Teachers’ Technological Self-Efficacy: Perceptions and Online Teaching Resistance
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Abstract
Recent studies have suggested that teaching self-efficacy is an important factor for increased online quality instruction. In the face of the accelerating expansion of online learning offerings across higher education, instructional deficits and teachers’ reluctance to teach online have been widely documented. One way for higher education institutions to support professors’ transition to online teaching may be to improve their perceived online self-efficacy (Gbemun et al., 2020; Corry and Stella, 2018; Reid, 2012). Against this background, the present study adopts a correlational research design to explore professors’ levels of online self-efficacy perceptions and examine the extent to which these perceptions relate to online teaching resistance or adoption. For this purpose, a number of 60 professors from different institutions have been randomly selected and requested to complete a 5 likert scale questionnaire. The data have been suggested to frequency, percentage and correlational analyses. The results indicate that online teaching self-efficacy perceptions differ across institutions and disciplines. Furthermore, it can be inferred from the analyses that the lack of belief in the ability to teach online can be translated into professors’ reluctance to provide quality online instruction. The findings suggest directions for faculty development to empower professors through pedagogical training and to enhance their online
self-efficacy perceptions and quality instruction adoption.

Keywords: Online teaching, higher education, self-efficacy, perceptions.

0. Introduction
Due to the present circumstances compelled by the sudden outbreak of the COVID-19, life has known tremendous changes in almost all of its aspects. One of the aspects that have undergone unprecedented changes in Morocco is the sector of education. Across the country, higher education institutions have increased their online and hybrid course offerings. The importance of information and communication technology (ICT) for teaching and learning has been increasingly recognized. However, at a time of higher institutions closure during the COVID-19 pandemic, the need for evidence on the adoption of online teaching, and professors’ perceptions about this newly imposed mode of instruction is greater than ever.

While university closures were decided centrally by the Moroccan government, it was largely up to local universities and teachers to plan and organize learning during this period. Instead of teaching in school premises and classrooms, professors were asked to make use of the various types of distance learning options provided by the ministry in charge of higher education and scientific research in Morocco. Such options include platforms like Moodle, Google Classroom, TEAMS, ZOOM, MEET, E-MAIL as well as Social Networks. Additionally, many students did not physically attend face-to-face classes for a temporary period, and in this context, expectations are high that online teaching can effectively support students’ learning.

The importance of online teaching and learning goes beyond the current pandemic. The Moroccan educational system sets digital instruction at the heart of its objectives and considers it a fundamental measure to up haul the quality of the Moroccan educational system. Based on this, the strategic vision (2015-2030) reads:

Les technologies éducatives comprennent les programmes et logiciels interactifs, les ressources numériques, les différents outils et équipements électroniques, ainsi que les réseaux et les
systèmes d’information et les services qu’ils offrent tels que l’enseignement à distance, la visioconférence, les bibliothèques numériques, etc. L’intégration des technologies éducatives a pour objectif d’élever la qualité de l’éducation et de la formation en facilitant l’acquisition des connaissances, en motivant davantage l’apprenant et en renforçant l’attractivité de l’École. L’intégration des technologies a aussi pour objectif de qualifier l’apprenant à accéder à la société du savoir, à maîtriser les stratégies de l’enseignement à distance et à construire les projets personnels au niveau de la recherche et de l’innovation. (p. 67)

It is obvious that this reform emphasizes the potential of ICT use and online teaching to improve quality-based instruction, enhance students’ performance and acquisition of new knowledge, and develop professors and learners with the online requisite skill to effectively integrate the field of knowledge, research, and innovation. Nevertheless, the implementation of such measures has been confronted to several challenges. One challenge that professors face as institutions of higher education is the transition toward increasing their online learning offerings and their documented reluctance to teach online. To gain understanding of the challenges professors face when shifting from on-site education to distance education, it is vital to investigate their perceptions of online teaching self-efficacy and how they relate to online teaching adoption or resilience. To meet this objective, the present study sets out to answer the following research questions:

1. What levels of online teaching self-efficacy and adoption do professors exhibit?
2. How do professors’ online teaching self-efficacy perceptions relate to their online teaching adoption?

This article is structured as follow. The first section reviews research related to teachers’ perceived online teaching self-efficacy and their behavior towards digital teaching use. The second section discusses the theoretical framework. The following section provides an account of the research design and research methods utilized in the present study. The results are displayed in section four and discussed based on reviewed studies in section five. The current study closes with conclusions and practical implications.
1. Review of the Literature

Several studies have suggested that the transition from traditional face-to-face classroom environments to virtual classroom contexts require professors to change their role (Berge, 2005). Across these studies, professors have reported concerns related to their perceived ability to teach online successfully – that is, their teaching efficacy. Teaching efficacy or teaching self-efficacy is a construct that represents teachers’ confidence in their ability to facilitate the development of students’ knowledge, abilities, and values (Tschannen-Moran, Hoy & Hoy, 1998). Bandura (1977) found self-efficacy to be important because people with high self-efficacy, when facing negative outcome expectations, are more likely to make an effort to change their work environment and persist at their work. Conversely, he found people with low self-efficacy were more likely to have feelings of hopelessness and less likely to persist in similar situations.

Professors’ self-efficacy continues to be of interest to both educators and researchers. There is a consensus that the contexts of face-to-face and distance or hybrid education differ greatly. This new mode of instruction necessitates professors’ adaption to new teaching environments and acquisition of distinct online-related skills. The transition to online teaching, therefore, warrants further investigation. In this context Bandura (2006) states:

One cannot be all things, which would require mastery of every realm of human life. People differ in the areas in which they cultivate their efficacy and in the levels to which they develop it even within their given pursuits. For example, a business executive may have a high sense of organizational efficacy but low parenting efficacy. Thus, the efficacy belief system is not a global trait but a differentiated set of self-beliefs linked to distinct realms of functioning (p. 307).

Based on Bandura’s contention, it is believed that online professor’s resilience might be related to current teaching efficacy beliefs professors hold about online teaching. As professors become exposed to a completely new teaching environment, they need to adapt to discrete new functioning. Accordingly, Berge (1995) explained the
diverse roles online professors must execute to be effective, which he classified as pedagogical, social, managerial, and technical. In their study, Bawane and Spector (2009) took Berge’s conceptualization a step further and categorized an inclusive list of eight roles played by online professors. These include being a professional, pedagogical, social, evaluator, administrator, technologist, advisor/counselor, and researcher. In addition to these varied roles, Hogan and McKnight (2007) warned that university online instructors may be susceptible to burnout based on their research using scales that examine emotional exhaustion, depersonalization, and personal achievement related to online teaching.

Following the same line of research, Shea (2007) examined 386 professors teaching online in an attempt to classify the top motivating and inhibiting factors for online teaching. Among the most prevalent factors pertaining to teaching online resistance were concerns about online educational quality, unfamiliarity with efficient online pedagogy, the absence of face-to-face interaction, and insufficient opportunities to learn how to teach online before doing so.

Online quality learning has also been the subject of investigation of several large-scale studies. These studies suggest that professors and instructors’ belief in their technical and managerial competence is an important factor in the adoption of instructional technologies and in quality online instruction. A case in point is the International Computer and Information Literacy Study (ICILS), (2014). This study is a new contribution to the knowledge base on digital competences and the integration of technology in teaching and learning. It surveyed and assessed 60 000 eight graders in more than 3300 schools from 21 education systems, including 9 EU countries. The findings pointed to the importance of teacher confidence in using ICT for the adoption by teachers of such technologies in their teaching. The findings revealed that there is also a significant variation between the ICT self-efficacy of frequent and infrequent pedagogical users of ICT, with infrequent users reporting a lower confidence in their own ability to complete different tasks on the computer. Generally, teachers demonstrated more confidence about their ability to use many computer applications and carry out different tasks, but with a view to innovative teaching tools such as teaching analytics and engaging students it is worth noting that
the lowest levels of confidence were found for using a computer for “monitoring student progress” and “adopting effective managerial and instructional strategies”.

Fraillon et al. (2020) investigated additional variables pertaining to teachers’ online self-efficacy perceptions and the adoption of technology in online teaching settings. Based on a large-scale data, they pointed that, on average, more than three quarters of teachers were more confident in finding useful teaching resources on the internet, produce presentations, with simple animation functions, prepare lessons that involve the use of ICT by students and assess students’ learning. Notably lower levels of confidence were recorded among teachers when using a learning management system and involving students in discussion forum or user group on the internet.

Similarly, Hatlevik and Hatlevik, (2018) addressed teachers’ ICT self-efficacy for educational purposes, and examined the assumed antecedents of teachers’ self-efficacy. Data from 1,158 teachers at 116 Norwegian schools was analyzed. The results indicated that teachers’ self-efficacy for using ICT in their teaching practice was associated with their use of ICT in teaching and their general ICT self-efficacy. In addition, the results showed that collegial collaboration among teachers had a positive association with the use of ICT in their teaching practice. Online self-efficacy can, therefore, be a strong predictor in explaining how professors intend to use web-based continuing learning environments (Robinia & Anderson, 2010; Liang, Wu & Tsai, 2011).

The literature confirms that online teaching is in continuous progress offering new challenges to teachers and faculty professors and requiring an effective adoption of online instructional measures and techniques. However, and to the best of our knowledge, there is a paucity of research on the relationship between online teaching efficacy and effective use of online teaching-related skills in the Moroccan context. An initial step to understanding the assumed professors’ resistance to online teaching involves revealing and understanding their levels of perceived online teaching. Unveiling the various aspects that contribute to professors developing online teaching efficacy will be of substantial assistance in facilitating more online teaching participation. Therefore, the purpose of this study is to examine university professors’
capabilities in implementing various technical, managerial, and instructional strategies in online settings and investigate possible relationship existing between those perceived abilities and online teaching adoption.

2. Theoretical Framework
The research variables investigated in this study as well as the adopted model are drawn from concepts of self-efficacy theory derived from Bandura socio-cognitive theory (1982, 2006). As a central component of social cognitive theory, self-efficacy addresses the complex interaction between cognitive beliefs, environment, skills, emotion, and behaviour. It is considered central to an individual’s ability to make change, influencing the choices a person makes regarding new situations or skills, such as using technology for teaching purposes (Bandura, 2006). Bandura points out that the behaviour (online teaching adoption) is more effectively predicted by the beliefs the individuals (professors) have regarding their capabilities than what they are actually capable of accomplishing. Bandura (2006) states that perceived self-efficacy highly influence whether professors believe they can successfully deal with challenging situations. One's self-efficacy may also determine whether they choose to engage themselves in a given activity and may determine the amount of effort they invest in a given task. Higher levels of self-efficacy are positively linked to greater persistence in new tasks (Schunk & Meece, 2005).

Based on the cyclical nature of teacher efficacy model, teachers might chose to avoid or give up on online teaching task due their lack of beliefs in their ability to have the necessary skills to provide effective online offerings. However, a strong self-efficacy perception enables teachers to face potentially negative outcome expectations with regard to online teaching with more determination to change behavior.

As pictured in figure 1, there are several sources of information that drive the formation of self-efficacy. The first source is verbal persuasion. Attending courses, seminars, or workshops on the topic on online teaching provides sources of verbal persuasion to boost online teaching efficacy levels. The second source includes vicarious experience. Working with colleagues or mentors skilled in online
teaching provides vicarious experiences to increase online teaching efficacy levels. The third source of online self-efficacy involves mastery experience of teaching online which has the most influence to increase online teaching efficacy (Bandura, 2006). Based on this model, professors cognitively process judgments of capabilities and deficits from various sources of information to develop a sense of teaching competence. This perception is merged with an analysis of the teaching task at hand, which takes into consideration available resources and the constraints of a particular teaching context. Tschannen-Moran et al.'s (1998) define a teacher's efficacy belief as, “the teacher's judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated” (p. 233). In this study, the definition was expanded to incorporate a professor’s capability to bring about desired outcomes in an online teaching environment.

Tschannen-Moran et al.'s (1998) model underlines the strong cyclical nature of professors’ efficacy, which is increased by mastery experiences leading to analysis of teaching task and assessment of personal teaching ability, and therefore, encouraging greater effort, persistence, and performance on task.

Figure 1. The cyclical nature of teacher efficacy (Tschannen-Moran et al. 1998)
3. Method
The present study examines university professors’ levels of online teaching self-efficacy perceptions and online teaching adoption through their perceived ability to engage students, provide effective instructional strategies, manage their online classrooms, and possess necessary computing skills. It also aims to investigate the relation between these perceptions and online teaching adoption. For this purpose, the study has adopted a correlational research design to explore the hypothesized relationships that may exist between effective online instruction resilience and their online perceived capabilities.

3.1. Participants
The study has utilized a convenience sampling design to recruit a number of 60 faculty professors from different disciplines and Faculties in Chouaib Doukkali University. The sampling process includes professors from the Faculty of Letters and Humanities, Faculty of Sciences and Technology, Faculty of Sciences and Education and National School of Commerce and Management. Although convenience sampling is highly vulnerable to selection bias, it has been proven to be effective in exploratory studies, especially when the topic under investigation is still in its infancy (Creswell & Creswell, 2017).

3.2. Data collection
A review of the literature did not disclose a measure specifically concerned with online teaching efficacy of faculty professors. The present study has adopted Tschannen-Moran and Hoy’s (2001) Teachers' Sense of Efficacy Teaching Scale (TSETS) and adapted it to the Moroccan university context. Items in the TSETS were developed based on the “cyclical nature of teacher efficacy” model and evolved from an extensive search of the literature of all known studies and existing measures of teacher efficacy (Robinia & Anderson, 2010). The adopted TSETS was employed to survey the online teaching efficacy beliefs of faculty professors in the areas of student engagement, instructional strategies, classroom management, and use of computers. The modified version of the TSET scale included a five-point Likert scale questionnaire ranging from strongly disagree to strongly agree. The questionnaire also comprised twenty items to evaluate professors’ online teaching self-efficacy beliefs and online teaching adoption.
Reliability for the investigated subscales are reported as (a) efficacy in instructional strategies, .94; (b) efficacy in classroom management, .93; (c) efficacy in student engagement, 0.93; and efficacy in computing skills, 0.86 (Tschannen-Moran and Hoy's, 2001).

3.3. Data analysis
The data obtained from the present study is performed using quantitative methods. It is analyzed using both descriptive and inferential statistics. The descriptive statistics are employed to screen out the data as a first step and to describe professors’ levels of online teaching self-efficacy perceptions and adoption of various instructional, managerial and technical strategies. In this regard, we have utilized analysis means and percentages. The study also draws on inferential statistics using Pearson product-correlation. This method of analysis allows the investigation of potential relationships existing between the variables under examination and reveals the direction and magnitude of these associations.

4. Results
4.1. Professors’ online teaching self-efficacy perceptions
The Online teaching Self-efficacy Perceptions scale is used to collect information from professors from different faculties and schools about their perceived online teaching abilities. This variable assesses their levels of self-efficacy perception to successfully employ practices meant to motivate students, help them value online learning, and develop their critical thinking skills in online settings. This variable also measures professors’ perceptions of their capability in applying various teaching methodologies to implement alternative instructional strategies, adjust online lessons to the proper level for individual students, and use a variety of online assessment techniques. Online classroom management self-efficacy perception is an additional sub-variable that has been investigated in this study. This sub-scale examines professors’ efficacy beliefs in deploying a variety of measures to control disruptive behavior in online courses, establish routines, and make their expectations clear to students. This study finally explores the participants’ competence in employing computing skills and using different teaching and learning platforms. Table (1) exhibits the
percentages and means of professors’ online self-efficacy perceptions subscales.

Table 1. Descriptive results of professors’ online teaching-Self Efficacy perceptions

<table>
<thead>
<tr>
<th>Variables</th>
<th>SD</th>
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<th>A</th>
<th>SA</th>
<th>Mean</th>
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<tbody>
<tr>
<td>Student engagement</td>
<td>17%</td>
<td>25.6%</td>
<td>17.4%</td>
<td>20.4%</td>
<td>16.7%</td>
<td>3.11</td>
</tr>
<tr>
<td>Instructional strategies</td>
<td>14.2%</td>
<td>20.8%</td>
<td>22.6%</td>
<td>21.7%</td>
<td>20.8%</td>
<td>3.93</td>
</tr>
<tr>
<td>Classroom management</td>
<td>21%</td>
<td>22.4%</td>
<td>20.2%</td>
<td>15.9%</td>
<td>19.6%</td>
<td>3.14</td>
</tr>
<tr>
<td>Computer use</td>
<td>11.2%</td>
<td>13.1%</td>
<td>15.0%</td>
<td>29.9%</td>
<td>30.8%</td>
<td>3.56</td>
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It is apparent that 42% of participants report low self-efficacy perceptions in involving students in online courses compared with only 19% who report high self-efficacy. The descriptive results also reveal that 35% have lower self-efficacy perceptions in providing effective online instructional strategy, while 24% indicate that they believe in their ability to implement efficient instructions in their online lessons. Additionally, 43% of university professors state having low beliefs in their abilities to manage online classrooms. However, the results suggest that 60% of participants report having high self-efficacy perceptions in their computing skills and use of different digital platforms.

4.2. Professors’ online teaching adoption

The online teaching adoption variable is measured in this study by asking professors to rate their levels of agreement with the adoption of the previously measured practices in table (1). These practices include instructional, managerial, and technical measures necessary to involve students in online courses, provide them with adequate instructional strategies, and employ necessary computing skills.
Table 2. Descriptive results of professors’ online teaching adoption

<table>
<thead>
<tr>
<th>Variables</th>
<th>SD</th>
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<th>U</th>
<th>A</th>
<th>SA</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student engagement</td>
<td>40.2%</td>
<td>17.8%</td>
<td>11.21%</td>
<td>20.6%</td>
<td>10.3%</td>
<td>2.43</td>
</tr>
<tr>
<td>Instructional strategies</td>
<td>39.3%</td>
<td>21.5%</td>
<td>11.2%</td>
<td>16.4%</td>
<td>11.2%</td>
<td>2.39</td>
</tr>
<tr>
<td>Classroom management</td>
<td>34.6%</td>
<td>21.5%</td>
<td>14.0%</td>
<td>16.8%</td>
<td>13.1%</td>
<td>2.52</td>
</tr>
<tr>
<td>Computer use</td>
<td>21.7%</td>
<td>12.3%</td>
<td>7.6%</td>
<td>29.2%</td>
<td>29.2%</td>
<td>3.32</td>
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</table>

Table (2) above suggests that 58% of participants disagree that they effectively use strategies to foster students’ online engagement and only 30% are in agreement. The results further demonstrate that 69% of professors indicate that they do not adopt variety of online instructional strategies and assessment approaches to meet students’ learning styles compared with only 13% who are able to use different instructional strategies in online settings. Additionally, 56% claim that they do not employ effective online classroom management techniques; yet, 60% report that they adopt different computing skills and digital platforms in their online courses. Overall, the mean scores of online teaching adoption is relatively low compared with their rated online teaching self-efficacy.

4.3. The relationship between online teaching self-efficacy perceptions and online teaching adoption

The correlational results reveal a strong positive relationship between professors’ online teaching self-efficacy beliefs and online teaching adoption (r=0.666, p<0.001). To put it differently, lower self-efficacy perception about the use of various online instructional, management, and technical skills is conducive to professors’ resistance to online teaching and that increased online teaching self-efficacy contributes to increased online teaching adoption.
Table 3. Correlational results of online teaching self-efficacy and online teaching adoption

<table>
<thead>
<tr>
<th>Overall online teaching self-efficacy perception Correlation Coefficient</th>
<th>Overall efficacy adoption/resistance Correlation Coefficient</th>
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</thead>
<tbody>
<tr>
<td>Overall online teaching self-efficacy perception Correlation Coefficient</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
</tr>
<tr>
<td>Overall online teaching adoption Correlation Coefficient</td>
<td>.666**</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
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**. Correlation is significant at the 0.05 level (2-tailed)

5. Discussion

A special concern of this study is to examine faculty professors’ levels of online teaching self-efficacy perceptions and online teaching adoption. These two variables have been investigated in terms of professors’ perceptions about and use of effective strategies to engage students, provide instruction, manage classrooms, and employ various computer skills in online settings. The results indicate that the majority of the professors demonstrate low self-efficacy levels in involving students in online courses, managing their online classrooms, and providing effective online instructional strategies, respectively. Additionally, professors have demonstrated resistance to deploy efficient instructional strategies to provide online content, use appropriate managerial strategies to establish a positive learning atmosphere, and utilize adequate online motivation techniques to engage students. However, the findings suggest that most participants report having a high self-efficacy perception and actual use of computing technology. This could be attributed to professors’ resistance to adapt to new environments (Berge, 2005). The shift from
the traditional face-to-face environment to an off-site teaching and learning setting requires professors to change their roles and adopt new ones. These include being a professional, pedagogical, social, evaluator, administrator, technologist, advisor/counselor, and researcher (Bawane & Spector, 2009).

Professors’ resistance to change constitutes a significant barrier to be fully involved in the development of a successful online course. Based on previous related studies, professors’ online teaching resistance can be attributed to several contextual and individual factors. In this regard, McLoughlin et al., (2008) states:

First-order barriers are external to the individual and the job and typically involve unavailable resources (e.g. lack of equipments, time, or training)...Second-order barriers are internal to the individual and their professional roles and often involve beliefs about teaching, beliefs about technologies, established practices, and unwillingness to change. (p.101)

Accordingly, professors’ reluctance to adopt online teaching can be a result of various external and internal barriers. Online teaching effectiveness requires faculty professors to abandon many conventional practices and adopt a more learner-focused pedagogy (Hatlevik & Hatlevik, 2018). This transition constitutes a challenge for most professors as they are required to learn the instructional technology and to learn the learner-oriented approach simultaneously. For this to be achieved, facilitating factors for online teaching should be taken into account. These include pedagogy and technology-related training, availability of technological equipments, and repeated exposure to online experiences (Shea, 2007).

The findings of the present study find support in previously reviewed studies. The International Computer and Information Literacy Study’s (ICILS), (2014) report indicates that teachers reported high confidence about their capabilities to employ many computer applications and carry out different tasks. However, low levels of online teaching self-efficacy are found with reference to monitoring students’ development and adopting efficient managerial and instructional methodology. The results also find resonance in another large-scale study. Fraillon et al.,
(2020) explored teachers’ perceived online self-efficacy and the adoption of online teaching settings. The researchers report that more than three quarters of teachers were more confident in finding useful teaching resources on the internet, produce presentations, with simple animation functions, prepare lessons that involve the use of ICT by students and assess students’ learning. Yet, lower levels of confidence are recorded among teachers when using innovative management measures and involving students in discussion forum or user group on the internet.

Another pattern of result emerged from the correlation analysis. It points out that online teaching self-efficacy perception positively correlates with online teaching adoption. This finding corroborates Fraillon et al (2020) and Hatlevik and Hatlevik’s (2018) results. They claimed that teachers’ self-efficacy regarding the use of ICT and provision of quality teaching strategies influence their levels of commitment to online teaching. Liang, Wu and Tsai, (2011) also stated that professors’ attitudes toward web-based instruction had a significant positive relationship with their self-efficacy scores and that online self-efficacy can be a strong predictor in explaining how professors intend to use web-based continuing learning environments. The findings of the present study further correspond with Robinia and Anderson (2010) who found a significant correlation between the number of online teaching experiences and online teaching self-efficacy.

The findings are also theoretically supported. The adopted model emphasizes the cyclical nature of online teaching self-efficacy, which regulates the amount of effort and persistence to achieve the desired outcome. Based on Bandura’s theory (2006) and Tschannen-Moran et al., (1998) model. Individuals with low self-efficacy have tendency to adopt avoidance goals, invest less efforts and become therefore more resilient against potential difficulties in new teaching situations. This model further demonstrates how levels of self-efficacy information affect professors’ degree of determination to invest the necessary efforts to achieve the desired objectives. Because university professors with low levels of online teaching self-efficacy judgments have more difficulties overcoming obstacles encountered during first-time experience could become more resilient against potential difficulties and therefore online teaching future involvement.
6. Conclusion and Implications
As described above, self-efficacy in teaching is important to examine because professors with higher teaching self-efficacy are more likely to persist through negative outcome expectations and experiences. That is, they are more likely to work through tough situations. The findings in this study suggest that the majority of professors teaching different disciplines have a low confidence in teaching online and using effective managerial and instructional practices. In other words, professors’ perceptions about and use of effective strategies to engage students, provide instruction, manage classrooms, and employ various computer skills in online settings are significantly related.

These are factors that can be addressed with faculty development interventions such as training and increased support structures. Such training and support would need to address the concerns professors have about student learning as well as technical concerns about computer use of online instructional practices. Faculty training could also more transparently address their self-efficacy related to online teaching. Exemplar courses, research-based instructional design approaches, and testimonials from other professors can be powerful supports for instructors learning how to teach online by reducing their skepticism about the quality of online courses. Based on the findings of the current study, professors adopt quality online teaching when they become more confident in their ability to manage an online class, provide appropriate online teaching methods, and engage students in the learning process. This can be achieved through substantial exposure to online teaching experiences. The challenge here is supporting professors early in their online teaching experience so that they become familiar with it and do not renounce on teaching online before they gain this self-efficacy. More research is, therefore, needed that investigates the product of different training and support approaches to improve professors’ online self-efficacy.

Ultimately, our data did indicate the importance of online self-efficacy sub-components in adopting teaching practices that are appropriate to online settings. These practices may not be in the traditional directions that training and support suggest. An emphasis on the mechanics of online teaching rather than on student learning outcomes and do-able best practices that new online professors can implement early for
success may negatively affect the opportunity to build strong self-efficacy. The big take-away when looking at these results is that early support for novice professors involved in the online teaching process should concentrate on best practices that contribute to student engagement, and ideas about course management that are simple to apply in early course attempts. Afterward training can expand and broaden instructional practices and computer skills. Our results corroborate other research in equipping professors with necessary tools to improve their online self-efficacy perceptions. Currently we need to take those insights and use them as a lens to reflect on our current practices.

References


