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## Investigation of the Psychological, Pedagogical and Technological Adaptation Levels of Repatriated University Students

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### To cite this article:

Tajibayeva, Z., Nurgaliyeva, S., Aubakirova, K., Ladzina, N., Shaushekova, B., Yespolova, G., & Taurbekova, A. (2023). Investigation of the psychological, pedagogical and technological adaptation levels of repatriated university students. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 11(3), 755-774. <https://doi.org/10.46328/ijemst.3336>

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## Investigation of the Psychological, Pedagogical and Technological Adaptation Levels of Repatriated University Students

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### Article Info

#### Article History

Received:

20 September 2022

Accepted:

15 March 2023

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#### Keywords

Repatriated university students

Psychological adaptation

Technological adaptation

Pedagogy

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### Abstract

The aim of this study is to examine the psychological, pedagogical and technological adaptation levels of repatriated students studying at different universities in Kazakhstan with a comparative and relational approach. In the research, since it is aimed to determine the psychological, pedagogical and technological adaptation levels of the repatriated students in Kazakhstan and to examine them in terms of various variables, the survey model was used. 172 repatriated students studying in different cities in Kazakhstan participated in this research in the 2022 academic year. Psychological adaptation, pedagogical adaptation and technological readiness and adaptation scales were used to collect the research data. In the analysis of the study data, Independent Samples t, ANOVA and Pearson Product Moments Correlation Coefficient techniques were used. According to the research findings, it has been seen that the psychological and pedagogical adaptation of the university students of repatriated is low, while the pedagogy technology integration, general pedagogical adaptation and technological adaptation are at a moderate level. Psychological and pedagogical adaptations of participant repatriated students differed according to gender and grade levels. However, no difference was found according to technological adaptation class level. Finally, significant and high-level relationships were found between the psychological, pedagogical and technological adaptations of the participant students.

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### Introduction

When the immigrants and their status are investigated, immigrants to those who migrate voluntarily without being subjected to any pressure or coercion, to those who cannot benefit from the protection of their country of citizenship due to the turmoil in their country and who do not want to benefit from it, do not want to or do not return to their country due to the fear in question. Persons who want to be accepted as a refugee in a country within the framework of relevant national or international documents and are waiting for the result of their application for refugee status are called asylum seekers. Persons who receive the temporary protection certificate are called

foreigners (Johnson, 2007). In recent years, immigration has been increasing rapidly all over the world. Especially in the last five years, the number of people who migrated has exceeded three percent of the world population. Immigrants generally immigrate with their whole families and start a new life in the places where they migrated, under undesirable conditions. These conditions can create many problems for people who migrate (Hammond, 2018; Naff, 1994). While the problems caused by the tension, stress and psychological trauma experienced by adults both while migrating and trying to live in a new geography negatively affect the mental structure, in addition to these problems, children are also affected by migration at least as much as adults (Cicourel 1982; Timotijevic & Breakwell, 2000; Singh, 2020).

Returning to the country is a particularly challenging period for many tertiary culture children and can cause culture shock for many individuals entering college (Kortegast & Yount, 2016; Smith & Kearney, 2016). Educational activities and schools are powerful tools for refugees and IDPs in the process of return and social integration. Return, reintegration and post-conflict reconstruction are multisectoral efforts with many variables that must include education (Linstone and Turloff 1975). In addition to improvements in safety, returnees base their return decisions on support for the rebuilding and establishment of education and health facilities, rebuilding roads and rebuilding homes and livelihoods. All this must be planned holistically, for example schools and their furniture can be built by young people trained in vocational programmes. The official opening and closing dates of schools should be taken into account when planning returns and accompanying services. Information campaigns should be conducted in both asylum areas and returns areas to prepare communities for the process of return, resettlement and reintegration (Goodwin, 2002; Hoang & Turner, 2022).

On acculturation theory, Berry (2005) states that an individual's values, beliefs, and identity are often affected or changed as they experience multicultural systems. According to this study, most of the participants shared that their values, beliefs and identities were influenced by their multicultural experiences. The confirmation of this theory is mostly seen in the participants' statements that they are not aware of their differences until they return to their countries. In another study, Berry (2005) suggested that many of the changes in values, beliefs and identity are not noticed until the individual returns to his or her home country. Findings from this study also support this theory. Berry's (2006) acculturation theory focused on the host country. However, a multicultural attitude that values, welcomes and integrates different groups when applied to the host culture – particularly the higher education environment – can help return Kazakhs to the mainstream society. In his study of Turkish immigrants returning to the United States, Martin (2007) found that the severity of culture shock is affected by several factors: exposure to American culture, the amount of return trips to the United States while living in the host country, and what the individual does with Americans while living in the host country (Martin, 2017).

Similarly, returning to their country may cause psychological distress as immigrants face sociocultural adaptation (Bikos et al., 2014; Tharenou, 2015). Psychological difficulties become more evident when individuals often have problems with adaptation, identity and culture shock when they return to their home country (Kortegast & Yount, 2016). Likewise, return can affect emotional development such as loss, adaptation difficulties, separation worries, and self-protection problems (Lijadi & van Schalkwyk, 2014). These psychological difficulties can make many social difficulties worse (Klemens & Bikos, 2009).

Students in migrant families are most affected by housing, health, employment, cultural relations, identity issues and education (Gaw, 2000). Education is one of the most important of these problems (Kuh, 2003). Education policies need to be improved in order to cope with both the failures in the current system and the problems caused by migration (Heckmann, 2008). One of the most important factors affecting success in the educational environment is the problem of adaptation (Pavlou & Christodoulou, 2002; Yurdakul & Tok, 2018). Therefore, it is important to give more weight to adaptation studies in education programs in schools with increasing migration and to investigate adaptation and educational problems in order to make the educational environment of refugee students who have to leave their country more efficient. It is observed that immigrant students have more adaptation problems than their peers in the field of education. (Parente et al.; 1994). Since they come from a different geography and culture than their peers, adaptation problems such as communication problems, peer bullying and language deficiency negatively affect the education of migrant students (Cebeci, 2015; Yurdakul & Tok, 2018). Therefore, this situation affects both migrant students and their peers with whom they receive education. School is an educational environment where students from different countries learn communication skills, get to know different cultures, help self-actualization, are supported and learn (Stephan et al.; 1999).

According to many teachers, these students have difficulty adapting to the classroom climate, peers, social environment and school rules as they are unable to actively participate in class and experience a sense of failure. In addition, refugee students who show negative behaviors or become withdrawn may also have difficulty communicating with their friends due to cultural differences (World Economic Forum, 2018). Students who cannot express themselves sufficiently may not be accepted by other students because they cannot communicate with them. This lack of acceptance by their peers does not disappear during the adaptation process and can affect the entire education process. In the education process, teachers' lack of any training on how to improve the education of refugee students and their prejudices increase these problems. This may lead to a tendency to exclude refugee students (Er & Bayındır, 2015). As a result, not learning the language of education sufficiently creates many new adaptation and educational problems and increases the existing problems.

The language problem that refugee students experience while continuing their education poses many problems for local students. As supported by the literature, the language problem of refugee students is one of the main problems faced by teachers in adaptation and education processes (Heckmann, 2008). The indifference of local students brings along the difficulties of repatriated students in adapting to the classroom, school culture and environment. Students who have difficulty understanding refugee students are also reluctant to communicate with refugee students because they cannot be understood when they express themselves. Since friendships cannot be established, repatriated students are not accepted (Hu et al., 2002). Teasing and exclusion of repatriated students who are not accepted by local students can lead to peer bullying (Tösten et al., 2017). This situation brings along undesirable behaviors such as fighting and violence.

Another factor that causes this situation is the negative impact on students' academic achievement. Local students, who are in the same class with older students and who achieve the gains late due to the curriculum not going at the existing pace, cannot develop positive emotions and thoughts. Nora (2002) also mentioned this in his study. Teachers' allocating more time to repatriated students and the decrease in the speed and efficiency of the lessons

due to overcrowded classrooms create jealousy and negatively affect the local student. Students who have difficulty focusing their attention and fall behind academically may cause classroom conflicts and increase peer bullying. Therefore, changes in the classroom environment are one of the factors that negatively affect local students. Another important factor affecting the negative perspectives of repatriated students during the adaptation process is the negative attitude of the student's parents towards these students. The fact that repatriated students cannot make sense of the process due to the lack of clear and open discussion of the reasons for their arrival in the home environment causes local students to treat these students with prejudice (Lincoln & Guba, 2005).

To facilitate the integration of students into the education system of their home country, there should be a process for the recognition and accreditation of education received in the country of return (e.g. refugee programs) prior to repatriation. The host country's Ministry of Education or a credible examination council should facilitate this accreditation process. In the case of secondary school students in particular, steps should be taken to ensure that adequate educational facilities and staff are available in the areas of return to enable students to continue their education. Possible strategies could include the integration of returning teachers and the establishment of a shift system to share limited school space. Wherever possible, students should be allowed to complete their education cycle, including final matriculation exams. It is important that an NGO or UN representative speaks on behalf of the refugee education system and takes ownership of the problems of teachers and students during the return and reintegration process (Adams, et al.; 2006).

As a general rule, special programs for returnees should be actively discouraged, as this creates tensions in the wider community. However, formal and informal monitoring mechanisms should be put in place to determine whether returning students and teachers are being discriminated against and whether education services are meeting their needs or impeding the resettlement process (Lincoln, 2005). For example, refugees and IDPs often wait in urban areas before returning to rural areas. In this case, it is important that rural schools are well resourced. Integration is the process of mutual adaptation of both the migrant and the inclusive society (Berger, 2001), adapting to the values of the new culture (Burteisen, 2003) and acquiring a distinct identity (Pulinx & van Avermaet, 2015). Only repatriated students who have successfully passed the previous stages can reach this stage. The migrant is now in the new place and is busy integrating the old values with the values of the new culture (Ortas, 2021 and Berger, 2001).

It is crucial to identify the views of the parents of repatriated students, as personal considerations such as parents' views can influence the choice of higher education institution for repatriated students. Therefore, the vast majority of parents of repatriated students intend to send their children to a college or university after graduation. Some parents plan to enroll their children in a university in an English-speaking country, while others consider sending their children to study in the country where they lived before coming to Kazakhstan.

Regarding the many problems in the education process of repatriated students, it is seen that all problems are interrelated and can be solved by addressing them as a concept (Dryden-Peterson, 2015). The problems faced by the students; It is important for the solution to be acted upon by families, teaching staff and university administration in a common language and within the necessary material and moral possibilities. Although the

increase in the number of repatriated students in recent years has caused problems in education as in many other areas, several steps can be taken to solve them. The suggestions developed based on the findings obtained from the perspective of the teachers regarding the problems experienced by the students who had to leave their countries during the adaptation and education processes are as follows:

Today, with the integration of technology into education and training activities in the process of transition to the information society, learners' attitudes towards technology show itself as a variable that needs to be taken into consideration. In the early periods when technological developments were widespread, the inequality in the access of male and female individuals to technology caused their attitudes towards technology to change; nowadays, the fact that there is no inequality in access to technology causes individuals to exhibit similar attitudes. Considering the socio-economic levels and income distribution of individuals, it is seen that human capital also affects attitudes towards technology (Corrocher & Ordinani, 2002; Cullen, 2001).

In the process of gaining desired behaviors in educational activities, individuals' interests and attitudes towards the concepts to be learned come to the fore. According to Morgan (1991), attitudes, hatreds and loves are effective on individuals' behaviors. Ajzen (2001) states that attitude includes different components such as good or bad, liking or disliking, harmful or beneficial and that it includes a general psychological evaluation of the concept. According to Anderson (1988), attitude is a psychological structure that emerges as an important predictor of individuals' behaviors with its cognitive, affective and behavioral dimensions. The digital divide, which is used to describe the difference between those who have access to a new information technology, mostly computers, smartphones, tablets and other digital devices (Van Dijk, 2006), and those who do not, is affected by many economic, social and demographic variables as well as technology, and its main indicators are technological infrastructure, number of internet users and number of telephone users (Campbell, 2001; Colby, 2001).

As a result of the digital divide, the concepts of minimal use and access to information technologies are expressed in terms of digital poverty, which is also defined as minimal or no use and access (Barrantes, 2007). Therefore, considering that refugee students are individuals who have been separated from their own countries through forced migration and have experienced digital divide and digital poverty, it seems to be expected that they will develop positive attitudes towards technology (Dragulanescu, 2002). It is inevitable for an individual who has to change his/her country to face a series of difficulties that may arise during this transition period. However, they will also encounter different opportunities in their new country of origin. Therefore, it is extremely important to develop an intervention program especially for immigrants in the integration process (Riggins & Dewan, 2005).

According to Grinberg and Grinberg (1999), who interpret migration from a psychoanalytic perspective, the migrant's insecurity makes him/her feel helpless and prevents him/her from making effective use of even favorable opportunities. On the one hand, the repatriated students want to be like other people; on the other hand, they are afraid of being destroyed by the new culture; on the other hand, they want to feel themselves as they are. These conflicts can lead to alienation and emotional turmoil. Feelings of loneliness and alienation increase anxious and depressive symptoms and may subsequently lead to psychological problems such as loss of appetite, indigestion, sleep disturbances and headaches (Cicoural, 1982; Ekşi, 2002; Göhler, 1990). In this context, it is of great

importance and necessity to develop a special form of therapy for the psychological adaptation of repatriated students. Since peer bullying and academic failure are among the most common problems experienced by these students, instructors and psychological counselors in schools may need to intervene more effectively in these issues. Psycho-education programs can be implemented to address the problems of marginalization, peer bullying and academic failure.

There are several studies in the literature investigating the educational status of migrant children (Dryden-Peterson, 2015; Beltekin, 2016; Kovinthan, 2016; Yaylacı et al. 2017). It is of course important for repatriated children to receive education, but the needs of teachers who will conduct the lessons of children in this group should not be ignored. Various studies have been conducted on this issue in the literature. In these studies (Matthews, 2008; Sidhu & Taylor, 2009; Ferfolja, 2009; Bourgonje, 2010; Pastoor, 2015), it was found that teachers' competencies are important, they want to have more knowledge in the education of repatriated, immigrant, and similar groups of children, and they need professional training on these issues.

Researches have shown that repatriated students face the most difficulties in terms of language, lack of motivation, adaptation, lack of appropriate learning environment, lack of guidance and counseling, cultural difficulties, exclusion by their peers, lack of resources/materials, non-specialists, economic problems and lack of family support. When these problems are considered as a whole, it can be said that repatriated children face serious difficulties in receiving education. One of the main difficulties experienced by repatriated students in receiving education is cultural problems. Considering that meeting and adapting to a new culture is difficult and requires a process, it can be stated that it is normal for such a problem to exist. Studies by Banks (1993), Sleeter and Grant (2003) and Obiakor (2007) also emphasized that culture is extremely important in education and that its gains will be more effective in the process. Lack of appropriate learning environment and shortage of resources/materials were emphasized as one of the important issues affecting the education of migrant students.

In general terms, adaptation is accepted as a measure of the compatibility between the individual and the environment in which he/she lives. Adaptation is the adoption of certain behaviors by coming to terms with the new environment. Individuals adapt to their new environment in different biological, psychological, social and economic dimensions. While explaining the adaptation process; stress and coping and cultural learning theories are taken as basis. The adaptation process experienced as a result of migration is evaluated from two different perspectives as psychological adaptation and sociocultural adaptation (Oguri & Gudykunst, 2002; Şahin, 2001; Yang, Noels & Saumure, 2016; Xia, 1991). Individuals may experience various incompatibilities in their new place of settlement and these incompatibilities may be a source of stress. Psychological adaptation is defined as the ability to cope with this stress (Abu-Rayya, 2013; Ward & Kennedy, 1993).

In other words, psychological adaptation refers to the individual's psychological and physical state and overall psychological well-being associated with the ability to clearly reveal one's personal and cultural identity in the new cultural context (Jasperse, Ward & Jose, 2012; Searle & Ward, 1990; Ward & Kennedy, 1993). Sociocultural adaptation, which is based on cultural learning theory, covers the behavioral aspect of adaptation according to the level of difficulty experienced in the process of inclusion in the new culture. In the literature, psychological

adaptation has been evaluated using many different variables such as psychological well-being, life satisfaction, self-esteem, psychological symptoms (Berry et al., 2006). In this context, the study examined the psychological, pedagogical and technological adaptation levels of repatriated university students from a multidimensional perspective.

## **Method**

Within the scope of the research, the purpose, model, sub-problems, limitations, findings and evaluations of the research are given. The main purpose of this study is to examine the psychological, pedagogical and technological adaptation levels of repatriated students studying at different universities in Kazakhstan with a relational approach. Since it is aimed to determine the psychological, pedagogical and technological adaptation levels of repatriated students in Kazakhstan and to examine them in terms of various variables, the survey model was used in the study. Survey studies are widely used in social sciences and are used to determine the characteristics of individuals such as gender, age, marital status, education status, etc. through tools such as interview questions, questionnaires or tests (Creswell, 2002). In this study, repatriated students studying in different cities in Kazakhstan in the academic year 2022 participated.

The population of the study consists of repatriated students registered in the student affairs system. As a sample, repatriated enrolled in different programs of the university were reached. Students were asked to fill out the questionnaires by providing preliminary information about the subject. In this context, 172 of the repatriated students who voluntarily agreed to participate in the study were included in the research sample. The voluntary participation of repatriated students will increase the quality of the research, and the sloppy and random answers of the participants who feel obliged to participate will affect the reliability of the scales applied. Therefore, it is important that participants participate voluntarily. In determining the repatriated university students who will participate in the research, the criteria of studying in private and public universities in Kazakhstan and being born outside Kazakhstan and studying in Kazakhstan for at least 1 year were taken into consideration.

### **Data Collection Tools**

In the study, three Likert-type scales were used to measure the psychological adaptation, pedagogical adaptation, and technological readiness and adaptation of repatriated students. In addition, a personal information form consisting of five questions was used to identify the demographic characteristics of the repatriated students such as age, gender, etc. Detailed information about the measurement tools used in the study is given below. The answers given to the measurement tools in the study were evaluated using an appropriate statistical program in computer environment.

#### *Brief Psychological Adaptation-6 (BASE-6) Scale*

The BASE-6 was developed by Cruz et al. (2019) and adapted into Kazakh by the researcher. The BASE-6 is one of the limited number of measurement tools that measure general psychological adaptation in the literature. The

Brief Psychological Adaptation Scale-6 (BASE-6) is a measurement tool used to measure and assess a person's general psychological adaptation. The researcher adapted the BASE-6 into Kazakh, examined the factor structure and measurement invariance of the scale and tested its reliability. In order to test the reliability and validity of the scale, a test application group was formed from university students between the ages of 18 and 26. The results of the confirmatory factor analysis (CFA) showed that the one-factor structure of the Kazakh form of the scale was confirmed in this sample. The results of the multigroup CFA analysis showed that there was measurement invariance between normal and repatriated university student groups. Using Cronbach's Alpha test, it was determined that the scale had sufficient internal consistency reliability for the overall factor structure. According to the analysis, the internal consistency coefficient of the scale was calculated as .77 in the Kazakh form. The present findings suggest that researchers and psychologists in Kazakhstan can use the BASE-6 to reliably and validly measure the general psychological adaptation of individuals. The Kazakh version of the Likert-form scale has a 5-point rubric. High scores on the scale indicate a high level of general psychological adaptation of the participating individuals.

#### *Pedagogical Adaptation Scale*

In the study, two sub-dimensions of Mishra and Koehler's (2006) TPACK scale were adapted to Kazakh in order to measure students' pedagogical alignment levels. As a data collection tool, the researcher adapted the 15-item 5-point Likert-type "University Students' Pedagogical Content Knowledge Adaptation Scale" consisting of 2 factors into Kazakh. The validity and reliability tests of the scale were conducted by the researcher. The content and face validity of the scale was ensured by field experts. In order to understand whether the prepared scale was correctly and fully understood by the target group, a two-stage pre-application was carried out on two different groups of 20 people. After the applications, the statements in 3 items that were not understandable and misunderstood were corrected and the Pedagogical Content Knowledge Adaptation Scale was finalized. The construct validity of the scale was tested through confirmatory factor analysis. As a result of confirmatory factor analysis, 7 items were grouped under Pedagogical Knowledge, 8 items were grouped under Pedagogical Content Knowledge, and the construct validity of the 15-item scale with a 2-factor structure was ensured in this study. As a result of the internal consistency test, the Cronbach Alpha coefficients of the 2 factors were between 0.82 and 0.87. The high mean scores obtained from the scale and its sub-dimensions indicate that the participant's pedagogical competence perception and adaptation are at a high level.

#### *Technological Readiness and Adaptation Scale*

In the study, a measurement tool consisting of 8 statements developed according to a 5-point Likert scale adapted for this study based on the Technology Readiness Index developed by Parasuraman (2000) was used to measure the technological readiness and adaptation levels of repatriated university students. As a result of the factor analysis performed on the technology readiness and adaptation scale data, several factors were obtained in the first place. As a result of the content analysis, some questions with factor loadings that were not significant were not included in the next analysis. Factor analysis was performed again on the remaining 8 questions. As a result of this factor analysis, a single factor, which was accepted as significant, explaining 52.15% of the total variance

was obtained. The reliability coefficient Croanbach Alpha value of the 8 statements related to 'readiness and adaptation to technology' in the sample of repatriated university students was calculated as 0.72. The high mean scores obtained from the scale and its sub-dimensions indicate that the participant has a high level of technological readiness and adaptation.

#### *Data Analysis Techniques*

The data obtained from the participants in the study were downloaded from Google Form with the help of Excel program. The downloaded data were made suitable for the program and analyzed in the SPSS 26.0 package program. Different analysis techniques were used to analyze the data obtained. Exploratory Factor Analysis and Confirmatory Factor Analysis were used to analyze the construct validity. AMOS 24.0 package program was used for confirmatory factor analysis. Cronbach's Alpha reliability coefficient was used for reliability calculations. In addition, the psychological, pedagogical and technological adaptation levels of the participating repatriated university students were examined according to different variables and analyzed using the SPSS program using mean, standard deviation, Independent Samples t test and ANOVA test.

### **Findings**

According to Table 1, when repatriated university students' perceptions of the research variables are examined, it is seen that the highest perceived adaptation dimension is "Technological Adaptation" (3.03), followed by "pedagogy content integration competence and adaptation" (2.61); "Pedagogy General Adaptation" (2.49); "Pedagogy competence and adaptation" (2.38); and finally "Psychological Adaptation" (2.32). When the averages of the scales are evaluated, it can be said that the psychological and pedagogical adaptation of the students are at a low level, while their pedagogy technology integration, general pedagogical adaptation and technological adaptation are at a medium level.

Table 1. Findings on Psychological, Pedagogical and Technological Adaptation of Repatriated University

	Students				
	N	Minimum	Maximum	Mean	Std. Deviation
Psychological Adaptation	172	1.00	4.35	2.32	0.62
Pedagogy	172	1.00	4.40	2.38	0.54
Pedagogy Content	172	1.00	3.98	2.61	0.46
Pedagogy Overall Average	172	1.00	3.94	2.49	0.44
Technological Adaptation	172	1.00	5.00	3.03	0.67

In the psychological adaptation scale of the repatriated students, the mean of females was 2.21 and the mean of males was 2.42. The t value calculated between the two groups was 2.17 ( $p < 0.05$ ). This result shows that there is a significant difference between the two groups at 0.05 level. According to the averages of the groups, the psychological adaptation of male repatriate students was found to be higher.

Table 2. Comparison of Psychological Adaptation of Repatriated University Students according to Gender

	Variable					
	Gender	N	Mean	Std. Deviation	t	p
Psychological adaptation	1	89	2.21	0.55	2.17	0.031
	2	83	2.42	0.67		

In the pedagogical competence and adaptation dimension of the pedagogical adaptation scale of the repatriated students, the mean of the females was 2.43 and the mean of the males was 2.32. The t value calculated between the two groups was 1.39 ( $p > 0.05$ ). This result shows that there is no significant difference between the two groups at 0.05 level in the pedagogical competence and adaptation dimension. In the pedagogical and content integration competence dimension of the pedagogical adaptation scale, the mean of females was 2.69 and the mean of males was 2.51. The t value calculated between the two groups was 2.50 ( $p < 0.05$ ). This result shows that there is a significant difference between the two groups at 0.05 level in pedagogical and content integration competence. According to the means of the groups, female repatriated students were found to have higher pedagogical and content integration competencies. Finally, in the overall mean of the pedagogical adaptation scale, the mean of females was 2.56 and the mean of males was 2.40. The t value calculated between the two groups was 2.26 ( $p < 0.05$ ). There is a significant difference between the two groups at 0.05 level in general pedagogical adaptation. The general pedagogical adaptation of female repatriated students was significantly higher.

Table 3. Comparison of Pedagogical Adaptation of Repatriated University Students according to Gender

	Variable					
	Gender	N	Mean	Std. Deviation	t	p
Pedagogy	1	89	2.43	0.52	1.39	0.17
	2	83	2.32	0.57		
Pedagogy Content	1	89	2.69	0.39	2.50	0.01
	2	83	2.51	0.54		
Pedagogy Overall	1	89	2.56	0.39	2.26	0.02
Average	2	83	2.40	0.51		

In the technological competence and adaptation scale of the repatriated students, the mean of females was 2.96 and the mean of males was 3.13. The t value calculated between the two groups was 1.70 ( $p > 0.05$ ). This result shows that there is no significant difference between the two groups at the 0.05 level in the technological competence and adaptation scale.

Table 3. Comparison of Technological Competence and Adaptation of Repatriated University Students according to Gender Variable

	Gender	N	Mean	Std. Deviation	t	p
Technological	1	89	2.96	0.67	1.70	0.09
Adaptation	2	83	3.13	0.63		

Table 4. Comparison of Psychological Adaptation of Repatriated University Students according to Grade Level

	Class Level	N	Mean	Std. Deviation	F	p
Psychological Adaptation	1	31	1.95	0.72	9.11	0.00
	2	61	2.22	0.56		
	3	47	2.46	0.57		
	4	33	2.64	0.45		
	Total	172	2.32	0.62		

When the psychological adaptation of repatriated university students was analyzed according to the grade level they studied, the mean of 1st grade students was 1.95, the mean of 2nd grade students was 2.22, the mean of 3rd grade students was 2.46 and the mean of 4th grade students was 2.64. The F value calculated as a result of the F test to test whether the difference between the averages was significant was calculated as  $F=9.11$  ( $p<0.05$ ). This finding shows that the psychological adaptation of the participants differed according to the grade level. According to the results of the Tukey test, it was found that repatriated university students studying in the 4th and 3rd grades had a higher level of psychological adaptation than students in the 1st and 2nd grades.

Table 5. Comparison of Pedagogical Adaptation of Repatriated University Students according to Grade Level

	Class Level	N	Mean	Std. Deviation	F	P
Pedagogy	1	31	1.97	0.68	13.91	0.00
	2	61	2.28	0.51		
	3	47	2.55	0.42		
	4	33	2.68	0.34		
	Total	172	2.38	0.55		
Pedagogy Content	1	31	2.45	0.70	2.68	0.05
	2	61	2.59	0.49		
	3	47	2.60	0.35		
	4	33	2.78	0.22		
	Total	172	2.60	0.47		
Pedagogy Overall Average	1	31	2.21	0.64	9.02	0.00
	2	61	2.42	0.44		
	3	47	2.58	0.34		
	4	33	2.73	0.23		
	Total	172	2.48	0.46		

When the mean scores of the repatriated university students in the pedagogical adaptation scale were analyzed according to their grade level, 13.91 F values ( $p<0.05$ ) were calculated in the pedagogical competence dimension, 2.68 F values ( $p<0.05$ ) in the pedagogy and content knowledge dimension, and finally 9.02 F values ( $p<0.05$ ) in the general pedagogical adaptation. These findings show that the pedagogical alignment of the participants differed according to the grade level. According to the results of the Tukey test, it was found that repatriated

university students studying in the 4th and 3rd grades had a higher level of pedagogical adaptation than students in the 1st and 2nd grades.

Table 6. Comparison of Technological Adaptation of Repatriated University Students according to Grade Level

	Class Level	N	Mean	Std. Deviation	F	p
Technological Adaptation	1	31	2.97	0.83	2.43	0.07
	2	61	3.20	0.71		
	3	47	2.87	0.51		
	4	33	3.08	0.47		
	Total	172	3.05	0.65		

Table 6 shows the averages of the repatriated students' technological competence and adaptation scale according to their grade level. The F value calculated between the four groups was 2.43 ( $p > 0.05$ ). This finding shows that there is no significant difference between the grade levels in the technological competence and adaptation scale at the 0.05 level.

Table 7. Relationships between Psychological, Technological and Pedagogical Adaptation of Repatriated University Students

		Psychological Adaptation	Pedagogy Overall Average	Technological Adaptation
Psychological Adaptation	Pearson Correlation	1	.606**	.400**
	Sig. (2-tailed)		0.000	0.000
Pedagogy Overall Average	Pearson Correlation	.606**	1	.389**
	Sig. (2-tailed)	0.000		0.000
Technological Adaptation	Pearson Correlation	.400**	.389**	1
	Sig. (2-tailed)	0.000	0.000	

As seen in Table 7, the correlations between psychological adaptation, pedagogical adaptation and technological adaptation variables ranged between .26 and .61. Looking at the correlation values between the variables in the table, correlation coefficients of .606 ( $p < 0.05$ ) were calculated between psychological adaptation and general pedagogical adaptation; .40 ( $p < 0.05$ ) between psychological adaptation and technological adaptation; and finally .389 ( $p < 0.05$ ) between general pedagogical adaptation and technological adaptation. . According to these coefficients, there is a significant and positive relationship between psychological adaptation, pedagogical adaptation and technological adaptation.

## Discussion and Conclusion

In this study, psychological, pedagogical and technological adaptation of repatriated university students were examined in terms of some variables with a comparative and relational approach. According to the findings of the study, psychological adaptation of repatriated students was found to be at a low level. In addition, psychological

adaptation of the participants differed according to gender and class variables. In general, the psychological adaptation of male repatriated students was found to be more positive and higher. In addition, it was observed that the psychological adaptation of the students increased as the time they spent at their universities in Kazakhstan increased, that is, as their grade level increased. These findings are similar to the findings of studies conducted by Gençez and Özen (2013), Hsieh and Dopkins-Stright (2012), Hu et al. (2014), Known et al. (2013), Ward & Searle (1991), Yakushko, Watson & Thompson (2008). Indeed, Sarıtaş-Atalar, Gençöz, and Özen (2015) found that psychological adaptation was higher in a sample of male adolescents compared to female adolescents. According to Kuo (2014), one of the important situations that increase the changes in individuals' lives and their stress levels as a result of these changes is the migration process. When individuals move to a new place, they undergo a process of adaptation to the new place. For different groups such as immigrants, refugees and international students, this process of change and the stress associated with it is experienced as a common situation (Ward & Searle, 1991; Yakushko, Watson & Thompson, 2008). The stress experienced affects the coping processes, psychological well-being and adaptation processes of these groups (Kuo, 2014; Diener & Ryan, 2009).

It has been observed that repatriated university students, especially those who have spent most of their lives abroad, experience academic difficulties on the one hand and psychological adaptation problems on the other. Kwon et al. (2013), in their study comparing Korean and American cultures, argued that men have strong psychological well-being and adaptation processes in new cultural and social environments. Hsieh and Dopkins-Stright (2012) showed that male participants overcame internalization problems through self-concept in their evaluation with Taiwanese high school students. Hu, Zhang, Wang, Mistry, Ran, and Wang's (2014) meta-analysis involving different cultures and participants from different developmental stages indicated that reappraisal was positively related to psychological adaptation in all cultures within the scope of the study, but suppression, especially in the early stages of interaction, reflected the adaptive effect of culture. Accordingly, there is either no significant relationship between suppression and mental health indicators in Eastern cultures or the negative relationship is much weaker than the relationship observed in Western cultures. A recent study has shown that culture may also have an adaptive effect on reappraisal. Kwon, Yoon, Joorman, and Kwon (2013) tested the cross-validity of the IRQ between South Korean and US cultures and found that although the construct validity of the scale was the same in both cultures, culture played an adaptive role in the relationship between emotion regulation and depression symptoms.

While even individuals who relocate within the same country for various reasons such as university education or migration from village to city experience adaptation problems, it is unthinkable that individuals coming from another country will not experience these or similar problems. Because every society has its own culture and an individual who moves from one culture to another culture encounters adaptation problems (Çöllü & Öztürk, 2010; Berekbussunova et al., 2014). Students starting university is emphasized as a transitional stage in the student's life. Because the student leaves his/her parents, family and friends and joins a new group of friends and gains new behaviors and values. If the student adapts to the environment academically and socially, the student will both adapt to university life more easily and the likelihood of being academically successful will increase, and this situation will also increase the commitment to universities (Tinto, 1993; Kılıçlar et al., 2012). University youth constitute a dynamic, variable and open to innovations. They can enter and exit different groups/institutions.

However, they may encounter difficulties in each new environment they enter and in adapting to that environment (Kır, 2007; Aslan, (2016). Another factor affecting psychological adaptation is cultural distance. In the studies conducted, it has been observed that as the cultural distance increases, the problems experienced in adaptation also increase. The length of stay in the host country is also one of the important factors affecting psychological adaptation. As the duration of stay in the host country increases, the acculturation process becomes easier (Zhang & Rentz, 1996). Acculturation attitude is also one of the factors affecting the psychological adaptation process. Studies have found that the mental health of individuals in the acculturation process is related to the acculturation attitudes they adopt (Eshel & Rosenthal-Sokolov, 2000). Studies on foreign students have revealed that these students experience loneliness, disharmony, inhibition, cultural shock and psychological problems (Biggs, 1999; Furnham, 1997; Lewins, 1990; Tomich et al., 2000). Berry (1997) defines this situation as an acculturation stress that foreign students often experience. Other problems that foreign students have to overcome include housing, food, health, climate, transportation and homesickness (Sandhu & Asrabadi, 1994). Deressa and Beavers (1988) found that the most important problem experienced by foreign students is financial (Kiroğlu et al., 2010: 27).

Another finding of the study is the pedagogical adaptation of repatriated university students. It was observed that the pedagogical adaptation of repatriated university students was at a moderate level. For students coming from foreign countries for higher education, a different education system, living in a different culture, academic incompatibilities make their adaptation to the university and the environment difficult and affect their academic success. Özbay (1996) and Tinto (1988) emphasize that problems such as not knowing the university they study at well and inadequate orientation activities at universities may have a negative impact on the adaptation of university students. In addition, the pedagogical adaptation of the participants differed according to gender and grade level. The pedagogical adaptation of female students was higher than that of their male peers. It was observed that the pedagogical adaptation of all students increased as the grade level increased. These results are similar to the results of studies conducted by Biasutti and Concina (2018). Female university students exhibited stronger and richer pedagogical competencies and levels of adaptation. According to Biasutti and Concina (2018), a multidimensional model that includes personal and professional characteristics such as gender in terms of teaching skills and beliefs in academic subjects reveals significant results in favor of girls. On the other hand, the time spent in the teaching process and experiences are important factors in pedagogical adaptation. In this respect, as the grade level of Repatriated university students increases, their adaptation competencies towards the university, instructors and learning task improve and they show more competent characteristics.

The last finding of the study is the technological competence of repatriated university students. In general, the technological competence and adaptability of the research participants were found to be above average. However, the technological adaptation of repatriated university students did not show a significant difference according to gender and class variables. It was observed that all student groups exhibited a high level of technological adaptation. In order for an individual to be able to do a job and learn a new behavior, he/she must have gained the necessary knowledge and skills as well as maturity. Readiness, in its simplest and simplest form, is the cognitive, affective, social and psychomotor readiness and adaptability to do any activity. Technology readiness can be seen as a general mental state resulting from the inhibitors and mental structure that collectively determine a person's predisposition to use new technologies (Parasuraman, 2000; Yen, 2005). In other words, it is an emotional

dilemma of individuals against using technology, i.e. technology discomfort or insecurity on the one hand and technology optimism or innovativeness on the other. These levels of technology readiness are explained below.

The use of technology depends first and foremost on the existence of technical and human infrastructure. However, although the existence of technology is a prerequisite, it is not always a sufficient condition for the use of technologies. In this respect, it is necessary to identify the psychological drivers and factors affecting the use of technology. Users' intention to use a technology has been recognized as a key indicator for the success of that technology (Martínez-Torrez et al., 2008). In addition, attitudes towards technology, perceived ease of use and perceived usefulness, demographic characteristics, culture and personality traits may also cause individuals to feel positive or negative feelings towards technology. For example, it is reported that both introverted and extroverted personality types found the use of technology beneficial (Meunier, 1995).

In this study, technology readiness and adaptation were examined in the context of variables such as age, gender, grade level and cultural differences. As a different perspective in the study, technology readiness and repatriated were associated with students' psychological and pedagogical adaptation. As a result of the study, it can be said that the effect of technology readiness and adaptation level on psychological and pedagogical adaptation is an important contribution. In the study, it was observed that students with high psychological adaptation exhibited high levels of pedagogical competencies and their technology adaptation was equally high. On the other hand, two important factors related to the adaptation of immigrant adolescents are the problem of attendance and school failure (Sam, 1991), as well as psychological adaptation problems such as behavioral disorders, self-conflict, and low self-perception (Berry & Sam, 1995). Therefore, there may be a linear relationship between pedagogical adaptation problems and difficulties in psychological adaptation in repatriated students. In the literature, it is revealed that university students with high academic achievement have higher levels of technological, pedagogical and general self-efficacy, more positive attitudes towards their courses and psychological predispositions (Allaberdiev, 2007; Galleguillos & Olmedo, 2017). In this context, Caprara et al. (2006) emphasize that university education, which requires technological and pedagogical competencies, is positively correlated with high levels of psychological adaptation, academic engagement, and academic achievement, as revealed by Sünbül, Gündüz, and Yılmaz (2022).

This study has some limitations. First of all, the fact that the study was conducted on repatriated university students in Kazakhstan resulted in a limited sample. In order to make generalizations, it is thought that it would be appropriate to conduct studies with university student groups and samples of different sizes. Since the study was conducted with a small number of participants, the researcher did not set a limitation on the duration of stay in Kazakhstan. This may also be a limitation of the study. Since the concept of psychological adaptation is a multidimensional concept, the factors affecting the adaptation of each student vary. Therefore, obtaining data from a larger number of participants may reveal different dimensions. This can be considered as a limitation due to the number of participants and the level of their education. In future studies on similar topics, it is recommended to test the research variables at different school levels and with larger samples. It may also be recommended to prepare programs that include academic counseling, information and skills training for repatriated after they arrive in Kazakhstan. Counseling departments of universities should be equipped to meet the needs of repatriated

students. For this purpose, experience in culturally sensitive counseling should be gained and necessary preventive services should be provided to repatriated. Supporting and guiding repatriated in pedagogical, technological and psychological adaptation can be recommended.

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