Schunk, 1981; Schunk, 1981, 1989; Zimmerman, 2000; Miyaki, 2017, 2020). Besides, it is of great significance for students to recognize and motivate themselves to achieve academic success. Therefore, studying self-efficacy may contribute to literature with a different perspective (Schunk, 1989). Towards this end, this study aims at identifying the relation of academic self-efficacy of the students studying music at faculty of education and conservatory with motivation for individual instrument class, daily goals, and mindfulness. Within this framework, the rest of the study is structured as follows; after theoretical framework is discussed, research method is detailed as study group and the questionnaire employed in the study.

Theoretical Framework

Self-efficacy is a critical construct that helps to explain students' performance and achievement-related behaviors (Schunk, 1989). Bandura (1994) defines self-efficacy as belief of the self in being capable of planning, organizing, and completing a task successfully. In short, self-efficacy is belief about one's perceived capability (Pajares, 1996). According to social cognitive theory, individuals have discretion in shaping the events and the way they live (Bandura, 2012). Individuals with a low self-efficacy may avoid whatever the task is while the one with high self-efficacy may have more will to participate (Schunk, 1989). Then it is not wrong to say that self-efficacy is a context-specific criterion affected by behavioral determinants and environmental ones as well personal characteristics. In other words, self-efficacy is a self-belief system communicating with environment reciprocally (Bandura, 2012:13). Pajares (1996) discusses social cognitive theory contributions to academic setting and concludes that students are inclined to generalize their self-belief about capabilities. As Ersanlı (2015) notes that self-efficacy as a cognitive process is task-specific. Moreover, in order to reach a judgment about one's ability, a benchmarking or a comparison with a specific standard would be made by the students (Urdan and Schoenfelder, 2006:338). To this end, following recommendations made by Pajares (1996), this study focuses on a clear activity for the students studying music, i.e. individual instrument playing.

There are many studies regarding students advocating that the higher self-efficacy is the higher academic success is (Bandura, 1997). With a wider perspective, self-efficacy is required for a student to cope with the challenges during university life to concentrate on learning new skills rather than engaging with distracting activities. However, Pintrich and De Groot (1990) and Pajares (1996) report that students are not aware how to raise their self-efficacy. Once students develop a strong belief about their capabilities, a failure will not have much negative effect as expected (Schunk, 1991). That's why it is of great significance to determine the predictors of self-efficacy and to help students to demonstrate achievement-related behavior. As Bandura (2012) underlines that self-efficacy is not a personality characteristics instead it is a multi-dimensional construct to be explored. Hence, there is an ever growing interest in literature to identify self-efficacy and apply it to promote academic performance of the students (Zimmerman and Schunk, 1989;

Zimmerman et al., 1992). In compliance with the efforts in self-efficacy literature, this study aims at identifying the relation of mindfulness, daily goals, motivation for individual instrument class and as well as demographic factors with self-efficacy.

There are many motivation theories putting forward that individuals are motivated if they believe in that action would lead to fruitful outcomes they value (Schunk, 1989). According to Sungurtekin (2010), motivation is defined as the individual's determination to act decisively by having an inner strength and desire to achieve their goals. Regarding university students, motivation is a controversial factor for academic achievement (Corti and Gelati, 2019) since the students require motivation to initate self-regulating strategies to benefit cognitive skills and to optimal use of resources. Motivation is a concept to explain how a goal-oriented behavior commences, moves further, and ends up (Brophy, 1998). Sternberg and Williams (2002) describe motivation as an internal energy and cognitive process to achieve the goals. Self-efficacy beliefs affect the quality of life and influence how well individuals motivate themselves (Bandura, 2012:13). A positive self-efficacy with a high motivation leads to cope with challenging tasks and raises awareness to show great effort to succeed (Pintrich and De Groot, 1990; Schunk, 1991; Bandura, 1993; Bandura, 1997; Cain and Dweck, 1995; Schunk and Pajares, 2002; Hsieh et al., 2007; Alivernini and Lucidi (2011); McGeown et al., 2014; Hwang et al., 2015; Arık, 2019; Koca and Dadandı, 2019). On the other hand, Ersanlı (2015) reports a negative correlation between self-efficacy and motivation. It is normal to expect a negative correlation following acquisition of a new skill (Schunk, 1989). If one doesn't feel self-adequate, (s)he drops out in case of any challenge and never behaves independently. Regarding self-efficacy, Bandura and Schunk (1981) concedes that the effect of motivation on self-efficacy is a process through goal-setting.

Goal-setting is critical factor related to self-efficacy (Schunk, 1989). Individuals with smart goals are prone to perform better on goal-specific tasks (Mikami, 2020: 29). Smart goals need to be specific, measurable, attainable, reasonable, and timely. Indeed there are two sorts of goals; long-term goals related to future expectations and short-term daily goals (King et al., 1998). Daily goals are set for a smooth and effortless transition to long-term life goals (Emmons et al., 1998). Daily goals are considered significant in order to display expected behavior towards achievement (Bakioğlu and Çapan, 2015). Students usually identify daily goals related to connections, careers, and leisure time (Eryılmaz, 2010). Daily goals a bridge role for university students to realize their long-term goals, to increase life satisfaction, and raise their awareness (Bakioğlu and Çapan, 2015: 65). Because the success of long-term goals has been reported to require a clear planning of daily goals and daily schedule (Emmons et al., 1998). Mikami (2017) tested a structural equation model and confirmed that goal-oriented students have higher self-efficacy. Similarly, Bandura and Schunk (1981) report that students with short-term goals demonstrate higher self-efficacy. Furthermore, Schunk (1985) and Ghaleb and colleagues (2015) purport that self-set goals develop self-efficacy. Likewise Zimmerman and colleagues (1992) confirm the positive relation between self-efficacy for achievement and grade goals of the students. In addition; as Schunk (1995) asserts, goals are directly related with motivation and goals affects behaviors through motivation (Locke and Latham, 1990). King's (2016) study provides enough evidence that goal orientations enhance the students' academic motivation. Zhang and colleagues (2019) confirm positive effect of self-efficacy on goal orientation and stresses the mediating role of goal orientation on the effect of self-efficacy on research motivation.

Mindfulness, an East-oriented practice for concentration, has an ever growing interest in the West (Kabat-Zinn, 2000). In particular, last three decades witness intense scientific studies demonstrating efficiency and usefulness of mindfulness (Chang et al., 2019: 1). Mindfulness is keeping one's focus on what's happening at the moment without any concern on the past and the future (Kabat-Zinn, 1994). To be more concrete, mindfulness talks about paying attention intentionally, nonjudgmentally, and in the present (Kabat-Zinn, 2004). Being mindful requires focusing on one's breath and how one perceives the world (Corti and Gelati,

2019). As Chang, who is a musician, admits that mindfulness provides better relaxation and more concentration during performance (Chang et al., 2019: 2). Mindfulness raises awareness to be open to experiences with high senses. Mindfulness decreases emotional distress and challenges by allowing thoughts and feelings occur in mind free of judgment and reaction (Gilbert, 2005). Mindfulness, highly related with subjective well-being (Falkenström, 2010), comprises both awareness and concentration (Brown and Ryan, 2003). The higher mindful one is the higher resilience about coping with stress (Weinstein et al., 2009). Mindfulness increases self-organizing behaviors (Brown and Ryan, 2003). The students who are more engaged are likely to regularly attend courses and achieve academically (Sukhsarwala et al., 2015; Pohl, 2020). Corti and Gelati (2019) apply mindful effective learning program to university students and conclude that the program help the students to improve self-confidence regarding learning abilities. Üstün (2019: 591) highlights that regular and daily work in individual instrument education has a positive effect on mindfulness and stress control of the students.

Research Method

In the research, in order to identify the determinants of academic self-efficacy the research model below is formed as a structural equation model and tested by means of SPSS and AMOS statistical softwares.

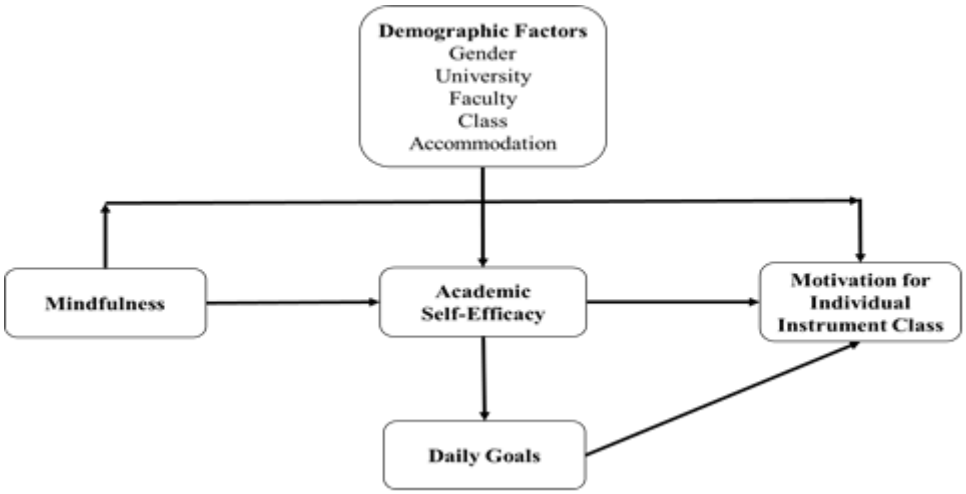


Figure 1. Research Model

According to the research model, the research hypotheses are listed below.

H1: Students' demographic factors have a significant effect on their academic self-efficacy.

H2: Students' mindfulness has a significant effect on academic self-efficacy

H3: Students' academic self-efficacy has a significant effect on their motivation for individual instrument class.

H4: Students' mindfulness has a significant effect on their motivation for individual instrument class.

H5: Students' academic self-efficacy plays a moderating role between mindfulness and motivation for individual instrument class.

H6: Students' academic self-efficacy has a significant effect on daily goals.

H7: Students' daily goals have a significant effect on their motivation for individual instrument class.

H8: Students' daily goals play a moderating role between academic self-efficacy and motivation for individual instrument class.

In the following part of the study, the sample of the study and the participant information, the measurement tools employed in the research, the analyses, and the findings are discussed respectively.

Participants

The population of the study is university students studying music at four universities located in different cities in Turkey. All students in the related departments in the universities were asked for completing the survey form on a voluntary basis, but 396 of the students returned the questionnaires. After checking convenience, analyses are done with a sample 348 students. The number of the sample at the significance level of 5% with a confidence interval of 5% is determined as adequate. Descriptive statistics regarding demographic variables are given in the following tables.

The frequency distribution of the universities and departments of students is given in Table 1. The students attend two different faculties, i.e. conservatory and faculty of education. 44 students (12.6%) study in Conservatory in Ankara Hacı Bayram-ı Veli University, 62 students (17.8%) study in Conservatory in Adıyaman University, and 149 students (42.8%) are enrolled music teaching at faculty of education in Gazi University. 93 students (26.7%) are from Erzincan Binali Yıldırım University, of which 4.3% study in conservatory whilst the rest attends music teaching at faculty of education.

Table 1. Universities and Departments of Students

		Faculty		**University**	
		Frequency	**%**	**Frequency**	**%**
Adıyaman University	Conservatory	44	12.6	44	12.6
Ankara Hacı Bayram-ı Veli University	Conservatory	62	17.8	62	17.8
Erzincan Binali Yıldırım University	Conservatory	15	4.3	93	26.7
	Faculty of Education, Music Teaching	78	22.4		
Gazi University	Faculty of Education, Music Teaching	149	42.8	149	42.8
Total		328	100.0	328	100.0

The frequencies of the students by gender, class, and accommodation are given in Table 2. 154 students (44.3%) are male while 194 students (56.7%) are female. The number of freshman is 108 (31.0%), the number of sophomore is 88 (25.3%), the number of middler is 92 (26.4%), and that of senior is 60 (17.2%). Since environmental factors affect concentration while one plays an instrument, accommodation is considered an environmental factor that would be one of demographic determinant of academic self-efficacy. 107 students (30.7%) stay with friends at home, 139 students (39.9%) live with their family, 55 (15.8%) of the students state at a state run quarters, and 47 students (13.5%) state at private sector quarters.

Table 2.1 Descriptive Statistics of Demographic Variables

Accommodation	Frequency	%	Class	Frequency	%
Staying with friends at home	107	30.7	Freshman	108	31.0
Living with family	139	39.9	Sophomore	88	25.3
Staying at state run quarters	55	15.8	Middler	92	26.4
Staying at private sector quarters	47	13.5	Senior	60	17,2
Gender	Frequency	%			
Male	154	44.3			
Female	194	56.7			

Questionnaire

Questionnaire includes five sections. First section gathers data related to demographic information. Other sections collect data for perceptions of the students about motivation for individual instrument class, academic self-efficacy, mindfulness, and daily goals. 5-point Likert scale was preferred in the questionnaire except mindfulness and participants were asked to mark to what extent they agree with given statements (1=Totally disagree, …, 5=Totally agree). One question in academic self-efficacy is reversely coded. Regarding mindfulness scale, a 6-point Likert scale is used (1=Almost never, …, 6=Almost always) and all items are reversely coded. All scales for the variables found reliable and valid for university students within Turkish cultural context. Validity and reliability of motivation for individual instrument class scale was conducted by Girgin (2015). As a result of exploratory factor analysis, the researcher concluded that the scale consist of 25 items with a 3 factor model. Subfactors were called amotivation, motivation for achievement, and motivation for study, respectively. Cronbach Alpha coefficients for the subfactors are 0.90, 0.88, and 0.76 respectively, where that for the whole scale is 0.77.

Academic self-efficacy was adapted from Jerusalem and Schwarzer (1981) by Yılmaz and colleagues (2007) to Turkish. After translation of German-origin scale into Turkish, it was empirically tested with a sample of 672 university students and found out that one-factor structure with seven items be valid and the reliability coefficient for the scale was 0.79.

Özyeşil and colleagues (2011) adapted mindfulness scale from Brown and Ryan (2003). After conducting exploratory and confirmatory factor analyses, one-factor model with 15 items was found reliable and valid for the use of the scale in Turkish at studies with a sample of university students. Cronbach Alpha coefficient was computed as 0.80.

Daily goals scale was adapted by Bakioğlu ve Çapan (2015) with exploratory and confirmatory analyses at two different samples. The scale consists 13 items and shows a one-factor structure. The scale is found reliable that Cronbach Alpha coefficient is 0.80.

In this study, the construct validity was analyzed by confirmatory factor analysis and Cronbach Alpha coefficient was employed to test the reliability. Confirmatory factor analyses' results are shown in Table 3, and the results of the reliability analyses are given in Table 4.

Table 23. CFA Results for Measurement Scales

Measurement Model	**χ2**	**s.d.**	**χ 2/s.d.**	**RMR**	**CFI**	**RMSEA**
Motivation for Individual Instrument Class	1,282.022	272	4.713	0.062	0.869	0.103
Three-Factor Related Modified Model	764.420	262	2.918	0.062	0.935	0.074
Academic Self-Efficacy	122.174	14	8.727	0.074	0.847	0.149
One-Factor Modified Model	6.403	10	0.640	0.021	1.000	0.000
Mindfulness	321.433	90	3.571	0.063	0.846	0.115
One-Factor Modified Model	65.367	61	1.072	0.070	0.993	0.023
Daily Goals	360.825	65	5.551	0.063	0.846	0.115
One-Factor Modified Model	49.590	43	1.153	0.025	0.997	0.021
Good fit values*			<3	<0.05	<0.95	<0.05
Acceptable fit values*			<5	<0.08	<0.90	<0.08

χ2: Chi-square; s.d .: degree of freedom; RMR: root mean square residual; CFI: Comparative Fit Index; RMSEA Root Mean Square Error of Approximation.

* Browne and Cudeck, 1993; Byrne 2001; Kline, 2004; Schumacher and Lomax, 2004.

The fit index values of the scale given in Table 3 are not initially fallen within acceptable limits identified by the scholars (e.g. Browne and Cudeck, 1993; Byrne 2001; Kline, 2004; Schumacher and Lomax, 2004). Thus the scales are modified according to suggestions made by analyses. The subsequent rows following initial indicators show modified models. Provided all measurement scales are structurally confirmed by means of confirmatory factor analysis, Cronbach Alphas are computed by means of SPSS statistics software to determine whether the scales are reliable or not. The results of reliability analyses of the scales as well as descriptive analysis, i.e. mean and standard deviation, are conducted and the statistics are shown on Table 4.

Table 4.3 Descriptive Statistics and the Results of Reliability Analyses for the Scales

Scale		Mean	Std. Deviation	Cronbach Alpha
Motivation for Individual Instrument Class	Whole	3.13	0.36	0.732
	Amotivation	1.52	0.79	0.942
	Motivation for Achievement	4.50	0.68	0.927
	Motivation for Study	3.62	0.93	0.882
Academic Self-Efficacy		3.73	0.69	0.784
Mindfulness		3.28	0.92	0.873
Daily Goals		3.80	0.65	0.892

Cronbach Alpha's of the scales are over 0.70, which is a threshold value employed to decide whether the scale is reliable or not (Nunnaly, 1978). Mean of motivation of the students for individual instrument class is 3.13 out of 5 with a standard deviation of 0.36. Regarding subfactors, the highest mean is of motivation for achievement (xavg=4.50, s.d.=0.68) while the least is of amotivation (xavg=1.52, s.d.=0.79). On the other hand, mean of motivation for study is 3.62 with a standard deviation of 0.93. Academic self-efficacy of the students is 3.73 on average with a standard deviation of 0.69. Mean mindfulness level of the students is 3.28 out of 6 with a standard deviation of 0.92. Likewise mean of daily goals is 3.80 out of 5 with a standard deviation of 0.65. Following validity and reliability of the scales, structural equation model is formed as shown on the figure below.

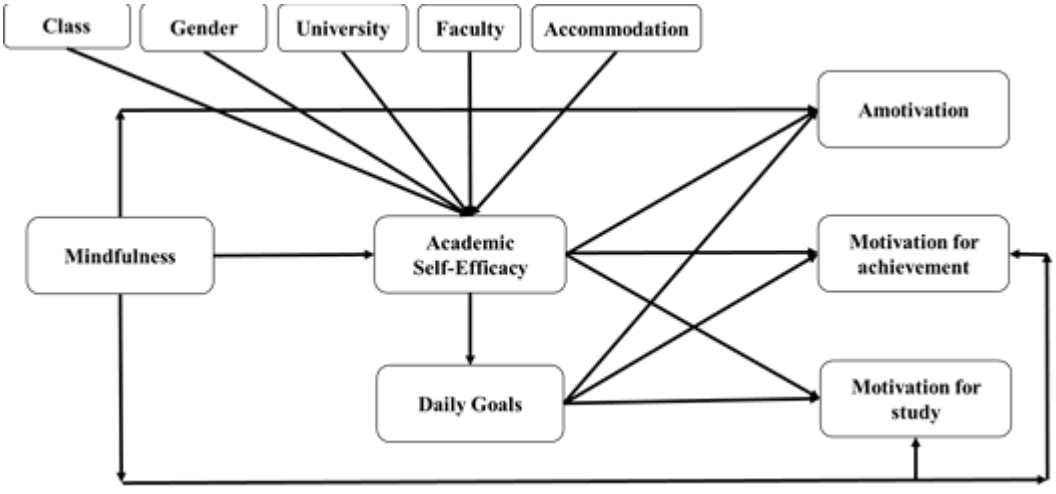


Figure 2. Structural Equation Model

Ethical

In this study, all rules stated to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed.

Ethical Review Board Name: Gazi University Ethics Committee

Date of Ethics Evaluation Decision: 07.02.2022

Ethics Assessment Document Issue Number: ../..

Findings

After the validity and reliability studies of the scale employed in the study were completed, structural equation model is run in order to identify the determinants of academic self-efficacy. Fit Indices of the model is depicted on Table-5. The first row shows the indices for basic model. While RMSEA value indicates a good fit, RMR and CFI values are not within acceptable limits. After some modifications are applied, modified model shows an acceptable fit concerning all values (Browne and Cudeck, 1993; Byrne 2001; Kline, 2004; Schumacher and Lomax, 2004).

Table 45. Results for Structural Equation Model

Structural Model	⚜2	s.d.	⚜2/s.d.	RMR	CFI	RMSEA
Basic Model	3.557,660	1948	1.826	0.112	0.877	0.049
Modified Model	3.232,939	1940	1.666	0.078	0.901	0.044
Good fit values			<3	<0.05	<0.95	<0.05
Acceptable fit values			<5	<0.08	<0.90	<0.08

According to modified structural equation model, significant paths are identified to test the hypotheses produced regarding the research model. Results of path analysis are examined at a significance level of 0.05 and indicated on Table-6.

Table 6. Path Analysis

Path	β	S.E.	p	Standardize β
Gender → Academic Self-Efficacy	-0.016	0.037	0.666	-0.025
Accommodation → Academic Self-Efficacy	0.052	0.033	0.117	0.096
University → Academic Self-Efficacy	-0.019	0.071	0.784	-0.016
Faculty → Academic Self-Efficacy	-0.065	0.038	0.085	-0.109
Class → Academic Self-Efficacy	0.053	0.071	0.454	0.045
Mindfulness → Academic Self-Efficacy	0.265	0.107	0.013	0.173
Mindfulness → Amotivation	-0.281	0.130	0.031	-0.137
Mindfulness → Motivation for Achievement	0.389	0.125	0.002	0.223
Mindfulness → Motivation for Study	0.242	0.148	0.102	0.099
Academic Self-Efficacy → Amotivation	-0.220	0.092	0.017	-0.165
Academic Self-Efficacy → Motivation for Achievement	0.151	0.077	0.050	0.133
Academic Self-Efficacy → Motivation for Study	0.225	0.109	0.038	0.142
Academic Self-Efficacy → Daily Goals	0.361	0.064	0.000	0.427
Daily Goals → Amotivation	0.033	0.102	0.746	0.021
Daily Goals → Motivation for Achievement	0.146	0.087	0.091	0.109
Daily Goals → Motivation for Study	0.494	0.129	0.000	0.263

When the results are examined, statistically significant paths are highlighted on Table-8. Regarding demographic factors, no factor predicts self-efficacy. Concerning the variables, there is a significant and positive effect of mindfulness on academic self-efficacy (Standardize β=0.113). Similarly significant positive effect of mindfulness on motivation for achievement exists (Standardize β=0.223) while the effect of that on amotivation is negative (Standardize β=-0.137). However, the effect of mindfulness on motivation for study is not significant (β=0.242, p>0.05). The effect of self-efficacy on motivation for individual instrument class is significant. While the effect of academic self-efficacy on amotivation is negative (Standardize β= -0.165), that on motivation for achievement (Standardize β= 0.133) and on motivation for study is positive (Standardize β= 0.142). Academic self-efficacy, also, affects daily goals significantly positive (Standardize β=0,427). Similarly,

daily goals' effect on motivation for study is significant and positive (Standardize β=0,371). On the other hand, there is no significant effect between daily goals and amotivation (β=0.033, p>0.05) and between that and motivation for study (β=0.146, p>0.05). Significant paths are depicted on Figure-3 below.

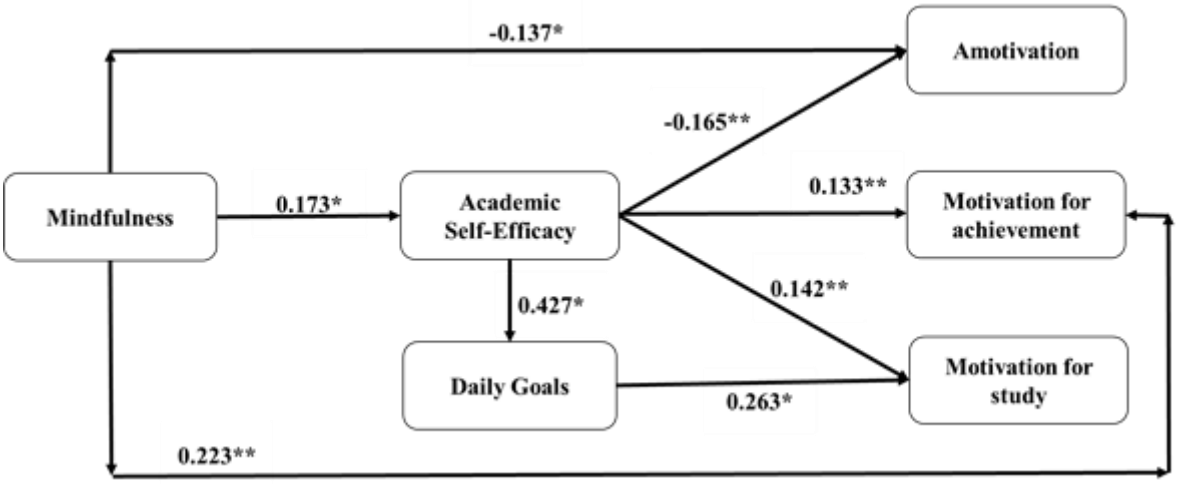


Figure 3. Structural Equation Model (Significant Paths)

In order to decide whether hypotheses are accepted or rejected, total, direct, and indirect effects of the variables are examined and coefficients of significant paths are depicted on Table-6 below. Regarding H1, demographic factors don't have any significant effect on academic self-efficacy. Therefore, it is concluded that H1 is not accepted. Concerning H2, there is a significant and direct positive effect of mindfulness on academic self-efficacy (Standardize β=0.265). Hence it is concluded that H2 is accepted. Regarding H3, academic self-efficacy has direct significant effects on motivation for individual instrument class (Total Standardize β=-0.165, 0.133, 0.142 respectively for amotivation, motivation for achievement, and motivation for study) as well as indirect significant effect on motivation for study (Indirect Standardize β=0.112) because academic self-efficacy has a significant effect on daily goals (Direct Standardize β=0.361) and daily goals have a significant effect on motivation for study (Direct Standardize β=0.494). Therefore, students' daily goals play a moderating role between academic self-efficacy and motivation for study. Thus, it is concluded that H3 and H6 are accepted while H7 and H8 are partially accepted.

Table 6. Total, Direct, and Indirect Effects

		Academic Self-Efficacy	**Mindfulness**	**Daily Goals**
Total Effects	Amotivation	-0.208	-0.336	0.033
	Motivation for achievement	0.204	0.443	0.146
	Motivation for study	0.403	0.349	0.494
	Daily Goals	0.361	0.096	0
	Academic Self-Efficacy	0	0.265	0
Direct Effects	Amotivation	-0.220	-0.281	0.033
	Motivation for achievement	0.151	0.389	0.146
	Motivation for study	0.225	0.242	0.494
	Daily Goals	0.361	0	0
	Academic Self-Efficacy	0	0.265	0
Indirect Effects	Amotivation	-0.009	-0.027	0
	Motivation for achievement	0.046	0.031	0
	Motivation for study	0.112	0.044	0
	Daily Goals	0	0	0
	Academic Self-Efficacy	0	0	0

With regard to H4, there are partially significant effects of mindfulness on motivation for individual instrument class. The effect of mindfulness on amotivation is both direct (Direct Standardize β=-0.281) and indirect via academic self-efficacy (Indirect Standardize β=-0.027). Similarly and the effect of mindfulness on motivation for achievement is both direct (Direct Standardize β=0.389) and indirect via academic self-efficacy (Indirect Standardize β=0.031). Thus, H4 and H5 are partially accepted. In total; H1 is rejected; H2, H3, and H6 are accepted; H4, H5, H7, and H8 are partially accepted.

Discussion and Conclusion

Social cognitive theory explains the interaction between an individual and the contextual environment. Self-efficacy is generally accepted concept for academic settings to explain the interaction students, instructors, and the school itself. In particular, classes to develop skills such as playing an instrument as well as sports, film making, and other creative arts require the students believe in the self to learning. Self-efficacy literature continuously attracts practitioners and academicians to make research in different settings. Since Bandura introduces self-efficacy, there is an ever growimg interest on the concept. However, there is scant literature on motivation for individual instrument class, daily goals, and mindfulness in a holistic context that contributes to body of knowledge on students' achievement-oriented behaviors. Towards this end, determinants and consequences of academic self-efficacy of university students are identified by means of a structural equation model in this study. CFA was employed to confirm the structural validity of the measurement tools used in the study, and Cronbach Alpha coefficient was used for the reliability.

A structural equation model is formed and path analysis is employed to test the hypotheses. It is finally conceded that mindfulness is a significant predictor of academic self-efficacy while the latter has a significant effect on daily goals, amotivation, motivation for achievement, and motivation for study. This finding seems compliance with literature (e.g. regarding relation between self-efficacy and motivation: Pintrich and De Groot, 1990; Schunk, 1991; Bandura, 1993; Bandura, 1997; Cain and Dweck, 1995; Schunk and Pajares, 2002; Hsieh et al., 2007; Alivernini and Lucidi (2011); McGeown et al., 2014; Hwang et al., 2015; Arık, 2019; Koca and Dadandı, 2019; regarding relation between self-efficacy and daily goals: Bandura and Schunk, 1981, 1985; Zimmerman et al., 1992; Ghaleb et al., 2015; Mikami, 2017; regarding relation between mindfulness and motivation: Brown and Ryan, 2003; Sukhsarwala et al., 2015; Corti and Gelati, 2019; Üstün, 2019; Pohl, 2020).

Also it is revealed that daily goals play a mediation role between academic self-efficacy motivation for study. There some studies reporting similar mediating role of goals (e.g. Locke and Latham, 1990; Schunk, 1995; King, 2016; Zhang et al., 2019). Furthermore, according to Zimmerman and Bandura (1994), predicting academic grade in the beginning of the semester by jointly using self-efficacy and goal-setting increases academic performance by 35%.

Besides, there is a mediation role of academic self-efficacy on the relation between mindfulness and amotivation and between that and motivation for achievement. This finding is an invaluable contribution of this study to self-efficacy literature. To conclude that self-efficacy based intervention programs for the students studying music would be more meaningful in order to increase their academic performance as well as cognitive and social skills. There are some intervention programs in the literature (e.g. Cordero et al., 2010; Breso et al., 2011; Corti and Gelati, 2019; Foulstone and Kelly, 2019). However, current research related to interventions focuses on learning abilities, academic skills, and coping with stress and exam anxiety.

This study introduces mindfulness concept and sets its relation with self-efficacy and motivation for individual instrument class. Corti and Gelati (2019) apply a mindfulness based intervention program and harness fruitful results on behalf of helping the students to improve self-confidence regarding learning abilities. Regarding finding of our study, it is clear that a mindfulness based self-efficacy intervention program reduces amotivation as increases motivation for achievement both directly and through self-efficacy. Since

mindfulness is an exploration of the self and is a way how to concentration on the task on hand, self-beliefs of the students on their capabilities would be implicitly and explicitly improved by mindfulness practices. Therefore, researchers and academicians are kindly asked to develop a program including mindfulness practices and self-efficacy implications for the students studying music. Furthermore, the study relates daily goals with self-efficacy and motivation for individual instrument class. Goal-setting theories provide enough evidence that the students having short- and long-term goals work harder, cope with stress and anxiety, and succeed academically. However, this study reveals that daily goals play a mediating role in the interaction between self-efficacy and motivation for study. Thus, intervention programs may plan and organize study programs and set smarter goals for the students. To be more concrete, goals are to be specific, measurable, achievable, reasonable, and timely. Moreover, daily goals may include social and cognitive activities in order to enhance mindfulness of the students.

When the results of both the current research findings and the other studies in the literature are examined, the importance of self-efficacy and its relationship with various variables are better understood. The inclusion of different variables affecting academic self-efficacy in future studies will bring a different perspective to the literature. In addition, when it is considered in the context of students, it can be encouraged to focus on determining daily goals to study regularly to get academic success and to benefit daily goals and thus internal motivation to develop instrument playing. Instructors may introduce incremental changes in learning environment to help the students to create daily goals. From this point of view, it is highly recommended that future studies on academic self-efficacy focus on determinants and measures to develop awareness on daily goals.

Furthermore, as Pajares (1996) highlights that self-efficacy is a collectivist effort comprising the school and the instructors as well as the self. Indeed, social cognitive theory urges researches to take contextual issues into account since motivation for academic success emerges from interaction between the actors within this context (Urdan and Schoenfelder, 2006). Towards this end, practitioners and academicians are highly recommended that further researcher diversify the source of information and include variables related to environmental factors and perceptions of the instructors.

On the other hand, there are some limitations to keep in mind while generalizing the findings of the study. At first, the sample of the study is from the students studying at some universities in Turkey. This limitation is twofold. First, the sample is consisted of the students, and next, the students are form two different faculties; conservatory and faculty of education. That's why the findings may be bound by the sample. Second, perceptions of the students are measured in a cross-sectional design. Thus, the findings are related to the psychology for the participants at the time measured. Last, but not least, perceptions are subject to social desirability that participants may answer as they would be instead not actually they are. Therefore, we recommend the researchers, practitioners, and academicians to make more researches on self-perception to overcome the limitations, thus to make contributions to the literature.

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