

# COMPARISON OF STUDENT ENGAGEMENT FROM TWO DIFFERENT UNIVERSITIES IN TURKEY IN TERMS OF TECHNOLOGY INTEGRATION AND CAMPUS CLIMATE

Lect. Emrullah YİĞİT Hakkâri University Hakkari- TURKEY

Assist. Prof. Dr. Selim GÜNÜÇ Yüzüncü Yıl University, Faculty of Education Van- TURKEY

# Abstract

Student engagement was defined as "quality and quantity of students' psychological, cognitive, emotional and behavioural reactions to the learning process as well as to in-class/out-of-class academic and social activities to achieve successful learning outcomes". In this study, the purpose was to compare the engagement levels of students from two universities which had different campus structures, climates and cultures with respect to campus, level of technology integration and campus climates. The research data were collected from students attending Yüzüncü Yıl University and Hakkâri University in the Spring Term of the academic year of 2016-2017. As the guantitative data collection tools, "Demographic Information Form", "Student Engagement Scale", "Student Perception Scale Regarding Faculty Member's Competency in Technology Integration" and "Campus Climate Checklist "were used. The findings obtained in the study revealed that Cölemerik Vocational School students at Hakkâri University had higher scores of sense of belonging and campus engagement that the education faculty students at Hakkâri University. The education faculty students at Hakkâri University had higher scores of cognitive engagement, emotional engagement and class engagement when compared the education faculty students at Yüzüncü Yıl University. The education faculty students at Yüzüncü Yıl University had higher levels of sense of belonging and higher scores regarding campus engagement and campus climate when compared to the education faculty students at Hakkâri University.

Keywords: Engagement, student, university, campus, class, technology integration.

# INTRODUCTION

Today, students have different life styles, habits, ways of using the technology and methods of reaching the information when compared to those from the previous generation. It is important to understand these students and to establish healthy communication with them. Making students' education lives more effective and productive is also important for the development of such skills as problem solving, analytical thinking, analyzing one's learning, putting one's knowledge into effect and using technology effectively. Especially in the period of undergraduate education, which is fairly important since it shapes university students' future lives, it is necessary to examine their engagement with the campus, with their courses as well as with their learning.

The Turkish Language Association defines the concept of engagement as "dependence, attachment, feeling of sympathy for someone with love and respect, showing interest and loyalty" (Turkish Language Association, 2017). As for student engagement, it was defined by Günüç (2013) as "*quality and quantity of students' psychological, cognitive, emotional and behavioural reactions to the learning process as well as to in-class/out-of-class academic and social activities to achieve successful learning outcomes".* Student engagement covers a number of concepts like academic achievement, campus



climate, student satisfaction, recreation activities and retention, and it is closely related to these concepts (Günüç, 2016a). In addition, in international literature, several other definitions have been provided for student engagement such as active participation in the learning process, responsibility and focusing on the learning process, attention in the learning process and the quality of the time spent and of the effort made by the student in relation to the educational activities to contribute to the outcomes (Newmann, Wehlage & Lamborn, 1992; Marks, 2000; Kuh & Hu, 2001; Kuh, 2009).

In studies reported in related literature on student engagement, it is seen that the concept was examined in several dimensions. Student engagement has three dimensions: cognitive, emotional and behavioral (Jimerson, Campos & Greif, 2003; Fredricks, Blumenfeld & Paris, 2004; Günüc, 2013). Cognitive engagement, which is related to students' approaches to their own learning, includes making investment in learning, valuing what they learn in class, objectives of learning, self-control and planning (Günüç, 2016a). Frederick and colleagues (2004) state that students with high levels of cognitive engagement have more flexible problem solving skills, make investment in their own learning, determine their own needs and develop various strategies against intellectual difficulties. Cognitive engagement refers to the situation related to students' intellectual processes. As for emotional engagement, it depends on psychological engagement and involves emotional reactions including interests and values regarding students' attitudes towards their classmates, teachers, lessons and their class (Fredricks et al. 2004). Emotional engagement occurs as positive emotions like students' interest in class and their happiness or as negative emotions like students' boredom and anxiety. Behavioral engagement, which constitutes another dimension of student engagement and which includes students' participation in academic and social activities at school, is more easily observable and measurable when compared to other types of engagements. Behavioral engagement includes students' attendance in classes and their efforts to participate in academic, social and inclass and out-of-class activities. Behavioral engagement, which is related to campus and class activities, requires student participation (Günüç, 2016a).

In student engagement, how students think (cognitive), how they feel (emotional) and how they behave (behavioral) are examined separately or collectively (Fredricks et al. 2004). In addition to these three dimensions, Günüç (2013) added the dimensions of sense of belonging and valuing and considered student engagement to be a five-dimension concept. The concepts of valuing and sense of belonging are also related to emotional and behavioral engagements. Students will be in peace and happy in an environment which they feel they belong to and where they feel they are valued, and they will thus be more willing to take part in the activities.

All university students could be said to have engagement even at lowest level. However, what is important is to increase their engagement and to maintain their engagement throughout their education lives. In this respect, Günüç (2016a) developed the Theory of Campus-Class-Technology to understand, explain and increase student engagement. In other words, according to the researcher, it was not satisfactory just to consider the cognitive, emotional and behavioral engagements as in related literature. Therefore, the researcher also pointed out that campus engagement was influential on students' achievement and on their learning as well. Within the scope of campus engagement, campus climate and facilities including the physical conditions of the campus, campus activities, peace and safety in campus, group activities and team works are considered to be among important factors that increase student engagement. In class engagement, the focus is on such factors as students' love for faculty members, their mutual communication, respect and interest, faculty members' professional competencies, students' participation in class, projects and cooperative learning activities, and physical conditions of classrooms. The dimension of technology, another factor of the theory, includes factors such as technological sub-structure of classrooms and of the faculty, support structures for technological malfunctions, introduction of technological innovations, technological competency and technology integration and use of social networks in education. All these factors are considered to be important for students to increase their engagement and to maintain their engagement throughout their education lives.



Student engagement is likely to be influenced by a number of variables in the teaching and learning process. In this study, the purpose was to compare the engagement levels of students from two universities which had different campus structures, climates and cultures with respect to campus, level of technology integration and campus climates.

# METHOD

# **Research Model**

In the study, two universities were compared in terms of certain variables, and the current situation was described and examined. In relation to the main purpose of the study, the academic units of Hakkâri\_University (HU) and the education faculties of HU and Yüzüncü Yıl University (YYU) were compared. For this reason, in the study, the survey model, one of quantitative research methods, was used.

# **Research Sample**

The research data were collected from students attending YYU and HU in the Spring Term of the academic year of 2016-2017.

University	Variable	Frequency	%
Hakkâri University			
Gender	Female	129	52,9
	Male	115	47,1
Unit	ÇVS	165	67,6
	Fac. of Edu.	79	32,4
Total		244	100
Yüzüncü Yil University			
Gender	Female	96	54,2
	Male	81	45,8
Unit	Education Faculty	177	100
Total		177	100
Total		421	100

 Table 1: Distributions of Frequencies and Percentages Regarding the Participants

As can be seen in Table 1, 244 students from HU and 177 students from YYU (421 in total) participated in the study. Of all the participants, 225 of them were female, and 196 of them were male. Table 1 presents the frequency and percentage distributions of the participants regarding their gender, university and academic unit.

#### **Data Collection Tools**

In the study, as the quantitative data collection tools, "Demographic Information Form", "Student Engagement Scale", "Student Perception Scale Regarding Faculty Member's Competency in Technology Integration" and "Campus Climate Checklist" were used.

*Demographic Information Form:* This form was used to collect data regarding the variables of the students' gender, university and academic unit.

*Student Engagement Scale:* In the study, the "Student Engagement Scale" developed by Günüç and Kuzu (2014) was used. As can be seen in Figure 1, the scale was made up of 41 items and two components with a six-factor structure. The factor structure of student engagement was determined



by Günüç and Kuzu (2014) as presented in Figure 1. For this reason, this structure was taken into account while conducting the related analyses.



Figure 1: Factor Structure of the Student Engagement Scale

The scale included 5-point items graded as "I completely disagree", "I disagree", "I am neutral", "I agree" and "I completely agree". Total variance explained in relation to the six factors of the scale was found to be 59%. The Cronbach's Alpha (a) internal consistency coefficient for the whole scale was calculated as .957 according to the exploratory factor analysis and as .929 according to the confirmatory factor analysis. Table 2 demonstrates the Cronbach's Alpha internal consistency coefficient for the scale and for its sub-factors regarding the two universities included in the present study.

Table 2: Reliability Values Calculated for the Student Engagmeent Scale and Its Sub-factors

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	Total	Valuing	Sense of	Cognitive	Peer	Relationships	Behavioral
Univ.	Scale		Belonging	Eng.	Relationships	With the Faculty	Engagement
	(Stu. Eng.)				(Emo. Eng1)	Eng2)	
HU	.943	.761	.932		.842	.920	.864
				.885			
YYU	.936	.849	.872		.909	.907	.861
				.887			

The scale was made up of two main components (campus engagmeent and class engagement) and six factors. Campus engagement included the factors of valuing and sense of belonging, while the component of class engagement included cognitive engagement, peer relationships (emotional engagement-1), relationships with faculty member (emotional engagement-2) and behavioral engagement. A higher score to be received from the scale refers to a high level of student engagement, which means the student has high levels of campus engagement and class engagement. On the other hand, a low score to be produced by the scale demonstrates that the student has a low level of student engagement; in other words, the student has a low level of campus engagement.

Student Perception Scale Regarding Faculty Member's Efficacy in Technology Integration (SPSFETI): The scale was developed by Artun and Günüç (2016) for university students, and the scale included 5-point items graded as "Never", "Rarely", "Sometimes", "Usually" and "Always". Total variance



explained in relation to the six factors of the scale was found to be 49%. The Cronbach's Alpha internal consistency coefficient of the structured confirmed with CFA was calculated as .940. A higher score to be received from the scale demonstrates that the preservice teacher perceives the faculty member's competency in technology integration to be high. In the present study, the Cronbach's Alpha internal consistency coefficients were calculated as .948 for the participants from YYU and as .972 for those from HU.

*Campus Climate Checklist:* This checklist was prepared by Günüç (2016b). The main indicators regarding a good-quality included Campus (physical features of the campus and physical features of the faculty), Life in Campus (accommodation/dormitory services, health services, counseling services, security services, technology services, library), Social Facilities (shopping, sports facilities), Entertainment Activities (sports activities, cultural activities, entertainment activities) and Student Clubs/Communities, and based on these indicators, a 21-item questionnaire was developed. This form can be filled out by each student individually, and it reveals students' perceptions regarding the campus climate/facilities. In addition, the questionnaire included 3-point items graded by the students as "I have no idea", "Inefficient" and "efficient". The researcher, who developed the questionnaire, explained the reason for including the category of "I have no idea" in the form saying that some of the students would be likely to be unaware of the campus facilities or may not have used these facilities.

# **Data Collection and Analysis**

The research data were collected on pencil-and-paper basis with the measurement tools applied to the students attending Colemerik Vocational School (ÇVS) and Education Faculty of HU as well as to those attending Education Faculty of YYU. The data collected were computerized and checked using the package software of SPSS to determine any related deficiencies or wrong entries in the data, and the participants with such deficient or wrong data were not included in the analysis process. For the analysis of the data, descriptive statistics such as mean scores, standard deviations, percentages and frequencies were used. In order to compare the groups, independent samples t-test was used.

# FINDINGS

Initially, for the purpose of comparing the two universities, the researchers described the campuses where the campus and academic units were found. For this reason, two researchers observed the universities and evaluated the campuses where the academic units were found with respect to certain indicators, which made it possible to interpret the data collected with quantitative data collection methods. In line with the basic purpose of the study, the analyses included comparisons between the units of HU and between the education faculties of HU and YYU. Similarly, the descriptions regarding the university campuses were done as well.

#### Describing the Campuses of Hakkâri University

The units in ÇVS and Education Faculty of HU are in different campuses. When the facilities and structures of the campus where the two units are found were compared, it was seen that ÇVS was located in a place a bit farther from the city center than the location of the Education Faculty, yet the former had a small-scale campus with its own dining hall, sitting benches, green areas, security, public housing and cafeteria. The ÇVS building was made up of two blocks, and the classrooms and the administrators' offices were on different floors. In addition, there were conference halls and application laboratories belonging to the departments. On the other hand, the education faculty was located only on one floor of a building found in the city center of Hakkâri. The classrooms were on the same floor with the administrative units, and the other floors of the building accommodated other faculties. The building did not have any garden, and its main entrance door directly opened to an avenue. The number of the classrooms and other facilities were a bit limited when compared to ÇVS. The campus of HU was still under construction at the time of the study, and the two units were found in a place different from the central units of the Rectorship, Head of Student Affairs, Head of Health,



Sports and Culture and Public Dormitory. When the facilities provided by the two units were evaluated in general, ÇVS had slightly better facilities compared to the education faculty.

# Describing the Campuses of Education faculties of HU and YYU

As the campus of HU was under construction at the time of the study, the units were giving education either in the buildings belonging to the university or in those rented. Since the construction of the campus was not completed, the buildings and the units were in different areas. The number of the public and private dormitories where the students accommodated was quite limited. There were not enough places where the students would have found the opportunity to communicate, spend their free time or socialize. Considering the technological sub-structures of the current buildings, it could be stated that they were all inefficient. On the other hand, YYU had its own campus with a wider variety of facilities. The campus of YYU, which is located near Lake Van, has the necessary environments for students to socialize, green areas, central laboratories, central cafeterias and dining halls, central libraries, hospitals for health services and the necessary technological sub-structure and related tools. Students have the opportunities to spend their time safely in the campus. In brief, it was seen that the two universities were different from each other in terms of their facilities and that HU provided its students with fairly limited facilities while YYU had a large and better-looking campus with its education faculty located in the campus.

# Findings Regarding Student Engagement, Technology Integration (SPSFETI) and Campus Climate

In the study, comparisons were made between ÇVS and Education Faculty of HU and between the education faculties of HU and YYU with respect to student engagement, student engagement components/factors, technology integration and campus climate, and the results obtained are presented in Table 3 and Table 4.

Variable	Department	N	x	S	Sd	t	р
SPSFETI	ÇVS	165	74.98	26.42	242	1.77	.077
	Fac. of Edu.	79	69.00	20.19			
Valuing	ÇVS	165	11.64	2.85	242	.237	.813
Faktor							
	Fac. of Edu.	79	11.55	2.75			
Sence of Belonging	ÇVS	165	23.78	8.61	242	4.757	.000
Factor							
	Fac. of Edu.	79	18.13	8.78			
Cognitive Engagement Factor	ÇVS	165	39.01	7.44	242	.711	.478
	Fac. of Edu.	79	38.29	7.34			
Peer Relationships	ÇVS	165	22.57	5.68	242	.517	.606
(Emotional Eng1) Factor							
	Fac. of Edu.	79	22.18	4.94			
Relationships	ÇVS	165	35.98	9.87	242	.264	.792
With the Faculty Member							
(Emotional Eng2) Factor							
	Fac. of Edu.	79	36.32	8.45			
Behavioral Engagement	ÇVS	165	16.06	3.73	242	.683	.495
Factor	-						
	Fac. of Edu.	79	15.72	3.38			
Campus Engagement	ÇVS	165	35.43	10.01	242	4.308	.000
Component	-						
	Fac. of Edu.	79	29.69	9.09			
Class Engagement	ÇVS	165	113.63	22.29	242	.376	.707
Component	-						
·	Fac. of Edu.	79	112.53	19.55			
Student Engagement	ÇVS	165	149.06	27.93	242	1.875	.062
	Fac of Edu	79	142 22	23 74			

Table 3: Comparison of HU Units in Terms of Certain Variables (T-Test Findings)

When Table 3 was examined, it was seen that the results of the comparison analyses revealed a significant difference between the education faculty and ÇVS of HU in terms of the variables of sense



of belonging ([t(242)=4.75; p<.05]) and campus engagement ([t(242)=4.30; p<.05]). Although no significant difference was found between the total scores of student engagement and SPSFETI, there was a difference with respect to the two variables in favor of ÇVS.

These findings demonstrated that the ÇVS students at HU had higher scores regarding the factor of sense of belonging when compared to the education faculties and that the ÇVS students at HU had higher scores regarding campus engagement than the education faculty students. Based on these findings, it could be stated that ÇVS was better when compared to the education faculty with respect to technology integration and campus facilities.

Variable	Unit	Ν	x	S	Sd	t	р
SPSFETI	HU	79	71.60	21.25	237	.126	.900
	YYU	160	71.91	17.99			
Valuing	HU	79	11.58	2.81	237	.320	.750
Faktor							
	YYU	160	11.70	3.02			
Sence of Belonging	HU	79	19,48	9.40	237	3.463	.001
Factor							
	YYU	160	23.08	6.92			
Cognitive Engagement	HU	79	38.39	7.59	237	2.406	.017
Factor							
	YYU	160	36.05	7.32			
Peer Relationships	HU	79	22.16	5.12	237	.051	.959
(Emotional Eng1) Factor							
	YYU	160	22.12	6.31			
Relationships	HU	79	36.15	8.60	237	5.273	.000
With the Faculty Member							
(Emotional Eng2) Factor							
	YYU	160	30.12	8.63			
Behavioral Engagement	HU	79	15.63	3.49	237	.552	.582
Factor							
	YYU	160	15.87	3.22			
Campus Engagement	HU	79	31.06	10.04	237	3.036	.003
Component							
	YYU	160	34.78	8.91			
Class Engagement	HU	79	111.78	21.44	237	2.917	.004
Component							
	YYU	160	104.21	18.74			
Student	HU	79	142.84	26.17	237	1.148	.252
Engagement							
	YYU	160	139.00	25.12			
Campus Climate	HU	79	21.32	7.35	237	2.175	.031
	YYU	160	23.23	6.23			

Table 4: Comparison of HU and YYU in Terms of Certain Variables (T-Test Findings)

When Table 4 was examined, it was seen via the results of the comparison analyses that there was a significant difference between the education faculties of both universities in terms of the variables of sense of belonging ([t(237)=3.46; p<.05]), cognitive engagement ([t(237)=2.40; p<.05]), relationships with the faculty member (emotional engagement-2) ([t(237)=5.27; p<.05]), campus engagement ([t(237)=3.03; p<.05]), class engagement ([t(237)=2.91; p<.05]) and campus climate ([t(237)=2.17; p<.05]). These findings revealed that the education faculty students at HU had higher scores regarding student engagement, relationships with faculty member (emotional engagement-2) and class engagement when compared to the education faculty students at YYU. On the other hand, the education faculty students at YYU had higher scores regarding sense of belonging, campus engagement and campus climate when compared to the education faculty students at HU. In other words, the education faculty students at YYU had higher scores of class engagement, while the education faculty students at YYU had higher scores of class engagement. All



these findings were consistent with the campus descriptions regarding the units and universities. In another saying, the facilities and structures related to the campus are important for student engagement.

# DISCUSSION AND CONCLUSION

The present study aimed to describe student engagement at the universities located in the cities of Van and Hakkâri and to compare certain campus-related variables. In this respect, not only the ÇVS and Education Faculty units at HU but also the units of the Education Faculty of HU and the Education Faculty of YYU were compared in terms of certain variables related to the campus, student engagement and technology integration.

The findings obtained in the study revealed that the ÇVS students at HU had higher scores of sense of belonging and campus engagement than the education faculty students at HU. One reason for this could be the fact that ÇVS had its own campus and that the education faculty did not. Therefore, the ÇVS students could be said to have a higher score of sense of belonging due to the facilities they were provided with in the campus.

Another finding was that the education faculty students at HU had higher scores of cognitive engagement, emotional engagement (the factor of relations with the faculty member) and class engagement when compared the education faculty students at YYU. The students at HU had better relationships and communication with each other and with their faculty members probably because HU was smaller than YYU as well as because the former had fewer students in number. For instance, some classes included 7-8 students, which made the lessons more productive and interactive. In addition, since the education faculty at HU used only one floor of its building, the students and the faculty members shared the same environment at out-of-class times. Accordingly, this situation could be said to create a warmer atmosphere which allowed the faculty members and the students to know one another better and which increased the students' levels of class engagement. The factors leading to an increase in engagement include the faculty members' support to their students, cooperation and interaction, interest in the environment and establishment of positive friendship relations between the students (Brewster & Bowen, 2004; Shin, Daly & Vera, 2007; Badge, Saunders & Cann, 2012; Günüç, 2016a). In this respect, the findings obtained in the study are supported by the related literature.

In addition, it was found in the study that the education faculty students at YYU had higher scores of sense of belonging and higher scores regarding campus engagement and campus climate when compared to the education faculty students at HU. The reason for this finding could be the fact that YYU had more facilities and its own campus and that it provided its students with environments where they could spend their free time. In addition, this result could also be based on the fact that HU did not have a big/wide campus; that the students were not exposed to any campus climate; and that the students were not provided with any facilities to spend their free time or to do any activities. Consequently, the limited campus facilities of HU decreased the students' scores of campus engagement, and the relationships established with peers and with the faculty member in a warmer atmosphere increased the students' scores of class engagement. In contrast, there was a contrary situation at YYU. However, the research data collected did not make it possible to explain the students' low levels of class engagement at YYU. This result might have occurred due to administration, faculty members and several other factors. In order to clarify this situation, interviews could be held with students in future studies.

One limitation to the present study could be the research sample. In the study, a limited number of students were reached due to time and cost issues. Moreover, the study included only the students from the ÇVS and education faculty at HU and from the education faculty at YYU. In future studies, similar comparisons could be made between students from other universities and units. In this respect, the variables in question may reveal different results at different class grades and in different units of the same university. Another limitation to the study could be the research method applied in



the study. In the present study, the quantitative research method was used. Therefore, it was not possible to determine the students' views in detail about the campus and the class, and several difficulties were experienced in relation to the interpretation of the findings.

There are a number of variables influential on student engagement. It is impossible to say that campus facilities, relations with the faculty member technology integration and technological substructure are the only variables influential on increasing engagement. In future studies, all these variables could be taken into account as a whole, and the influence of other variables on student engagement could be examined. University administrators should make more efforts to make campus climates better. As can be seen via the results obtained in the present study, there are many factors influential on student engagement. However, it will make important contributions to increasing student engagement if the focus is not just on the factors related to the campus or class as well as if the two factors are evaluated simultaneously with a holistic approach.

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# **BIODATA AND CONTACT ADDRESSES OF AUTHORS**



Instructor Emrullah YIGIT was born in 1987 in Van. In 2011, he graduated from the department of Computer Education and Instructional Technologies in the Faculty of Education of Yüzüncü Yıl University. He still holds a master's degree in the same department. He is married and has 1 child. He is working as an instructor at the department of Computer Technology at Colemerik Vocational School, Hakkari University.

Emrullah YİĞİT Hakkari University Colemerik Vocational School Hakkari- TURKEY E. Mail:<u>emrullahyigit@hakkari.edu.tr</u>



Selim GÜNÜÇ graduated from Computer Education and Instructional Technologies Department in 2004. He graduated Educational Sciences Master Program in 2009. He received him Ph. D. in Anadolu University, Department of Computer Education and Instructional Technologies in 2013. He is an assistant professor in Department of Computer Education and Instructional Technologies at Yuzuncu Yil University. His research interes ciber psychology (technology/internet/game addictions so on), technology integration and student engagement.

Assist. Prof. Dr. Selim GÜNÜÇ Yüzüncü Yıl University, Faculty of Education Computer Education and Instructional Technologies Van-TURKEY E. Mail: <u>selimgunuc@hotmail.com</u>



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