Traditional Classroom Management to Virtual Classroom Management: A Study on Physical Education Teachers’ Competencies

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Abstract

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Traditional Classroom Management to Virtual Classroom Management: A Study on Physical Education Teachers' Competencies

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Abstract: The purpose of this study was to investigate physical education teachers' competencies in virtual classroom management. The study was designed as a cross-sectional study using quantitative research methods and included 726 physical education teachers working in different secondary schools and high schools in Turkey. The data of the study were collected using the “Teachers' Virtual Classroom Management Competence Scale”. The research found that physical education teachers were undecided about their competence in managing relationships with students in the virtual classroom, but they were competent in the dimensions of virtual classroom activities and virtual classroom management. Further research analyzed the effects of some socio-demographic variables on teachers' competencies in the transition from traditional classroom management to virtual classroom management. The analysis showed that gender and work experience had a medium effect, virtual classroom had a large effect, and school level had a weak effect on teachers' virtual classroom competencies. The educational level variable had no significant effect on teachers' virtual classroom management competencies. In conclusion, in modern classrooms where there is a shift from traditional classrooms to virtual classrooms, physical education teachers are expected to be more effective in their relationships with students in virtual classrooms.

Keywords: Turkey, physical education teachers, virtual classroom management, competence

Introduction

Distance education, using the infrastructure of information and communication technologies, has become an integral part of face-to-face education today. Although the history of distance education finding a place in countries' educational systems according to their level of development and educational policies is old, the recent Covid 19 pandemic has made distance education almost the only alternative for all countries. This is because education, which is as vital as people's basic needs, is one of the areas that must be met in all conditions and circumstances. Currently, alternative educational environments to the traditional education system are being built in both developing and developed countries (Kaya, 2002). Regardless of the formal constraints of traditional face-to-face education, such as time, place, purpose, and method, distance education, which is realized through the use of technological facilities, is becoming an alternative educational method (Hızal, 1983). Distance education, which can be conducted both synchronously and asynchronously using educational technologies, where students and teachers are usually in separate areas, is defined as an educational system in which personalized learning takes place (Bruder, 1989; Keegan, 2013). According to another definition, distance education is an alternative form of learning in which education, teachers, and students continue their educational activities using different methods without being in the same environment (Carswell & Venkatesh, 2002).

With technological advances in education, synonymous terms such as e-learning, digital learning, online learning, and virtual learning have emerged in distance education (Traxler,
Web-based educational applications with features such as synchronous and asynchronous instruction, mobile learning, and hybrid learning are considered within the framework of online learning or e-learning (Roper, 2007). Although the terms are used differently, online learning refers to a form of learning that uses technology to access learning materials and interact with learners and instructors in situations where learners and instructors are remote. The distinguishing characteristic of online learning is that it is synchronous or asynchronous. Synchronous communication between learners and teachers is called synchronous, while asynchronous communication between learners and teachers is called asynchronous. In particular, the influence of information and communication technologies on learning environments has led to the development of online learning environments (Anderson, 2008; Belanger & Jordan, 1999; Chang, 2003; Morrison, 2003; Wang, 2008). There are many online learning platforms where synchronous and asynchronous courses are delivered through learning management systems (LMS). These include Microsoft Team, Adobe Connect, BigBlueButton, Zoom, Google Meet, Cisco Webex, Canvas, Edgenuity, ALMS (Advancy Learning Management System), Moodle, and Blackboard (İzmirli & İzmirli, 2020; Kaçan & Gelen, 2020; Telli & Altun, 2021).

Virtual classrooms are learning environments organized or conducted online. The main difference between traditional classrooms and virtual classrooms is that virtual classrooms are learner-centered. The main advantage of virtual classrooms over real classrooms is that they allow learners to participate in the learning environment from anywhere (Ebbers et al., 2003; Rufai et al., 2015; Wang & Newlin, 2001). In virtual classrooms, technology, teacher, and student characteristics are three important factors that influence success. Specifically, as a technological factor, teachers and students are expected to have the necessary skills to access learning tools and effectively use the required software and hardware (İşman, 2018). On the other hand, students who are accustomed to the experience of the physical classroom and the student-teacher relationship need the support and guidance of the teacher to be successful in moving to the online learning environment (Murphy et al., 2020). At this point, effective management of virtual classrooms is as much on the agenda as teaching activities conducted in traditional classrooms (Can, 2020).

Classroom management is the way students’ behavior, movement, interaction, etc. are regulated during a lesson and how they are controlled by the teacher or sometimes by the students themselves to facilitate effective teaching (Richards & Richard, 2013). According to another definition, classroom management, which is defined as the application of theoretical knowledge and techniques in line with educational goals to increase the effectiveness of elements such as planning, organization, delivery, and assessment (Erdoğan, 2019), also applies to the virtual classroom environment. The roles of teachers in virtual classrooms are defined as planning, social, teaching, technology, and management (Guasch et al., 2010). However, virtual classrooms do not have a traditionally managed classroom. But there is a workspace that provides the teacher with the necessary technological tools to manage the virtual classroom in the online learning system. By designing an appropriate learning environment with these tools, the teacher is practically managing not the classroom, but the students’ virtual classroom. Teachers can manage virtual classrooms as effectively as traditional classrooms (Kiseleva & Pogosian, 2021; Yang & Liu, 2007).
Virtual classroom management involves developing a sense of belonging to the classroom by addressing students' emotional needs, creating positive interaction between students and teachers, and creating a supportive classroom environment (Ho & Lin, 2016). The realization of effective learning and teaching in the virtual environment depends on teachers' management skills in the virtual classroom and thus their effective management of the virtual classroom (Can & Gündüz, 2021). However, teachers' perceptions of online learning, their knowledge, attitudes, and skills related to the teaching method influence their effective management of the virtual classroom in the distance education process (Ertmer & Ottebbreit-Leftwich, 2010). Especially after the Covid 19 pandemic, classroom management has become more important for instructional quality in virtual environments (Huber & Helm, 2020). There are many national studies in the literature (Akdeniz & Uzun, 2022; Akgül et al., 2022; Araz et al., 2023; Arslan et al., 2021; Arslan & Şumuer, 2020; Can & Gündüz, 2021.; Ceylan, 2021; Çakır et al., 2023; Çayırlı, 2022; Kavrayıcı, 2021; Kaya & Dilekçi, 2021; Sargın, 2022; Şeker et al., 2022; Uçar & Acar, 2022; Uçar & Mazlum, 2020), which investigate teachers' virtual classroom management in different industries. On the other hand, although there are some studies that investigate physical education teachers' classroom management (Bektaş & Pepe, 2022; Çar & Aydos, 2022), it was found that the studies that investigate virtual classroom management competencies are limited. This study is considered important to determine the current status of teachers' classroom management competencies in light of scientific data in physical education classes conducted in a virtual environment.

The purpose of this study is to investigate the competencies of physical education teachers in the virtual classroom. In line with this objective, the study aimed to answer the following questions;

1- Are physical education teachers competent in virtual classroom management?

2- Are there significant sociodemographic variables such as gender, school level, education level, professional seniority, and virtual classroom experience affecting the virtual classroom management competencies of physical education teachers?

Materials and Methods

This study, which investigates physical education teachers' competencies in the virtual classroom, was designed as a cross-sectional study using quantitative research methods. The study's research group consists of a total of 726 physical education teachers who were reached through the online link “Google. docs form” during the spring semester of the academic year 2022-2023 using the snowball method. The physical education teachers who participated in the study were 67.2% male and 32.8% female. 62.0% of the teachers work in secondary schools and 38% work in high schools. 66.1% of the teachers have a bachelor's degree and 33.9% have a postgraduate degree. 16.1% of teachers have 1-5 years of work experience; 16.3% have 6-10 years of work experience; 21.8% have 11-15 years of work experience; 20.2% have 16-20 years of work experience; and 25.6% have 21 years or more. While 90.2% of teachers have experience with virtual classrooms, 9.8% of them have no experience with virtual classrooms. The demographic characteristics of the participants are shown in Table 1.
Table 1. Sociodemographic characteristics of participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>488</td>
<td>67.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>32.8</td>
</tr>
<tr>
<td>School</td>
<td>Level</td>
<td>450</td>
<td>62.0</td>
</tr>
<tr>
<td></td>
<td>intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>276</td>
<td>38.0</td>
</tr>
<tr>
<td>Educational status</td>
<td>License</td>
<td>480</td>
<td>66.1</td>
</tr>
<tr>
<td></td>
<td>Postgraduate</td>
<td>246</td>
<td>33.9</td>
</tr>
<tr>
<td>Professional seniority</td>
<td>1-5 years</td>
<td>117</td>
<td>16.1</td>
</tr>
<tr>
<td></td>
<td>6-10 years</td>
<td>118</td>
<td>16.3</td>
</tr>
<tr>
<td></td>
<td>11-15 years</td>
<td>158</td>
<td>21.8</td>
</tr>
<tr>
<td></td>
<td>16-20 years</td>
<td>147</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>21 years</td>
<td>186</td>
<td>25.6</td>
</tr>
<tr>
<td></td>
<td>older</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience with the virtual classroom</td>
<td>We have</td>
<td>655</td>
<td>90.2</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>71</td>
<td>9.8</td>
</tr>
</tbody>
</table>

Research data were collected using the demographic information form created by the researcher and the "Teachers' Virtual Classroom Management Efficacy Scale". The "Teachers' Virtual Classroom Management Efficacy Scale" developed by Can & Gündüz (Can & Gündüz, 2021) consists of three subdimensions, namely "Relations with Students" (11 items), "Virtual Classroom Activities" (8 items), and "Virtual Classroom Management" (5 items), and includes a total of 24 items. The items of the scale were on a five-point Likert scale ranging from "1 - strongly disagree" to "5 - strongly agree". Data were interpreted using the point scale: "1.00-1.80: Disagree at all", "1.81-2.60: Disagree", "2.61-3.40: Undecided", "3.41-4.20: Agree", "4.21-5.00: Strongly Agree." The researchers found that the 3-factor structure of the scale explained 52.53% of the total variance and showed good agreement with the model ($X^2/SD = 3.04$, $AGFI = 0.80$, $GFI$ value 0.84, $CFI = 0.97$, $NFI = 0.95$) formed as a result of confirmatory factor analysis. The internal consistency coefficients of Cronbach's alpha of the scale ranged from .76 to .91 in the subdimensions and .90 in the total value (Can & Gündüz, 2021). In the present study, internal consistency coefficients of Cronbach's alpha for the 3-factor structure of the scale were calculated between .83 and .94 for the subdimensions and .93 for the total scale.

Descriptive statistical procedures were used in the analysis of the data, as well as the t-test for independent samples and one-way analysis of variance (ANOVA). The analyzes first tested the conformity of the data to the normal distribution using the skewness and kurtosis values. As a result of the test (Table 2), it was assumed that the distribution was normal because the values for skewness and kurtosis were between ± 2 (George & Mallery, 2010). The results of Levene's homogeneity test were considered for the T-test and ANOVA, and Welch and post hoc tests (Dunnett-T3) were used in ANOVA. Analyzes were performed in the SPSS 27 package program.
Findings

The descriptive statistical results of the competencies of the physical education teachers participating in the study in relation to virtual classroom management are shown in Table 2. Examination of the results reveals that the physical education teachers were undecided in the subdimension of relationships with students \( (M = 3.09, SD = 0.86) \), but considered themselves adequate in the subdimensions of virtual classroom activities \( (M = 3.623, SD = 0.70) \) and virtual classroom management \( (M = 3.77, SD = 0.69) \).

Table 2. Descriptive statistics of participants' management skills in the virtual classroom

<table>
<thead>
<tr>
<th>Subdimension</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with students</td>
<td>726</td>
<td>3.09</td>
<td>0.86</td>
<td>0.13</td>
<td>-0.69</td>
</tr>
<tr>
<td>Virtual classroom activities</td>
<td>726</td>
<td>3.63</td>
<td>0.70</td>
<td>-0.55</td>
<td>0.52</td>
</tr>
<tr>
<td>Virtual classroom management</td>
<td>726</td>
<td>3.77</td>
<td>0.69</td>
<td>-0.89</td>
<td>1.84</td>
</tr>
</tbody>
</table>

The results of the t-test on the competencies of physical education teachers in the virtual classroom according to gender are shown in Table 3. Examination of the results shows that there is no significant difference between teachers' virtual classroom management competencies by gender when the relationship with the student scale is analyzed \( [t (724) = 1.94, p = .052] \). However, in the virtual classroom activities dimension, male teachers \( (M = 3.71, SD = 0.71) \) had higher scores than female teachers \( (M = 3.46, SD = 0.63) \) \( [t (724) = 4.72, p = .000, d = 0.36] \), and in the virtual classroom management dimension, male teachers \( (M = 3.86, SD = 0.70) \) had higher virtual classroom management competencies than female teachers \( (M = 3.58, SD = 0.63) \) \( [t (724) = 5.35, p = .000, d = 0.42] \). Gender was significant in both subdimensions with a moderate effect size on teachers' ratings of virtual classroom management competencies (Cohen's \( d = 0.36 \) and 0.42).

Table 3. T-test results on virtual classroom participants' management skills by gender

<table>
<thead>
<tr>
<th>Subdimension</th>
<th>Male</th>
<th>Female</th>
<th>t (724)</th>
<th>p</th>
<th>Cohen's d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Relationships with students</td>
<td>3.13</td>
<td>0.90</td>
<td>3.01</td>
<td>0.77</td>
<td>1.94</td>
</tr>
<tr>
<td>Virtual classroom activities</td>
<td>3.71</td>
<td>0.71</td>
<td>3.46</td>
<td>0.63</td>
<td>4.72</td>
</tr>
<tr>
<td>Virtual classroom management</td>
<td>3.86</td>
<td>0.70</td>
<td>3.58</td>
<td>0.63</td>
<td>5.35</td>
</tr>
</tbody>
</table>

\*\*\*\*p<.001

The results of the t-test on physical education teachers' competencies in managing the virtual classroom as a function of the school variable are shown in Table 4. Examining the results, there is no significant difference between the virtual classroom management teachers' scores depending on the school variable in the dimension of virtual classroom management \( [t (724) = -1.91, p = .056] \). In the dimension of relationships with students, teachers working at a high school \( (M = 3.18, SD = 0.82) \) had higher scores than teachers working at a level intermediate school \( (M = 3.04, SD = 0.88) \) \( [t (724) = -2.11, p = .035, d = -0.16] \), and in the "virtual classroom activities" dimension, high school teachers' management skills \( (M = 3.70, SD = 0.67) \) were higher than middle school teachers' \( (M = 3.58, SD = 0.71) \) \( [t (724) = -2.09, p = .037, d = -0.16] \).
In both subdimensions, the effect size of the school-level variable on teachers' virtual classroom management scores is significant but weak.

**Tablo 4. T-test results of participants' management competencies in the virtual classroom by school**

<table>
<thead>
<tr>
<th>Subdimension</th>
<th>Level intermediate</th>
<th>High school</th>
<th>t (724)</th>
<th>p</th>
<th>Cohen's d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Relationships with students</td>
<td>3.04</td>
<td>0.88</td>
<td>3.18</td>
<td>0.82</td>
<td>-2.11</td>
</tr>
<tr>
<td>Virtual classroom activities</td>
<td>3.58</td>
<td>0.71</td>
<td>3.70</td>
<td>0.67</td>
<td>-2.09</td>
</tr>
<tr>
<td>Virtual classroom management</td>
<td>3.73</td>
<td>0.75</td>
<td>3.83</td>
<td>0.58</td>
<td>-1.91</td>
</tr>
</tbody>
</table>

*p < .05

The results of the t-test on the competencies of physical education teachers in managing the virtual classroom depending on the level of education are shown in Table 5. The examination of the results shows that there is no significant difference between the results of the teachers for the management of the virtual classroom depending on the level of education (p > .05).

**Tablo 5. T-test results of participants' management skills in the virtual classroom by educational level**

<table>
<thead>
<tr>
<th>Subdimension</th>
<th>Bachelor's</th>
<th>Graduate</th>
<th>t (724)</th>
<th>p</th>
<th>Cohen's d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Relationships with students</td>
<td>3.08</td>
<td>0.84</td>
<td>3.10</td>
<td>0.88</td>
<td>-0.24</td>
</tr>
<tr>
<td>Virtual classroom activities</td>
<td>3.59</td>
<td>0.68</td>
<td>3.68</td>
<td>0.72</td>
<td>-1.52</td>
</tr>
<tr>
<td>Virtual classroom management</td>
<td>3.80</td>
<td>0.67</td>
<td>3.70</td>
<td>0.73</td>
<td>1.76</td>
</tr>
</tbody>
</table>

ANOVA the results of virtual classroom management skills of physical education teachers as a function of the variable of seniority are presented in Table 6. Because the variances in the analysis were not homogeneous, Welch's test was used to compare the means (p < .001). Examination of the results shows that seniority has a significant effect on physical education teachers' virtual classroom management skills in the subdimensions of relationships with students [F (4, 721) = 13.28, p = .000], virtual classroom activities [F (4, 721) = 9.05, p = .000], and virtual classroom management [F (4, 721) = 20.03, p = .000].

In post-hoc comparisons using the Dunnett-T3 HSD test; in the "relationships with students" subdimension, teachers with 1-5 years (M = 3.35, SD = 0.97) and 6-10 years (M = 3.53, SD = 0.97) and teachers with 11-15 years (M = 2.86, SD = 0.81), 16-20 years (M = 2.83, SD = 0.84), and more than 21 years (M = 3.11, SD = 0.61) in the "virtual classroom activities" subdimension; teachers with 6-10 years (M = 3.98, SD = 0.75) and teachers with 11-15 years (M = 3.57, SD = 0.69), 16-20 years (M = 3.53, SD = 0.75) and over 21 years (M = 3.51, SD = 0.61), and in the subdimension "virtual classroom management"; teachers with over 21 years (M = 3.49, SD = 0.47) and teachers with 1-5 years (M = 3.92, SD = 0.63), 6-10 years (M = 3.93, SD = 0.69), 11-15 years (M = 3.92, SD = 0.70), and 16-20 years (M = 3.71, SD = 0.85) of professional affiliation.

As teachers gain seniority, their competencies in virtual classroom management decrease. In the subdimensions "relationships with students (η2 = .08)" and "virtual classroom management (η2 = .07)," the effect size of the variable "professional seniority" was at a
"medium" level, and in the subdimension "virtual classroom activities (η2 = .05)," the effect size of the variable "professional seniority" was at a "small" level (Green & Salkind, 2021).

**Table 6.** ANOVA results of participants' competences in virtual classroom management by professional seniority

<table>
<thead>
<tr>
<th>Subdimension</th>
<th>1-5 yrs M</th>
<th>1-5 yrs SD</th>
<th>6-10 yrs M</th>
<th>6-10 yrs SD</th>
<th>11-15 yrs M</th>
<th>11-15 yrs SD</th>
<th>16-20 yrs M</th>
<th>16-20 yrs SD</th>
<th>21 yrs + M</th>
<th>21 yrs + SD</th>
<th>F (4, 721)</th>
<th>η2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with students</td>
<td>3.25</td>
<td>0.97</td>
<td>3.53</td>
<td>0.97</td>
<td>2.86</td>
<td>0.81</td>
<td>2.83</td>
<td>0.84</td>
<td>3.11</td>
<td>0.61</td>
<td>13.28***</td>
<td>.08</td>
</tr>
<tr>
<td>Virtual classroom activities</td>
<td>3.65</td>
<td>0.59</td>
<td>3.98</td>
<td>0.75</td>
<td>3.57</td>
<td>0.69</td>
<td>3.53</td>
<td>0.75</td>
<td>3.51</td>
<td>0.61</td>
<td>9.05***</td>
<td>.05</td>
</tr>
<tr>
<td>Virtual classroom management</td>
<td>3.92</td>
<td>0.63</td>
<td>3.93</td>
<td>0.69</td>
<td>3.92</td>
<td>0.70</td>
<td>3.71</td>
<td>0.85</td>
<td>3.49</td>
<td>0.47</td>
<td>20.03***</td>
<td>.07</td>
</tr>
</tbody>
</table>

***p < .001, aThe Welch test was included because homogeneity of variance was not established.

The results of the t-test on the management skills of physical education teachers in virtual classrooms as a function of the variable "experience with virtual classrooms" are shown in Table 7. Examining the results, in the dimension of relationships with students, the values of teachers with experience (M = 3.14, SD = 0.87) differ significantly at a medium level from those of teachers without experience (M = 2.62, SD = 0.55) [t (724) = 7.02, p = .000, d = 0.61], while in the dimension of activities in the virtual classroom, the values of teachers with experience (M = 3.70, SD = 0.67) than inexperienced teachers (M = 2.90, SD = 0.44) [t (724) = 13.81, p = .000, d = 1.23], and in the dimension of virtual classroom; it can be seen that the values of experienced teachers (M = 3.87, SD = 0.63) compared to the inexperienced teachers (M = 2.86, SD = 0.58) differed significantly in magnitude [t (724) = 13.90, p = .000, d = 1.62].

**Table 7.** T-test results on participants' virtual classroom management skills as a function of virtual classroom experience

<table>
<thead>
<tr>
<th>Subdimension</th>
<th>Experience M</th>
<th>Experience SD</th>
<th>Inexperienced M</th>
<th>Inexperienced SD</th>
<th>t (724)</th>
<th>p</th>
<th>Cohen's d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with students</td>
<td>3.14</td>
<td>0.87</td>
<td>2.62</td>
<td>0.55</td>
<td>7.02</td>
<td>.000**</td>
<td>0.61</td>
</tr>
<tr>
<td>Virtual classroom activities</td>
<td>3.70</td>
<td>0.67</td>
<td>2.90</td>
<td>0.44</td>
<td>13.81</td>
<td>.000**</td>
<td>1.23</td>
</tr>
<tr>
<td>Virtual classroom management</td>
<td>3.87</td>
<td>0.63</td>
<td>2.86</td>
<td>0.58</td>
<td>13.90</td>
<td>.000**</td>
<td>1.62</td>
</tr>
</tbody>
</table>

***p < .001

**Discussion**

This study, which examined physical education teachers' virtual classroom management competencies using a sample of 726 participants, found that physical education teachers were undecided about their virtual classroom management competencies on the dimension of relationships with students, but considered themselves adequate on the dimensions of virtual classroom activities and virtual classroom management. According to Apak et al. (2021), the majority of teachers are highly prepared for 21st century classroom management. In reviewing the literature, although there are research findings (Arar et al., 2023; Can, 2020; Can & Gündüz, 2021; Karakaya et al., 2020; Sönmez & Recepoğlu, 2019; Yılmazsoy et al., 2018) that teachers
are competent in both traditional and virtual classroom activities and dimensions of virtual classroom management, there are also findings that there are difficulties in relationships with students in virtual classrooms. In one of the recent studies, Araz et al. (2023) found that teachers were undecided about their virtual classroom management competencies in the subdimension of relationships with students. Can & Gündüz (2021) found that teachers were competent in virtual classroom management but performed poorly in the subdimension of relationships with students. Similarly, Kaya (2011) found in his study that instructors found the elements of face-to-face communication in virtual classrooms to be lacking and were undecided whether this situation affected the teaching process.

Managing a virtual classroom also differs from managing a traditional classroom. Face-to-face communication in traditional classrooms takes on a different dimension in virtual classrooms. Akdeniz & Uzun (2022) found that during distance learning, teachers considered the lack of student feedback during the lesson, turning off the video and microphones, entering and leaving the lesson late, lack of interest, interest in extracurricular situations, and not participating continuously in class as important problems. Şeker et al. (2020) found that students' speaking, listening, and nonverbal communication skills were interrupted in virtual classrooms and teachers could only communicate with parents and students outside of live classes. Albayrak (2017) notes that students' inability to participate in virtual classrooms (e.g., speaking aloud, asking questions, etc.) is a significant problem for student success. In their study, Aslan & Şumuer (2020) found that 26.25% of teachers had problems with managing instructional time, 22.05% with managing academic learning time, and 42.26% with student-to-student and teacher-to-student communication. Arslan et al. (2021) cited lack of communication, students' difficulty in expressing themselves in virtual classrooms, and the fact that some students who are comfortable in the traditional classroom remain passive in the virtual classroom as problems in classroom management in virtual classrooms.

Considering that physical education classes are mostly face-to-face, the atmosphere created by student relationships is natural to observe in traditional classrooms. In virtual classrooms, on the other hand, the fact that communication is not face-to-face poses a challenge that is reflected in the management of virtual classrooms (Almonacid-Fierro et al., 2021; Can, 2020; Sabancı & Yılmaz, 2021). In addition, technical problems in the virtual classroom environment, the teacher's body language and the attractiveness of the materials used in the classroom environment, the number of students, etc., may also negatively affect communication with students (Cornelius, 2014; Çoruhlu & Uzun, 2021; Dinçer & Uyar, 2016; Goecktaş & Sirakaya, 2021; Hilli, 2020; Kalelioglu et al., 2016; Phelps & Vlachopoulos, 2020; Yılmaz et al., 2022; Yueksel, 2021). To effectively manage virtual classrooms, the main concern is to keep the number of students manageable (Schlusmans et al., 2009).

In the study, the gender variable was found to have a moderate effect on teachers' virtual classroom management competencies, while male physical education teachers' management competencies were higher in the subdimensions of virtual classroom activities and virtual classroom management. Can & Gündüz (2021) found that female teachers had higher competencies in the subdimension of virtual classroom activity management, while Araz et al. (2023) found no gender differences in virtual classroom teachers' management competencies. Çelik (2019), in his study investigating the relationship between self-efficacy and classroom
management skills of elementary and level intermediate school teachers, found that the level of classroom management skills of female teachers was higher than that of male teachers. It is suggested that the fact that the teachers studied came from different backgrounds and worked at different levels of education may have led to different results. In the study, high school teachers were found to have better virtual classroom management skills than level intermediate school teachers on the subdimensions of relationships with students and virtual classroom activities. However, this effect was weak. In Can & Gündüz's (2021) study, high school teachers' mean scores were lower on virtual classroom activities competency and higher on virtual classroom management dimension. This finding is partially consistent with the results of our study. It is hypothesized that it will become easier for high school teachers to manage the virtual classroom as students' technological literacy and sense of responsibility in the learning environment increase with age.

The study concluded that physical education teachers' competencies in virtual classroom management do not change significantly depending on the level of education. Can & Gündüz's (2021) study concluded that teachers' virtual classroom management competencies did not change significantly in all subdimensions depending on educational level, and Araz et al.'s (2023) study in the virtual classroom subdimension. Çelik (2019), on the other hand, found that there was no difference in teachers' overall classroom management competencies depending on their educational status. The study found that the gradual increase in professional seniority weakened teachers' virtual classroom management skills. Professional seniority has a medium effect size in the subdimensions of relationships with students and virtual classroom management, and a small effect size in the subdimension of virtual classroom activities. Araz et al. (2023) found that low seniority teachers' competencies in virtual classroom activities were significantly better than those of high seniority teachers. In Çelik's (2019) study, it was found that the average of teachers' general classroom management skills gradually decreased after 11-15 years of working in schools. However, in the study of Can and Gündüz (2021), it was found that teachers' virtual classroom management skills did not change significantly depending on their professional seniority.

In the study, physical education teachers' virtual classroom management competencies changed significantly across all subdimensions as a function of their virtual classroom experience. The competencies of teachers with experience in the virtual classroom were significantly higher than those of teachers without experience in medium and large dimensions. This result is expected in research. Can & Gündüz (2021) also found that teachers with virtual classroom experience had a significantly higher level of virtual classroom management than teachers without virtual classroom experience. It is found that teachers who receive training on distance education and virtual classroom management prior to entering the profession improve their classroom management skills and gain a better understanding and competence in supporting students (Asim et al., 2020; Milliken, 2019). Frazier's (2022) research found that teachers' lack of preparation greatly impacted their training and professional development in effectively managing the virtual classroom. Virtual reality environments can be very beneficial in improving the classroom management skills of pre-service and in-service teachers (Seufert et al., 2022).
Conclusions

Globally, Covid-19 has led to a rapid shift from traditional classrooms to online classrooms. This makes preparation an important element of education (United Nations Educational, Scientific and Cultural Organization., 2020). Given this reality, especially in a subject such as physical education (Almonacid-Fierro et al., 2021), it is important to provide not only access to technology, but also the necessary conditions for teachers and students to facilitate student learning. For students to be successful in a virtual classroom, they must effectively participate in the virtual classroom, and teachers must be competent in strategies to manage the virtual classroom (Allen et al., 2020). Classroom management strategies implemented in virtual classrooms have been shown to affect students' academic performance and attitudes toward the course in the same way as in face-to-face classes (Polat & Özan, 2018). At this point, it is very important to support interaction, participation, and collaboration in the design and implementation of virtual classrooms to manage the class according to its purpose and raise awareness to increase the effectiveness of the course in the virtual environment (Clark & Kwinn, 2007; Kavrayıcı, 2021; Ward et al., 2010). This is because building and maintaining student-teacher relationships in classroom management is a fundamental component of effective classroom management (Brophy, 2006).

In this study, physical education teachers were found to lack competencies in managing virtual classrooms, especially in interacting with students. In addition, physical education teachers with seniority and no experience with virtual classrooms showed deficits in managing virtual classrooms. To improve teachers' competencies in managing virtual classrooms, it would be appropriate to focus on teacher training and provide the necessary incentive measures.

Conflicts of Interest

The author declares no conflict of interest.

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Ethical Approval

Participants signed a voluntary consent form that informed them that they could end the interview at any time without any valid reason. All processes of the study were conducted by ethical rules.

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