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Research Article

Understanding how demographic factors influence faculty member's perceptions of online learning success: A case study in Thai private higher education

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This research study investigates the influence of demographic factors, including gender, position, and year of experience on perceptions of online learning success during the pandemic. The study acknowledges that various factors, such as prior experience with online learning, technological literacy, and cultural context, influenced the perception of human resources towards online learning. The study will utilize a quantitative research approach with surveys and statistical analysis to gather and analyze data from executives managing education programs in Thai private higher education institutions. The participants in the study were executives managing education programs working in Thai private higher education institutions, including deans, vice deans, assistant deans, heads of departments, assistants to department heads, and full-time lecturers. A sample group of 213 participants will be selected using simple random sampling. Data will be collected through surveys distributed electronically to the selected participants. The survey will consist of a validated questionnaire with good content validity and reliability. Quantitative research methods will be employed to analyze the gathered data, including multivariate statistics (ANOVA), to interpret the findings. The research findings from this study will contribute to the existing literature on online learning effectiveness by examining the role of demographic factors in shaping perceptions of success in the context of the pandemic. The findings have practical implications for educational institutions in designing and implementing online learning programs during the pandemic and beyond, considering the demographic characteristics of their participants. The study suggests that institutions should consider the effects of gender, position, and year of experience in shaping perceptions and behaviours related to online learning, provide targeted support, foster collaboration and knowledge sharing, conduct ongoing research and evaluation, and adopt a multi-dimensional approach to enhance the effectiveness of online learning initiatives. Further study and contextual considerations are necessary to understand demographic factors' effects on online learning perceptions comprehensively.

Keywords: Online learning; Learning design; Curriculum management; Institution support; Student readiness; Technology; Innovation

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1. Introduction

In the wake of the global pandemic, online learning has become a critical mode of education for millions of students worldwide. With the closure of schools and universities, online learning has emerged as an essential solution to ensure the continuity of education. While effective online learning has the potential to provide flexible, accessible, and engaging educational opportunities, it is not without its challenges and limitations (Kara, 2020; Kır, 2019; Picciano, 2017). One of the critical reasons why effective online learning is crucial in the post-pandemic era is the need for continuity of education. As traditional face-to-face learning has been disrupted, online learning has become a lifeline for students to continue their education remotely. It allows students to access learning materials, engage in virtual classrooms, participate in discussions, submit assignments, and receive instructor feedback, all from the comfort of their homes. Online learning has also enabled institutions to reach a wider audience, including learners from remote or underserved areas, providing access to education that might not have been possible otherwise (Bozkurt et al., 2017; Kebritchi et al., 2017).

However, online learning faces various challenges and limitations despite its potential benefits. One of the primary challenges is the issue of access and equity. Not all students have equal access to reliable internet connectivity, appropriate devices, or conducive learning environments. It creates disparities in learning opportunities, with some students facing barriers to participating fully in online learning (Sulisworo et al., 2016; Sulisworo & Toifur, 2016). Students from low-income backgrounds, rural areas, or with disabilities face particular challenges accessing online learning resources, exacerbating existing educational inequalities (Kormos & Wisdom, 2021; Sulisworo, Kusumaningtyas et al., 2019).

Another challenge is the quality of online learning experiences. Not all online courses are designed and delivered effectively, impacting learning outcomes. Poorly designed courses, lack of engagement, limited opportunities for interaction and collaboration, and inadequate feedback lead to lower levels of student motivation, engagement, and learning outcomes (Kebritchi et al., 2017; Voogt et al., 2013). Instructors also need help adapting their teaching methods to the online environment, resulting in a suboptimal learning experience for students. Another critical challenge is the issue of student engagement and motivation. Online learning requires self-directed learning skills, time management, and discipline (Cheng & Tsai, 2020; Dumitru, 2021; Khang et al., 2013). Some students struggle with staying motivated and engaged in online learning without the structure and support of a physical classroom. The absence of face-to-face interaction with peers and instructors also affects the social aspect of learning, leading to feelings of isolation or disconnection (Keramidas, 2012).

Additionally, online learning presents challenges for assessment and feedback. Traditional evaluation forms, such as exams or practical assessments, must be adapted for the online environment, which requires new strategies for ensuring academic integrity and fairness. Providing timely and meaningful feedback to students in online courses is also challenging, as it requires effective communication and technology tools. Moreover, the rapidly evolving nature of technology and online learning challenges institutions and instructors to keep up with the latest tools, platforms, and best practices (Blundell et al., 2020; Graham et al., 2013). Training and professional development for instructors and support staff are needed to ensure they have the skills and knowledge to deliver compelling online learning experiences.

While online learning has become a critical mode of education in the post-pandemic era, it has challenges and limitations. Access and equity, quality of learning experiences, student engagement and motivation, assessment and feedback, and keeping up with evolving technology are critical challenges online learning faces. Institutions, instructors, and stakeholders must work collaboratively to address these challenges and ensure that online learning is effective, inclusive, and engaging for all learners. It involves investing in infrastructure and resources to improve access, providing professional development opportunities for instructors, designing engaging and

interactive online courses, leveraging technology effectively for assessment and feedback, and promoting student engagement and motivation in the online learning environment.

The perception of human resources, including staff and faculty, towards online learning is a critical factor that significantly impacts the success of online learning. Positive perceptions lead to effective instructional practices, motivation for professional development, commitment to student success, and effective communication with students. On the other hand, negative perceptions result in resistance to change, reluctance to adopt online learning practices and potential barriers to effective online instruction. Institutions and educational leaders should recognize the importance of addressing the perception of human resources towards online learning through professional development opportunities, supportive policies, and ongoing communication to foster a positive environment for online learning success.

As the education landscape continues to evolve, especially in the post-pandemic era, online learning has increasingly become a mode of instruction. The perception of staff and faculty members towards online learning significantly impacts its effectiveness and outcomes. One of the key reasons why the perception of human resources is essential in the context of online learning is their role as facilitators and instructors. Staff and faculty members are responsible for designing and delivering online courses, providing instructional support, and interacting with students in virtual environments. Their perception of online learning, including their attitudes, beliefs, and expectations, influences their instructional practices and student engagement. Positive perceptions of online learning by staff and faculty lead to more effective instructional strategies, innovative use of technology, and higher levels of motivation among students.

Additionally, the perception of human resources towards online learning also affects their willingness to engage in professional development and continuous improvement. Online learning environments require ongoing adaptation and upskilling to engage with students in the virtual space effectively. Staff and faculty members who positively perceive online learning are more likely to actively seek professional development opportunities to enhance their skills and knowledge in online instructional design, technology integration, and student engagement strategies (Blundell et al., 2020; Turoff, 2019). On the other hand, negative perceptions result in resistance to change and reluctance to adopt online learning practices, which hinder the effectiveness of online courses.

Furthermore, the perception of human resources towards online learning impacts their motivation and commitment to student success. Online learning environments require additional efforts in terms of time management, communication, and monitoring student progress. Staff and faculty members who perceive online learning are likelier to demonstrate high motivation, engagement, and commitment to student success (Hayat et al., 2020; Ngabiyanto et al., 2021). They will likely invest more time and effort in providing timely feedback, facilitating online discussions, and addressing student needs, contributing to a positive learning experience.

Moreover, staff and faculty members' perception of online learning influences their interaction and communication with students. Effective communication is crucial in online learning environments, as students experience isolation or disconnection. Staff and faculty members who positively perceive online learning are more likely to proactively engage in effective communication strategies, such as prompt responses to student inquiries, regular updates, and clear instructions. Positive perceptions of staff and faculty towards online learning contribute to a supportive and inclusive learning environment, which enhances student engagement and satisfaction (Fuchs, 2022; Muzammil et al., 2020).

It is essential to acknowledge that the perception of human resources towards online learning is influenced by various factors, such as their prior experience with online learning, technological literacy, and cultural context. For instance, staff and faculty members with positive previous experiences with online learning have a more favourable perception. Those with limited experience or exposure to online learning harbour reservations or misconceptions. The main objective of this research is to investigate the influence of demographic factors, including gender,

position, and year of experience, on perceptions of online learning success during the pandemic. The specific aims of this study are:

- To examine how gender influences perceptions of online learning success during the pandemic.
- To explore the impact of position (e.g., faculty, staff, administrator) on perceptions of online learning success during the pandemic.
- To investigate how year of experience in an online learning environment affect perceptions of online learning success during the pandemic.
- To identify any interactions or relationships between gender, position, year of experience, and perceptions of online learning success during the pandemic.

2. Literature Review

2.1. Curriculum Management

In online learning, effective curriculum management has significantly impacted the learning process's success. Curriculum management refers to the strategic planning, design, implementation, and evaluation of the educational curriculum, including the selection of instructional materials, instructional strategies, and assessments (Bazylak & Aleman, 2017; Desha, 2013). In online learning, curriculum management plays a crucial role in shaping the overall success of the learning experience.

One key aspect of effective curriculum management in online learning is the alignment of learning objectives, content, and assessments to ensure that they are relevant, engaging, and conducive to effective online delivery (Conrad & Openo, 2018). It involves careful planning and organising the online curriculum, including the sequencing and pacing of learning activities, integrating multimedia resources, and utilizing interactive and collaborative learning strategies (Garrison & Kanuka, 2004). Furthermore, effective curriculum management in online learning involves regular monitoring and evaluation of the curriculum to ensure its effectiveness in meeting the desired learning outcomes. It involves ongoing data analysis, feedback from learners and instructors, and adjustments to the curriculum based on identified areas of improvement.

Research has shown that effective curriculum management in online learning positively impacts learner engagement, motivation, and overall learning outcomes. When the curriculum is well-designed, organized, and aligned with the needs of online learners, it enhances the quality of the learning experience, promotes meaningful interactions, and fosters a more profound understanding of the subject matter (Keengwe & Schnellert, 2012; Taja-on et al., 2021). Effective curriculum management is a critical factor that influences the success of online learning. It involves carefully planning, designing, implementing, and evaluating the curriculum to ensure its relevance, engagement, and alignment with learning objectives. When done effectively, curriculum management significantly impacts the overall success of online learning experiences for learners.

2.2. Institutional Support

The support provided by the institution significantly impacts the effectiveness of online learning. It affects the effectiveness of online learning due to several reasons. Online learning relies heavily on technology, and technical issues such as connectivity, access to learning platforms, and software glitches disrupt the learning process. Adequate technical support from the institution, including troubleshooting assistance and timely resolution of technical problems, help ensure a smooth online learning experience (Machmud et al., 2021). Effective online learning requires appropriate pedagogical strategies, such as well-designed instructional materials, interactive activities, and opportunities for engagement and feedback. Institutions that provide comprehensive pedagogical support, including training for instructors in online teaching best practices, instructional design support, and access to resources and tools, enhance the quality of online learning (Bailey & Card, 2009; Conole & Fill, 2005; Nasir & Jabar, 2022; Raman et al., 2022).

Administrative support from the institution, such as clear communication of policies, procedures, and expectations for online learning, efficient enrollment and registration processes, and prompt and responsive administrative services, contribute to a positive online learning experience for students (Conrad & Openo, 2018; Pearl Villalon Tomaro, 2018). This support helps students navigate administrative tasks and focus on their learning. Institutions that offer robust student support services, such as academic advising, tutoring, counselling, and career services, help online learners overcome challenges and stay motivated, leading to improved learning outcomes. Access to student support services facilitates student engagement, persistence, and success in online learning (Jaggars & Xu, 2016).

Institutions that provide adequate resources for online learning, such as learning management systems (LMS), online libraries, multimedia content, and other digital tools, enhance the learning experience for students. Access to these resources allows students to engage with course materials effectively and access additional learning materials, which improve their understanding of the subject matter (Chen et al., 2018; Conrad & Openo, 2018; Sulisworo et al., 2017). Institutions that invest in training and professional development for online instructors improve their ability to design and deliver practical online courses. Well-prepared and trained in online pedagogy, instructors create engaging learning experiences, provide prompt feedback, and facilitate discussions, leading to better student outcomes (Bozkurt et al., 2017).

Online learning relies on technology, and technical issues are a significant barrier to effective learning. Institutions that provide technical support, such as troubleshooting assistance, IT helpdesk, and regular maintenance of online platforms, ensure that students have uninterrupted access to course materials and a smooth learning experience. Efficient administrative processes, such as clear communication of course expectations, timely enrollment and registration procedures, and prompt handling of administrative inquiries, help students focus on their learning rather than administrative tasks. Institutions that provide solid administrative support facilitate a seamless online learning experience for students. Institutions that offer comprehensive student support services, such as academic advising, tutoring, counselling, and career services, help students overcome challenges, stay motivated, and persist in their online learning journey. These support services improve student engagement, retention, and success in online learning (Jaggars & Xu, 2016).

2.3. Teaching and Learning Design

Teaching and learning design significantly impact the effectiveness of online learning due to several reasons:

- Engagement and Interactivity: Well-designed online courses incorporate interactive elements, such as multimedia content, discussion forums, group activities, and assessments, that engage students and promote active participation. Engaged students are more likely to be motivated, focused, and invested in their learning, leading to improved learning outcomes (Chen et al., 2018).
- Clear Learning Objectives and Expectations: Effective online courses have clear and measurable learning objectives that guide students' learning journey and set expectations for their performance. When students understand what is expected of them and how they will be assessed, they can better plan their learning activities and meet the course requirements (Bingham & Conner, 2015; Hayat et al., 2020).
- Instructional Strategies and Pedagogy: Online courses that use evidence-based instructional strategies, such as differentiated instruction, formative feedback, and active learning techniques, enhance students' understanding and retention of course content. Effective pedagogy that aligns with the online learning environment promotes critical thinking, problem-solving, and collaboration skills (Artino Anthony, 2009; Kara, 2020; Wells & Miller, 2020).

- Accessibility and Usability: Online courses designed with accessibility in mind, such as providing closed captioning for videos, alternative text for images, and easy-to-navigate course interfaces, ensure that all students, including those with disabilities, access and engage with course content effectively. Usability considerations, such as intuitive navigation and clear instructions, reduce barriers and enhance the overall learning experience (Bast, 2021; Yadav et al., 2021; Zimmer, 2012).
- Assessment and Feedback: Well-designed assessments that align with the learning objectives and provide timely, constructive feedback facilitate students' self-assessment and reflection, guide their learning progress, and help them identify areas for improvement. Practical assessment and feedback strategies promote metacognitive skills and contribute to better learning outcomes in online courses (Chickering & Gamson, 2000; Conrad & Openo, 2018; Suen, 2014).

Various teaching and learning design elements influence online learning effectiveness from a student's perspective. By incorporating engaging multimedia content, clear learning objectives, evidence-based pedagogy, accessibility features, and practical assessment and feedback strategies, institutions create online courses that promote active engagement, deeper understanding, and improved student learning outcomes.

As students log in to the course platform, they find captivated by the engaging multimedia content that the instructor has incorporated into the course. They watch videos, interact with simulations, and explore interactive learning modules that allow them to apply what they are learning in real-world scenarios. The course also has a discussion forum where they interact with peers, exchange ideas, and collaborate on group activities. As they progress through the course, they notice that the learning objectives are clearly stated and provide a roadmap for the learning journey. This clarity helps students stay focused and motivated through the course materials and complete assignments.

The instructional strategies used in the course are adequate, with differentiated instruction that caters to different learning styles and formative feedback that guides student learning progress. Students actively engage in critical thinking and problem-solving activities and appreciate the opportunities for collaboration with peers, which enhance their understanding of the course content (Chen, 2019). The online course is also designed with accessibility in mind. Videos have closed captioning, images have alternative text descriptions, and the course interface is easy to navigate. These accessibility features ensure that students fully access and engage with the course content.

Assessment and feedback are also integral to the course design. The assessments align with the learning objectives and provide timely, constructive feedback that helps students reflect on their performance and improve (Conrad & Openo, 2018). Overall, the online course's well-designed teaching and learning approach significantly impacts learning effectiveness. The engaging and interactive course design, clear learning objectives and expectations, evidence-based pedagogy, accessibility and usability considerations, and practical assessment and feedback strategies all contribute to a positive and practical online learning experience.

2.4. Student Readiness

Student readiness is a crucial factor in the success of online learning. As education systems have shifted towards online platforms, especially after the COVID-19 pandemic, students' preparedness to engage in online learning has become a critical consideration for educators and institutions (Ahmad et al., 2021; Yadav et al., 2021). Student readiness is essential in online learning, and discuss how it impacts the overall effectiveness of the learning experience. One of the critical reasons why student readiness is vital in online learning is that it determines the level of engagement and participation in the virtual classroom. Online learning requires a different set of skills and habits compared to traditional classroom settings. Students need to be self-motivated, disciplined, and independent learners to thrive in an online learning environment. They must also

possess digital literacy skills, including navigating online platforms, managing their time, and communicating effectively through digital tools. With these skills and habits, students can keep up with the demands of online learning, resulting in higher levels of engagement and participation (Almendingen et al., 2021; Zubeer et al., 2022).

Moreover, student readiness for online learning also affects the quality of learning outcomes. When students are prepared for online learning, they are more likely to actively participate in discussions, complete assignments on time, and seek clarification when needed. This level of engagement allows them to absorb the course material effectively and apply it to real-world situations. On the other hand, students who need to be adequately prepared for online learning struggle with time management, technical difficulties, or lack of motivation, which leads to subpar performance and lower learning outcomes. student readiness also plays a role in fostering a positive learning experience. In online learning, students have more control over their learning pace and schedule, which requires them to be responsible for managing their time effectively. Students who need more preparation for this level of autonomy struggle with time management, leading to stress, frustration, and a negative learning experience. Conversely, students who are prepared and equipped with the necessary skills for online learning are more likely to enjoy the flexibility and convenience of this mode of education, resulting in a positive learning experience.

In addition, student readiness for online learning impacts student retention rates. Students who feel overwhelmed or ill-equipped for online learning are likelier to drop out of the course or program. It is detrimental to the student's educational progress and wastes time and resources for both the student and the institution. On the other hand, students who are adequately prepared for online learning are more likely to persist in the course and complete their studies, leading to higher retention rates (Avila et al., 2021; Fajri et al., 2021). So, how do educators and institutions promote student readiness in online learning? One fundamental approach is to provide comprehensive orientation and training programs for students before starting online courses. These programs cover digital literacy skills, time management, online communication etiquette, and strategies for self-motivation and self-regulation. Additionally, institutions offer support services such as technical assistance, online tutoring, and academic advising to help students navigate the challenges of online learning.

2.5. Technology and Innovation

Technology and innovation have become increasingly crucial in the success of online learning. In today's digital era, technological advancements have transformed education, providing new opportunities and challenges for learners, educators, and institutions (Hollier & Abou-Zahra, 2018; Martín-Gutiérrez et al., 2017; Thornhill-Miller & Dupont, 2016). Technology plays a vital role in facilitating the delivery of online learning. With various digital tools and platforms available, learners access educational resources and engage in learning activities at their own pace and convenience. These tools include LMS, video conferencing software, multimedia resources, interactive simulations, and social media platforms, among others (Hachaj & Baraniewicz, 2015; Lu, 2019; Olanike et al., 2017). These technologies enable learners to engage in various activities, such as accessing course materials, participating in discussions, submitting assignments, and taking assessments, all within a virtual learning environment.

Moreover, technology allows for personalized and adaptive learning experiences, tailoring instruction to meet learners' individual needs and preferences. Adaptive learning platforms use data and analytics to identify learners' strengths and weaknesses and provide targeted feedback and support, enhancing the effectiveness of the learning process. Research has shown that personalized learning experiences significantly improve learner engagement, motivation, and achievement. In addition to facilitating learning, technology also enables innovative pedagogical approaches in online education. For example, online simulations, virtual labs, and gamified learning experiences allow learners to apply theoretical concepts in practical contexts, promoting a more profound understanding and retention of knowledge. Virtual reality [VR] and augmented

reality [AR] technologies offer immersive learning experiences, allowing learners to explore virtual worlds, simulate real-world scenarios, and enhance their critical thinking and problem-solving skills. Furthermore, social media and collaborative online tools promote interaction and collaboration among learners, fostering a sense of community and social presence in the online learning environment (Rovai, 2003).

Innovative technologies also enable new modes of assessment in online learning. Traditional methods of evaluation, such as exams and papers, are supplemented or replaced by alternative forms of assessment, such as online quizzes, interactive simulations, e-portfolios, and peer assessments (Davis, 2015; Lamb et al., 2019; Ramadoan et al., 2020; Sulisworo, Handayani, et al., 2019). These assessments provide learners with more authentic and meaningful feedback, helping them gauge their progress and performance promptly and allowing instructors to tailor their instruction accordingly. The integration of technology and innovation in online learning is not without challenges. Technical issues, access to reliable internet, and concerns about data privacy and security are some barriers that must be addressed (Graham et al., 2013). Moreover, the rapid pace of technological advancements requires educators and institutions to continuously adapt and update their skills and resources to keep up with the changing landscape of online education.

In conclusion, technology and innovation are essential elements for the success of online learning. They enable the delivery of educational content, facilitate personalized and adaptive learning experiences, support innovative pedagogical approaches, foster collaboration and interaction among learners, and provide new modes of assessment. However, careful consideration and planning are needed to address the challenges associated with technology integration in online education. As we continue to embrace the digital age, educators and institutions must leverage technology and innovation to create effective and engaging online learning experiences for learners.

2.6. Contribution to Existing Literature

The research findings from this study will contribute to the existing literature on online learning effectiveness, specifically by examining the role of demographic factors in shaping perceptions of success in the context of the pandemic. The use of quantitative research methods, including surveys and statistical analysis, will provide empirical evidence and insights into the influence of demographic factors on perceptions of online learning success. The findings also have practical implications for educational institutions in designing and implementing online learning programs during the pandemic and beyond, considering the demographic characteristics of their participants.

3. Method

3.1. Research Design

This research will utilize a quantitative approach with surveys and statistical analysis to gather and analyze data from executives managing education programs in Thai private higher education institutions. The data will be collected using a verified questionnaire with good content validity and reliability. The research findings will contribute to the existing literature on online learning effectiveness by examining the role of demographic factors. Statistical analysis will be applied to interpret the results.

3.2. Participants

The participants in this research will be executives managing education programs working in Thai private higher education institutions, such as deans, vice deans, assistant deans, heads of departments, assistants to department heads, and full-time lecturers. Simple random sampling will be utilized to select a sample group of 213 participants from this population. The number of participants who fills complete data was 189. Table 1 provides information about the sample's composition in terms of gender, position, and year of experience. This information helps

understand the characteristics of the study population and interpret the results of any analyses or findings in the context of the sample demographics.

Table 1
Demographic information of the participants

Demographics	*N*	*%*
Gender		
Male	66	34.92%
Female	123	65.08%
Position		
Dean	7	3.70%
Asst. or Vice Dean	25	13.23%
Chairperson or Vice Chair	20	10.58%
Lecturer	137	72.49%
Year of Experience		
Less than five years	53	28.04%
5-9 years	57	30.16%
10-14 years	29	15.34%
More than 14 years	50	26.46%
Total	189	100%

The data provided in the table shows the demographic characteristics of the sample population. In terms of fender, the sample is reasonably balanced, with 34.92% identifying as male and 65.08% as female. In terms of position, the sample is diverse, with 3.70% being deans, 13.23% being assistant or vice deans, 10.58% being chairpersons or vice chairs, and the majority (72.49%) being Lecturers. In terms of year of experience, the sample is spread across various levels, with 28.04% having less than five years of experience, 30.16% having 5-9 years of experience, 15.34% having 10-14 years of experience, and 26.46% having more than 14 years of experience. The total sample size is 189 participants. These demographic characteristics provide valuable insights into the sample composition and help interpret the research findings in the context of the sample demographics. It is essential to consider these demographic factors when analyzing the data and drawing conclusions from the research findings, as they impact the results and generalizability of the findings to the broader population.

3.3. Data Collection

Data will be collected through surveys and distributed electronically (Google Form) to the selected participants. The survey will consist of a five-rating scale questionnaire verified by five experts in the field for content validity, with a confirmed validity ranging from 0.67 to 1.00. The questionnaire will also have high reliability, with a Cronbach's alpha coefficient of 0.94, indicating good internal consistency. The instrument covers curriculum management (5 items), institution support (4 items), learning design (7 items), student readiness (3 items), and technology and innovation (3 items). See Table 2 for the instrument structure.

3.4. Data Analysis

Quantitative research methods will be employed in this study, utilizing the statistical analysis to analyze the gathered data. Multivariate statistics (ANOVA) will be applied to interpret the findings. These statistical techniques will allow for examining the relationship between the demographic factors (gender, position, and year of experience) and perceptions of online learning success during the pandemic. The data for all variables involved in the analysis were jointly multivariate normally distributed. This means that all the variables together, their distribution follows a multivariate normal distribution. Observations was independent of each other. It assumed that each variable followed a univariate normal distribution.

Table 2
Questionnaire structure

Factors and Items
Curriculum Management
The teacher council launched students' practicum policy up to date with the situation.
Curriculum management, such as meeting Self-evaluation reports and collecting evidence and data.
Sharing information among lecturers and students via the online platform
Sharing information among different programs in the education department via the online platform.
Sharing information among different departments and outside organizations via the online platform.
Institution Support
Flexible teaching and learning in the department
Competency development of online teaching and learning continually
Budget support to buy an online system having more features for motivating learning and teaching
Improving information knowledge to be ready for use all the time.
Learning Design
Encourage students to ask questions and discuss via the online platform.
Plan and design to manage teaching sessions, from easy to complex approaches.
Encourage students to exchange their knowledge.
Inform rules and regulations before study class.
Approach various learning activities online.
Formative Assessment
Reflective Feedback to students every learning assessment.
Student Readiness
Suitable residents promote an online learning environment
Good internet signal and stable WIFI
Online tools are always compatible and ready.
Technology and Innovation
Prepare tools and technology to help learners understand easily.
Utilize various tools and technology for teaching online.
Solve problem particular technology problems while teaching online.

4. Results

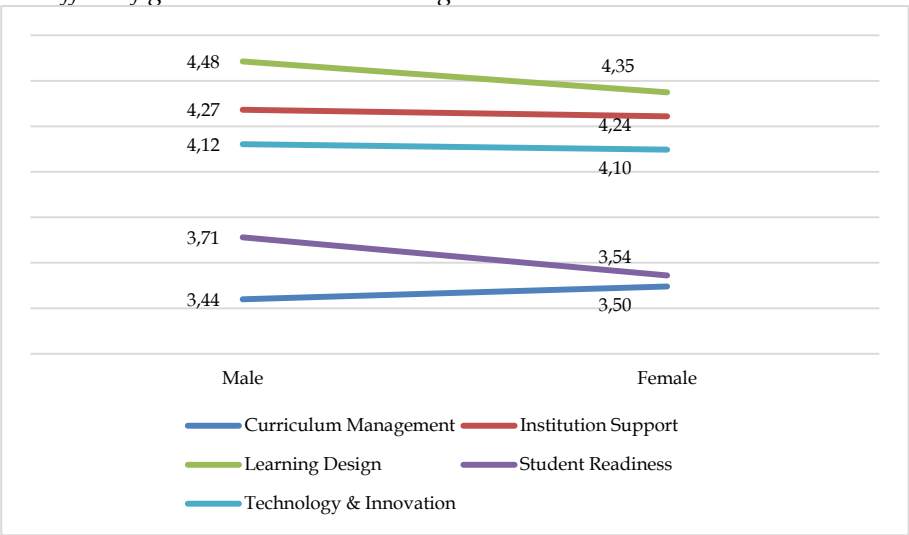
4.1. The Effect of Gender

From the data provided, it was observed that gender has a significant effect on the learning design (p =.060) and student readiness (p =.059). Still, it does not have a significant impact on the curriculum management variable (p =.774), institution support (p =.945), and technology and innovation (p =.527). It implies significant differences in the effect of gender on learning design and student readiness variables. Still, there are no significant differences in the impact of gender on curriculum management, institution support, and technology and innovation variables. Descriptive statistics regarding the effect of gender on online learning is presented in Figure 1.

4.2. The Effect of Position

The analysis of the data revealed that position has a significant effect on curriculum management (p =.010), student readiness (p =.030), and technology and innovation (p =.044). However, the Position does not significantly affect institution support (p = .134) and learning design (p =.211). Based on the data analysis findings, position, as a variable, has a significant effect on curriculum management, student readiness, and technology and innovation. It implies that individuals' positions, likely within an educational or organizational context, significantly shape their

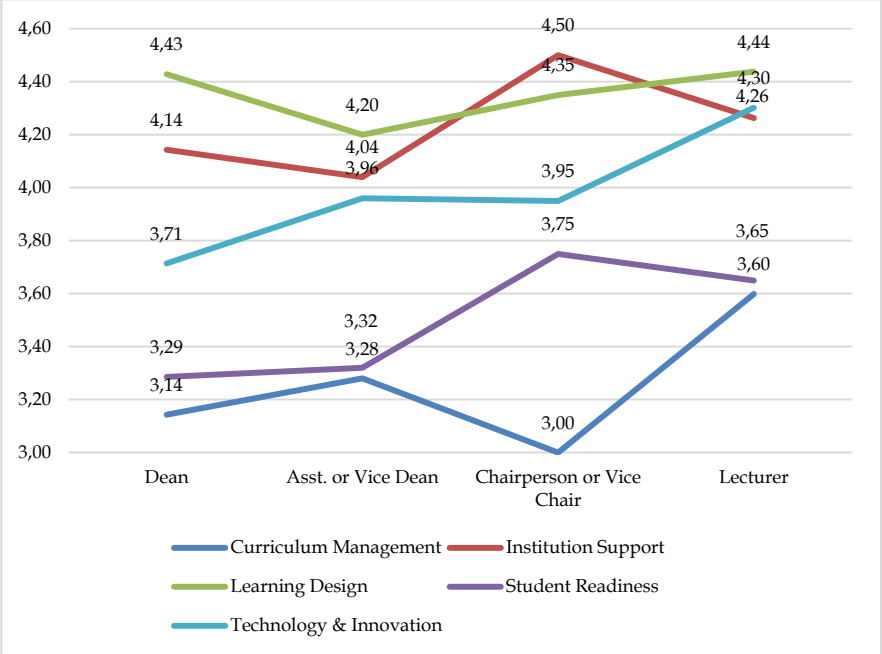
Figure 1
The effect of gender on online learning



perceptions and behaviours related to these variables. The significant p-values (i.e., p <.05) indicate that the observed effects are unlikely to have occurred by chance and are statistically significant.

On the other hand, the analysis did not find a significant effect of position on institution support and learning design. It suggests that position does not significantly predict individuals' perceptions or behaviours related to institution support and learning design. However, it's important to interpret these findings in the context of the specific study and research question being investigated. Descriptive statistics regarding the effect of position on online learning is presented in Figure 2.

Figure 2
The effect of position on online learning

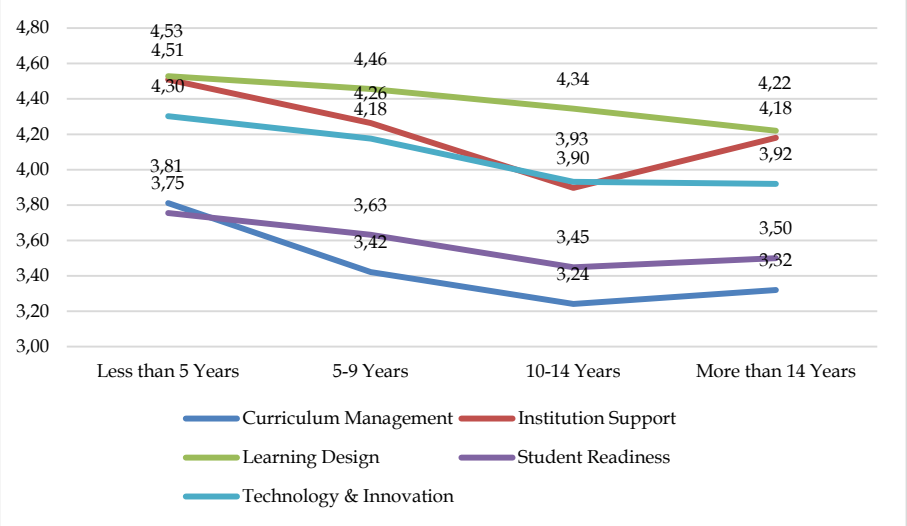


4.3. The Effect of Year of Experience

From the data analysis, it was found that year of experience has a significant effect on perceptions related to curriculum management (p =.006), institution support (p =.002), learning design

(p =.045), and technology and innovation (p =.004). It suggests that individuals' year of experience in an educational or organizational context influence their perceptions of these variables in the context of online learning. However, year of experience did not significantly affect perceptions related to student readiness (p =.095), indicating that it was not a significant predictor of perceptions related to student readiness in the context of online learning. A summary of the descriptive data is presented in Figure 3.

Figure 3
The effect of year of experience on online learning



4.4. Multivariate Tests

Table 3 shows the results of a multivariate test, specifically utilizing Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root as the test statistics. The test was conducted to examine the effects of gender, position, and year of experience on perceptions of online learning success during the research, with an intercept term included in the design. The results for the intercept term indicate that all four test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) have statistically significant values, with p of 0.000. The overall effect of the intercept term, which represents the combined influence of all the demographic factors and the intercept, is significant in shaping perceptions of online learning success during the research.

For gender, all four test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) have non-significant values, with p-values greater than 0.05 (ranging from 0.252 to 0.252). It indicates that gender does not statistically affect perceptions of online learning success during the research. On the other hand, for position, all four test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) have statistically significant values, with p-values ranging from 0.001 to 0.001. It suggests that position significantly affects perceptions of online learning success during the research, as indicated by the significant values of the test statistics. Similarly, for year of experience, all four test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) have statistically significant values, with p-values ranging from 0.007 to 0.000. It indicates that year of experience significantly affect perceptions of online learning success during the research.

The results of the multivariate test indicate that gender does not significantly affect perceptions of online learning success during the research. In contrast, position and year of experience have significant effects. These findings provide insights into the role of demographic factors in shaping perceptions of online learning success and have implications for designing and implementing online learning programs during similar circumstances.

Table 3
Multivariate Tests

Variable	*Value*	*F*	*Hypothesis df*	*Error df*	*Sig.*
Intercept					
Pillai's Trace	.962	901.458[b]	5.000	177.000	.000
Wilks' Lambda	.038	901.458[b]	5.000	177.000	.000
Hotelling's Trace	25.465	901.458[b]	5.000	177.000	.000
Roy's Largest Root	25.465	901.458[b]	5.000	177.000	.000
Gender					
Pillai's Trace	.036	1.333[b]	5.000	177.000	.252
Wilks' Lambda	.964	1.333[b]	5.000	177.000	.252
Hotelling's Trace	.038	1.333[b]	5.000	177.000	.252
Roy's Largest Root	.038	1.333[b]	5.000	177.000	.252
Position					
Pillai's Trace	.198	2.527	15.000	537.000	.001
Wilks' Lambda	.813	2.543	15.000	489.020	.001
Hotelling's Trace	.218	2.550	15.000	527.000	.001
Roy's Largest Root	.130	4.653[c]	5.000	179.000	.001
Year of Experience					
Pillai's Trace	.170	2.157	15.000	537.000	.007
Wilks' Lambda	.835	2.198	15.000	489.020	.006
Hotelling's Trace	.191	2.231	15.000	527.000	.005
Roy's Largest Root	.145	5.206[c]	5.000	179.000	.000

Note. a. Design: Intercept + Gender + Position + Year of Experience; b. Exact statistic; c. The statistic is an upper bound on F that yields a lower bound on the significance level.

4.5. Tests of Between-Subjects Effects

Table 4 shows the results of a between-subjects analysis of variance (ANOVA) for various independent variables (gender, position, and year of experience) on the dependent variables (curriculum management, institution support, learning design, student readiness, and technology and innovation).

The R Squared values indicate that the independent variables collectively explain a moderate amount of variance in the dependent variables, ranging from .033 to .123. Adjusted R Squared values are slightly lower, indicating the model's goodness of fit. These results suggest that the independent variables have significant or marginally significant effects on the dependent variables. Further analysis is warranted to understand the nature and magnitude of these effects.

5. Discussion

5.1. Gender

Based on the provided data and statistical analysis (Figure 1), it can be inferred that gender significantly affects the perception of learning design and student readiness variables but not curriculum management, institution support, and technology and innovation variables. The p-values for learning design and student readiness variables were found to be .060 and .059, respectively, indicating that the effect of gender on these variables is statistically significant at a significance level of .05 or lower. There are likely differences in how males and females perceive learning design and student readiness. On the other hand, the *p*-values for curriculum management, institution support, and technology and innovation variables were found to be 0.774, 0.945, and 0.527, respectively, which are higher than the significance level of 0.05. It suggests that there are no statistically significant differences in the effect of gender on curriculum management, institution support, and technology and innovation variables.

Table 4
Multivariate Tests

Soruce / Dependent variable	*Type III sum of squares*	*df*	*Mean square*	*F*	*Sig.*
Corrected Model					
Curriculum Management	17.067[a]	7	2.438	3.615	.001
Institution Support	10.182[b]	7	1.455	3.005	.005
Learning Design	5.983[c]	7	.855	1.904	.071
Student Readiness	7.921[d]	7	1.132	2.458	.020
Technology and Innovation	8.167[e]	7	1.167	3.029	.005
Intercept					
Curriculum Management	636.987	1	636.987	944.453	.000
Institution Support	1082.526	1	1082.526	2236.034	.000
Learning Design	1170.862	1	1170.862	2608.157	.000
Student Readiness	756.121	1	756.121	1642.618	.000
Technology and Innovation	945.662	1	945.662	2455.153	.000
Position					
Curriculum Management	7.875	3	2.625	3.892	.010
Institution Support	2.737	3	.912	1.884	.134
Learning Design	2.048	3	.683	1.521	.211
Student Readiness	4.203	3	1.401	3.043	.030
Technology and Innovation	3.186	3	1.062	2.757	.044
Year of Experience					
Curriculum Management	8.719	3	2.906	4.309	.006
Institution Support	7.664	3	2.555	5.277	.002
Learning Design	3.680	3	1.227	2.733	.045
Student Readiness	2.971	3	.990	2.151	.095
Technology and Innovation	5.346	3	1.782	4.626	.004
Error					
Curriculum Management	122.075	181	.674		
Institution Support	87.627	181	.484		
Learning Design	81.255	181	.449		
Student Readiness	83.317	181	.460		
Technology and Innovation	69.717	181	.385		
Total	122.075	181	.674		
Curriculum Management	2423.000	189			
Institution Support	3518.000	189			
Learning Design	3741.000	189			
Student Readiness	2545.000	189			
Technology and Innovation	3264.000	189			
Corrected Total	122.075	181	.674		
Curriculum Management	139.143	188			
Institution Support	97.810	188			
Learning Design	87.238	188			
Student Readiness	91.238	188			
Technology and Innovation	77.884	188			

Note. a. R Squared = .123 (Adjusted R Squared = .089); b. R Squared = .104 (Adjusted R Squared = .069); c. R Squared = .069 (Adjusted R Squared = .033); d. R Squared = .087 (Adjusted R Squared = .052); e. R Squared = .105 (Adjusted R Squared = .070)

These findings are consistent with previous research showing that gender significantly influences perceptions and attitudes towards learning and education (Huang, 1993). For example, some studies have found that males and females have different preferences and perceptions regarding learning design, with variations in approaches to problem-solving, communication styles, and social interactions (Daniels et al., 2001; Makransky et al., 2019; Yeh et al., 2018). Similarly, research has also shown that gender impact student readiness, with differences in motivation, self-efficacy, and engagement levels (Alemayehu & Chen, 2021; Daniels et al., 2001; Makransky et al., 2019).

However, it's important to note that while these findings suggest a significant effect of gender on the perception of learning design and student readiness variables, the effect size and practical significance of these differences require further investigation. Additionally, it's crucial to consider other contextual factors and variables that influence the observed outcomes.

Based on the finding that gender has a significant effect on the perception of learning design and student readiness variables but no significant impact on curriculum management, institution support, and technology and innovation variables. It is important to consider gender as a variable of interest in future research and educational interventions. Researchers and practitioners can further explore the underlying mechanisms and factors contributing to these gender differences in perception of learning design and student readiness and tailor educational strategies accordingly. Based on the findings, adopting gender-inclusive educational practices that consider the differing perceptions and attitudes towards learning design and student readiness among males and females is beneficial. It could involve incorporating diverse learning styles, communication styles, and social interactions in educational settings better to accommodate the needs and preferences of all students, regardless of their gender. It's important to note that these suggestions are general and must be tailored to specific educational contexts, populations, and research questions. Consulting with experts in the field of education, conducting further research, and considering the unique characteristics of the target population are recommended when implementing strategies based on these findings.

5.2. Position

The findings from the data analysis (Figure 2) indicate that position, specifically the roles of dean, assistant or vice dean, chairperson or vice chair, and lecturer, has a significant effect on curriculum management, student readiness, and technology and innovation, as reflected by the low p-values of .010, .030, and .044, respectively. It suggests that individuals' positions within an educational or organizational context influence their perceptions and behaviours related to these variables. For instance, individuals in leadership roles such as dean or chairperson have different perspectives and responsibilities compared to those in lecturer roles, impacting their approach to curriculum management, student readiness, and technology and innovation in online learning.

The significant effects of Position on curriculum management, student readiness, and technology and innovation are attributed to the unique roles and responsibilities associated with each position. For example, deans and chairpersons have higher authority and decision-making power in managing the curriculum and promoting Technology and Innovation in online learning. In contrast, assistant or vice deans and lecturers have different levels of involvement and influence. These findings are consistent with previous research highlighting the significance of leadership roles in educational settings and their impact on various aspects of online learning (Rovai, 2003).

However, the analysis did not find a significant effect of position on institution support and learning design, as indicated by the *p*-values of .134 and .211, respectively. It suggests that position does not strongly predict individuals' perceptions or behaviours related to these variables. It's important to note that other factors, such as organizational culture, institutional policies, and individual characteristics, also shape perceptions and behaviours related to institution support and

learning design in online learning. Further research is needed to explore the potential interplay of these factors and their influence on the relationship between position and these variables.

The findings also highlight the potential interactions between position and the factors of online learning success (curriculum management, student readiness, technology and innovation, institution support, and learning design). Interactions occur when the effect of one variable on an outcome is dependent on the level of another variable. In this case, the impact of position on curriculum management, student readiness, and technology and innovation varies depending on the levels of the factors of online learning success. It suggests other factors modulate or mediate the relationship between position and these variables. Further investigation and statistical analysis, such as regression analysis or ANOVA with interaction effects, are needed to understand these interactions' nature and direction better.

It's important to interpret these findings with caution, as the results were context-dependent and specific to the sample and research design of the study. The study's limitations, such as sample size, measurement instruments, and generalizability, should also be considered when interpreting the findings. Further research with more extensive and diverse samples, multiple methods of data collection, and longitudinal designs provide more robust and generalizable insights into the relationship between position, factors of online learning success, and the variables of interest.

Several recommendations can be made based on the data analysis findings. The significant effects of position on curriculum management, student readiness, and technology and innovation suggest that individuals' positions within an educational or organizational context influence their perceptions and behaviours related to these variables in the context of online learning. Institutions should consider the unique roles and responsibilities associated with different positions, such as dean, assistant or vice dean, chairperson or vice chair, and lecturer, and provide appropriate support, training, and resources to individuals in these roles to enhance their effectiveness in managing the curriculum, promoting student readiness, and leveraging technology and innovation in online learning. The presence of interactions between position and the factors of online learning success (curriculum management, student readiness, technology and innovation, institution support, and learning design) suggests that other factors influenced the relationship between position and these variables. Further investigation and statistical analysis, such as regression analysis or ANOVA with interaction effects, provide more insights into the nature and direction of these interactions and help institutions better understand how different factors interact and influence individuals' perceptions and behaviours related to online learning.

While the position was found to have a significant effect on some variables, it did not significantly influence institution support and learning design. It suggests that other contextual factors, such as organizational culture, institutional policies, and individual characteristics, shape perceptions and behaviours related to these variables. Institutions should consider these factors and incorporate them into their online learning strategies and approaches to create a supportive and conducive learning environment for all stakeholders involved. The findings from this study are context-dependent and specific to the sample and research design used. Further research with larger and more diverse samples, multiple methods of data collection, and longitudinal procedures can provide more robust and generalizable insights into the relationship between position, factors of online learning success, and the variables of interest. Institutions and researchers can continue to investigate and explore the role of position and other contextual factors in shaping perceptions and behaviours related to online learning to inform evidence-based practices and policies. The data analysis findings suggest that position has a significant effect on certain variables related to online learning, and institutions should consider the unique roles and responsibilities associated with different positions in their online learning strategies and policies. Further research, exploration of interactions with other factors, consideration of other contextual factors, and continuous professional development can all contribute to enhancing online learning experiences and outcomes for all stakeholders involved.

5.3. Year of Experience

The finding that year of experience (Figure 3) has a significant effect on perceptions related to curriculum management, institution support, learning design, and technology and innovation in the context of online learning is consistent with prior research that suggests that experience plays a role in shaping perceptions and attitudes towards technology-mediated learning environments (Chen, 2019; Chen et al., 2010). Educators or practitioners with more year of experience develop a better understanding of the importance of curriculum management, institutional support, learning design, and technology and innovation in the online learning context, which influences their perceptions. For example, individuals with more year of experience have a deeper understanding of how curriculum management impacts the quality of online courses, including factors such as alignment with learning objectives, instructional strategies, and assessment methods (Bernard et al., 2004). Similarly, more experienced educators are more aware of the significance of institutional support, such as technical support, training, and resources, in facilitating compelling online learning experiences for students (Bozkurt et al., 2017; Tas et al., 2021).

Furthermore, the finding that year of experience significantly affects perceptions related to learning design and technology and innovation aligns with prior research that highlights the importance of instructional design and innovative use of technology in online learning (Graham et al., 2013; Picciano, 2017). Educators or practitioners with more experience have a better understanding of practical learning design principles and the use of technology tools and innovations to enhance online learning experiences, which positively influence their perceptions of these variables (Bailey & Card, 2009). However, the lack of significant effect of year of experience on perceptions related to student readiness suggests that year of experience was not a significant predictor of perceptions related to student readiness in the context of online learning. Other factors, such as student characteristics, motivation, and prior experience with online learning, play a more significant role in shaping perceptions of student readiness (Rovai, 2003).

In conclusion, the finding that year of experience significantly affects perceptions related to curriculum management, institution support, learning design, and technology and innovation in the context of online learning suggests that experience influences how educators or practitioners perceive these variables. However, it is not a significant predictor of perceptions related to student readiness. This finding adds to the existing literature on the role of experience in shaping perceptions of online learning variables. It has implications for professional development and training programs for educators and practitioners involved in online learning contexts.

Institutions and organizations involved in online learning should recognize the potential influence of year of experience on individuals' perceptions. It includes considering the year of experience of faculty, administrators, and other stakeholders when planning, designing, and implementing online learning initiatives. Experience shapes perceptions, attitudes, and expectations related to various aspects of online learning, which should be considered in decision-making processes. Faculty and administrators with varying year of experience in online learning have different needs and challenges. Providing targeted support and professional development opportunities that cater to individuals with varying experience levels' unique needs helps enhance their effectiveness in managing curriculum, supporting institutions, designing effective learning experiences, and leveraging technology and innovation in online learning settings. It includes workshops, training sessions, mentoring programs, and access to resources and best practices that align with individuals' specific needs and expectations based on their year of experience.

Encouraging collaboration and knowledge sharing among faculty and administrators with different year of experience in online learning facilitates the cross-pollination of ideas, best practices, and innovative approaches. Creating opportunities for regular interaction, networking, and sharing of experiences and insights among individuals with varying experience levels helps bridge knowledge gaps and foster a culture of continuous learning and improvement in online learning initiatives. It is important to note that these recommendations are based on the available evidence and should be considered in the context of the specific study and the population's

characteristics. Further research and contextual considerations are necessary for the practical implementation of these recommendations.

6. Conclusion

The data analysis indicates that gender, position, and year of experience affect different aspects of online learning. Gender has significant effects on learning design and student readiness, while not significantly affecting curriculum management, institution support, and technology and innovation. The position substantially affects curriculum management, student readiness, and technology and innovation but not institution support and learning design. Year of experience significantly affects curriculum management, institution support, learning design, and technology and innovation, but not student readiness. These findings highlight the importance of considering the role of gender, position, and year of experience in shaping perceptions and behaviours related to online learning. Institutions and organizations involved in online learning should consider these factors when planning, designing, and implementing online learning initiatives. Providing targeted support, fostering collaboration and knowledge sharing, conducting ongoing research and evaluation, and adopting a multi-dimensional approach contribute to enhancing the effectiveness of online learning initiatives (Apriani, 2021; Blundell et al., 2020; Tas et al., 2021). It is important to note that these conclusions are based on the specific data and statistical analysis provided in the study and should be interpreted within the context of the research question and population studied. Further research and contextual considerations are necessary for a comprehensive understanding of the effects of gender, position, and year of experience on perceptions related to online learning.

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