Original Research

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The Relationship Between Culturally Responsive Teacher Roles and Innovative Work Behavior: Canonical Correlation Analysis

Funda Nayir, PhD
Pamukkale University, Pamukkale, Denizli, Turkey

Gurkan Saridas, MS
Pamukkale University, Pamukkale, Denizli, Turkey
https://orcid.org/0000-0002-7989-2130

Contact: fnayir09@gmail.com

Abstract

The aim of this research was to identify the relationship between culturally responsive teacher roles and innovative work behavior according to teachers' views. The first phase of the analysis revealed that in the first canonical function, which is calculated to maximize the relationship between culturally responsive teacher roles and innovative work behavior data sets, culturally responsive teacher roles and innovative work behavior data sets share a variance of approximately 77%. In addition, as a result of the canonical correlation analysis, we determined that there is a positive relationship between the variables of the culturally regulating teacher (CRT) and the culturally mediating teacher (CMT) in the culturally responsive teacher roles data set and the GII and FSI variables in the innovative work behavior data set.

Recommended Citation

Introduction

Our globalized world has accepted migration as natural, and we now consider it a normal phenomenon. Although most of the studies on migration were evaluated based on numbers, migration is a global phenomenon. The World Migration Report, prepared by the International Organization for Migrations (IOM) (2020), reported that there were approximately 272 million immigrants around the world, representing 3.5% of the world's population. According to the World Migration Report (2020), more than 11% of the immigrants were of school age, and Turkey ranks 12th among the target countries for immigration. The number of immigrants in Turkey is equivalent to 45 per 1,000 people. From an educational point of view, the number of

migrant students of educational age in Turkey was approximately 1.23 million as of September 2018, based on the information note in Migrant Education in Turkey, which was prepared by the International Migration and Refugee Association (IMRA, 2020). As of 2020, there were approximately 3 million (645.143) Syrian immigrants in Turkey (Directorate-General for Migration Management, 2020). Of these immigrants, 1.6 million were children and about 1 million of these immigrants were of school age. According to the Ministry of National Education (MoNE) data, approximately 770,924 Syrian students received education in the 2020–2021 academic years (2019). However, there is a multicultural structure formed by cultural differences in Turkey's internal structure. For example, while Turkish, Kurdish, and Arabic are among the most spoken languages in Turkey, sectarian distinctions such as Sunni and Alevi, as well as Muslim, Christian, and Jewish, create diversity in terms of religion (KONDA, 2006). According to this information, although cultural differentiation becomes evident with students from different countries, in fact, domestic migration also creates cultural differences.

Literature Review

In the classroom environment, where cultural differentiation takes place, the teacher manages differences and is culturally responsive. Culturally responsive teachers' roles to cultural values include cultural regulation, cultural mediation, and orchestrating social learning environments (Diamond & Moore 1995). In cultural regulation, teachers encourage cultural differences in the educational environment, transferring cultural differences to the classroom environment and integrating these differences with the learning process. Allowing students to express their cultural differences reveals differences in the classroom environment. In cultural mediation, teachers try to ensure that students respect differences and see similarities and differences free from prejudices. This creates an environment for students to behave respectfully towards each other and their cultures. As the conductor of social learning environments, the teacher includes the students' environment in the learning process, increasing the socio-cultural interaction and including culturally strong features in the learning process (Diamond & Moore 1995; Nayir, 2020). Although culturally responsive teacher roles were considered in three dimensions, in a study conducted in Turkey, culturally responsive teacher characteristics have emerged as culturally mediating and culturally regulating (Nayir, 2019).

A culturally responsive teacher not only knows the cultural characteristics of the students and has knowledge of the students' past lives but also is able to create various connections between the lives of students and their experiences at school and ensure that these connections are actively maintained. Therefore, teachers should establish a link between psychological and organizational knowledge and innovation in school (Knotek, 2012). With such a bond, an effective education and training process that includes the cultural characteristics of students can be managed.

Being culturally responsive means making the education process more relevant and effective for students by considering the cultural values, past experiences, environment, and performances of ethnically diverse students (Gay, 2014). When evaluated in this context, it is important for teachers to know the cultural values and past experiences of the students and it is necessary to make an effective contribution to the student in the education and training process. However, considering that the studies may differ in various cultures and different countries could yield different results, we wanted to determine how valuable the cultural values and past experiences of students were in Turkey in order to make the education process effective. According to the literature, the culturally responsive teacher emphasizes the need to have an innovative and different perspective along with the ability to know the students' past (Sarıdaş and Nayir, 2021; Ford, 2007; cited in Ford & Kea, 2009). The innovative perspective reflects the innovative work behavior that includes the stages of "generating, creating, developing, implementing, encouraging, recognizing and defining new ideas" (Thurlings et al., 2015).

Innovative work behavior was defined as all individual activities towards the development, promotion, and implementation of an innovation at the organizational level (West and Farr, 1989). However, innovative work behavior was needed in educational organizations in terms of innovation, teachers, and students to provide flexible and effective solutions to learning (Hargreaves, 1999). Innovative work behavior was examined in three dimensions, generating an innovative idea, introducing an idea, and implementing an innovative idea. (Janssen, 2000). Generating ideas included recognizing problems for any need and rearranging the existing situation (Basadur and Gelade, 2006). Introducing the idea is the explanation of the idea to the people related to the subject. Because a new idea that arises would change the existing situation, it should be encouraged and supported in a way that can respond to possible resistance (Janssen et al., 2004). Idea realization was the final dimension of innovative work behavior and involved the incorporation and dissemination of the generated and developed ideas into organizational processes (De Jong and Hartog, 2010). However, in a study conducted in Turkey, innovative work behavior emerged in two dimensions and was named as generating ideas and implementing and finding supporters for the idea (Tore, 2019).

Present Study

In Education 4.0, which is a reflection of Industry 4.0, it is important that individuals focus on innovation and that individual learning is at the forefront (Lengel, 2013). In the organization, teachers are an integral part of continuous development, given that bringing innovation to the educational training process is a part of the cycle of generating an idea, finding supporters of the idea, and implementing this idea. Teachers who adopt new approaches began to consider innovative practices in their professional development processes and develop the curriculum by organizing activities at the global education level (Frost, 2012). Chen de (2010) stated that educational organizations should consider what kind of education system should be designed for the skills expected from individuals and develop an innovative understanding of this issue. Teachers' innovative behavior was an important factor for students to reach their existing potential (Ferrari & Cachia and Punie, 2009). Innovative work behavior becomes an important teacher characteristic, especially at the point of acquiring these skills and making them aware of the practices of other societies in the globalizing world. From the point of view of cultural responsivity, the activities in the education and training process should be diversified in order for the student to receive a more effective and more relevant education. This diversification takes place with innovative work behavior. In a world where society and technology are constantly developing and globalization is increasing, teachers are expected to have innovative work behavior. And this ability, defined as a 21st-century skill, is also included in the characteristics of teachers who are sensitive to cultural values.

The transfer of students' cultural differences to the classroom environment is realized by enriching the education and training process. At this point, the teacher should produce innovative ideas in order to realize this enrichment. The second dimension of innovative work behavior involves teachers sharing ideas with their colleagues, which enables them to find supporters. A teacher applies these ideas that students produce so that they can transfer their culture to the classroom environment, express themselves, and treat students with respect for each other, which means that various activities are carried out in the educational training process. In carrying out these activities, a teacher has to constantly produce and apply new ideas, taking into account the differences in the classroom. As it can be understood from here, there was a strong relationship between culturally responsive teacher characteristics and innovative work behavior.

Revealing this relationship would also help to show the importance of innovative work behavior in teachers' culturally responsivity. In this context, the aim of the study was to reveal the relationship between culturally responsive teacher roles and innovative work behavior according to teachers' opinions. Accordingly, we asked the following questions:

1. What are the teachers' views on the roles of teachers who are culturally responsive?
2. What are the teachers' levels of innovative work behavior?
3. Is there a significant relationship between teachers' views on culturally responsive teacher roles and their level of innovative work behavior?

Method

Research Model

Our research aims to reveal the relationship between culturally responsive teacher roles and innovative work behavior. A relational survey model was used to match the purpose of the research. Relational survey models are research models aimed at determining the presence and/or degree of change between two or more variables together (Karasar, 2014). As part of the research, we aimed to determine the relationship between culturally responsive teacher characteristics and innovative work behavior.

Working Group

The study's working group consisted of 155 teachers in public secondary schools and high schools in 20 different provinces of Turkey in the 2020–2021 academic years. The variables used in the data set are given in Table 1.

Table 1. *Data Set Variables*

CRTR Scale	IWB Scale
Culturally Regulating Teacher (CRT)	Generating and Implementing Ideas (GII)
Culturally Mediating Teacher (CMT)	Finding Supporters for Ideas (FSI)

Note. CRTR = culturally responsive teacher roles; IWB = innovative work behavior

As seen in Table 1, the CRTR scale had two variables, "culturally regulating teacher" and "culturally mediating teacher," and the IWB scale had two variables, "generating ideas and implementing them" and "finding supporters for the idea." There were four variables in total in the data set. The sample size was important in canonical correlation analysis. Stevens (2009) stated that the sample size should be 20 times the total number of variables in the data sets. Accordingly, since there were four variables total for this study, 80 participants with 20 folds were sufficient. The sample size of the study was 155. In this case, the sample size was found to be sufficient.

Demographic information about participants is given in Table 2.

Table 2. *Demographic Information About Participants*

Variables	Groups	Frequency (f)	Percentage (%)
Gender	Female	129	83.2
	Male	26	16.8
Education status	Undergraduate	147	94.8
	Postgraduate	8	5.2
Professional seniority	1–9 years	95	61.3
	10–19 years	60	38.7
School type	Middle School	107	69
	High School	48	31

As shown in Table 2, 129 (83.2%) of the teachers participating in the study were women and 26 (16.8%) were men. Of the teachers, 147 (94.8%) were undergraduates and 8 (5.2%) were postgraduates. When we examined the seniority of teachers, 95 (61.3%) had between 1–9 years of experience and 60 (38.7%) had between 10-19 years. Of the teachers, 107 (69%) taught in middle school and 48 (31%) taught in high school.

Data Collection Tools

Culturally Responsive Teacher Roles (CRTR) Scale
The CRTR scale developed by Nayir (2019) consists of 19 items and two dimensions. In the scale, there are 11 items in the culturally regulating teacher behavior dimension and eight items in the culturally mediating teacher behavior dimension. The variance explained by each factor in the scale was found to be 32.67% for the "culturally regulating teacher," 24.81% for the "culturally mediating teacher," and the total variance explained was 57.48%. When we evaluated the Cronbach alpha coefficients of each factor of the scale, we found that Cronbach's alpha was .93 for the first factor, .88 for the second factor, and .94 for the whole scale. In this study, Cronbach's alpha coefficients were calculated as .89 for culturally regulating teacher roles, .85 for culturally mediating teacher roles, and .94 for the whole scale.

According to the results of the confirmatory factor analysis performed to verify the structure of the CRTR scale, fit indices were found as NFI = .95, NNFI = .98, CFI = .98, IFI = .98, GFI = .87, AGFI = .83 and RMSEA = .056. However, the value obtained by dividing the chi-square value from the fit statistics by the degrees of freedom (χ^2/df) was calculated as 1.48.

Innovative Work Behavior (IWB) Scale
The IWB scale developed by Janssen (2000; pp. 287–302) was adapted to Turkish by Tore (2017). The original scale consists of three sub-dimensions: idea generation, supporting ideas, and implementing ideas. There were three items in each sub-dimension. The Cronbach alpha coefficient of the scale was .95 (Janssen, 2000). In the Turkish adaptation of the scale, there were two sub-dimensions: "generating and implementing ideas" and "finding supporters for the idea." Idea-generating and implementing consists of six items, and the dimension of finding supporters for the idea consists of three items. The Cronbach alpha coefficient of the adapted scale was .87 (Tore, 2017). In this study, the Cronbach alpha coefficient was found to be .84 for idea generation and implementation, .68 for finding supporters for ideas, and .86 for the whole scale.

According to the confirmatory factor analysis performed to verify the structure of the IWB scale, the fit indices were found as NFI = .95, NNFI = .97, CFI = .98, IFI = .98, GFI = .93, AGFI = .88 and RMSEA = .082. However, the value obtained by dividing the chi-square value from the fit statistics by the degrees of freedom (χ^2/df) was calculated as 2.03.

Data Collection

Due to the Covid-19 pandemic, it has become impossible to fill data collection tools by personally interviewing teachers because they are providing distance education. Therefore, we created the form and sent it to teachers through Google Forms. Teachers contributed to the research by filling out the form remotely. Data with missing options or always marked with the same option were removed from the data set and the remaining data and analysis phase was started.

Data Analysis

The relationship between culturally responsive teacher roles and innovative work behavior was examined by canonical correlation analysis. Canonical correlation and multiple regression analysis are similar. In multiple regression analysis, the relationship between a single variable (Y) and two or more variables (X1, X2 ... Xp) is examined, while the relationship of multiple Y variables with multiple X variables is simultaneously examined in canonical correlation. (Manly, 2005; Bordens & Abbott, 2011; cited in Kuru Cetin, 2018). According to Stangor (2010, cited in Ilhan et al., 2013), an analysis was sufficient to determine the relationship between two data sets in canonical correlation, so Type I error was taken under control.

SPSS 24 package program was used for data analysis. Before starting the correlation analysis, we tested the assumptions. In order to perform canonical correlation analysis, linearity, multiple normal distributions, and multiple linear connection assumptions must be met (Tabachnick and Fidell, 2013). In order to have a multiple linear connection problem, the correlation coefficient of the variables should be at least .90. In the correlation analysis, we found that the correlation between the variable sets is below .90. However, the correlation coefficient was not sufficient for multiple linear connections. However, tolerance, VIF and CI values should be considered. (Cokluk et al., 2012). In the literature, the tolerance value should be greater than .10 (Field, 2005; cited in Cokluk et al., 2012); the fact that the VIF value is less than 10 (Webster, 1992, cited in Albayrak, 2005) and the CI value is less than 30 (Gujarati, 1995; cited in Albayrak, 2005) shows that there is no multiple connection problem. In this analysis, we found that the tolerance value was between .24 and .47, the VIF value was between 4.18 and 2.12 and the CI value was between 11.43 and 26.18. At this point, we concluded that there is no multiple linear connection between the variables in the data set. Afterwards, an extreme value scan was performed in the data sets, and a data was identified as extreme value and removed from the data set. Then we examined if the data showed a normal distribution or not. For this, kurtosis and skewness coefficients were examined and the skewness coefficients were between -.09 and -.46; the kurtosis coefficient values were between -.49 and -.97. According to the literature, the ratio of skewness and kurtosis values to standard deviations is between ∓1.5 (Tabachnick & Fidell, 2013) or ∓2.0 (George & Mallery, 2010), which indicates that the data set is normally distributed. Since the skewness and kurtosis coefficients are in the acceptable range, we concluded that the data set showed a normal distribution. Later, we examined the Q-Q plot and Kolmogrov-Smirnov tests and found the distribution to be normal. In order to test the linearity assumption of the scales, scatter diagrams between variables were examined and, as a result of all these, we decided that the data sets were suitable for canonical correlation analysis.

Findings

In this study, descriptive analysis was conducted to determine teachers' levels of culturally responsive teacher roles and innovative work behavior. Analysis results are given in Table 3.

Table 3. *Standard Deviation and Arithmetic Mean Values of Teachers Regarding CRT Roles and IWB Levels*

CRTR	N	$\bar{X}$	S
Culturally Regulating Teacher (CRT)	154	3.95	1.06
Culturally Mediating Teacher (CMT)	154	3.99	1.04
IWB	N	$\bar{X}$	S
Generating and Implementing Ideas (GII)	154	3.97	1.06
Finding Supporters for Ideas (FSI)	154	4.00	1.05

As seen in Table 3, teachers primarily exhibit the culturally mediating role (X = 3.99) and then the culturally regulating role (X = 3.95). This showed that teachers who convey cultural differences to the classroom environment had a cultural connection between life and life in school. When we examined the opinions of teachers on innovative work behavior, we discovered that the level of finding support for the idea (X = 4.00) and finding and producing ideas (X = 3.97) was high. Since various current and innovative behaviors were exhibited in the reflection of cultural differences in the classroom environment, these behaviors were expected to be disseminated within the organization. It was seen that teachers were active in finding support for innovative applications and generating ideas for innovative applications. The results of the Pearson Correlation Analysis, which was made to reveal the relationship between teachers' culturally responsive roles and innovative work behavior, are given in Table 4 below.

Table 4. *The Relationship Between the CRTR Exhibited by Teachers and IWB Levels*

Dimensions	1	2	3	4
CRT (1)	1.00			
CMT (2)	.872**	1.00		
GII (3)	.841**	.830**	1.00	
FSI (4)	.734**	.704**	.727**	1.00

*$p < .05$, **$p < .01$*

As seen in Table 4, there was a high level of positive direction between the dimension of CRT and GII (r = .841, p <.01) and FSI (r = .734, p <.01); A high level of positive and significant correlation was found between the CMT dimension and the GII (r = .830, p <.05), and FSI (r = .704, p <.05) dimensions. This suggested that teachers were acting as cultural regulators and cultural mediators to find and produce ideas and find supporters of the idea. The results of the canonical correlation analysis for the two variable pairs included in the analysis are given in Table 5.

Table 5. *Values of Canonical Correlation Analysis Results*

Roots	r_c	r_c^2	Eigenvalue	Wilks' λ	F	SD	p
1	.880	.774	3.44	.224	84.029	4.00	.000
2	.059	.003	.004	.996	.540	1.00	.464

When the *F* values were examined according to Table 5, we found that the model calculated between the first canonical variable pair (Wilk's λ = .224, *F* (4) = 84.029, *p* <.01) is significant. The other model was not meaningful. Tabachnick and Fidell (2007) stated that statistically significant roots should be considered in an analysis for canonical correlation. Accordingly, the canonical correlation value for the first canonical function was 0.880 and the data sets shared a variance of 77%.

Standardized canonical coefficients were examined to determine the relationship between the dimensions in the data sets and the scale. Standardized correlation coefficients for the variables in the first data set are given in Table 6.

Table 6. *Standardized Correlation Coefficients and Load Values of the Variables in the First and Second Set*

Variable	r_c^1		
	Correlation Coefficient	Load Value	r_c^2 (%)
First set (CRTR)			
1. CRT	-.592	-.977	.954
2. CMT	-.440	-.957	.912
Second set (IWB)			
1. FGI	-.777	-.860	.739
2. FSI	-.281	-.843	.711

According to Table 6, the equations for canonical variables U1 and U2 obtained from standardized coefficients could be formulated as follows:

U1 =-.592*CRT- .440*CMT

U2 =-.777*FGI- .281*FSI

According to this, it was seen that the variable that had the highest contribution to the formation of the U1 canonical variable was "culturally regulating teacher" (.592). However, when the coefficients in the second set were examined, it was seen that the variable that contributes the highest level to the canonical variable is "finding and generating ideas" (-.777).

In canonical correlation analysis, canonical loads for each data set indicate the variance explained by the variables. According to Tabachnick and Fidell (2013), while the values over .30 indicate that the variable was a part of the related set, Sherry & Henson (2005) stated that this value should be .45. In this study, the canonical factor load value was taken as .45. When Table 6 was examined, it was possible to say that, in terms of canonical load values, the dimensions of CRT (-.977) and CMT (-.957) were part of the first data set. In the second data set, FGI (-.860) and FSI (-.843) dimensions in terms of canonical load values were part of the second data set.

In the canonical functions obtained from the canonical correlation analysis, the signs of the variables (having a structural coefficient of .45 or more) were considered in order to determine the direction of the relationship between variables. Accordingly, in the CRTR data set, where CRT and CMT variables were significant, both variables have negative signs. In this case, it was possible to say that there was a same directional relationship between CRT and CMT variables. Also, the effect of the CRT variable was greater than the CMT variable. This suggested that the teacher's role as a cultural regulator was more effective in cultural responsiveness. In the IWB data set where FGI and FSI variables were significant, all variables were negative. In this case, it was possible to say that there was a same-directional relationship between variables. Also, the FGI variable has a higher effect than the FSI variable. This showed that it was more important to find ideas to make innovative and up-to-date studies in cultural responsiveness. The canonical load values of the variables considered within the scope of the study and the canonical correlation coefficient between the variables were summarized in Figure 1.

Figure 1. *Canonical Analysis Results*
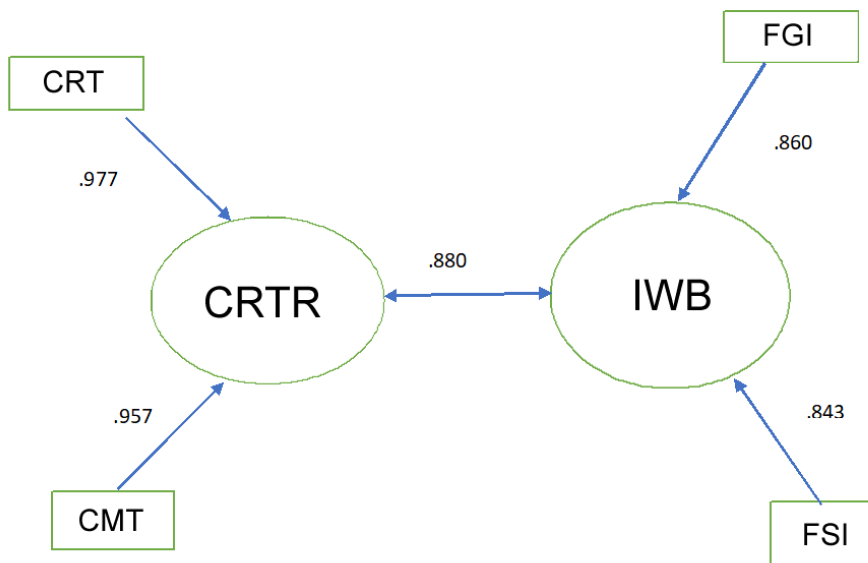
As seen in Figure 1, the canonical correlation coefficient between CRT roles and IWB data sets is .88. Accordingly, the common variance shared by the CRTR and IWB data sets is 77%. Based on the findings obtained from the canonical correlation analysis, the relationship between CRT roles and IWB is given in Figure 2.

Figure 2. *Common Variance Shared Between Data Sets*
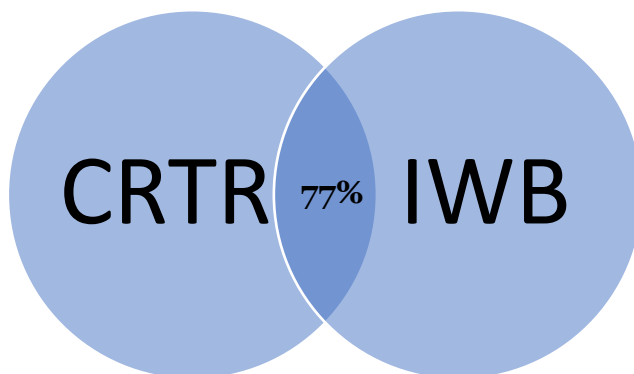
Discussion

In this study, we examined the relationship between the roles of teachers working in public secondary and high schools and their culturally responsive roles and innovative work behavior. According to the findings of the research, the views of teachers on the culturally regulating roles and culturally mediating teachers were at the level of agree. In addition, teachers' views on culturally mediating teacher roles were relatively higher. This situation could be interpreted as the teachers acknowledging cultural differences and trying to bridge these differences. Culturally responsive teachers are aware of their own culture, know how their culture affects their choices and their lives, and, as a result, know the importance of the student's culture (Nayir, 2020). Culturally regulating teachers accept cultural difference and encourage cultural difference in the classroom. Culturally mediating teachers, on the other hand, try to reveal similarities and differences between cultures with a slightly more critical perspective and thus reduce prejudices (Diamond & Moore, 1995; cited in Gay, 2014). However, a high opinion of teachers about culturally responsive teacher roles may be due to teachers' views on culturally responsive education. Culturally responsive education aims to develop individuals as a whole based on the fact that cultural elements and cultural factors affect students' knowledge, skills, and attitudes (Kotluk, 2018).

When the literature was examined, we found studies revealing that teachers' views on culturally responsive education were positive. (Kozikogu & Tosun, 2020; Kotluk and Kocakaya, 2019; Boru, 2018; Siwatu, 2007; Rhodes, 2017; Han, 2017; Walker-Dalhouse & Dalhouse, 2006; Nayir et al., 2019). At this point, it was possible to say that teachers include differences in the education process and see differences as wealth. This situation is reflected in teachers' in-class activities and affects the roles of teachers.

Another result emerging from the research findings was that teachers had high levels of innovative work behavior. Tore (2019) found that teachers' innovative work behavior levels were very high in the study, where the levels of innovative work behavior were examined according to various variables. However, there were also studies revealing that teachers' innovative work behaviors were at a moderate level (Ismail & Mydin, 2019; Hasiao et al., 2011; Li et al., 2017). Tore (2019) explained the high level of innovative work behavior of teachers in Turkey with differences in cultural, political, and educational systems. Teachers' "high level of innovative work behavior was necessary to increase students" learning levels in the teaching process (Eaude, 2011). Studies have revealed that the systems that achieve excellence in education were important to creating innovative learning communities (Mourshed et al., 2010).

When the relationship between culturally responsive teacher roles and innovative work behavior was examined, we found a significant canonical correlation of the relationship between them. The first canonical function, which was calculated to maximize the relationship between culturally responsive teacher roles and innovative work behavior data sets, revealed that culturally responsive teacher roles and innovative work behavior data sets share a variance of approximately 77%. In addition, as a result of the canonical correlation analysis, a positive relationship was found between the CRT and CMT variables in the culturally responsive teacher roles data set and the FGI and FSI variables in the innovative work behavior data set. In other words, as the level of innovative work behavior increases, the level of culturally responsive teachers would also increase.

Conclusion, Limitations, and Implications

When we examined the literature, we found no study that examines the relationship between culturally responsive teacher roles and innovative work behavior. However, the study on the characteristics of culturally responsive teachers (Saridas & Nayır, 2021) revealed the importance of having an innovative perspective. Teachers' innovative behavior in schools was important in terms of adapting to a rapidly changing society,

adopting new technologies and teaching methods to learning processes, and being role models for social competition (Thurlings et al., 2015). In other words, teachers with innovative behavior became more creative (Balkar, 2015), and in this case, it emerged as a necessary feature in order to adapt to the changing structure in the educational process and to respond to the needs of students (Hargreaves, 1999). In the light of these explanations, we could say that innovative behavior was important for educational organizations to adapt to the changing world and to gain the skills expected from students. The gathering of students from different cultures in schools has created a new learning environment, and this situation has changed the expectations and needs of the students. It was important for teachers to stand out from the traditional point of view and have an innovative perspective in order to meet the academic and social needs of all students and increase their learning level (Saridas & Nayir, 2021).

As a result, innovative work behavior had an important role in culturally responsive teachers' characteristics. In the relevant literature, teachers thought that having innovative work behaviors in addition to knowing the background of the student and recognizing the cultural values of the student were among culturally responsive teachers' characteristics. The relationship between culturally regulating teachers' characteristics and culturally mediating characteristics and the relationship between finding and generating ideas and finding supporters for the idea show that innovation by teachers supports cultural richness. Thus, when teachers exhibit innovative work behavior in their schoolwork and apply this behavior in the classroom, it will also have a regulating effect in terms of cultural values.

Our work does have limitations as this study included only teachers in Turkey. In the future, studies can be carried out with teachers from different countries and differences between countries can be revealed. In addition, researchers can investigate how teachers can display culturally responsive roles in the classroom, what kind of problems they encounter in exhibiting innovative work behavior, and how school culture and administrative attitudes affect this situation.

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