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Relationships between Student Engagement in Higher Education and Academic Success and Desire to Attend University

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ABSTRACT: *The purpose of this research is to examine the relationships between student engagement in a higher education system and the desire to attend university and academic success. A causal design was used in the research. The research sample consisted of 3,093 undergraduate students in Turkey, selected using the stratified sampling method. NSSE was used as a data collection tool in the study. Pearson product-moment correlation analysis, simple linear regression analysis, and multilevel logistic regression analysis were used to analyze the data. Within the scope of the research, it was determined that student engagement statistically significantly predicted academic success and the desire to attend university. As students' level of engagement increases, their academic success and desire to attend their universities also increase. In this context, universities should establish institutional policies to enhance student engagement and regularly evaluate their progress by measuring the level of student engagement within their institutions.*

Keywords: Academic success, desire to attend university, higher education institutions, student engagement

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INTRODUCTION

Student engagement has recently emerged as one of the most important topics in educational research (Cinches et al., 2017). Student engagement has become increasingly prominent in higher education policy debates, scientific research literature and popular media (Kuh, 2009b). Since the concept of student engagement first entered the literature, it has been central to efforts to understand and improve student learning and higher education (Groccia, 2018). Shulman (2005) stated that learning begins with student engagement, which leads to knowledge acquisition and understanding. The quality of the student experience is significantly impacted by the concept of student engagement, which is a multifaceted and dynamic concept (Dangeni, 2023).

The term "student engagement" is defined in many ways (Darmody et al., 2022). Kuh (2009a) defines student engagement as the time and effort students spend on activities related to the university's desired outcomes and everything the university does to encourage students to participate in these activities. Student engagement is a concept related to the interaction between the time, effort and other relevant resources spent by both students and universities to improve the student experience, enrich learning outcomes, and increase the performance and reputation of universities (Trowler, 2010). Coates (2007) defined student engagement as a broad structure that encompasses both academic and non-academic aspects of the student experience, including active learning, participation in challenging educational activities, developing communication with academic staff, engaging in enriching educational experiences, and feeling supported by university communities.

Student engagement refers to the degree to which students are interested and involved in the learning process, as well as their connection to their classes, universities, and peers (Axelson & Flick, 2010). Student engagement refers to the behaviors of students who indicate a greater interest in the university than their friends do. Student engagement is defined as the time, energy and resources that students devote to activities designed to increase learning at the university. These activities generally range from a short period of time spent on campus or during the education process to students' long-term learning experiences in and out of the classroom (Krause, 2005). Students' active participation in classroom lessons, reading course resources, studying for their lessons, answering the questions asked to them, completing their homework and maintaining good communication with their teachers in the lessons are activities related to student engagement.

Students' performance in the classroom is a direct result of student engagement (Finn, 1989).

Student engagement varies significantly among individuals from diverse backgrounds (Wang & BrckaLorenz, 2018). According to Kuh (2009a), students with high levels of engagement strive not only to pass the course but also to learn more than what they have learned in the course. These students not only strive to obtain a good grade but also try to understand what they learn in class, incorporate it into their lives, and internalize it (Newmann, 1989). According to Saeed and Zyngier (2012), students with high levels of engagement have the skills to work with others and know how to transfer knowledge to solve problems creatively. Students with low levels of engagement cannot pass their classes and cannot complete their homework. They do not show interest in their lessons and have little excitement for learning (Newmann, 1989). As a result of the decrease in student engagement in higher education, negative situations such as students not attending classes, failing in their courses, and terminating their university education are observed (Archambault et al., 2009; Finn, 1989; Harris, 2008; Newmann et al., 1992; Tinto, 1975; Willms, 2003).

Vibert and Shields (2003) stated that students' ability to conduct independent research in line with their own interests at universities, research the subjects they want to learn, and take part in projects on the subjects they are interested in increases student engagement. Students' participation in these educational activities at their universities also increases their academic success and desire to attend university (Kuh et al., 2006). For this reason, it is extremely important for universities to strengthen student engagement, develop positive attitudes toward their universities, increase the academic success of students and ensure that they continue attending their universities. In this context, this study aimed to determine the contributions of student engagement to academic success and university attendance by examining the relationships between student engagement and students' academic success and their desire to attend university. To achieve this aim, the following questions were sought:

1. Is there a significant relationship between students' NSSE scores and their academic success?
2. Do students' scores on the NSSE predict academic success?
3. Do the scores students receive from the higher education student engagement scale and engagement indicators predict their desire to attend university?

METHOD

A causal design, a quantitative research approach, was used in this study. The reason for using causal design in this study is the researcher's desire to determine the contribution of student engagement to the variables of desire to attend university and academic success.

Research has shown that student engagement has a positive effect on students' attendance at university (Astin, 1985; Cox, 2013; Gordon et al., 2008;

Jones, 2013; Kuh et al., 2007; Kuh et al., 2008; Peck, 2017; Shinde, 2008; Shinde, 2010; Smith, 2019) and academic success (Carini et al., 2006; Cox, 2013; Fredricks et al., 2004; Fuller et al., 2011; Gordon et al., 2008; Heng, 2014; Korobova, 2012; Kuh et al., 2008; Ladd & Dinella, 2009; LaNasa et al., 2007; Osagie, 2016; Park et al., 2012; Pascarella & Terenzini, 1991; Peck, 2017; Phillips, 2013; Pike et al., 2008; Reeve & Tseng, 2011; Rice, 2017; Sarwar & Ashrafi, 2014; Snyder, 2008; Wang & Holcombe, 2010; Ward et al., 2012).

Population and Sample

The population of this study consists of 1969844 undergraduate students at 129 state universities in Turkey. The sample of the study consists of 3093 undergraduate students at 11 state universities, as determined via the stratified sampling method. The sample of the study was determined via the six-stratified sampling method according to the Turkey University Satisfaction Survey 2018 grades of the universities in the universe (universities with A+, A, B, C, D and F grades). Among the 161 respondents, 5.2% were international students.

National Survey of Student Engagement (NSSE)

The NSSE, the most well-known theoretical scale for measuring student engagement in the literature, was used to assess student engagement in higher education within the scope of this research. The scale used as a data collection tool in the study was adapted by the researcher. To start the adaptation study of the scale, the necessary permission was first obtained. In this context, a scale usage agreement was signed between Indiana University and the researcher for the adaptation of the scale and its application to the sample determined within the scope of the research after adaptation. After the contract was signed, adaptation and application studies of the scale were carried out on the dates that permission was obtained.

CFA was applied to the data collected from the students in the sample to test the construct validity of the NSSE. The goodness-of-fit values obtained via CFA showed that the model proposed for the scale was appropriate. In addition, all t values obtained for 47 items were significant at the 0.01 level. As a result, the original factor structure of the scale was confirmed within the scope of the values obtained in terms of goodness-of-fit indexes. The results of the confirmatory factor analysis applied to determine the construct validity of the NSSE are shown in Table 1.

Table 1: Goodness-of-Fit Indexes Related to the CFA Results Applied to Determine the Construct Validity of the NSSE

Goodness-of-Fit Indexes	Goodness of Fit Values
x^2	2427.67
df	1024
x^2/df	2.37
RMSEA	.05
GFI	.81
AGFI	.80
CFI	.97
IFI	.97
NFI	.94
NNFI	.97

As a result of the reliability analysis of NSSE, the Cronbach's alpha internal consistency coefficient was found to be .92. The Cronbach's alpha internal consistency coefficients of the engagement indicators were .90 for higher-order learning, .84 for reflective & integrative learning, .84 for learning strategies, .82 for quantitative reasoning, .77 for collaborative learning, .84 for discussions with diverse others, .88 for student–faculty interaction, .87 for effective teaching practices, .88 for quality of interactions and .94 for supportive environments.

Data collection and analysis

The data obtained from the data collection tool were analyzed via transfer to the IBM SPSS Statistics 21 program. First, the z score was calculated for each item in the dataset, and whether there were outliers was examined. According to the computed z scores, there were no outliers in the dataset. Skewness and kurtosis values were analyzed to determine whether the data in the dataset exhibited a normal distribution. In this context, the skewness and kurtosis values of the items were calculated, and it was determined that these values ranged between -1.5 and +1.5, indicating that the data exhibited a normal distribution. While multilevel logistic regression analysis was applied, the "no" category of the predicted variable was taken as the reference category. The significance level was set at $p \leq .05$ in the statistical analysis of the study.

RESULTS

Relationships between Scores on Student Engagement and Engagement Indicators and Academic Success

According to Table 2, there is a positive and low-level significant relationship between university students' NSSE scores and their academic success (r=.29*). Similarly, there are positive and low-level significant relationships between university students' scores on engagement indicators and their academic success (r=.18*, r=.19*, r=.18*, r=.20*, r=.14*, r=.14*, r=.23*, r=.20*, r=.07*, r=.22*).

Table 2: Pearson product moment correlation analysis results for the relationships between student engagement and engagement indicator scores and academic success

Engagement Indicators	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1.Higher-order Learning	1	.57*	.51*	.44*	.40*	.18*	.43*	.42*	.22*	.35*	.71*	.18*
2.Reflective & Integrative Learning		1	.49*	.41*	.49*	.30*	.41*	.34*	.20*	.23*	.70*	.19*
3.Learning Strategies			1	.40*	.34*	.15*	.39*	.37*	.17*	.32*	.63*	.18*
4.Quantitative Reasoning				1	.30*	.28*	.40*	.29*	.13*	.26*	.59*	.20*
5.Collaborative Learning					1	.21*	.30*	.25*	.16*	.19*	.55*	.14*
6.Discussions with diverse others						1	.23*	.09*	.03	.09*	.40*	.14*
7.Student–Faculty Interaction							1	.39*	.28*	.32*	.67*	.23*
8.Effective Teaching Practices								1	.31*	.50*	.68*	.20*
9.Quality of Interactions									1	.31*	.49*	.07*
10.Supportive Environment										1	.67*	.22*
11.Student Engagement											1	.29*
12.Academic Success												1

Note. n=3093, *p<.01

The level of prediction of student engagement and engagement indicator scores for academic success

Table 3: Simple linear regression analysis results between student engagement and engagement indicator scores and academic success

Academic success	B.	SHB	β	t	R.	R^2	F	p
Constant	2.25	.04		57.61				.00*
Higher-Order Learning	.15	.01	.18	10.00	.18	.03	100.00	.00*
Constant	2.08	.05		38.27				.00*
Reflective & Integrative Learning	.19	.02	.19	10.22	.19	.04	104.50	.00*
Constant	2.27	.04		60.00				.00*
Learning Strategies	.14	.01	.18	9.83	.18	.03	96.52	.00*
Constant	2.28	.03		68.86				.00*
Quantitative Reasoning	.15	.01	.20	10.91	.20	.04	119.09	.00*
Constant	2.26	.05		45.90				.00*
Collaborative Learning	.13	.02	.14	7.59	.14	.02	57.67	.00*
Constant	2.41	.03		77.52				.00*
Discussions with Diverse Others	.10	.01	.14	7.26	.14	.02	52.63	.00*
Constant	2.28	.03		77.61				.00*
Student–Faculty Interaction	.17	.01	.23	12.82	.23	.06	164.31	.00*
Constant	2.22	.04		56.80				.00*
Effective Teaching Practices	.16	.02	.20	10.81	.20	.04	116.86	.00*
Constant	2.49	.04		64.97				.00*
Quality of Interactions	.05	.02	.07	3.53	.07	.004	12.47	.00*
Constant	2.26	.03		69.34				.00*

Supportive Environment	.18	.02	.22	12.04	.22	.05	145.05	.00*
Constant	1.71	.06		29.31				.00*
Student Engagement	.38	.02	.29	15.87	.29	.08	251.69	.00*

Note. n=3093, **p*<.001

According to Table 3, the higher-order learning engagement indicator significantly predicts academic success. The higher-order learning engagement indicator explained 3% of the change in academic success ($F_{(1, 2850)}$=100.00, p<.001, R=.18, R^2=.03).

The reflective & integrative learning engagement indicator predicts academic success in a statistically significant way. It has been found that the reflective & integrative learning engagement indicator can explain 4% of the change in academic success ($F_{(1, 2850)}$=104.50, p<.001, R=.19, R^2=.04).

The learning strategies engagement indicator predicts academic success in a statistically significant way. It has been determined that the learning strategies engagement indicator can explain 3% of the change in academic success ($F_{(1, 2850)}$=96.52, p<.001, R=.18, R^2=.03).

The quantitative reasoning engagement indicator predicts academic success in a statistically significant way. It has been found that the quantitative reasoning engagement indicator can explain 4% of the change in academic success ($F_{(1, 2850)}$=119.09, p<.001, R=.20, R^2=.04).

The collaborative learning engagement indicator predicts academic success in a statistically significant way. It has been determined that the collaborative learning engagement indicator can explain 2% of the change in academic success ($F_{(1, 2850)}$=57.67, p<.001, R=.14, R^2=.02).

Discussions with diverse others engagement indicator predicts academic success in a statistically significant way. It has been found that discussions with diverse others engagement indicator can explain 2% of the change in academic success ($F_{(1, 2850)}$=52.63, p<.001, R=.14, R^2=.02).

The student–faculty interaction engagement indicator predicts academic success in a statistically significant way. It has been determined that the student–faculty interaction engagement indicator can explain 6% of the change in academic success ($F_{(1, 2850)}$=164.31, p<.001, R=.23, R^2=.06).

Effective teaching practices engagement indicator predicts academic success in a statistically significant way. It has been found that effective teaching practices engagement indicator can explain 4% of the change in academic success ($F_{(1, 2850)}$=116.86, p<.001, R=.20, R^2=.04).

The quality of interactions engagement indicator predicts academic success in a statistically significant way. It has been determined that the quality of interactions engagement indicator can explain 0.4% of the change in academic success ($F_{(1, 2850)}$=12.47, p<.001, R=.07, R^2=.004).

The supportive environment engagement indicator predicts academic success in a statistically significant way. It has been found that the supportive environment engagement indicator can explain 5% of the change in academic success ($F_{(1, 2850)}$=145.05, p<.001, R=.22, R^2=.05).

Student engagement predicts academic success in a statistically significant way. It has been determined that student engagement can explain 8% of the change in academic success ($F_{(1, 2850)}$=251.69, p<.001, R=.29, R^2=.08).

The level of prediction of student engagement and engagement indicators scores on the desire to attend university

Table 4: Multilevel logistic regression analysis results between student engagement scores and desire to attend university

Categories		B.	SHB	df	p	Exp(β)
Yes	Constant	-4.27	.29	1	.00*	
	Student Engagement	2.26	.13	1	.00*	9.62
I am not sure	Constant	-2.20	.33	1	.00*	
	Student Engagement	.91	.14	1	.00*	2.40

*Note. $X^2(2)$=441.05, p<.001, R^2=.16 (Nagelkerke), *p<.001 Reference Category: No*

According to Table 4, *student engagement significantly* predicts the desire to attend university. It has been determined that *student engagement can* explain 16% of the change in the desire to attend university (R^2 =.16 (Nagelkerke), X^2(2)=441.05, *p*<.001). *Student engagement* had a 9.62-fold (OR=9.62) increase in university students' ability to answer *yes to* their desire to attend university. *Student engagement* has a 2.40-fold (OR=2.40) greater effect on university students' desire to attend university as *"not sure"*.

According to Table 5, the engagement indicators significantly predict the desire to attend university. The engagement indicators explained 17% of the change in the desire to *attend* university (R^2=.17 (Nagelkerke), X^2(20)=459.68, *p*<.001).

When the data belonging to the "*yes"* category are examined, *the higher-order learning* engagement indicator is 1.25-fold (OR=1.25), the *reflective and integrative learning* engagement indicator is 1.56-fold (OR=1.56), *the quantitative reasoning* engagement indicator is 1.22-fold (OR=1.22), the *discussions with diverse others* engagement indicator is 1.27-fold (OR=1.27), the *effective teaching practices* engagement indicator is 1.21-fold (OR=1.21), the *quality of interactions* engagement indicator is 1.43-fold (OR=1.43), and the *supportive environment* engagement indicator is 1.46-fold (OR=1.46) greater

effect on university students' willingness to attend university. Other engagement indicators do not significantly predict university students' desire to attend university (p>.05).

Table 5: Multilevel logistic regression analysis results between scores on engagement indicators and desire to attend university

Categories		B.	SHB	df	p	Exp(β)
Yes	Constant	-4.40	.32	1	.00*	
	Higher-Order Learning	.22	.09	1	.01***	1.25
	Reflective & Integrative Learning	.45	.12	1	.00*	1.56
	Learning Strategies	.13	.08	1	.11th	1.14
	Quantitative Reasoning	,20	.08	1	.01***	1.22
	Collaborative Learning	.09	.08	1	.27	1.10
	Discussions with Diverse Others	.24	.07	1	.00*	1.27
	Student–Faculty Interaction	.04	.08	1	.58	1.04
	Effective Teaching Practices	.19	.08	1	.03**	1.21
	Quality of Interactions	.36	.07	1	.00*	1.43
	Supportive Environment	.38	.08	1	.00*	1.46
I am not sure	Constant	-2.30	.36	1	.00*	
	Higher-Order Learning	.17	.10	1	.10	1.18
	Reflective & Integrative Learning	.44	.14	1	.00**	1.56
	Learning Strategies	-.02	.09	1	.83	.98
	Quantitative Reasoning	.04	.09	1	.64	1.04
	Collaborative Learning	-.04	.10	1	.65	.96
	Discussions with Diverse Others	1.0	.08	1	.23	1.10
	Student–Faculty Interaction	-.00	.09	1	.99	1.00
	Effective Teaching Practices	.06	.10	1	.54	1.06
	Quality of Interactions	.08	.09	1	.35	1.09
	Supportive Environment	.08	.10	1	.44	1.08

Note. $X^2(20)=459.68$, $p<.001$, $R^2=.17$ *(Nagelkerke), *p<.001, **p<.01, ***p<.05, Reference Category: No*

When the data belonging to the "*I'm not sure"* category are examined, *the reflective & integrative learning* engagement indicator has a 1.56-fold (OR=1.56) increasing effect on university students' responses of *"not sure"* about their desire to attend university. Other engagement indicators do not significantly predict university students' desire to attend university (p>.05).

DISCUSSION

When the relationships between the scores received by university students from *the* student engagement and engagement indicators and their academic success were examined, positive and low-level significant relationships were found between the scores they received from the *NSSE* and *all the engagement indicators* and their academic success. Within the framework of these results, student engagement and engagement indicators positively contribute to the academic success of students.

The results of the studies conducted by Osagie (2016), Snyder (2008), Carini et al. (2006), Cox (2013), Sarwar and Ashrafi (2014) and Ward et al. (2012) are in line with the results of this study. In his research, Osagie (2016) reported

positive and weakly significant relationships between the scores of university students on the engagement indicators of higher-order learning, reflective & integrative learning and student–faculty interaction and their academic achievement. Snyder (2008) reported a positive and low-level significant relationship between the scores of university students on the active and collaborative learning criteria, one of the main criteria of student engagement, and their academic achievement. In their research, Carini et al. (2006) reported positive and low-level significant relationships between students' scores in active and collaborative learning, student–faculty interaction and higher-order thinking dimensions and their academic achievement. In his study, Cox (2013) reported that there was a positive and low-level significant relationship between the scores of students in the dimension of student–faculty interactions and their academic success. In their research, Sarwar and Ashrafi (2014) reported that there was a positive and moderately significant relationship between students' engagement and academic success. Similarly, in their study, Ward et al. (2012) reported that there was a positive and low-level relationship between the scores of business students on the dimension of the integration of diversity into courses and their field exam scores.

When the independent prediction levels of university students' scores from the NSSE and each of the engagement indicators were examined, it was determined that student engagement and each of the engagement indicators independently predicted academic success in a statistically significant way. Within the framework of these results, student engagement contributes positively to academic success. As students' engagement levels and scores on engagement indicators increase, their academic success also increases.

The results of Korobova (2012), Rice (2017), LaNasa et al. (2007), Pike et al. (2008), Peck (2017), Ward et al. (2012), Phillips (2013), Sarwar and Ashrafi (2014), Fuller et al. (2011), Heng (2014), Kuh et al. (2008) and Gordon et al. (2008) are in line with the results of this study. In his research, Korobova (2012) reported that all the main criteria of *student engagement* statistically significantly predict academic success. In his research, Rice (2017) reported that the *level of academic challenge* and *active and collaborative learning* criteria significantly predict students' success. In their research, LaNasa et al. (2007) reported that *learning strategies, academic interactions, a variety of interactions, effort* and *all relationship* dimensions of student engagement significantly predict academic success. Pike et al. (2008) reported that all the main criteria of student engagement significantly predict students' success. In his research, Peck (2017) reported that the engagement indicators of *higher-order learning, learning strategies, quantitative reasoning,* and *quality of interactions* significantly predict academic success. In their study, Ward et al. (2012) reported that the integration of diversity into the course dimension of student engagement significantly predicts the success of business students on field exams.

Similarly, Phillips (2013) reported that the *level of the academic challenge* criterion significantly predicts the academic success of first- and final-year international students, the *enriching educational experience* criterion predicts the academic success of final-year international students, and the *student–faculty*

interaction criterion predicts the academic success of first-year international students. In their research, Sarwar and Ashrafi (2014) reported that student engagement significantly predicts academic success. In their research, Fuller et al. (2011) reported that the *level of the academic challenge* criterion statistically significantly predicts the academic success of first-year students and that the *active and collaborative learning* criteria statistically significantly predict the academic success of senior students. In his research, Heng (2014) reported that dimensions of student engagement, such as time spent on course-related tasks, homework, active participation in class, and time spent on extensive reading, significantly predict academic success. In their research, Kuh et al. (2008) reported that student engagement significantly predicts academic success. Finally, in their research, Gordon et al. (2008) reported that the level of academic challenge, active and collaborative learning, and enriched educational experience criteria significantly predict the academic success of first-year students and that the supportive campus environment criterion significantly predicts the academic success of senior students.

When the scores obtained by university students from the NSSE were examined to independently predict their desire to attend university, student engagement was *shown to* independently predict their desire to attend university in a statistically significant way. *Student engagement* increases the probability that university students will answer *yes* to their desire to attend university compared with the probability of answering *no.* Similarly, *student engagement* increases the probability that university students will answer *not sure* of their desire to attend university compared with the probability of answering *no.*

When the degree to which university students' scores from engagement indicators together predict their desire to attend university, the *commitment indicators* predict their desire to attend university in a statistically significant way. When the data in the *yes* category were examined, it was found that *higher-order learning, reflective & integrative learning, quantitative reasoning, discussions with diverse others, effective teaching practices, quality of interactions* and *supportive environment* engagement indicators increased the probability that university students would answer *yes* to their desire to attend university compared with the probability of answering *no*, whereas other engagement indicators did not significantly predict university students' desire to attend university. When the data in the *"I'm not sure" category are examined, the reflective & integrative learning* engagement indicator increases the probability that university students are *not sure* of their desire to attend university compared with the probability of answering *no*, whereas other engagement indicators do not significantly predict university students' desire to attend university. Within the framework of these results, student engagement positively contributes to the desire to attend university. As students' engagement levels and scores on engagement indicators increase, their desire to attend university also increases.

The results of the studies conducted by Cox (2013), Peck (2017), Shinde (2010), Jones (2013), Kuh et al. (2008), Gordon et al. (2008) and Shinde (2008) are in line with the results of this study. In his study, Cox (2013) reported that the dimensions of student engagement, such as *interactions with faculty* and

institutional importance, significantly predict students' desire to attend university. Peck (2017) reported that *effective teaching practices* and the *quality of interactions* significantly predict students' desire to attend university. Shinde (2010) reported that the *social engagement* and *general satisfaction* dimensions of student engagement significantly predict students' desire to attend university. Jones (2013) reported that the *supportive campus environment* criterion significantly predicts students' desire to attend university. In their research, Kuh et al. (2008) reported that *student engagement* significantly predicts students' desire to attend university. In their study, Gordon et al. (2008) reported that the *supportive campus environment* criterion significantly predicted students' desire to attend university. Similarly, Shinde (2008) reported that the *social engagement* and *general satisfaction* dimensions of student engagement significantly predict students' desire to attend university.

In line with the results of the present research, as students' engagement increases, their academic success and desire to attend university increase. In this context, universities should establish institutional policies to increase the level of student engagement, effectively implement all engagement indicators, and regularly measure the level of student engagement in their institutions to evaluate themselves and identify their shortcomings. They should also examine the student engagement results of other universities, compare them with their own results, and examine universities that are successful in areas where they are lacking and take them as an example.

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In the preparation of this manuscript, we utilized artificial intelligence (AI) tools for content creation with the following capacity:

- ✕ *None*
- ☐ *Some sections, with minimal or no editing*
- ☐ *Some sections, with extensive editing*
- ☐ *Entire work, with minimal or no editing*
- ☐ *Entire work, with extensive editing*

REFERENCES

Archambault, I., Janosz, M., Fallu, J., & Pagani, L. S. (2009). Student engagement and its relationship with early high school dropout. *Journal of Adolescence, 32,* 651-670. https://doi.org/10.1016/j.adolescence.2008.06.007

Astin, A. W. (1985). *Achieving educational excellence*. Jossey-Bass.

Axelson, R. D., & Flick, A. (2010). Defining student engagement. *Change: The Magazine of Higher Learning, 43*(1), 38-43. https://doi.org/10.1080/00091383.2011.533096

Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education, 47*(1), 1-32.

Cinches, M. F. C., Russell, R. L. V., Chavez, J. C., & Ortiz, R. O. (2017). Student engagement: Defining teacher effectiveness and teacher engagement. *Journal of Institutional Research South East Asia, 15*(1), 5-19.

Coates, H. (2007). A model of online and general campus-based student engagement. *Assessment & Evaluation in Higher Education, 32*(2), 121-141. https://doi.org/10.1080/02602930600801878

Cox, B. G. (2013). *Academic and social integration of the nontraditional college student: Does engagement affect retention* [Unpublished doctoral dissertation]. The University of North Carolina at Charlotte.

Dangeni, (2023). Student engagement: A critical conceptualization of the complexity of the international students' experiences. *Journal of International Students, 13*(4), 227-233. https://doi.org/10.32674/jis.v14i3.5702

Darmody, M., Groarke, S., & Mihut, G. (2022). Engagement of international students at Irish higher education institutions. *Journal of International Students, 12*(4), 795-816. https://doi.org/10.32674/jis.v12i4.3608

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*(2), 117-142. https://doi.org/10.3102/00346543059002117

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109. https://doi.org/10.3102/00346543074001059

Fuller, M. B., Wilson, M. A., & Tobin, R. M. (2011). NSSE as a predictor of undergraduate GPA: A cross-sectional and longitudinal examination. *Assessment & Evaluation in Higher Education, 36*(6), 735-748. https://doi.org/10.1080/02602938.2010.488791

Gordon, J., Ludlum, J., & Hoey, J. J. (2008). Validating NSSE against student outcomes: Are they related?. *Research in Higher Education, 49,* 19-39.

Groccia, J. E. (2018). What is student engagement?. *New Directions for Teaching and Learning, 154*, 11-20. https://doi.org/10.1002/tl.20287

Harris, L. R. (2008). A phenomenographic investigation of teacher conceptions of student engagement in learning. *The Australian Educational Researcher, 35*(1), 57-79. https://doi.org/10.1007/bf03216875

Heng, K. (2014). The relationships between student engagement and the academic achievement of first-year university students in Cambodia. *Asia-Pacific Education Researcher, 23*(2), 179-189.

Jones, S. G. (2013). *The relationship between the NSSE scores and persistence data from the freshman to sophomore year among Georgia Southern University students* [Unpublished doctoral dissertation]. Georgia Southern University.

Korobova, N. (2012). *A comparative study of student engagement, satisfaction, and academic success among international and American students* [Unpublished doctoral dissertation]. Iowa State University.

Krause, K. (2005). *Understanding and promoting student engagement in university learning communities. 'Engaged, inert or otherwise occupied?.* The University of Melbourne, Centre for the Study of Higher Education.

Kuh G. D. (2009a). What student affairs professionals need to know about student engagement. *Journal of College Student Development, 50,* 683-706. https://doi.org/10.1353/csd.0.0099

Kuh, G. D. (2009b). NSSE: Conceptual and empirical foundations. *New Directions for Institutional Research, 141*, 5-20. https://doi.org/10.1002/ir.283

Kuh, G. D., Kinzie, J. L., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). *What matters to student success: A review of the literature.* National Postsecondary Education Cooperative.

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2007). Piecing together the student success puzzle: Research, propositions and recommendations. *ASHE Higher Education Report, 32*(5), 1-182.

Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education, 79*(5), 540-563. https://doi.org/10.1080/00221546.2008.11772116

Ladd, G. W., & Dinella, L. M. (2009). Continuity and change in early school engagement: Predictive of children's achievement trajectories from first to eighth grade?. *Journal of Educational Psychology, 101*(1), 190-206. https://doi.org/10.1037/a0013153

LaNasa, S. M., Olson, E., & Alleman, N. (2007). The impact of on-campus student growth on first-year student engagement and success. *Research in Higher Education, 48*(8), 941-966. https://doi.org/10.1007/S11162-007-9056-5

Newmann, F. M. (1989). Student engagement and high school reform. *Educational Leadership, 46*(5), 34-36.

Newmann, F. M., Wehlage, G. G., & Lamborn, S. D. (1992). The significance and sources of student engagement. In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools*. (pp. 11-40). Teachers Collage Press.

Osagie, S. E. (2016). *Student engagement and academic success in veterans' postsecondary education* [Unpublished doctoral dissertation]. Temple University.

Park, S., Holloway, S. D., Arendtsz, A., Bempechat, J., & Li, J. (2012). What makes students engaged in learning? A time-use study of within and between individual predictors of emotional engagement in low-performing high schools. *Journal of Youth and Adolescence, 41*, 390-401.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students.* Jossey-Bass.

Peck, L. (2017). *The correlation between the NSSE indicators and first year student achievement, satisfaction, and retention* [Unpublished doctoral dissertation]. Old Dominion University.

Phillips, G. C. (2013). *A comparative study of international student engagement and success based on race/ethnicity, gender, and institutional type* [Unpublished doctoral dissertation]. University of Minnesota.

Pike, G. R., Kuh, G. D., & Massa-McKinley, R. (2008). First-year students' employment, engagement, and academic achievement: Untangling the relationship between work and grades. *Naspa Journal, 45*(4), 560-582. https://doi.org/10.2202/1949-6605.2011

Reeve, J., & Tseng, C. M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology, 36*, 257-267. https://doi.org/10.1016/j.cedpsych.2011.05.002

Rice, D. (2017). *An exploratory study examining the relationship between student engagement and success between minority and nonminority nursing students* [Unpublished doctoral dissertation]. The University of Alabama.

Saeed, S., & Zyngier, D. (2012). How motivation influences student engagement: A qualitative case study. *Journal of Education and Learning, 1*(2), 252-267.

Sarwar, M., & Ashrafi, G. M. (2014). Students' commitment, engagement and locus of control as predictor of academic achievement at higher education level. *Current Issues in Education, 17*(3), 1-10.

Shinde, G. S. (2008). *The relationship between students' responses on the NSSE and retention* [Unpublished doctoral dissertation]. Tennessee Technological University.

Shinde, G. S. (2010). The relationship between students' responses on the NSSE and retention. *Review of Higher Education and Self-Learning, 3*(7), 54-67.

Shulman, L. (2005). Making differences: A table of learning. *Change: The Magazine of Higher Learning, 34*(6), 36-44. https://doi.org/10.1080/00091380209605567

Smith, S. A. (2019). *Student engagement and retention of minority students in a faith-based institution* [Unpublished doctoral dissertation]. Liberty University.

Snyder, J. A. (2008). *An exploration of the effects of student characteristics and engagement practices on academic success for low-income college students* [Unpublished doctoral dissertation]. Bowling Green State University.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125. ttps://doi.org/10.2307/1170024

Trowler, V. (2010). *Student engagement literature review*. The Higher Education Academy.

Vibert, A. B., & Shields, C. (2003). Approaches to student engagement: Does ideology matter? *McGill Journal of Education, 38*(2), 221-240.

Wang, M., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement and academic achievement in middle school. *American Educational Research Journal, 47*(3), 633-662. https://doi.org/10.3102/0002831209361209

Wang, R., & BrckaLorenz, A. (2018). International student engagement: An exploration of student and faculty perceptions. *Journal of International Students, 8*(2), 1002-1033. https://doi.org/10.32674/jis.v8i2.124

Ward, C., Yates, D., & Song, J. Y. (2012). Blending research and teamwork to enhance undergraduate education: Results from National Survey of Student Engagement and business ETS major field test. *American Journal of Business Education, 5*(3), 325-330. https://doi.org/10.19030/ajbe.v5i3.7004

Willms, J. D. (2003). *Student engagement at school: A sense of belonging and participation, Results from PISA 2000*. Organization for Economic Co-operation and Development.

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