# Level of Readiness for In-Class Teaching Among Teachers of Students with Special Educational Needs: Post-COVID-19

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| A R T I C L E   I N F O | A B S T R A C T |
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**Purpose** The spread of pandemic COVID-19 and social distancing has affected student's educational system with disabilities, prompting moving to online learning. As in traditional learning platforms, students with disabilities may have additional educational needs, especially with sudden and unexpected movement to online platforms. This study aimed to determine whether special education teachers were ready for in-class learning post-COVID-19. Specifically, it investigated the impact of the pandemic on the quality of education, teachers' quality of life, participation in planning the process of in-class teaching, teachers' concern regarding their students' needs, and teachers' readiness for in-class education. **Methodology:** Data were collected using an online questionnaire distributed to a sample of special education teachers across Saudi Arabia (N = 107). Responses were analyzed using descriptive statistics and multiple linear regression to predict the teachers' readiness for in-class education.

**Findings**: It was found that teachers' concerns regarding their students' needs and teachers' participation in planning the process of in-class teaching may predict teachers' readiness levels. Results also suggested that these special education teachers believed themselves ready to return to teaching in the classroom. **Implication to Research and Practice:** On this basis, in-class teaching can be considered a suitable learning environment for students with special needs. Some fruitful suggestions are presented for educational development during the post-pandemic transition to in-class learning.

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## Introduction

According to the Convention on the Rights of Persons with Disabilities (Article 24), students with disabilities have the right to be educated on the basis of equal opportunity and without discrimination. This includes their rights to fully develop personalities and psychological and physical abilities with a sense of dignity and self-worth. Furthermore, according to Article 25, students with disabilities have the right to full access to proper health services without discrimination based on disability. Countries' education organizations should ensure that students with special needs have individualized support provided in appropriate academic and social environments.

The COVID-19 coronavirus pandemic has affected many community services, such as health, social, economic, and education (Nicola et al., 2020). According to the United Nations Student's Fund, at least one-third of students worldwide have been deprived of education due to their inability to attend remote learning after many schools have closed. Furthermore, up to 94 % of students worldwide have been affected by school closures since the pandemic outbreak (Connor et al., 2020). Efforts to limit the spread of COVID-19 in March 2020 to implement some preventive measures such as social distancing prompted school closures in many countries, including the Kingdom of Saudi Arabia (KSA).

Saudi Arabia's education was established in 1932 and developed over the years to prepare students' lives and work considering the country's cultural aspects. The first university was established in 1957, and then the Ministry of Higher Education was founded in 1975 after multiple universities were founded. In 2020, there are over 30,000 schools and over fifty public and private universities.

This study aimed to determine the predictors of readiness for in-class education among special educators in the Saudi Arabia. Prior to designing this study, the researchers had personal communication with some special education teachers to understand distance learning for students with special educational needs and, importantly, how to be prepared for student's learning post-COVID. Teachers reported that the main challenge to distance learning was no preparation or clear instruction. Some teachers were not offered online platforms that suited students with disabilities. Some students had difficulties attending online learning due to hyperactivity and attention deficit, motivation problems, and the inability of teachers to provide meaningful reinforcements. Although special educators attended many technical courses on using online teaching tools, some reported an inability to modify tools to fit the student's needs and abilities.

Therefore, to provide the best educational practice in the post-COVID era, this study focused on planning for it and understanding teachers' levels of readiness for it. Because teachers are on the front line in classrooms and understand their students' needs and abilities at that stage, they were chosen as a sample for this study. The transition to post-COVID-19 can be difficult, even for students with safe and stable backgrounds. Students need to experience a sense of calm, be included, feel others' desire to communicate and interact with them, and feel safe to share their thoughts and ideas (Neuwirth et al., 2021). Therefore, this study tried to identify those informed principles that should apply to students with disabilities. The current study could also be useful in planning to overcome some of the previous negative aspects of teaching in special education classrooms to provide quality learning to students when getting back to in-class learning.

## Literature Review

- *Challenges to Education in Saudi Arabia*

Aljaber (2018) reported that the education system in Saudi Arabia is facing many challenges due to rapid expansion and missing quality standards and guidelines. Tausif (2017) studied Prince Sattam bin Abdulaziz University in Saudi Arabia as a case to analyze the perception-expectation gap and found that there is a need to deliver quality education and to improve the satisfaction of the students. Furthermore, Khayati and Selim (2019) studied innovation in Saudi universities regarding the quality of education and innovations in educational programs, teaching methods, applied research, developing partnerships, and achieving financial sustainability. The results show that the country has about "162 departments and colleges in the country accredited by foreign recognized institutions (Dougados et al., 2014). However, researchers concluded that the reality of innovation in Saudi universities does not match the potential of the country and its current increasing spending toward improving the quality of education.

Furthermore, Mohammed et al. (2016) reported a need to promote the culture of total quality in higher education institutions in Saudi Arabia and use different tools to measure satisfaction. Recently, Begum et al. (2021) explored the effect of the COVID-19 pandemic on the quality of education worldwide (including Saudi Arabia) and reported that some students could not meet all requirements for effective learning due to some financial constraints and the slow movement of adaptive processes. Frad and Jedidi (2022) studied the online education experience of Saudi Arabia before and after COVID-19 for students in the general educational system and reported a need to improve students' engagement in online learning resources. Therefore, having a closer understanding of the quality of the teachers, teaching, rules and laws, and students in Saudi Arabia will improve the education sector considerably (Almaiah et al., 2020).

Schools were closed due to preliminary evidence suggesting students can spread the virus although they are less likely to contact the virus. This has led countries to provide online learning through remote schooling (Di Pietro et al., 2020). School closures have significant negative effects on low-income families and students with disabilities who have less access to technology, the internet, food, and childcare services (Kuhfeld et al., 2020). Some previous studies found negative results for students attending e-learning platforms, with students in virtual schools performing worse on standardized assessments than their peers in traditional public schools (Ahn & McEachin, 2017; Fitzpatrick et al., 2020). Despite the direct impact of the education sector on all age groups in general, the most prominent effect is on students with disabilities (Dunlosky et al., 2013).

Previous studies reported some mental health and psychological problems and that some students show self-regulation and emotional issues due to the lockdown (Alonso-Martínez et al., 2021; Benitez et al., 2009; Page et al., 2021). Social isolation was reported as a barrier to appropriately educating students with disabilities, whereas most of their social circles rely on schools and service centers (Page et al., 2021; Smith, 2020); one of the keys to teaching students with disabilities is developing peer relations. Merello et al. (2021) concluded that the pandemic created a long-term problem and brought challenges to teaching students with disabilities and that most of the barriers to educating students appeared to be interrelated, which may affect student's development. Thus, "efforts must

be made at higher levels of society, such as policies, laws, or government support, to ensure the proper development of students" (Merello et al., 2021).

Moreover, Beight et al. (2022) explored parental and adolescent perspectives on the impact of COVID-19 on the care of seriously ill students using a semi-structured interview followed by an online sociodemographic survey. Parents reported some difficulties due to canceled health services, isolation, and high emotional distress; however, the study reported using a hybrid care model as the only positive outcome reported by parents as an outcome of the COVID-19 pandemic for students with health needs. Nevertheless, the prevalence of students considered at risk for anxiety and depression was not associated with online classes, but student's participation in sports was protective against the risk of anxiety, depression, and obsessive-compulsive disorders (Acosta et al., 2021). Therefore, families of students with health needs faced some challenges that may have potential consequences; thus, improving access to health services to a satisfying level after COVID-19 is required.

- *Special Educators and Distance Learning*

Gardner (2010) studied a sample of 12 special education teachers in the United States to identify intrinsic and extrinsic factors that may cause special education teachers' attrition which impedes schools' ability to provide quality learning to students. The researcher indicated that teachers' relationships with their students were key to their teaching. Teachers expressed their desire to return to in-class learning and wished to remove previous negative aspects of teaching in special education classrooms, such as paperwork load and limited planning time with co-teachers.

Niemi and Kousa (2020) described students' and teachers' perceptions of distance learning during the COVID-19 pandemic and reported that distance teaching was successful although teachers reported a lack of ease in distance teaching, were worried about students' progress, and students had a heavy workload and some motivation problems. On the other hand, Lambert and Schuck (2021) presented a case study of a special educator's experiences teaching standards-based mathematics using distance learning tools and reported various barriers that made teaching more challenging. Those challenges included supporting students with struggles and problems with supporting students' self-regulation. These researchers concluded that distance learning requires considering the emotional support for learning and coaching students and their families with self-regulation strategies to support their engagement in mathematical learning during the use of distance learning tools. Therefore, evidence from previous studies suggests that moving to online learning platforms may induce additional needs for students and extra teaching demands on the teachers' side.

- *Distance Learning during COVID-19 School Closures*

Findings of previous studies identified learning facilitators, such as having access to the internet, tablets, and laptops (Iivari et al., 2020), as well as new schedules designed to form a consensus between families and teachers to maintain goals and schedules to help parents participate in the education of their students (Iivari et al., 2020). However, reviewed papers identified different barriers, such as having limited or no access to the internet (Honein et al., 2021; Iivari et al., 2020), especially for families of lower socioeconomic status or families living in rural areas, which may prevent students from attending their online lessons due

to internet connection issues (Smith, 2020). Some students could not participate in digital classes or afford electronic devices due to their families' income, making it impossible to attend e-learning platforms (Honein et al., 2021; Iivari et al., 2020; Page et al., 2021; Smith, 2020). Unfortunately, these barriers created a gap between students who could adapt to the situation and other students or families who could afford these devices for learning. Another intense barrier to effectively educating students with disabilities during the pandemic is the change of routines (Iivari et al., 2020; Lund & Gabrielli, 2021; Page et al., 2021; Smith, 2020) or having a large number of interactions with students with disabilities that cannot be performed in an online meeting (Lund & Gabrielli, 2021; Smith, 2020).

Roitsch et al. (2021) examined the impact of the sudden transition to online learning due to the COVID-19 pandemic using a phone interview with a parent of a student with autism spectrum disorder (ASD). The researchers reported four themes that emerged from the interview: adjustments to changes in routines and roles (i.e., the responsibility of becoming educators), instruction (i.e., shifting to live remote instruction), significantly reduced social interactions for students with ASD, and benefits of the transition to online learning. Those benefits include strengthened family relationships, the child's capability with online assignments, and the increased ability to complete schoolwork easily. The parent reported transition challenges such as increased social, health, and emotional anxiety due to the pandemic, loss of social connections, and lack of instructional clarity on protecting themselves from COVID-19. Therefore, the outcomes of this interview may raise awareness of the consequences of changes in routines and roles, instruction, social impact, and learning for students with ASD during the COVID-19 pandemic. When online learning tools were implemented, special education teachers were encouraged to consider technology needs for students with disabilities.

Tomasik et al. (2021) compared mathematics and language learning outcomes before and after the school closures in Switzerland and reported no differences with secondary school pupils, but a slowdown of learning and increases of learning interindividual variance for primary school pupils; concluding that distance learning may appear to be effective for some students but not to the same degree. Simó-Pinatella et al. (2021) reported that although special educators provided adequate support to their students and their families using many different interventions during the spread of COVID-19 and school shutdowns, teachers reported difficulties providing support to students and families, such as difficulties in managing and implementing behavioral interventions as well as communicating effectively with students. Therefore, future research should investigate best educational practices suited to students' needs and abilities.

- *Distance Learning for Students with Disabilities*

Distance learning is not a new topic in the field of special education. Several studies have focused on online and distance learning for students with disabilities (Canter et al., 2007; Connor et al., 2020; Grisham-Brown et al., 1998; Honein et al., 2021; Spooner et al., 1998). No single learning environment can be identified as the best learning choice for every student with disabilities; therefore, it is important to avoid the overgeneralized approach to distance learning, especially after the COVID-19 pandemic. The experience of every person with a disability and every teacher of students with disabilities is different and should be considered when reviewing lessons learned through the sudden and complete shift to online learning.

One of the key approaches in the special education field is to differentiate learning strategies across learners based on their strengths, needs, and abilities (Algozzine & Anderson, 2007; Benitez et al., 2009; Börnert-Ringleb et al., 2021; Kaur, 2017), which some educators worry can be impossible during an online session, especially for students with certain kinds of disabilities or those with attention or behavioral challenges. Another key concept in special education is relationships and interactions between and among teachers and their students (Blacher et al., 2014; Broderick et al., 2005; Eisenhower et al., 2007; Nurmi, 2012), and shifting such a relationship online is very difficult due to teachers' being unable to support students in person, making small interactions with teachers difficult.

Previous studies highlighted some of the potential benefits of distance learning for students with disabilities. For example, Ferri et al. (2020) reported increasing parental involvement in their student's learning in the same cases and having open access to course materials. Moessenlechner et al. (2015) also reported some advantages of distance learning for college students with learning disabilities, such as flexibility in scheduling online classes and opportunities for self-management. Furthermore, Huang and Yu (2019) reported no more challenges with learning at home for parents of students with special educational needs. However, students may have more difficulties coping than their peers with differentiated results due to the satisfaction of school support, weekly learning time, parental support, and the intensity of students' needs. On the other hand, parents reported difficulties in preparing for distance education due to lack of time or resources (Börnert-Ringleb et al., 2021; Eisenhower et al., 2007; Iivari et al., 2020; Smith, 2020), being responsible for creating new routines without training (Börnert-Ringleb et al., 2021; Eisenhower et al., 2007; Iivari et al., 2020; Smith, 2020), and struggling to motivate students to participate actively during online classes (Serianni & Coy, 2014; Smith, 2020). Not receiving proper services in schools was identified as a barrier for students with disabilities, which led to losing milestones that had already been achieved Huang and Yu (2019) or falling behind in the learning process (Page et al., 2021).

- *Post-COVID-19*

The pandemic is not over yet. However, reports from different states in the United States showed low rates of in-school transmission of COVID-19 (Doyle et al., 2021; Honein et al., 2021; Huang & Yu, 2019). Indeed, most of the reported school transmission cases were associated with breakdowns in mask adherence or students or staff attending school while symptomatic. These efforts resulted from applying workplace safety measures for schools and policies and supporting teachers and staff without fear of issues with sick leave or burdening colleagues with teaching responsibilities. However, it is difficult to distinguish school opening variables from those of many other simultaneous measures.

Ali (2020) confirmed that COVID-19 had disclosed vulnerabilities on the humanistic vision of education and the development and human rights frameworks, especially with vulnerable students. Therefore, UNESCO emphasized the need for policymakers, educators, and communities to make such decisions through shared principles and visions of desirable futures based on rights frameworks for humanistic education.

The 2030 Agenda for Sustainable Development provides helpful educational guidelines post-COVID-19 (Haslam, 2021). Those signposts include strengthening education as a common good, the right to education, the teaching profession and teacher collaboration,

promoting students' participation and rights, providing social spaces in schools, providing free and open-source technologies to teachers and students, supporting learners with scientific literacy within the curriculum, protecting the financing of public education, and advancing global solidarity to limit inequality. Those guidelines and signposts can be useful to improve the education world and overcome the consequences caused by COVID-19.

- *Educational Response to COVID-19 in Saudi Arabia*

In the first months of the spread of the coronavirus, Saudi Arabia responded quickly and emphasized the collective and participatory approach and international cooperation as the most effective way to confront global crises in critical and sensitive times. On March 8, 2020, all public and private educational institutions containing approximately 8.4 million students were closed. This was three days before the World Health Organization announced the classification of "Corona" as an "epidemic." The teaching process was then completed the next morning using online tools for all general and higher education classrooms. Learning management systems were already almost in use, despite the high capacity and resources required to accommodate a task of this size. In public schools, the Ministry of Education broadcast 12 educational TV channels in parallel with the progress of the curriculum. There was a total of 24 educational channels in the end. Three months later, the Ministry launched the Madrasati (My National School) platform using a learning management system in parallel with 24 satellite channels on (Ain TV), and the systems were operated pivotally and flexibly to ensure the inclusion of all students, teachers, and schools in the Kingdom.

*Problem Statement*

Preliminary planning and preparation for returning to in-class education is not an easy matter for students with disabilities, as studies have shown that changing the routine may be accompanied by behavioral problems for some students with special educational needs (Bailey et al., 2021; Serianni & Coy, 2014). The Ministry of Education announced that in-class education (attendance in schools) would occur for age groups 12 years and over if two doses of the vaccine were obtained. In-class learning for the age group under 12 years would be linked to access to the required societal immunity (70%) of the Saudi Arabia population in two doses or by October 30, 2021. Therefore, investigating teachers' readiness for post-COVID-19 and studying the needs of teachers and students for their return to in-class education is important to draw a map to return effectively and efficiently.

This study's outcomes would help strengthen the current literature in developing special education programs in general and post-COVID-19 programs to in-class education globally because preparation for in-class education includes knowing the shortcomings in the last stage, the impact of the pandemic on education programs for people with disabilities, and its impact on teachers' quality of life to design effective treatment programs that fit with the cultural and lawful perspective of Saudi Arabia. Understanding the level of special education teachers' readiness for in-class teaching is an important aspect of providing better education services for students with disabilities.

This study addressed the following question that guided this research: *What is the level of special education teachers' readiness for post-COVID-19 in-class teaching?*

Several other questions emerged from this question, namely:

- What is the level of the quality of education and teachers' quality of life during the online learning stage compared to the years of in-class education?
- What is the level of special education teachers' participation in planning the process of post-COVID-19 in-class education?
- What is the level of expected needs among students with disabilities?
- What is the level of quality of life for special education teachers?
- What other variables can predict the readiness of special education teachers?

## Methodology

- *Research Design*

A quantitative approach was used to collect and analyze the data to answer the research questions. The quantitative method used statistics to determine the significant correlation between variables (Apuke, 2017). Dependent and independent variables were determined and used to investigate readiness of in-service special education teachers. Four independent variables were investigated: quality of education, teachers' quality of life, planning the process of in-class education, and the needs of students with disabilities. These independent variables were used to determine the impact on the readiness of in-service special education teachers who were teaching online classes. Caywood and Duckett (2003) explained how researchers investigated and identified participants' responses to signal variables or questions in surveys using descriptive questions; therefore, this study used descriptive analysis. Furthermore, a multiple regression analysis was used to predict relations between variables and determine the group of predictors of independent variables. It was assumed that there would be a linear relationship between the independent variables and the readiness of special education teachers as the dependent variable.

- *Research Instrument*

The researchers designed a questionnaire consisting of two sections for collecting data. The first section consisted of demographic information about the respondent: gender, age, academic path (e.g., hearing loss, intellectual disability, learning difficulties, visual disability, and ASD), number of years of working in teaching people with disabilities, region of work, the number of hours (i.e., sessions) and students taught in virtual classes during the session (2020-2021), and the approximate percentage of students' attendance in virtual classes.

The second section consisted of two main domains. The first domain used to collect data on the impact of the COVID-19 pandemic on education for people with disabilities, particularly to assess: (a) the quality of education during that period and (b) the quality of life for teachers compared to the previous years of in-class education). A five-point Likert scale (*decrease a lot, decrease a little, do not change, increase a little,* and *increase a lot*) was chosen for the study. In the quality of education part, participants were asked to evaluate some statements based on their experiences of teaching people with disabilities during the past academic year, such as interaction with students, parents, other teachers, the participation of students in activities, social interaction between students with disabilities and other students, teachers benefit from professional development programs and courses, and the school administration's interest in supporting people with disabilities scientifically, psychologically, and socially.

In the second part (of this domain), teachers evaluated some statements related to the quality of their life based on their teaching experiences during the past academic year. Those statements were related to their sense of achievement in the educational process, intellectual health, physical health, job security, and their quality of life in general. Those statements were adapted from Repišti et al. (2020) and were slightly modified to fit the theoretical background of "quality of life" discussed by Merello et al. (2021); Walton (1973).

In the second domain, teachers were asked to evaluate some statements related to the extent to which teachers of students with disabilities are prepared for face-to-face education through three parts: (a) participation of students and teachers in planning the process of face-to-face education, providing the basic resources in their three forms (social, educational, and psychological), planning to address the conditions of students with disabilities who may not be able to return to the normal school environment for health, psychological, social, or financial reasons, planning for COVID-19-related safety procedures and protocols, and planning to cover educational losses in past semesters (if any); (b) data on the extent of teachers' concern about the needs of students with disabilities, including the educational development (cognitive and skill) of students, the current psychological status of students, students' behavior, students' relationships with typically developing students, with their peers with disabilities, with teachers and school staff, and students' readiness for in-class education; (c) data on the extent of teachers' preparations to return to face-to-face education which includes enthusiasm to provide the best types of in- and out-of-classroom curricular activities, ability to socialize with students with disabilities, discovering professional strengths and weaknesses, willingness to participate in many workshops and training courses to plan for the return to face-to-face education, and preparedness to participate in covering the educational loss during the past year (if any).

Finally, teachers were asked whether they needed additional support in any of the following areas: supporting students with Applied Behavior Analysis, transitional services for people with disabilities, supporting gifted students, supporting students with social and emotional needs, use of technology and aids, and other support services (e.g., speech and occupational therapy). The questionnaire was developed based on the researchers' experience in the field and supported by the outcomes of previous studies related to in-service teachers of special education and studies on the impact of COVID-19 (presented previously). The questionnaires were validated using face and content validity, as explained in subsequent sections. Ethics approval was granted by Qassim University Permanent Committee on the Ethics of Scientific Research as this research met their criteria. The informed consent form was provided electronically at the beginning of the questionnaire and in the participants' first language, Arabic. Participants were capable of consenting for themselves. They were informed of the right to withdraw without giving a reason at any point and that their data would be completely anonymous.

- *Study Population and Sample Selection*

The sample size of this study was 107 special education teachers teaching online during the COVID-19 pandemic in Saudi Arabia. We chose this sample of teachers as the best population to share their opinions about the study's issues. Oraif and Elyas (2021) mentioned that various factors could influence a researcher's investigation of a group of people; thus, one of the suitable methods to collect data is using a questionnaire to engage

participants and obtain less biased views and opinions about the issues. The target population of special education teachers would help policymakers, and school leaders identify whether in-service special education teachers were ready for face-to-face or in-class teaching in schools post-COVID-19. A small sample of the population used to do a pilot study to ensure the reliability of questionnaire before to send it to entire sample in this study.

- *Pilot Study*

The pilot study used in this research involved three phases. First, we developed the questionnaire in the Arabic language, as presented earlier. In the second phase, we presented the questionnaire to 10 specialists holding Ph.D. degrees in special education, psychology, and educational leadership to review its statements' validity and truthfulness. We then applied their feedback, comments, and suggestions. In the third phase, we asked 17 teachers to take the survey, and we gained some feedback to ensure its readiness for data collection. The study's reliability was measured using Cronbach's coefficient alpha for its internal consistency on the whole sample. The Cronbach's alpha for the questionnaires was considered sufficiently reliable, as presented in Table 1.

**Table 1**

*The Scale of Reliability Coefficients of the Arabic Version of the Readiness of Special Education Teachers (N =17)*

| Subscales | No. of Items | Reliability Coefficient |
|---|---|---|
| Quality of Education | 7 | .813 |
| Teachers' Quality of Life | 5 | .861 |
| Planning The Process of In-class Education | 5 | .869 |
| The Needs of Students with Disabilities | 7 | .910 |
| Special educators' readiness for in-class teaching | 5 | .799 |
| Total | 29 | .807 |

- *Data Collection and the Response Rate*

The questionnaire was sent to about 1400 teachers across the country through invitations online link; however, only 107 responses were obtained in the located data collection period.

## Results

This section organizes the results by descriptive statistics, descriptive questions, and multiple regression regarding the post-COVID-19 readiness of in-service special education teachers in Saudi Arabia.

- *Demographic characteristics of the sample*

Table 2 presents the demographic characteristics of this study's sample: gender, age, major in special education, years of experience, level of teaching, region of work, hours of teaching online, number of students, and percentage of attendance in an online class.

**Table 2**

*Demographics of the Study Participants*

| Variables | Frequency (*N* = 107) | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 83 | 77.6% |
| Female | 24 | 22.4% |
| **Grade Level of Teaching** | | |
| Elementary school | 75 | 70.1% |
| Middle school | 22 | 20.6% |
| High school | 10 | 9.3% |
| **Age** | | |
| 22 – 30 | 27 | 25.2% |
| 31 – 40 | 60 | 56.1% |
| 41 – 50 | 19 | 17.8% |
| 51 – 60 | 1 | .9% |
| **Major in Special Education** | | |
| Hearing impairment | 24 | 22.4% |
| Intellectual disability | 50 | 46.7% |
| Learning disability | 8 | 7.5% |
| Visual impairment | 4 | 3.7% |
| Autism spectrum disorder | 9 | 8.4% |
| Others | 12 | 11.2% |
| **Region of work** | | |
| Northern region | 6 | 5.6% |
| Southern region | 5 | 4.7% |
| Eastern region | 9 | 8.4% |
| Western region | 30 | 28.0% |
| Central region | 57 | 53.3% |
| **Class Size** | | |
| 1-3 | 34 | 31.8% |
| 4-6 | 40 | 37.4% |
| 7-9 | 16 | 15.0% |
| 10-12 | 7 | 6.5% |
| 13-15 | 2 | 1.9% |
| More than 16 | 8 | 7.5% |
| **Years of Experience** | | |
| 1-5 | 24 | 22.4% |
| 6-10 | 35 | 32.7% |
| 11-15 | 33 | 30.8% |
| 16-20 | 13 | 12.1% |
| 21-25 | 2 | 1.9% |
| **Number of teaching hours** | | |
| 1 – 3 | 8 | 5% |
| 4 – 6 | 6 | 5.6% |
| 7 – 9 | 8 | 7.5% |
| 10 – 12 | 27 | 25.2% |
| 13 – 15 | 34 | 31.8% |
| More than 16 | 24 | 22.4% |
| **Percentage of attendance** | | |
| 85 – 100% | 51 | 47.7% |
| 70 – 84 % | 21 | 19.6% |
| 55 – 69% | 13 | 12.1% |
| 40 – 54% | 9 | 8.4% |
| Less than 39% | 13 | 12.1% |

- *Means and standard deviations of the questionnaire variables*

One of the aims of this study was to assess special education teachers' responses to various variables. To investigate this aspect, means, standard deviations, and ranks of teachers' responses on the questionnaire sections were extracted, as Table 3 illustrates. The quality of education during the pandemic ($M$ = 22.44), the quality of life for teachers compared to their years of in-class education ($M$ = 16.39), participation in planning the process of in-class education ($M$ = 15.85), and teachers' concern about the needs of students with disabilities ($M$ = 24.54) are reported on the average. Special education teachers scored highly on the variables of special educators' readiness for in-class teaching ($M$ = 20.05), indicating a high level of readiness (discussed in the discussion section).

**Table 3**

*Means and Standard Deviations of the Questionnaire Variables*

| Variables | Mean | SD | Level |
|---|---|---|---|
| Quality of Education | 22.44 | 6.053 | Average |
| Teachers' Quality of Life | 16.39 | 4.937 | Average |
| Planning the Process of In-class Education | 15.85 | 4.298 | Average |
| The Needs of Students with Disabilities | 24.54 | 6.195 | Average |
| Special Educators' Readiness for In-class Teaching | 20.05 | 3.818 | High |

- *Multiple Linear Regression Results*

Multiple linear regression analysis was used to predict special educators' readiness for in-class teaching based on four independent variables (i.e., quality of education, teachers' quality of life, planning the process of in-class education, and the needs of students with disabilities). The multiple linear regression results include a model summary of the coefficient table of special educators' readiness for in-class teaching (as the dependent variable) with the four independent variables that might affect the readiness level of special education teachers. An alpha level of .05 was used throughout. The readiness of special education teachers and the four independent variables are presented in Table 4.

**Table 4**

*Regression Analysis of Special Educators' Readiness for In-class Teaching (N=107)*

| Model | Unstandardized Coefficients | | Standardized Coefficients Beta | $t$ | sig. |
|---|---|---|---|---|---|
| | B | Std. Error | | | |
| Quality of Education | -.014 | .323 | -.022 | -.183 | .855 |
| Teachers' Quality of Life | -.130 | .094 | -.168 | -1.402 | .165 |
| Planning the Process of In-class Education | .323 | .137 | .364 | 3.440 | .001 |
| Needs of Students with Disabilities | .137 | .065 | .222 | 2.095 | .039 |

Adjusted R Square = .135

The multiple regression analysis was conducted to predict special education teachers' readiness for in-class teaching in Saudi Arabia post-COVID-19 using the subscale Readiness of special education teachers and four independent variables (i.e., quality of

education, teachers' quality of life, planning the process of in-class education, and the needs of students with disabilities). Only two of the IVs in the model, planning the process of in-class education ($p < .001$) and the needs of students with disabilities ($p < .039$), were statistically significant predictors of special educators' readiness for in-class teaching. These two variables accounted for more than 2.8 of the variances in readiness, which indicates that planning the process of in-class education increased the prediction of special educators' readiness for in-class teaching score by .323 points and the needs of students with disabilities by .137.

In these two variables, the planning of in-class education was the strongest predictor, at .364, and the needs of students with disabilities were the second strongest predictor, at .222. The adjusted $R^2$ was .135, meaning the model explained 13.5% of why some teachers had higher readiness scores for in-class teaching. Table 4 summarizes the model.

## Discussion

Studying the level of readiness for in-class teaching post-COVID-19 among special education teachers is an important aspect for providing an effective transition for students with disabilities. As mentioned, this would help teachers select the appropriate method of returning to normal teaching and learning, which is essential in teaching students with special needs, as some tend to have transition issues and difficulties.

As discussed in the introduction, some studies have reported that teaching online is associated with some disadvantages among students with special needs due to the increase of students' needs and teachers' workloads. As discussed, some of their needs require a high level of support from resource rooms, assistive technology, and other supports through speech-language therapy and behavior therapy. However, there is a gap in the literature on planning effectively to return to school and the transition for students with special needs. Therefore, this study investigated this element in one place (Saudi Arabia) concerning different independent variables (i.e., quality of education, teachers' quality of life, planning the process of in-class education, and the needs of students with disabilities) to assess in-service special education teachers' levels of readiness of. This study presented different analysis methods to give a more in-depth explanation of the subject of this research.

Table 3 presents the means, standard deviations, and ranks of teachers' responses on the questionnaire sections; however, all variables are reported on average, except teachers' readiness for in-class teaching, which was high. This may be due to the efforts made by the Saudi Arabian government to limit the consequences of the pandemic by taking early measures to control this disease, which made teachers feel that their students' health was safe and under the observation of the health administration in the country; thus, they felt ready for in-class teaching.

The World Health Organization provided nine pillars of public health preparedness and response, which were well adapted by the Saudi Arabian government and helped limit the spread and effect of the disease (Maghdid et al., 2021). Those pillars can be observable through the suspension of all schools and social events, establishing a system of screening the population, restrictions of public events requiring interaction with others locally or nationally, and immunization programs. It should be noted that the data collection for this study was launched before the Ministry of Education's announcement on their plan to

return to in-class education (mentioned in the section on the problem of the study), indicating no threat effect on teachers' responses.

This study found that planning the transition process from online teaching to in-class attendance statistically and significantly predicted the level of readiness for in-class teaching. This may mean that the more teachers of students with disabilities participate in the transition process, the more likely they are to implement such a change for two proposed interpretations. First, they may feel unready for in-class teaching, as they were not included in the translation process. LePine and Van Dyne (1998) reported that when individuals withdraw from their work roles when they do not perceive positive feedback or when they feel they were disengaged, they are more likely to personally disengage, which would result in less responsiveness to situational factors. Previous studies highlighted the importance of participation in planning and decision-making in schools and educational institutions to have effective teaching environments (Aljaber, 2018; Çetin, 2013; Maghdid et al., 2021; Moessenlechner et al., 2015). Thus, to have a smooth transition to in-class teaching and prepare special educators for this period, teachers' voices should be heard, and their participation in the transition planning and the process should be encouraged.

The second possible interpretation is that as long as teachers have less participated in the planning of the transition process, they are less prepared for it. Previous studies indicated gaps in knowledge and involvement in transition planning and service delivery in the special education sector (Benitez et al., 2009; Knott & Asselin, 1999), which is seen to be key to the success of special education services (Benitez et al., 2009). One of the main professional roles and competencies of special educators is to be included in the transition of any period to another, including from one class to another class and from learning online at home to attending in-class learning at school. Special educators' role in transition planning and service delivery is an emerging emphasis in special education, and further studies are needed, especially the post-COVID-19 pandemic, which may negatively impact some students with special needs, as discussed in the introduction.

Another notable outcome from the multiple regression analysis is that the scores of the needs of students with disabilities were statistically and significantly predictors of special educators' levels of readiness for in-class teaching. It can be assumed that as teachers feel the needs of the students are higher, they may believe in-class teaching can help them reduce or work directly with those needs. Kuhfeld et al. (2020) found that the schools' closings had significant negative effects, limiting families and students with disabilities from accessing services such as technology, the internet, food, and childcare services. Therefore, teachers may think they could be limited by needs or recently identified negative effects of school closures by going back to what they used to do: in-class learning.

Furthermore, Ahn and McEachin (2017); Çetin (2013) reported that students with disabilities who attended e-learning platforms did not perform as well in assessments as students who attended traditional in-class learning. Similarly, Niemi and Kousa (2020) mentioned that teachers were worried about students' progress as they had heavy workloads and some motivation problems using online platform learning. Thus, this study finding aligns with some previous studies because students with disabilities need more support in schools based on students' needs that may not be met online.

Cheng and Lam (2021) found that teachers' relationships with their students were key in remaining in teaching and understanding their needs. This is indicated in the outcomes of this study, as teachers believed there was a need for planning the process of in-class learning, which can be supported in class. These teachers believed students with disabilities need more services in schools, such as speech and behavior therapy and other support services. Most of the special educators in the research sample were teaching four to nine students, which required them to spend more time planning and preparing and implementing an individualized education program for each student; thus, they felt they were ready for in-class teaching to fulfill those needs.

## Conclusion, Limitations and Implications

This study aimed to determine the levels of special educators' readiness to return to in-class education to draw a map to return effectively and efficiently. A self-report questionnaire was used to uncover five main aspects, which included the quality of education during the pandemic, the quality of life for teachers compared to their years of in-class education, participation in planning the process of in-class education, teachers' concern about the needs of students with disabilities, and teachers' readiness for in-class education. Multiple linear regression analysis was used to predict the readiness of in-service special education teachers with the four independent variables that might influence the readiness level of special education teachers. Those variables were found to be average, except for teachers' readiness for in-class education, which was high, indicating a high level of readiness. The results showed that teachers who participated in the planning of in-class education and teachers who felt the needs of students with disabilities had higher scores in special educators' readiness for in-class education. Overall, this study concludes that special education teachers who participated in this study were ready for post-COVID-19 in-class teaching.

This study has three main limitations. The first limitation is the small number of female participants working in some regions, such as the northern, southern, or eastern Saudi Arabia; however, this could not be controlled as this study used a convenience sampling technique. Another limitation of this study is its limited generalizability, as its findings may not be generalized to all groups due to the sample section; also, other variables were not controlled. Further research is needed once post-COVID-19 in-class education is launched in the KSA. Further research is needed to understand special educators' perspectives and needs and provide best practices in special education classrooms. Furthermore, future research may use an experimental study design with a wider range of sampling to provide an advanced understanding of the impact of online vs. in-class teaching on teachers and studies with special needs. The third limitation is that we used self-reported questionnaires where responses were subject to biases, and participants' may have provided responses that seem to be more socially acceptable rather than accurate.

The outcomes of this study can be applied to practice in two ways. First, teachers working with students with higher special needs should provide advanced supporting planning to uncover educational loss and satisfy teachers' concerns about the impact of previous periods on student's learning where they use online platforms for learning. The second practice application includes more teachers in the planning process as teachers who participated in the planning process for in-class teaching post-COVID-19 seemed to be more ready for in-class teaching. Educational responses to post-COVID-19 may include a

stronger focus on vulnerable student groups, unlocked funds to support students with disabilities, facilitated cooperation between educational authorities and other stakeholders, and closer attention paid to the well-being of special educators and their students to provide efficient learning (Slavin & Storey, 2020). Teachers, schools, and educational institutions need to design and implement recovery strategies that help students learn in safe and convenient environments regardless of their needs or classifications. Although this may be challenging due to some existing educational gaps and budget issues, it can have positive outcomes in the end.

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