الجامعة الإسلامية بالمدينة المنورة
ISLAMIC UNIVERSITY OF MADINAH

مجلة الجامعة الإسلامية

للعلوم التربوية والاجتماعية

مجلة علمية دورية محكمة

تصدر أربع مرات في العام خلال الأشهر:

(مارس، يونيو، سبتمبر، ديسمبر)

العدد 21 - المجلد 40

رمضان 1446 هـ - مارس 2025 م

معلومات الإيداع في مكتبة الملك فهد الوطنية

النسخة الورقية :

رقم الإيداع: 1441/7131

تاريخ الإيداع: 1441/06/18

رقم ردمـــد : 1658-8509

النسخة الإلكترونية :

رقم الإيداع: 1441/7129

تاريخ الإيداع: 1441/06/18

رقم ردمـــد : 1658-8495

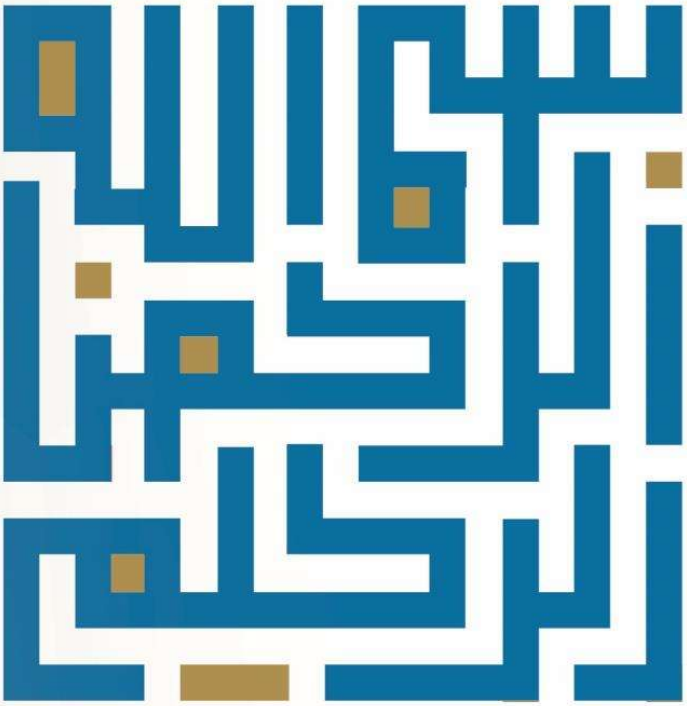
الموقع الإلكتروني للمجلة :

https://journals.iu.edu.sa/ESS

البريد الإلكتروني للمجلة :

ترسل البحوث باسم رئيس تحرير المجلة

iujourna14@iu.edu.sa



قواعد وضوابط النشر في المجلة

- أن يتسم البحث بالأصالة والجدية والابتكار والإضافة المعرفية في التخصص.
- لم يسبق للباحث نشر بحثه.
- أن لا يكون مستلاً من أطروحة الدكتوراه أو الماجستير سواء بنظام الرسالة أو المشروع البحثي أو المقررات.
- أن يلتزم الباحث بالأمانة العلمية.
- أن تراعى فيه منهجية البحث العلمي وقواعده.
- أن لا تتجاوز نسبة الاقتباس في البحوث التربوية (25%)، وفي غيرها من التخصصات الاجتماعية لا تتجاوز (40%).
- أن لا يتجاوز مجموع كلمات البحث (12000) كلمة بما في ذلك الملخصين العربي والإنجليزي وقائمة المراجع.
- لا يحق للباحث إعادة نشر بحثه المقبول للنشر في المجلة إلا بعد إذن كتابي من رئيس هيئة تحرير المجلة.
- أسلوب التوثيق المعتمد في المجلة هو نظام جمعية علم النفس الأمريكية (APA) الإصدار السابع، وفي الدراسات التاريخية نظام شيكاغو.
- أن يشتمل البحث على : صفحة عنوان البحث، ومستخلص باللغتين العربية والإنجليزية، ومقدمة، وصلب البحث، وخاتمة تتضمن النتائج والتوصيات، وثبت المصادر والمراجع، والملاحق اللازمة مثل: أدوات البحث، والموافقات للتطبيق على العينات وغيرها؛ إن وجدت.
- أن يلتزم الباحث بترجمة المصادر العربية إلى اللغة الإنجليزية.
- يرسل الباحث بحثه إلى المجلة إلكترونيًا ، بصيغة (WORD) وبصيغة (PDF) ويرفق تعهدًا خطيًا بأن البحث لم يسبق نشره ، وأنه غير مقدم للنشر، ولن يقدم للنشر في جهة أخرى حتى تنتهي إجراءات تحكيمه في المجلة.
- المجلة لا تفرض رسوما للنشر.

الهيئة الاستشارية :

الجامعة الإسلامية بالمدينة المنورة

ISLAMIC UNIVERSITY OF MADINAH

Teachers' Motivation and Willingness for Distance Education: Concurrent Transformative Design Through Self-Determination Theory Perspective

دوافع المعلمين واستعدادهم للتعليم عن بعد: التصميم التحويلي المتزامن من منظور نظرية تقرير المصير

إعداد

د. سحر سالم الغانمي

أستاذ تقنيات التعليم المساعد

قسم تقنيات التعليم – كلية التربية – جامعة طيبة

Dr. Sahar S Alghanmi

Assistant Professor of Educational Technology

Department of Educational Technology - Faculty of Education - Taibah University

Email: sghanmi@taibahu.edu.sa

DOI:10.36046/2162-000-021-018

تاريخ التقديم: ٢٠٢٤/٨/٢٩ م تاريخ القبول: ٢٠٢٤/٩/٢٥ م

Abstract

This study employs Self-Determination Theory (SDT) and Structural Equation Modelling (SEM) to investigate the relationship between teachers' motivation and willingness to engage in distance education, while also examining the impact of demographic factors. Adopting a mixed methods research design, namely a Concurrent Transformative Design, data was collected through questionnaires administered to 470 teachers in Al-Madinah region, including interviews with eight educators. The findings reveal key factors that either enhance or impede teachers' perceptions of autonomy, competence, and relatedness. Intrinsic motivation emerges as a significant predictor of teachers' acceptance of distance education, while demographic variables exhibit negligible influence. These insights shed light on the elements shaping teachers' motivation and readiness for distance education, offering implications for educational policies and practices.

Keywords: Intrinsic Motivation, Extrinsic Motivation, Willingness, Teaching, Online

المستخلص

تستند هذه الدراسة على نظرية تقرير المصير (SDT) ونمذجة المعادلة الهيكلية (SEM) لاستكشاف الروابط المعقدة التي تربط دوافع المعلمين برغبتهم في الانخراط في التعليم عن بُعد، مسلطة الضوء على التأثيرات المتعددة للعوامل الديموغرافية. من خلال اتباع منهجية بحث مختلطة، معروفة بالتجربة التحويلية المتزامنة، جُمِعَت المعلومات عبر استبيانات شملت ٤٧٠ معلمًا في منطقة المدينة المنورة، إلى جانب إجراء مقابلات مع ثمانية معلمين. تكشف النتائج عن دوافع داخلية قد تعزز أو تعيق ميول المعلمين، وخاصة الشعور بالاستقلالية والكفاءة ودرجة الارتباط في بيئة التعليم عن بُعد. أن الدافع الداخلي يُعتبر عنصرًا حاسمًا يؤثر بشكل عميق على تقبل المعلمين لفكرة التعلم عن بُعد واستعدادهم للاستمرار في التدريس بهذه الطريقة. تلي ذلك تأثيرات العوامل الخارجية، بينما تظل التأثيرات الديموغرافية في حالة من الحيادية. تبرز هذه النتائج العناصر الأساسية التي تشكل دوافع المعلمين واستعدادهم للتعليم عن بُعد، مما يُعكس بوضوح على السياسات والممارسات التربوية.

الكلمات المفتاحية: الدافعية الداخلية، الدافعية الخارجية، الرغبة، التعليم عن بعد.

Introduction

The COVID-19 pandemic has led to a global shift towards distance education, presenting both challenges and opportunities. Despite research on distance education during the pandemic, there is limited literature on the factors driving teachers' willingness to continue with distance education post-COVID-19. Particularly within Saudi Arabian context, there is a scarcity of studies focusing on teachers' motivation in distance education in the post-pandemic era. As countries transition back to normalcy, it is crucial to explore motivators behind teachers' sustained adoption of distance education beyond COVID-19.

During the COVID-19 pandemic, distance education emerged as a crisis-management solution, impacting over 1.6 billion students globally (Nahid et al., 2023). This shift presented challenges for both students and teachers, requiring rapid adaptation of teaching strategies, design of engaging online lessons, and exploration of novel methods for assessing distance education (Gronchi, 2022; Panisoara et al., 2020).

Numerous studies have investigated influence of attitudinal and motivational factors on long-term intentions towards technology-supported instruction in education (Panisoara et al., 2020). However, research on the relationship between distance education, willingness and motivation is limited (DiVito, 2021). Relating to general education schooling, which is less prepared for distance education compared to higher education, it is important to understand motivation and willingness of teachers (Anderson & Hira, 2020). Previous studies often neglect relevant motivational theories, despite their effectiveness in complex online learning environments (Chaya, 2022). SDT stands out as a comprehensive and empirically supported theory that emphasizes the need to include teacher motivation towards technology usage in future studies (Chiu, 2022). Furthermore, a scarcity of studies examined distance education from SDT perspective in diverse cultural contexts (Salikhova et al., 2020).

Distance education, online learning, and emergency remote education have revolutionized sharing and acquisition of information. These methods offer adaptability, accessibility, and opportunities for educational innovation, enabling individuals to acquire knowledge and skills without being physically present (Gallagher & McCormick, 1999). Online learning, a type of distance education, uses internet and digital tools to deliver educational content (Hartnett et al., 2011). It offers flexible and adaptable learning through multimedia materials, forums, tests, video

lectures, and interactive resources. Students can access course materials at their own pace, accommodating diverse learning preferences. Online education enables lifelong learning and education while maintaining current employment.

Disasters, pandemics, or emergencies that disrupt traditional educational settings, emergency distance education is a rapid adaptation of online learning where organizations transition from in-person to online formats (Khlaif et al., 2021). Although emergency distance education may lack educational depth and involvement of well-designed online courses, it primary goal is ensuring continuity of education in challenging circumstances (Schultz & DeMers, 2020). This approach encompasses both synchronous and asynchronous learning experiences, allowing students to access course materials and connect with teachers. In this study, the term "distance education" is used to encompass essence of emergency distance education in post-COVID-19 era.

Education has undergone significant changes in the post-COVID-19 era, incorporating lessons learned during the pandemic. Student preparations for a rapidly evolving world, requires more resilience, flexibility, equity, and lifelong learning than ever. Therefore, methods as blended learning has progressed with enhanced technological infrastructure. By leveraging opportunities arising from the crisis, education will become more resilient and robust in addressing future challenges (Ma et al., 2023; Shin et al., 2023).

Research problem

The emergence of the COVID-19 pandemic has significantly impacted teachers' emotional and motivational factors, influencing their decision to adopt online instruction (Alasmari, 2022; Altwaim et al., 2023). Although existing research has explored variables such as technology readiness, self-efficacy, and the support provided by colleagues and administrators, these studies primarily focused on the immediate effects of the pandemic, neglecting potential shifts in teachers' long-term attitudes and motivations. Moreover, research addressing public school teachers' perspectives on e-learning within Saudi Arabia remains limited, leading to a gap in understanding the role of e-learning in mainstream K-12 education (Alwahoub et al., 2020). Therefore, further investigation is essential to examine the evolving willingness and motivation of teachers to engage in distance education.

Research questions

This study seeks to understand teacher motivations for distance education and propose strategies to help them acquire necessary skills and confidence for effective distance education.

RQ1: What factors determine teachers' intrinsic motivation in delivering distance education mode?

RQ2: What factors determine teachers' extrinsic motivation in delivering distance education?

RQ3: What factors determine teachers' willingness to deliver distance education?

RQ4: How do demographic variables influence teachers' motivation and willingness to deliver distance education?

Objective of the study

The primary objective of this study is to conduct a comprehensive examination of multifaceted motivational factors influencing teachers' motivation and willingness in distance education, within post-COVID-19. Thus, this study aims to:

1. Identify intrinsic motivational factors that drive teachers to adopt and sustain their involvement in distance education, including personal beliefs, attitudes, and inherent satisfaction.
2. Examine extrinsic motivational factors shaping teachers' online teaching motivation, like external rewards, institutional support, professional development opportunities, and other environmental influences.
3. Provide a comprehensive assessment of teachers' overall willingness and motivation to engage in distance education, considering interplay between intrinsic and extrinsic motivational drivers.
4. Investigate the potential influence of demographic variables, including age, gender, teaching experience, and educational background, on teachers' motivation and willingness to teach online.
5. Propose evidence-based strategies to support teachers in acquiring necessary skills, knowledge, and confidence for effective online instruction, focusing on enhancing both intrinsic and extrinsic motivation.

Importance of the study

This study holds critical importance as it seeks to deepen the understanding of the intricate relationship between teacher motivation and engagement in distance education, particularly within the context of Saudi Arabian pedagogy. In remote learning environments, educators must adhere to the principles of effective instruction, with motivation serving as a key psychological mechanism influencing their behaviours (Khashaba et al., 2022). Whether driven by intrinsic factors, such as personal satisfaction and passion for teaching, or extrinsic factors, such as external rewards and recognition, teachers' motivation directly impacts their willingness to engage and perform effectively in online instruction.

By examining both the cognitive and affective aspects of motivation, this study aims to uncover how these elements either enhance or hinder the effectiveness of teachers in distance education. Elucidating the complex interplay between intrinsic and extrinsic motivations, alongside the emotional and cognitive states of educators, will provide crucial insights into how motivation shapes their behaviours and commitment to online teaching.

The findings of this research will contribute to the development of targeted policies and practices that support teachers during their transition to distance education, ensuring their well-being and enhancing their professional efficacy. Ultimately, this study will provide evidence-based recommendations for fostering a more effective and sustainable distance education framework within the Saudi Arabian K-12 educational landscape.

Limitations

Geographical Scope: The research was conducted in Al-Madinah region of Saudi Arabia, focusing on public school teachers. Consequently, the findings are contextually bound and may not reflect experiences in other parts of Saudi Arabia or internationally.

Population Scope: Participants comprised 470 K-12 public school teachers who completed a quantitative survey, and 8 who participated in qualitative interviews. As such, the results are limited to this specific.

Temporal Scope: Data was collected during post-COVID-19 era, capturing teachers' motivations and attitudes at that time. The findings do not account for potential shifts in perceptions as educational landscape evolves or as new technologies and policies are introduced.

Theoretical framework: Self-Determination theory

SDT is a comprehensive macro-level theory of human motivation and well-being that encompasses six sub-theories, explaining the connection between motivation and basic psychological needs (Deci & Ryan, 2013). It is recognized as a theory of human development and wellness with significant implications for education. SDT emphasizes the importance of individuals having self-determination or autonomy, feeling competent, and being connected to others in their environment (Ryan & Deci, 2000).

SDT distinguishes between different types and subtypes of motivation and self-regulation, and research based on this theory highlights the impact of these distinctions on success, perseverance, and feelings of accomplishment (Sommet & Elliot, 2017). According to SDT, individuals have three fundamental psychological needs: autonomy, competence, and relatedness. When these needs are fulfilled, individuals experience better motivation and well-being. The fulfilment of these needs also promotes individuals' self-determination in various tasks (Deci et al., 1985).

The core distinction in SDT is between intrinsic motivation (derived from enjoyment of an activity) and extrinsic motivation (completion of a task for an external reward). It is important to note that these two types of motivation can influence each other, with extrinsic incentives potentially undermining intrinsic motivation (Deci & Deci, 1975). Extrinsic motivation, also known as managed motivation, is influenced by external rewards and can have a negative impact on intrinsic motivation (Chen et al., 2010).

Literature review in the light of Self-Determination theory

The study incorporates motivational issues and jobs arising from COVID-19. SDT is a multidimensional framework explores complex interactions between cognitive and emotional learning environments. It recognizes diverse forms of motivation driven by various reasons or objectives. This research aims to investigate motivation from a multidimensional perspective, distinguishing between intrinsic and extrinsic motivations. Thus, literature is being reviewed according to SDT.

The influence of autonomy, competence, and relatedness on teachers' distance education practices.

Intrinsic motivation (IM) is essential for enhancing individuals' experiences and satisfaction (Ryan & Deci, 2017). SDT provides a framework for examining how basic

psychological needs affect behaviour in distance education (Sun et al., 2019). Teachers' interpretation of their intrinsic motivation impacts their distance education practices and level of engagement (Jansen in de Wal et al., 2020; Wang et al., 2021). Therefore, it focuses on autonomy, competence, and relatedness in relation to teachers' distance education practices (Wang et al., 2021).

Autonomy is fundamental according to SDT, encompassing individuals' self-awareness and their need for self-organization and behaviour regulation. In distance education, autonomy refers to teachers' recognition of their agency and controlling their actions. By granting teachers freedom to design their curriculum, choose instructional methods, and utilize technology, they experience a sense of ownership and empowerment. This fosters motivation and job satisfaction (Garn et al., 2019).

Competence reflects individuals' desire to demonstrate proficiency and enhance their skills for effective interaction (Garn et al., 2019). Educators' confidence in their learning process drives their creativity and promotes superior outcomes in distance instruction. Competencies and convictions held by teachers partaking in defining and enhancing success of technology-mediated instructions (Paliwal & Singh, 2021).

Relatedness emphasizes need for social connections and meaningful interactions in learning environments (Garn et al., 2019). Establishing connections with students and fostering a sense of community among teachers through online communication tools is crucial. Engagement in professional learning communities also enhances motivation and well-being, allowing instructors to share experiences, exchange ideas, and receive emotional support (Hesse-Gawęda, 2018). Recognizing relatedness as a fundamental aspect of human nature highlights the importance of social connections in learning. By utilizing online tools and engaging in professional networks, educators can foster community, collaboration, and motivation in distance education.

Distance Education and Extrinsic Motivation

Both intrinsic and extrinsic motivation are important factors in distance education (Ryan & Deci, 2000). Extrinsic motivation is explained by SDT as the external driving force behind an individual's activity (Van den Broeck et al., 2021). Motivation is crucial for individuals, societies, groups, and institutions to achieve success, leading to enhanced efficiency and performance. External factors including workload, organizational support, technical support, and system quality impact the level of external regulation.

As teachers face techno-stress from adapting to educational technologies (Panisoara et al., 2020). Excessive workload leads to time constraints and pressure for task completion, diminishing satisfaction and fulfilments in the learning process (Robinson et al., 2023).

Organizational support plays a critical role in shaping motivation towards distance education. It impacts individuals' engagement by providing accessibility to resources, professional development opportunities, supportive policies, rewards systems, and constructive feedback mechanisms (Ulla & Perales, 2021). The importance of organizational support in online teaching during the pandemic cannot be overstated, as it becomes indispensable for teachers to navigate this challenging terrain successfully (Balakrishnan et al., 2022).

Technical support is not just important, but essential, to create an enjoyable and seamless online learning experience. The significance of technological support cannot be overstated, as it not only helps to address any immediate issues or challenges that may arise, but also plays a crucial role in promoting extrinsic motivation towards online education (Nambiar, 2020). By providing timely assistance and fixing any technological glitches, technical support teams contribute to the creation of a supportive environment that empowers both students and teachers. After all, the effectiveness of online education heavily relies on the teacher's ability to effectively utilize available technological tools and platforms. Therefore, investing in robust technical support systems is not an option, but a requirement for educational institutions committed to delivering a top-notch online learning experience. Thus, technical support serves as the backbone of a successful online learning environment. Its role in providing timely assistance, overcoming technological challenges, and fostering a supportive atmosphere is vital for promoting extrinsic motivation and ensuring high-quality education for students. Likewise, prioritizing technical support for teachers is of utmost importance it empowers them to effectively navigate the ever-changing technological landscape and deliver exceptional online instruction education (Akhter, 2020; Casacchia et al., 2021).

The degree to which teachers' extrinsic motivation is shaped critically on the quality of system utilized in distance education. Not Supported of essential features such as dependability, user-friendly interfaces, accessibility, performance, and system support is not just important, but crucial. Only a high-quality system can create a good learning environment (Al-Sharafi et al., 2023). An exceptional system goes beyond mere functionality and becomes an indispensable tool in lowering obstacles,

promoting active involvement, and providing necessary support for students to thrive in their distance education activities. In short, when it comes to extrinsic motivation in online education, the significance of system quality cannot be overstated.

Willingness of continuous use distance education

The continuous use of distance education as an essential cognitive choice in education significantly influences teachers' post-acceptance behaviour. However, it is concerning that the literature on behavioural intention to use virtual technologies predominantly focuses on positive aspects like perceived happiness, motivation, e-learning efficacy, engagement, and learning outcomes, while conveniently disregarding negative emotions namely tiredness and techno-stress (Panisoara et al., 2020). This glaring oversight highlights the need for a critical examination of challenges that hinder sustained implementation of online learning. Instructors and educational organizations must confront these obstacles head-on to not only survive in an intensely competitive educational landscape, especially considering ongoing global health crisis.

Control variables, motivation, and willingness to continuous use of distance education

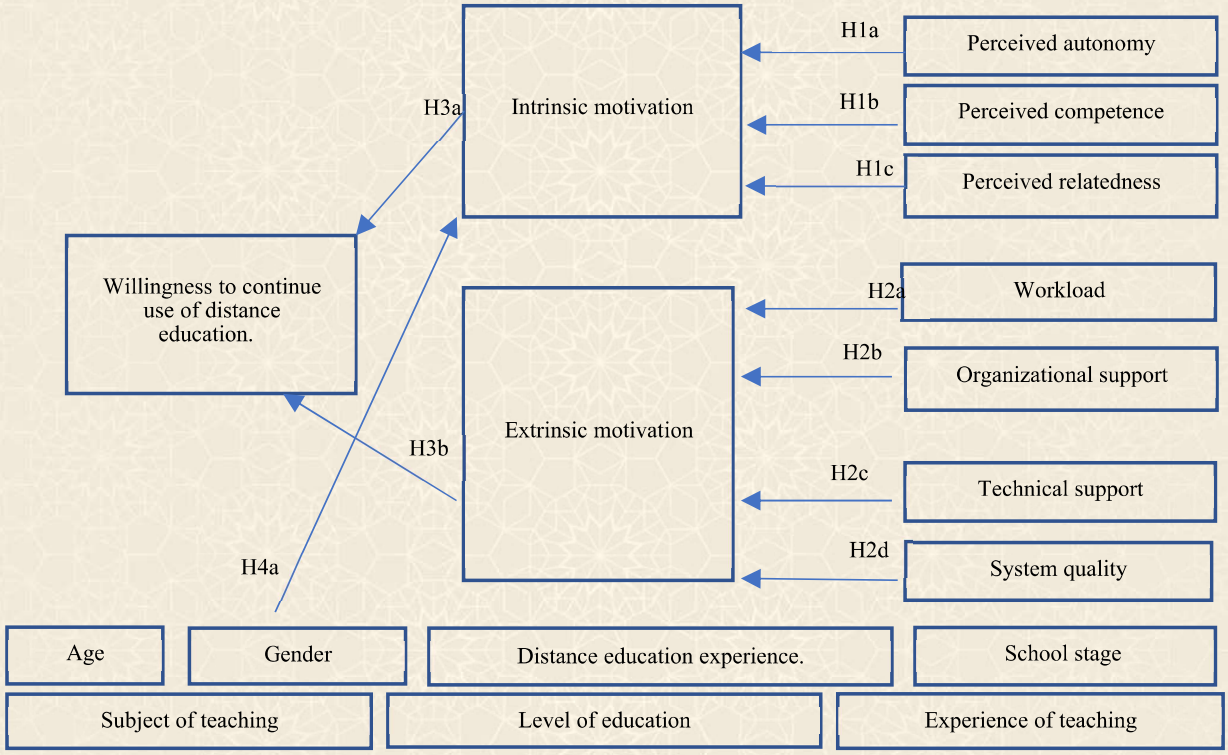
Research indicates that demographic factors have a substantial influence on teachers' motivation and inclination to engage in distance education. Crucial demographic variables in this context include age, gender, teaching experience, and educational degrees. Findings suggest that age significantly impacts teachers' desire and willingness to teach distance education, with older teachers exhibiting lower levels of motivation and engagement (Oliveira et al., 2021). Additionally, gender has emerged as a pertinent factor, with studies indicating that female teachers are more inclined and motivated compared to their male counterparts to partake in distance education (Van der Spoel et al., 2020). Furthermore, teachers with limited experience in distance education tend to lack confidence in their ability to effectively utilize cutting-edge technologies in their teaching practices (Pressley, 2021). Moreover, educational qualifications play a pivotal role, as higher-level teachers are more likely to possess motivation and willingness to engage in distance education. This could be attributed to their greater familiarity and comfort with new technologies, making them more receptive to innovative teaching methodologies. Consequently, it is evident that demographic factors exert a significant impact on teachers' motivation and willingness to embrace distance education.

Research model and hypotheses

The research model and hypotheses were grounded in SDT and supported by previous research to guide quality data collection, analysis, and examination of relationships between variables.

Figure 1

Research Model and hypotheses



- H1a: Teachers' perceived autonomy positively impacts their intrinsic motivation in distance education.
- H1b: Teachers' perceived competence significantly affects their intrinsic motivation in distance education.
- H1c: Teachers' perceived relatedness positively impacts their intrinsic motivation in distance education.
- H2a: Workload affects extrinsic motivation in distance education.
- H2b: Organizational support significantly influences extrinsic motivation in distance education.

- H2c: Technical support has a positive influence on extrinsic motivation towards distance education.
- H2d: System quality has a positive influence on extrinsic motivation towards distance education.
- H3a: Intrinsic motivation has a positive influence on willingness to Continuous use of distance education.
- H3b: Extrinsic motivation has a positive influence on willingness to Continuous use of distance education.
- H4a: Control variables have a positive influence on Intrinsic motivation towards distance education.
- H4b: Control variables have a positive influence on extrinsic motivation towards distance education.
- H4c: Control variables have a positive influence on willingness to Continue use of distance education.

Methodology

Mixed method research

This study adopts a mixed-methods design, which adheres to pragmatic paradigm and incorporates both qualitative and quantitative methods at various stages of the research process (Creswell & Clark, 2017; Tashakkori & Teddlie, 2008). By employing mixed methodology, researchers can provide comprehensive and nuanced insights into the study's focal issues (Turner et al., 2017). In this regard, quantitative data is initially employed to obtain a broad understanding of the research problem, followed using qualitative data to enhance, expand, and elucidate initial quantitative findings. This approach engenders a heightened level of significance and purpose in the research endeavor. Specifically, a concurrent transformative design is adopted in this study, whereby both quantitative and qualitative data are collected simultaneously (Alavi & Hąbek, 2016).

Concurrent Transformative Design aims to facilitate transformation or modification, encompassing alterations in policy, practices, attitudes, or beliefs in light of the study's outcomes (Almeida, 2018). Adoption of a transformative paradigm is employed to address complexities inherent in research conducted within culturally diverse settings, with the objective of promoting social transformation (Mertens,

2007). Specifically, transformative paradigm elucidates the intricate cultural dynamics underlying teachers' motivation and willingness to engage in distance education. Furthermore, it advocates for a culturally competent approach in conducting and interpreting research pertaining to Teachers' Motivation and Willingness for distance education.

The Concurrent Transformative Design, guided by the utilization of a specific theoretical perspective and concurrent collection of both quantitative and qualitative data (Creswell & Creswell, 2017). Which shapes the study's objectives, research questions, and subsequent methodological choices. Thus, this design is regarded as constructive as it synergistically combines data from multiple sources, aligning them with theory to uncover a profound understanding of the research problem. In this study, SDT serves as the guiding principle informing methodological decisions, enabling a comprehensive examination of Teachers' Motivation and Willingness for distance education.

Instruments of data collection:

Questionnaire

The questionnaire is one of the popular methods among researchers in order to collect data (Dewaele, 2018). Based on research setting and hypotheses, a questionnaire with a five-point Likert scale spanning from strongly disagree (1) to strongly agree (5) was created. To ensure content validity, the initial version of the questionnaire was constructed and refined with help of educational expert panels. It comprised self-developed or previously validated components. All the scales used range from 0 to 5, where 0 means “totally dissatisfied” and 5 means “totally satisfied”. The first part of the questionnaire presented general information about the study a questionnaire with three scales was distributed to 470 Saudi school teachers from kindergarten to upper secondary school, who completed a socio-demographic section, a section on the impact of intrinsic motivation and distance education, a section on the impact of extrinsic motivation, and items on motivation and willingness to continuous use of distance education.

In-depth interview

An in-depth interview is a qualitative research approach in which a long and comprehensive interview is conducted with a person or a small group of participants.

An in-depth interview is conducted to get a thorough understanding of a participant's experiences, beliefs, attitudes, and viewpoints on a specific phenomenon (Berry, 1999). In-depth interviews are frequently used in qualitative research to investigate difficult or sensitive topics that necessitate a more in-depth grasp of participant's experiences and opinions (Mears, 2012). In-depth interviews usually require a skilled interviewer, asking unstructured and open-ended questions and allowing the subject to make thorough responses. The interviewer may also pose follow-up questions or request that subjects elaborate on their responses. Depending on preferences of the participants and researcher.

The interview questions were designed around general themes related to the research problem, themes including the experience of distance education, and motivational, emotional, cultural, pedagogical, and technological factors. Before conducting the designed in-depth interview, it went through careful planning to gather relevant information from participants. First, ensure the interview questions align with the overall research objectives. Second, thoroughly review data from previous questionnaires to identify key themes, patterns, and gaps. Then it was piloted for further improvements which enhanced the final interview design.

Participants

The research sample for this study focused on teachers from Al Madinah region of Saudi Arabia who were engaged in online instruction during the COVID-19 pandemic and expressed voluntary interest in participating. For the quantitative component, a cluster sampling approach is employed. This technique facilitated efficient collection of data from a geographically dispersed population, with a total of 470 participants responding via Microsoft Forms.

For the qualitative phase, purposive sampling strategy is utilized. This selective sampling method aimed to identify participants who could provide rich, relevant information to deepen the understanding of the research topic. Eight teachers were face-to-face interviewed to collect data that would widen the researchers' comprehension of phenomenon under study and inform future inquiries.

Table 1 *Participant demographics*

		Count	%
Gender	Male	163	34.7%
	Female	307	65.3%
Age	25-30	24	5.1%

		Count	%
	30-35	53	11.3%
	35-40	115	24.5%
	40-45	138	29.4%
	45-50	84	17.9%
	+50	56	11.9%
Level of education	Diploma	43	9.1%
	Bachelor	385	81.9%
	Master	35	7.4%
	PhD	7	1.5%
Experience of teaching	0-5	47	10.0%
	5-10	62	13.2%
	10-15	134	28.5%
	15-20	60	12.8%
	20-25	95	20.2%
	+25	72	15.3%
Subject of teaching	Islamic Religion	70	14.9%
	Arabic	82	17.4%
	English	28	6.0%
	Social studies	42	8.9%
	Science	10	2.1%
	Math	124	26.4%
	Computer	26	5.5%
	Arts	17	3.6%
	Physical education	18	3.8%
	Psychology	3	0.6%
	sociology	7	1.5%
	Chemistry	9	1.9%
	Biology	9	1.9%
	Physics	10	2.1%
	Management	10	2.1%
	other	5	1.1%
School stage	K.G	13	2.8%
	Primary	220	46.8%
	Elementary	97	20.6%
	Secondary	140	29.8%
Experience of distance education	Yes	78	16.6%
	No	392	83.4%

Data analysis

Qualitative data: thematic analysis of interview

Thematic analysis is a popular qualitative analysis method of (Xu & Zammit, 2020). It is used to understand the subjective experiences and perspectives of individuals, which involves identifying patterns or themes in data essentially interview transcripts. It is used to identify the meaning and significance of individual experiences, to uncover underlying assumptions or beliefs, and to explore the complexity of social phenomena (Moller et al., 2016). Such method involves several steps, including familiarization with the data, generating initial codes or themes, reviewing and refining themes, defining and naming themes, and interpreting and reporting findings (Dawadi, 2021). This process is iterative and involves constant reflection and refinement of themes as new data is collected and analysed. MAXQDA software is used to manage and analysed the interview data approaching the steps of thematic analysis.

Quantitative statistical analysis

Descriptive statistical methods and some inferential statistical methods are employed in this study to test the scale of the study to obtain results explaining the validity of error in the study's hypotheses.

Analysis and results

Findings of quantitative Phase

Instrument Reliability and Validity

Table 2 - *Results of validity and reliability of all items*

n	Item	Internal consistency factor (correlation coefficient)	Sig
1	Willing1	.882**	Less than 0.01
2	Willing2	.891**	Less than 0.01
3	Willing3	.891**	Less than 0.01
1	PA1	.911**	Less than 0.01
2	PA2	.932**	Less than 0.01
3	PA3	.891**	Less than 0.01
1	PC1	.894**	Less than 0.01

n	Item	Internal consistency factor (correlation coefficient)	Sig
2	PC2	.852**	Less than 0.01
3	PC3	.894**	Less than 0.01
1	PRP1	.889**	Less than 0.01
2	PRP2	.907**	Less than 0.01
3	PRP3	.912**	Less than 0.01
1	WDE1	.838**	Less than 0.01
2	WDE2	.868**	Less than 0.01
3	WDE3	.681**	Less than 0.01
1	OS1	.800**	Less than 0.01
2	OS2	.905**	Less than 0.01
3	OS3	.897**	Less than 0.01
1	CS1	.821**	Less than 0.01
2	CS2	.899**	Less than 0.01
3	CS3	.870**	Less than 0.01
1	TS1	.934**	Less than 0.01
2	TS2	.954**	Less than 0.01
3	TS3	.935**	Less than 0.01
1	SQ1	.839**	Less than 0.01
2	SQ2	.851**	Less than 0.01
3	SQ3	.869**	Less than 0.01
4	SQ4	.832**	Less than 0.01

** Refers to the significance of the correlation coefficient at a significant level of 0.01

The results of the previous table (2) confirmed the validity of all elements that related to willingness to continuous use of distance education as confirmed by the values of correlation transactions and were all significant at 0.01. Moreover, the previous table's results confirmed the validity of most elements related to perceived autonomy, perceived competence, and perceived relatedness as confirmed by the values of correlation transactions which were all significant at 0.01. Furthermore, it is confirmed the validity of all items relating to workload, organizational support, community support, technical support and system quality in distance education as confirmed by the values of correlation transactions and were all significant at 0.01.

Table 3 - *Principal component and Alpha Cronbach Coefficient for measuring stability for study dimensions*

Construct	Item	Internal reliability	Convergent validity		
		Cronbach alpha	Factor loading	Composite reliability	Average variance extracted
Willingness to Continuous use of distance education	Willing1	0.856	0.852	0.996	0.987
	Willing2		0.909		
	Willing3		0.908		
Perceived autonomy	PA1	0.898	0.911	0.992	0.994
	PA2		0.936		
	PA3		0.888		
Perceived competence.	PC1	0.853	0.891	0.989	0.994
	PC2		0.864		
	PC3		0.886		
perceived relatedness people	PRP1	0.886	0.882	0.999	0.989
	PRP2		0.910		
	PRP3		0.916		
Workload in distance education	WDE1	0.717	0.824	0.992	0.985
	WDE2		0.877		
	WDE3		0.687		
Organizational support	OS1	0.836	0.789	0.995	0.979
	OS2		0.911		
	OS3		0.901		
Community support	CS1	0.829	0.810	1.000	0.995
	CS2		0.901		
	CS3		0.879		
Technical support	TS1	0.935	0.935	1.000	0.991
	TS2		0.955		
	TS3		0.932		
System quality	SQ1	0.868	0.836	1.000	0.987
	SQ2		0.863		
	SQ3		0.862		
	SQ4		0.831		

From the previous table (3) for the scale, the coefficient of alpha Cronbach (0.946 = α) means that elements of the scale are highly reliable in measuring what they are designed for. Convergent validity measures the extent to which items of a scale that are theoretically related are correlated. a composite reliability of 0.70 or above and an average variance extracted of more than 0.50 are deemed acceptable. As can be seen from the previous table, all the composite reliability values are above 0.70, The average variance extracted is all above 0.50. Therefore, we can conclude that convergent validity has been established for this study.

Table 4 - *Discriminant validity of constructs*

	SQ	TS	CS	OS	WDE	PRP	PC	PA	Willingness
SQ	0.993								
TS	0.550	0.996							
CS	0.668	0.562	0.998						
OS	0.592	0.590	0.571	0.989					
WDE	0.002	0.066	0.061	-0.050	0.993				
PRP	0.741	0.502	0.638	0.537	0.057	0.994			
PC	0.738	0.464	0.618	0.452	0.028	0.768	0.997		
PA	0.646	0.415	0.542	0.407	-0.021	0.707	0.765	0.997	
Willingness	0.705	0.418	0.548	0.455	-0.027	0.675	0.735	0.671	0.994

In Discriminant validity of constructs Diagonals represent the square root of the average variance extracted while the other entries represent squared correlations. Where the previous table (4) indicates that the items are classified correctly as its factors.

able 5 - *Fit indices*

Fit Measures	Study	Recommended values
df	105	
c2	213.436	
c2 / df	2.03	≤ 3.00
GFI	.949	≥ 0.90
AGFI	.918	≥ 0.80
CFI	.946	≥ 0.90
RMSEA	.047	≤ 0.08
NNFI (TLI)	.921	≥ 0.90

The fit statistics are presented in the next table. All the fit measures from this study are above the recommended values suggesting a good model fit as table (5) indicates.

Hypotheses testing

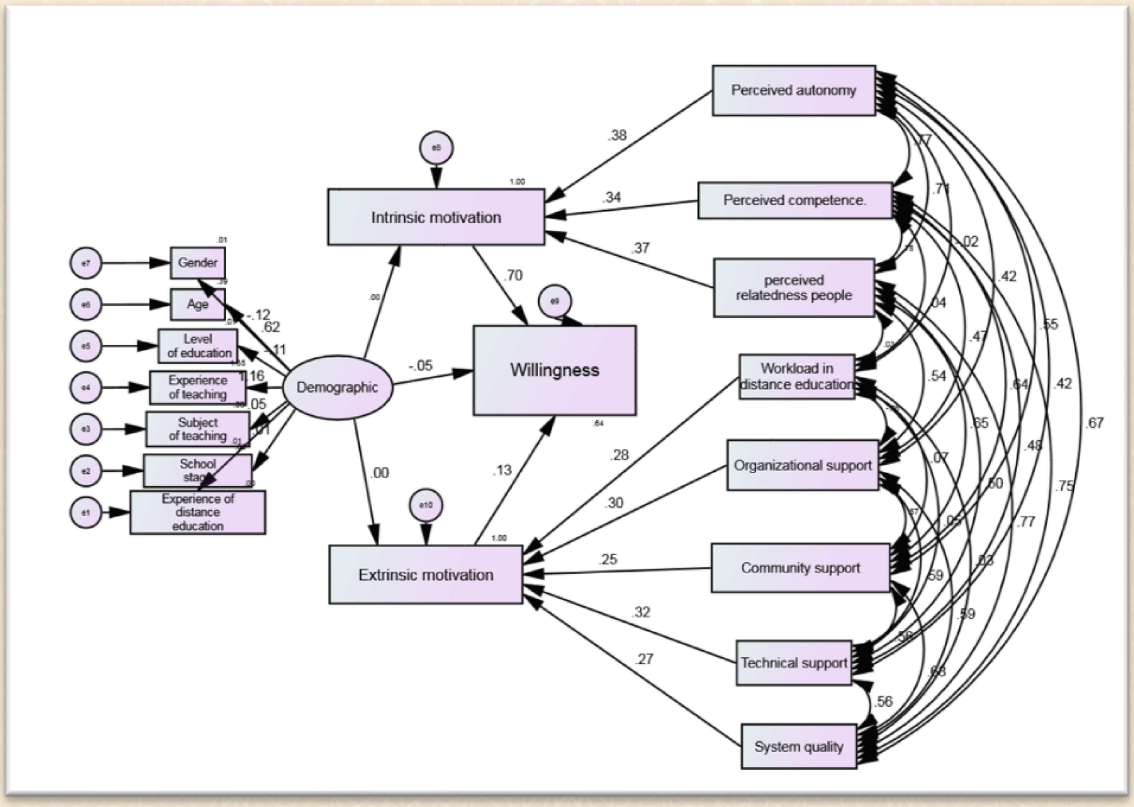
To check the research hypothesis about what determines Saudi teachers' motivation and willingness in teaching distance education. The structural model was estimated using the generalized least square method (GLS). Table 6 and Figure 2 below indicate the path coefficients and p-values for each hypothesis. Regarding hypotheses 1, the p.value of the test less than 0.01 which means that teachers' perceived autonomy, perceived competence, and perceived relatedness have a significant effect on their intrinsic motivation towards distance education with level of confidence 95%. However, perceived autonomy represents the strongest one with Standardized estimate value of (.382). Looking at hypotheses 2, the p.value of the test less than 0.01 which means that workload, organizational support, and community support, technical support, and system quality in distance education has a significant effect on extrinsic motivation towards distance education with level of confidence 95%. Similarly, hypotheses 3, the p.value of the test less than 0.01 which means that Intrinsic motivation and Extrinsic motivation has a positive influence on willingness to continuous use of distance education with level of confidence 95%. However, Intrinsic motivation slightly higher in indicating teachers' willingness. However, the p.value of Hypotheses 4, is greater than 0.05 which means that Control variables (age, gender, experience of distance education, Experience of teaching, Subject of teaching, and Level of education) have a negative influence on willingness to Continuous use of distance education.

Table 6 - *Hypotheses testing*

Hypotheses				Estimate	Standardized estimate	S.E.	C.R.	P	result
H1a	IM	<---	PA	.333	.382	.000	3354.159	< 0.01	Supported
H1b	IM	<---	PC	.333	.340	.000	2628.940	< 0.01	Supported
H1c	IM	<---	PRP	.333	.372	.000	3166.403	< 0.01	Supported
H4b	IM	<---	Demographic	.007	.000	.019	.376	.707	Not-Supported
H4c	EM	<---	Demographic	.000	.000	.007	-.059	.953	Not-Supported
H2a	EM	<---	WDE	.200	.284	.000	4016.412	< 0.01	Supported
H2b	EM	<---	OS	.200	.300	.000	3144.594	< 0.01	Supported

Hypotheses				Estimate	Standardized estimate	S.E.	C.R.	P	result
H2c	EM	<---	CS	.200	.253	.000	2485.488	< 0.01	Supported
H2d	EM	<---	TS	.200	.319	.000	3456.623	< 0.01	Supported
H2e	EM	<---	SQ	.200	.270	.000	2607.375	< 0.01	Supported
	Experience of distance education	<---	Demographic	1.000	.014				
	School stage	<---	Demographic	1.033	.006	8.732	.118	.906	Not-Supported
	Subject of teaching	<---	Demographic	-37.784	-.051	86.112	-.439	.661	Not-Supported
	Experience of teaching	<---	Demographic	379.035	1.164	916.639	.414	.679	Not-Supported
	Level of education	<---	Demographic	-9.209	-.108	20.566	-.448	.654	Not-Supported
	Age	<---	Demographic	170.227	.622	390.061	.436	.663	Not-Supported
	Gender	<---	Demographic	-11.451	-.122	27.088	-.423	.672	Not-Supported
H3a	Willingness	<---	IM	.785	.701	.054	14.589	< 0.01	Supported
H3b	Willingness	<---	EM	.203	.128	.076	2.672	.008	Supported
H4a	Willingness	<---	Demographic	-9.593	-.045	21.781	-.440	.660	Not-Supported

Figure 2 - *generalized least square method (GLS)*



Findings of Qualitative Phase

Teachers' intrinsic motivation: Teachers' construction of their perceived autonomy experience post-covid 19

Teachers' identities evolved during the epidemic as they faced significant challenges. They expressed a sense of control in delivering and managing their online teaching activities. Many embraced new technologies and teaching methods they wouldn't have considered before, becoming more innovative and resourceful. As, T2 quickly adapted their teaching to an online format, mastering new technology and modifying their style for student engagement, as she said: T2 said "I quickly adapted my teaching to an online format, facing a steep learning curve. Soon, I realised I needed to master new technology and modify my teaching style to keep my students engaged". Similarly, T8 added: "In distance education, I occasionally get to teach in

my preferred style, which helps alleviate the annoyance I sometimes feel". T8 mentioned occasionally teaching in their preferred style during distance education, relieving This emerging positive self-image is characterised by commitment, altruistic motivation, and personal and professional growth. Interviews revealed a reform of teachers' agency, as they found ways to maintain autonomy and provide quality education to students during these difficult times.

Teachers' intrinsic motivation: Teachers' construction of their perceived competence experience post-covid 19

Teachers discussed how they found strategies to preserve their competency while teaching online. They have experimented with new educational approaches and technologies, emphasizing the need to create an environment where students can be engaged and focused. Thus, because of online learning, teachers have been compelled to adapt to new technologies and instructional styles, as T5 clearly states: T5: "I overcame the challenge of learning multiple platforms and applications to effectively conduct my online lessons, while also developing new abilities and strategies for future teaching". Similarly, T1 indicated that: "I actively explored web tools, collaborated with teachers, and took online courses. I incorporated interactive elements namely quizzes, discussion boards, and virtual group work to engage and motivate my students". Teachers are clearly driven by the opportunity to learn new skills and methods to online teaching. By using online teaching, they have been able to expand their skill sets, develop new teaching approaches, and experiment with new ways to engage their students, this is evident in the extract of T1.

Teachers' intrinsic motivation: Teachers' construction of their perceived relatedness experience post-covid 19

Teachers deliberated on their professional feelings of connection, involvement, and emotional support. Some teachers spoke about the need for a better feeling of connection and collaboration with their colleagues and students, as well as how technology has enabled new ways of communication and collaboration. This disconnect has also damaged their sense of motivation, with some teachers saying that they are less invested in their profession than they were previously. As T2 expressed difficulty of understanding her students' hidden needs, she said; "I believe I was successful in making distance education work… However, there were some tasks that were more difficult to complete remotely… It was more difficult to form relationships with students and it's been harder to read their emotions and learn about their unique

needs and strengths... It was difficult to provide feedback on written work when you couldn't glance over a student's shoulder and ask questions in real time". This is clearly voiced in T3 extract as he said: "I have been looking for new methods to connect with their colleagues, students, and school community. I've been using online tools including Zoom or Google Meet to engage with colleagues and students virtually. I have also been able to communicate with other educators… to share ideas and materials". Teachers in this study demonstrated a new mentality about the power of technology in making and maintaining connections with others namely teachers, students, and parents etc. By embracing online instruction, they were able to build a sense of belonging and connection even in the middle of a pandemic that offers their students with a feeling of normalcy, structure, and routine.

Teachers' extrinsic motivation: Teachers' Workload experience in online teaching post-covid 19

The interviewed teachers expressed a huge workload increased, as they had to create new materials, adapt existing ones, and constantly monitor and evaluate student progress online. They articulated how the pandemic completely changed the way they teach. Initially, they had to quickly transition to virtual learning, which meant learning new technologies, creating online lesson plans, and finding ways to engage students through a screen. Which added to their workload and therefore causes unstable work-life balance as its obvious in T2 extract. Similarly, T3 conveys similar view stressing the fact that managing technology in a way that makes the online pedagogies work for the students was time consuming but also learning process. T2: "It has been difficult to maintain a healthy work-life balance, especially while transitioning to online teaching for the first time. Over time, I've been able to set more boundaries and find better ways to manage my workload". T3: "It required a lot of effort. When the epidemic hit, I had to swiftly transition to online teaching. Despite the difficulties, I learned a lot about what works well and poorly in this new environment". As interviewed teachers illustrated, that the pandemic brought about a lot of uncertainty, in which teachers had to be flexible with their teaching methods. They had to adjust to sudden school closures, adapt to changing health guidelines, and find ways to keep students safe and engaged. This required a lot of time and effort, which added to their workload.

Teachers' extrinsic motivation: Teachers' construction of their Organizational support experience post-covid 19

The interviewed teachers constructed their organizational support experience by raising a variety of issues including communication, professional development, recognition, and technological support. In terms of communication, T2 states the need for regular checks and continuous assistance by school administration, he also emphasizes the importance of technological support. T2: "schools should acknowledge the added effort that online instruction may bring about and to offer tools and assistance to help handle it. This can entail chances for professional growth, instruction in technology, and access to tools and resources that can speed up the procedure". Moreover, T4 demonstrates the significance of providing a gaudiness set to manage the way in which distance education is operating. T6, however, add to the value of recognition and acknowledgement in maintaining teachers' motivation in distance education. As the following extracts explain: T4: "Since we had no gaudiness set at the outset, we had no idea what to say to students or even their parents. Create tough legislation emphasizing the value of enrolling students and educating parents on5need for legal action against careless students". Agreeing with this T6 voiced that: "The motivation of teachers depends on just that acknowledgment. It fosters a helpful and encouraging work atmosphere by demonstrating to them the worth and appreciation of their efforts". It is obvious that the experience of Saudi teachers in constructing organizational support has been vital to their motivation in online teaching. The way in which they articulate how communication, professional development, recognition, and technological support played a significant role for them to navigate challenges associated with online teaching effectively.

Teachers' extrinsic motivation: Teachers' construction of technical support in online teaching experience post-covid 19

Online teaching has increased need for technical support. Prior to the pandemic, some teachers may have only used technology for basic tasks including creating lesson plans or grading assignments. However, with the shift to online teaching, teachers have had to become proficient in using various digital tools and platforms for delivering lessons, conducting assessments, and communicating with students and parents. This has created a greater need for technical support. This is clearly articulated in T4 extract, emphasizes the need for technical support, as he said: T4: "I believe it is critical for schools and districts to recognize that online teaching necessitates a different set of skills and support than traditional teaching. A dedicated

IT support team or help desk, for example, would be ideal". Another teacher added T5: "It's just not realistic to expect every teacher to be an expert in all kinds of technologies and platforms. Having someone who can help troubleshoot problems would be valuable". This can prompt frustration for both teachers and students, as technical issues can disrupt the learning process and impact student engagement. As T5 expresses in the above-mentioned extract, many teachers have found themselves in need of technical support to effectively navigate online teaching. Thus, to adapt to online teaching, teachers need to be able to use a range of digital tools and software, like video conferencing software, learning management systems, and content creation tools. This requires technical expertise and support, which may not always be readily available.

Teachers' extrinsic motivation: Teachers' construction of online system quality experience post-covid 19

The construction of online system quality experience by teachers post-COVID-19, reveals several factors mentioned by interviewed teachers. First, teachers voiced issues regarding the alignment between curriculum and instruction in distance education, they need to adapt their instructional methods and teaching strategies to such a new environment. Which means designing online courses that are engaging, interactive, and promote active learning. Thus, the system should also use a variety of multimedia tools to support student learning and provide timely feedback to students. As T6 articulates, T6: "online assessment and evaluation methods must be valid, reliable, and appropriate for the online learning... providing clear instructions on how students will be evaluated and provide feedback to students on their performance".

The second issue raised by T1 added the value of accessibility when considering system quality, which enables the reach points from different devices and systems that users can rely on. T1: "The online system should be easily accessible to all students, regardless of their location or technical abilities". This may involve providing multiple access points, such as through a website or mobile app, and ensuring that the system is compatible with a range of devices and operating systems.

The third concern raised by T4 emphasizes the importance of actively involving students in online learning. The system should offer opportunities for interaction and collaboration, essentially through discussion forums and group projects. Additionally, it should enable monitoring of student participation and regular feedback to support student progress. T4 said: "By creating a supportive and engaging online learning environment, teachers can help students develop the necessary skills to succeed in an

online learning environment". This may involve incorporating features namely discussion forums, chat rooms, and video conferencing and that is important to take into consideration post-COVID-19.

T5 addressed data security and privacy concerns in online systems with students to safeguard sensitive data and comply with privacy laws. T5: "Protecting students' privacy maintains confidentiality, promotes a safe learning environment, and builds trust among educational stakeholders". These platforms may include multimedia content like movies, presentations, and interactive materials requiring student participation. Thus, raising awareness about digital citizenship is critical factor.

The fifth issue raised by T2, regarding the need for a system that provides personalized learning experiences. Students can access content and resources that are tailored to their individual needs and interests. T2: "When students' experiences are matched to their strengths and challenges, they are more likely to take ownership of their learning and develop a growth attitude". Thus, designing a learning experience that encourage customized learning experiences is more a critical need in online environment.

The final point discussed by T1 emphasized that a user-friendly system reduces entry barriers, enabling users to concentrate on content and learning instead of technical challenges. T1: "When a system is user-friendly, it lowers entry barriers and allows users to focus on content and learning rather than technological difficulties". This enhancement in usability leads to increased efficiency, engagement, and overall satisfaction in online learning.

Overall, Teachers' post-COVID-19 online system experiences emphasize the need for a holistic approach that caters to both teachers and students. They must ensure that their online systems provide accessibility, user-friendliness, interactivity, customization, and effectiveness.

Teachers' willingness to continue the use of online teaching tools post Covid-19

When queried about their post-COVID-19 teaching preferences, interviewed teachers displayed varying levels of interest in continuing online education. While some have embraced this mode of learning, others remain hesitant or prefer traditional classrooms. Quantitative data indicates a preference for distance education. The teachers cited intrinsic and extrinsic factors shaping their views. Adaptability emerged as a crucial factor, with teachers open to new technology and teaching methods more

likely to accept distance education. As T3 explains, the first factor is adaptability; “teachers who are adaptive and open to new technology and instructional approaches are more likely to accept distance education. They are eager to improve their distance education abilities”. T6 supported such view "Online education isn't for everyone. It requires unique abilities and mindset." This highlights the need for teachers to control their thoughts, behaviours, and emotions to effectively adapt to the benefits of online education.

The teachers interviewed highlighted concerns about student participation and interaction in distance education. They emphasized the challenge of maintaining the same level of connection and engagement as in traditional classrooms. T2: "Teachers struggle to engage students through screens, leading to a desire for a return to traditional classrooms". Emotional support and fostering a sense of belonging were seen as crucial, as teachers struggle to engage students through screens. This support reduces stress and creates a positive environment that enhances motivation and engagement.

T1 emphasizes the crucial role of technological proficiency in teachers' willingness to engage in online education. Teachers' desire to participate post-COVID-19 is heavily influenced by their level of technological competence. T1: “Proficiency with digital tools shapes their perception of technology as a valuable teaching tool”. Moreover, teachers' belief in pedagogical effectiveness of distance education is a key intrinsic motivator affecting their readiness to adopt distance education. As noted by T5: “enthusiasm for online teaching is higher among educators who view it as equally effective as traditional in-person instruction in achieving learning outcomes”. Conversely, reluctance or unwillingness to pursue online education may arise if teachers perceive it as less productive or inferior to traditional classroom setting.

When discussing factors influencing teachers' willingness to engage in online education, T6 emphasizes importance of teacher experience and training, noting that those with prior online teaching experience or distance education training are more likely to continue in this mode. T6 advocates for proper training and support to enable successful online instruction. T6: “with correct training and support, teachers can provide successful online instruction novel ways”. Additionally, access to resources including technology and infrastructure is seen as a key extrinsic motivator, as highlighted by T2, who points out that limited access to technology can hinder motivation for distance education. T2: “if we have access to reliable internet

connectivity, suitable hardware equipment, and acceptable software, we are more likely to engage in online teaching". In essence, support and professional development play a crucial role in shaping teachers' motivation towards online education.

Discussion

RQ1: what determines Teachers' intrinsic motivation in teaching distance education post-covid 19?

The study found that teachers demonstrated high in online teaching, consistent with previous research on Saudi teachers' positive attitudes and self-determination in e-learning (Aladsani, 2021; Hoq, 2020). Notably, perceived autonomy had a significant impact on their motivation, while perceived competence played a lesser role. This pattern was also reflected in the interview analysis.

During the COVID-19 pandemic, teachers underwent transformative shifts in self-perception, influenced by factors that include perception, commitment, self-image, job satisfaction, and self-efficacy (Hanna et al., 2019). The transition to hybrid and blended learning led to increased proficiency in distance education and a positive outlook on distance instruction. Professional development and collaboration fostered adaptability and dedication in adjusting teaching strategies for online environments. Research highlights significant changes in teachers' professional modality, self-efficacy, and motivation for online teaching during the pandemic (Mellon, 2022; Sacré et al., 2023). Teachers driven by personal and professional growth tend to embrace online learning more favourably, despite facing emotional exhaustion. Overall, teachers expressed satisfaction with their work, underscoring the profound impact of the pandemic on their teaching approach and self-perception.

The impact of distance education on teachers' motivation is influenced by public relations (PR), affecting their community and social-emotional well-being negatively (Alonso-Díaz et al., 2023; Robinson et al., 2023). Studies show that teachers often feel isolated and disconnected from colleagues and students, leading to heightened stress and fatigue (Larsari et al., 2023). Teachers have adapted by cultivating digital identity to maintain a consistent professional online presence. Understanding the pandemic's disruptions, educators value stability and student support (Alonso-Díaz et al., 2023). Thus, fostering a community and promoting collaboration among teachers can boost motivation through idea exchange, seeking support, and creating a supportive virtual network via shared resources and virtual meetings.

Online teaching sparked creativity and innovation among educators despite initial challenges. While many teachers initially struggled with distance education, they gradually embraced its benefits and enhanced their technological skills (Cao et al., 2021; Mashhadi et al., 2023). This shift was driven by their dedication to enhancing student learning and adapting to new teaching methods. However, additional training and professional development are essential to support teachers in integrating new technologies effectively, as evidenced in prior research on Saudi teachers' TPACK skills (Altwaim et al., 2023).

RQ2: what determines Teachers' extrinsic motivation in teaching distance education?

Teachers' intrinsic motivation for distance education positively correlates with their overall motivation, while extrinsic motivation shows no significant impact. However, the shift to distance education during the pandemic has presented considerable challenges for educators, such as an unstable work-life balance and increased stress levels. Studies point to escalated workload and added professional pressures experienced by teachers in this setting (MacIntyre et al., 2020; Robinson et al., 2023). Therefore, it is essential to understand effects of distance education on teachers' emotional and physical well-being. Teachers have voiced feelings of being overwhelmed by the time-intensive nature of distance education, highlighting challenges with workload, working conditions, and time management, which is in line with prior research. Moreover, educators perceive online learning and teaching to demand more time and effort compared to traditional education.

To navigate online education challenges, teachers depend on organizational support. Despite receiving adequate support, they express dissatisfaction impacting their motivation. Research shows that schools offering tech access, training, fostering communication, and clear policies excel in transitioning to online teaching (Kraft et al., 2020). Supportive conditions are crucial for teachers' success.

Educational institutions have recognized the need to support teachers in adapting to during the COVID-19 pandemic. While providing resources, training, and professional development, these efforts have motivated teachers to enhance their skills. However, teachers also seek professional development focusing on social-emotional learning (SEL) (Palmer et al., 2021). Programs should encompass training in distance education technologies, strategies for engaging students in virtual settings, and mental health support for managing pandemic-related stress. This comprehensive

approach aims to cultivate essential traits namely healthy identities, emotional control, goal attainment, empathy, supportive relationships, and sound decision-making.

In motivating teachers in distance education, rewards and incentives play a crucial role. Balakrishnan et al. (2022) emphasize that offerings essentially pay raises, promotions, and recognition for good performance reinforce value of teaching remotely. Feedback and acknowledgment of teachers' efforts further boost their motivation and sense of competence (Mugyenyi et al., 2023).

Technological support and access to digital resources significantly impact teachers' motivation in distance education. When teachers have necessary tools and support, they're motivated to engage in distance education (Akhter, 2020; Casacchia et al., 2021). Conversely, lack of support leads to frustration and decreased motivation. Teachers require assistance with learning digital tools, troubleshooting technical issues, and ongoing training to enhance their digital teaching skills and focus on delivering quality education (Casacchia et al., 2021).

Online system quality is a crucial factor in the ability of teachers to deliver courses online. Systems must be reliable, handling high volumes of traffic, maintaining stability and consistency, and providing seamless content delivery (Al-Sharafi et al., 2023). User-friendliness and clear instructions are also essential (Chen et al., 2020). Additionally, to support interactivity, student engagement, and collaboration, there must be an array of tools including online assessment, virtual classrooms, and collaboration platforms (Barman & Roy, 2023; Barman, 2022). Data security and privacy should be considered and adhered to (Barman & Roy, 2023). Thus, when evaluating online systems, the perspectives and needs of teachers must be considered.

RQ3: what determines teachers' willingness in teaching distance education?

Post COVID-19, teachers have shifted towards accepting and embracing distance education. Despite initial challenges, educators have demonstrated resilience and adaptability (Wang et al., 2021). Research indicates a preference for intrinsic motivation over external regulation among teachers, influencing their commitment to the profession (Nahid et al., 2023). This intrinsic drive, rooted in personal values and interests, boosts teachers' willingness to utilize online technologies when they feel autonomous, competent, and connected. While extrinsic motivation can drive specific behaviours, its long-term effectiveness pales in comparison to the sustainability of intrinsic motivation. Not all teachers embrace online learning equally. Some struggle

with student relationships and assessment without face-to-face interactions. Managing behaviour and discipline in virtual classrooms presents challenges. Schools must support teachers with ongoing training and resources for distance instructions. distance education offers room for innovation. Embracing new ideas can shape education's future and ensure quality instruction for all. A blended approach, combining traditional and online methods, may offer flexibility, personalization, and enhanced opportunities.

RQ4: What influence demographic variables has in teachers' motivation and willingness in distance education?

The impact of demographic variables on teachers' motivation and willingness to engage in distance education is often overstated, with statistical data challenging this assumption. Contrary to anecdotal evidence, demographic factors show limited contribution to disparities in teachers' readiness for online instruction. For instance, a study by Alea et al. (2020) found no significant correlation between teachers' demographic profiles and their awareness of the COVID-19 pandemic. Factors age, gender, teaching experience, educational background, and technological proficiency exhibit minimal influence on teachers' motivation and readiness for distance education. While teachers' motivation may vary based on demographic characteristics, transformative changes in perspective are not solely determined by these factors (DeCoito & Estaiteyeh, 2022). Recent research by Papazis et al. (2023) suggests that specific demographic and personal traits can impact teachers' attitudes, behaviour, resilience, and stress levels. Acknowledging the intricate interplay of various demographic elements is crucial. To effectively enhance motivation and interest in distance education , initiatives must consider these relationships and tailor professional development techniques to address the needs and challenges of each demographic group (Braje & Topčić, 2023).

Limitation of the study and direction for future research

The study's findings are limited in several ways. First, the geographic scope was confined to Al-Madinah region of Saudi Arabia, which may restrict the generalizability to other regions or countries with different educational systems, cultures, and technological infrastructures. Future research should expand the geographical focus to include teachers from various parts of Saudi Arabia and other countries enabling cross-cultural comparative analyses.

Second, while the quantitative sample of 470 teachers provides robust data, it doesn't fully capture the diversity of perspectives across school types (public vs. private) or educational levels (K-12). The small number of qualitative interviews (eight educators) limits the range of insights represented. Further research should aim to include diverse sample of teachers from various school types and educational levels to provide a more comprehensive understanding of how institutional context influences motivations for distance education.

Third, the reliance on self-reported data through questionnaires introduces potential bias, as participants may have provided socially desirable responses rather than fully accurate reflections of their motivations and experiences, potentially affecting the reliability of data.

Finally, the application of SDT focused on autonomy, competence, and relatedness, but other motivational theories or constructs could have enriched the analysis and provided additional perspectives on teachers' motivations and behaviours.

Addressing these limitations in future research could deepen understanding of teachers' motivations and readiness for distance education, enhancing the study's applicability and scope. Further exploration could involve gathering perspectives from students and stakeholders, furthermore, conducting comparative research with educational experiences from other countries.

Recommendations

To sustain teachers' motivation, well-being, and effectiveness in distance education, the following recommendations are proposed:

1. Fostering teacher autonomy: empower teachers with flexible curricula and instructional design to enhance intrinsic motivation and online engagement.
2. Professional development for distance education: provide training in technological tools and blended learning to develop TPACK and effective technology integration.
3. Collaborative teacher networks: enable virtual communities for idea exchange, peer support, and best practice sharing to mitigate isolation and burnout.
4. Encouraging pedagogical innovation: incentivize teachers to explore creative digital approaches, stimulating engagement and professional growth.

5. Integrating hybrid learning: develop plans to blend online and face-to-face instruction, supporting professional development and student engagement.
6. Institutionalizing feedback: establish regular feedback loops to inform adjustments to professional development and support services.
7. Enhance work-life balance: prioritize policies to improve teachers' work-life balance and mitigate stress in distance education settings, including mental health support services.
8. Provide social-emotional learning (SEL) programs: introduce SEL programs to support teachers' emotional and physical well-being, focusing on emotional regulation, resilience, and decision-making skills.
9. Offer organizational and technological support: provide robust support, including access to resources and professional development on virtual platforms, to improve teachers' distance instruction capabilities.
10. Recognize and incentivize teachers: offer incentives, recognition, and regular feedback to reinforce the value of teachers' efforts and boost their job satisfaction.

By implementing these recommendations, educational institutions can facilitate maintenance of teachers' motivation and preparedness for distance instruction, leading to enhanced teaching outcomes and elevated levels of job satisfaction.

Conclusion

This study underscores the transformative impact of the shift to online learning in Saudi Arabia on teachers during the COVID-19 pandemic. The key findings reveal the significant influence of the crisis on the education system, prompting teachers to swiftly adapt to novel teaching methods. Notably, teachers exhibited strong intrinsic motivation for distance education, with social support partaking in sustaining this motivation. The post-pandemic era has introduced both positive changes and challenges, highlighting the necessity for improvements in pre-service teacher education and ongoing professional development.

Significantly, the study highlights teachers' openness to change, emphasizing the importance of integrating technology into pedagogy for enhanced learning outcomes. Furthermore, the findings underscore the need for future instructional strategies to prioritize Social Emotional Learning (SEL) concepts. The evolution and adaptation of Saudi Arabian education systems are crucial to meet the dynamic needs of students and educators in a constantly changing landscape.

This study provides two key contributions. Firstly, it demonstrates teachers' exceptional motivation and adaptability in response to changing circumstances, driven by their dedication to teaching and access to ongoing professional development support. Secondly, the findings underscore the importance of maintaining robust support systems for teachers, including necessary resources and tools, to enable them to excel in shaping future generations. In the post-COVID-19 era, Saudi Arabian educators can leverage their enhanced online instructional skills to deliver learning experiences for students.

References

Akhter, T. (2020). Problems and challenges faced by EFL students of Saudi Arabia during COVID-19 pandemic. Rupkatha Journal on Interdisciplinary Studies in Humanities, 12(5), 1-7.

Al-Sharafi, M. A., Al-Emran, M., Arpaci, I., Marques, G., Namoun, A., & Iahad, N. A. (2023). Examining the impact of psychological, social, and quality factors on the continuous intention to use virtual meeting platforms during and beyond COVID-19 pandemic: A hybrid SEM-ANN approach. International Journal of Human–Computer Interaction, 39(13), 2673-2685.

Aladsani, H. K. (2021). A narrative approach to university instructors' stories about promoting student engagement during COVID-19 emergency remote teaching in Saudi Arabia. Journal of Research on Technology in Education, 1-17.

Alasmari, M. A. (2022). The Attitudes of Public-School Teachers towards E-learning in Saudi Arabia. Arab World English Journal (AWEJ) 2nd Special Issue on Covid, 19.

Alavi, H., & Hąbek, P. (2016). Addressing research design problem in mixed methods research. Management Systems in Production Engineering, 21(1), 62-66.

Alea, L. A., Fabrea, M. F., Roldan, R. D. A., & Farooqi, A. Z. (2020). Teachers' Covid-19 awareness, distance learning education experiences and perceptions towards institutional readiness and challenges. International Journal of Learning, Teaching and Educational Research, 19(6), 127-144.

Almeida, F. (2018). Strategies to perform a mixed methods study. European Journal of Education Studies.

Alonso-Díaz, L., Delicado-Puerto, G., Ramos, F., & Manchado-Nieto, C. (2023). Student Teachers' Classroom Impact during Their Practicum in the Times of the Pandemic. Education Sciences, 13(3), 277.

Altwaim, N. M., Kadi, M. S., & Alfakeh, S. A. (2023). Distant learning and primary school teacher burnout: Assessing the effect during coronavirus disease (COVID-19) in Jeddah, Saudi Arabia, 2021. Journal of Family & Community Medicine, 30(2), 97.

Alwahoub, H. M., Azmi, M. N. L., & Jomaa, N. J. (2020). Teachers' and Students' Perceptions of E-Learning Integration in the Primary Schools of Saudi Arabia. International Journal of Advanced Research in Education and Society, 2(1), 116-126.

Anderson, E., & Hira, A. (2020). Loss of brick-and-mortar schooling: How elementary educators respond. Information and Learning Sciences.

Balakrishnan, S. R., Soundararajan, V., & Parayitam, S. (2022). Recognition and rewards as moderators in the relationships between antecedents and performance of women teachers: evidence from India. International Journal of Educational Management, 36(6), 1002-1026.

Barman, N. (2022). Digital technology adoption and its impact on the education system during the Covid-19 pandemic. International Management Review, 18(27), 6.

Berry, R. S. (1999). Collecting data by in-depth interviewing.

Braje, I. N., & Topčić, J. (2023). Implications of Teacher Motivation in the Digital Age: Does Teacher Motivation Contribute to the Adoption of E-Learning Tools. SHS Web of Conferences,

Cao, Y., Zhang, S., Chan, M. C. E., & Kang, Y. (2021). Post-pandemic reflections: Lessons from Chinese mathematics teachers about online mathematics instruction. Asia Pacific Education Review, 22, 157-168.

Casacchia, M., Cifone, M. G., Giusti, L., Fabiani, L., Gatto, R., Lancia, L., Cinque, B., Petrucci, C., Giannoni, M., & Ippoliti, R. (2021). Distance education during COVID 19: an Italian survey on the university teachers' perspectives and their emotional conditions. BMC medical education, 21(1), 1-17.

Chaya, H. (2022). A Review of Factors Influencing the Student Motivation for Learning in Virtual Environments. Saudi J Eng Technol, 7(2), 62-68.

Chen, K.-C., Jang, S.-J., & Branch, R. M. (2010). Autonomy, affiliation, and ability: Relative salience of factors that influence online learner motivation and learning outcomes. Knowledge Management & E-Learning: An International Journal, 2(1), 30-50.

Chen, T., Peng, L., Jing, B., Wu, C., Yang, J., & Cong, G. (2020). The impact of the COVID-19 pandemic on user experience with online education platforms in China. Sustainability, 12(18), 7329.

Chiu, T. K. (2022). School learning support for teacher technology integration from a self-determination theory perspective. Educational Technology Research and Development, 1-19.

Creswell, J. W., & Clark, V. L. P. (2017). Designing and conducting mixed methods research. Sage publications.

Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

Dawadi, S. (2021). Thematic analysis approach: A step by step guide for ELT research practitioners. Journal of NELTA, 25(1-2), 62-71.

Deci, E. L., & Deci, E. L. (1975). The intrinsic motivation of behavior. Intrinsic motivation, 93-125.

Deci, E. L., & Ryan, R. M. (2013). Intrinsic motivation and self-determination in human behavior. Springer Science & Business Media.

Deci, E. L., Ryan, R. M., Deci, E. L., & Ryan, R. M. (1985). Conceptualizations of intrinsic motivation and self-determination. Intrinsic motivation and self-determination in human behavior, 11-40.

DeCoito, I., & Estaiteyeh, M. (2022). Transitioning to online teaching during the COVID-19 pandemic: An exploration of STEM teachers' views, successes, and challenges. Journal of Science Education and Technology, 31(3), 340-356.

Dewaele, J.-M. (2018). Online questionnaires. The Palgrave handbook of applied linguistics research methodology, 269-286.

DiVito, A. V. (2021). An exploration of SDT need fulfillment in a synchronous online learning environment

Gallagher, P. A., & McCormick, K. (1999). Student satisfaction with two-way interactive distance learning for delivery of early childhood special education coursework. Journal of Special Education Technology, 14(1), 32-47.

Garn, A. C., Morin, A. J., & Lonsdale, C. (2019). Basic psychological need satisfaction toward learning: A longitudinal test of mediation using bifactor exploratory structural equation modeling. Journal of Educational Psychology, 111(2), 354.

Gronchi, M. (2022). A Study on Academic FL Online Activities During the COVID-19 Outbreak in Italy. Educazione Linguistica. Language Education.

Hanna, F., Oostdam, R., Severiens, S. E., & Zijlstra, B. J. (2019). Domains of teacher identity: A review of quantitative measurement instruments. Educational Research Review, 27, 15-27.

Hartnett, M., St. George, A., & Dron, J. (2011). Examining motivation in online distance learning environments: Complex, multifaceted, and situation-dependent. International Review of Research in Open and Distributed Learning, 12(6), 20-38.

Hesse-Gawęda, A. (2018). Changes in the culture of the organization of Polish schools of various types in light of undertaken reforms.

Hoq, M. Z. (2020). E-Learning during the period of pandemic (COVID-19) in the kingdom of Saudi Arabia: an empirical study. American Journal of Educational Research, 8(7), 457-464.

Jansen in de Wal, J., van den Beemt, A., Martens, R. L., & den Brok, P. J. (2020). The relationship between job demands, job resources and teachers' professional learning: Is it explained by self-determination theory? Studies in Continuing Education, 42(1), 17-39.

Khashaba, A., Albreiket, A., Elghazali, A., Alkhouja, A., & Baghareeb, S. (2022). Students' Perceptions towards the Experience, Quality, Challenges and Effectiveness of Online Teaching-Learning during Covid-19 Pandemic in Riyadh Elm University, Saudi Arabia. Mymensingh Med J, 31(1), 242-251.

Khlaif, Z. N., Salha, S., & Kouraichi, B. (2021). Emergency remote learning during COVID-19 crisis: Students' engagement. Education and Information Technologies, 26(6), 7033-7055.

Kraft, M., Simon, N., & Lyon, M. (2020). Sustaining a sense of success: The importance of teacher working conditions during the COVID-19 pandemic. Journal of Research on Educational Effectiveness, 14(4), 727-769.

Larsari, V. N., Wildová, R., Dhuli, R., Chenari, H., Reyes-Chua, E., Galas, E. M., Sario, J. A., & Lanuza, M. H. (2023). Digitalizing Teaching and Learning in Light of Sustainability in Times of the Post-Covid-19 Period: Challenges, Issues, and Opportunities. International Conference on Digital Technologies and Applications,

Ma, X., Xie, Y., & Wang, H. (2023). Research on the construction and application of teacher-student interaction evaluation system for smart classroom in the post COVID-19. Studies in Educational Evaluation, 78, 101286.

MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. System, 94, 102352.

Mashhadi, A., Kassim Kadhum, A., & Shooshtari, Z. G. (2023). Exploring Technological Pedagogical Content Knowledge among Iraqi High School English Teachers: A Comparative Study during the COVID-19 Pandemic. Iranian Journal of Applied Language Studies, 15(1), 141-154.

Mears, C. L. (2012). In-depth interviews. Research methods and methodologies in education, 19, 170-176.

Mellon, C. (2022). Lost and found: an exploration of the professional identity of primary teachers during the Covid-19 pandemic. Journal for Multicultural Education.

Mertens, D. M. (2007). Transformative paradigm: Mixed methods and social justice. Journal of mixed methods research, 1(3), 212-225.

Moller, N., Burgess, V., & Jogiyat, Z. (2016). Barriers to counselling experienced by British South Asian women: A thematic analysis exploration. Counselling and Psychotherapy Research, 16(3), 201-210.

Mugyenyi, A., Asiimwe, S., & Apiku, C. (2023). Relationship between school working environment and teachers' motivation in private secondary schools of Wakiso district, Uganda, Vol. Isue-2-2023, IJARIIE-ISSN (CO)-2395-4396.

Nahid, S., Muzaffar, N., & Abbas, M. (2023). Impact of Teachers' Motivation on Students' Performance. Global Educational Studies Review, VIII, 8, 444-453.

Nambiar, D. (2020). The impact of online learning during COVID-19: students' and teachers' perspective. The International Journal of Indian Psychology, 8(2), 783-793.

Oliveira, G., Grenha Teixeira, J., Torres, A., & Morais, C. (2021). An exploratory study on the emergency remote education experience of higher education students and teachers during the COVID-19 pandemic. British Journal of Educational Technology.

Paliwal, M., & Singh, A. (2021). Teacher readiness for online teaching-learning during COVID– 19 outbreak: a study of Indian institutions of higher education. Interactive Technology and Smart Education.

Palmer, J. M., de Klerk, E. D., & Modise, M. A. (2021). Re-prioritizing teachers' social emotional learning in rural schools beyond COVID-19. Journal of Ethnic and Cultural Studies, 8(2), 68-88.

Panisoara, I. O., Lazar, I., Panisoara, G., Chirca, R., & Ursu, A. S. (2020). Motivation and continuance intention towards online instruction among teachers during the COVID-19 pandemic: The mediating effect of burnout and technostress. International journal of environmental research and public health, 17(21), 8002.

Papazis, F., Avramidis, E., & Bacopoulou, F. (2023). Greek teachers' resilience levels during the COVID-19 pandemic lockdown and its association with attitudes towards emergency remote teaching and perceived stress. Psychology in the Schools, 60(5), 1459-1476.

Pressley, T. (2021). Returning to teaching during COVID-19: An empirical study on elementary teachers' self-efficacy. Psychology in the Schools, 58(8), 1611-1623.

Robinson, L. E., Valido, A., Drescher, A., Woolweaver, A. B., Espelage, D. L., LoMurray, S., Long, A. C., Wright, A. A., & Dailey, M. M. (2023). Teachers, stress, and the COVID-19 pandemic: A qualitative analysis. School mental health, 15(1), 78-89.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary educational psychology, 25(1), 54-67.

Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. Guilford publications.

Sacré, M., Ries, N., Wolf, K., & Kunter, M. (2023). Teachers' well-being and their teaching quality during the COVID-19 pandemic: a retrospective study. Frontiers in Education,

Salikhova, N. R., Lynch, M. F., & Salikhova, A. B. (2020). Psychological Aspects of Digital Learning: A Self-Determination Theory Perspective. Contemporary Educational Technology, 12(2).

Schultz, R. B., & DeMers, M. N. (2020). Transitioning from emergency remote learning to deep online learning experiences in geography education. Journal of Geography, 119(5), 142-146.

Shin, H., Yuniar, C. T., Oh, S., Purja, S., Park, S., Lee, H., & Kim, E. (2023). The Adverse Effects and Nonmedical Use of Methylphenidate Before and After the Outbreak of COVID-19: Machine Learning Analysis. Journal of Medical Internet Research, 25, e45146.

Sommet, N., & Elliot, A. J. (2017). Achievement goals, reasons for goal pursuit, and achievement goal complexes as predictors of beneficial outcomes: Is the influence of goals reducible to reasons? Journal of Educational Psychology, 109(8), 1141.

Sun, Y., Ni, L., Zhao, Y., Shen, X. L., & Wang, N. (2019). Understanding students' engagement in MOOCs: An integration of self-determination theory and theory of relationship quality. British Journal of Educational Technology, 50(6), 3156-3174.

Tashakkori, A., & Teddlie, C. (2008). Quality of inferences in mixed methods research: Calling for an integrative framework. Advances in mixed methods research, 101-119.

Turner, S. F., Cardinal, L. B., & Burton, R. M. (2017). Research design for mixed methods: A triangulation-based framework and roadmap. Organizational Research Methods, 20(2), 243-267.

Ulla, M. B., & Perales, W. F. (2021). Emergency Remote Teaching During COVID19: The Role of Teachers' Online Community of Practice (CoP) in Times of Crisis. Journal of Interactive Media in Education, 2021(1).

Van den Broeck, A., Howard, J. L., Van Vaerenbergh, Y., Leroy, H., & Gagné, M. (2021). Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation. Organizational Psychology Review, 11(3), 240-273.

Van der Spoel, I., Noroozi, O., Schuurink, E., & van Ginkel, S. (2020). Teachers' online teaching expectations and experiences during the Covid19-pandemic in the Netherlands. European journal of teacher education, 43(4), 623-638.

Wang, J., Tigelaar, D. E., & Admiraal, W. (2021). Rural teachers' sharing of digital educational resources: From motivation to behavior. Computers & Education, 161, 104055.

Xu, W., & Zammit, K. (2020). Applying thematic analysis to education: A hybrid approach to interpreting data in practitioner research. International journal of qualitative methods, 19, 1609406920918810.