INSTRUCTIONAL LEADERSHIP AND TEACHER EFFICACY IN ONLINE LEARNING:BASIS FOR PROPOSED PROFESSIONAL DEVELOPMENT FRAMEWORK

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ABSTRACT

As a result of the COVID-19 epidemic, community quarantine rules mandated a digitization drive, forcing educational institutions all across the world to reimagine traditional classroom instruction and convert to an online learning paradigm. This study looked at the link between instructional leadership and teacher efficacy in online learning.

A descriptive survey design was used to describe teachers' profiles, deans' and principals' instructional leadership, and teachers' self-efficacy and collective efficacy. The association between instructional leadership and teacher efficacy was investigated using correlational method. The qualitative design was used to delve deeper into the quantitative findings of the study. The research instruments were distributed online to the participants. A total of 7 deans/principals, 197 teachers, and 100 students participated in the study. The study revealed that deans/principals were continually observing various aspects of instructional leadership, while teachers demonstrated sufficient self-efficacy and collective efficacy in online learning. When teachers' self-efficacy in online learning was classified by department, field of specialization, and number of seminars/trainings, a significant difference was discovered. When grouped by sex, department, and field of specialization, there was a significant difference in collective teacher efficacy in online learning. The study revealed a positive relationship between instructional leadership and teacher efficacy in online learning. Technology, training, administration, stakeholders, and self-motivation were factors revealed as enablers and restraints for teacher efficacy in online learning. It was concluded that the dean's or principal's instructional leadership behaviors influence instructors' ability to provide meaningful education in the face of an unanticipated shift to online learning. Moreover, continuing professional development is a crucial approach for allowing teachers to obtain new abilities that will help them grow and succeed at work, especially in unusual contexts. It is

recommended that the findings of this study could be used to construct a framework for ongoing professional development for teachers.

Keywords: COVID-19, pandemic, online learning, instructional leadership, teacher efficacy, teacher self-efficay, collective teacher efficacy, professional development, leadership development

INTRODUCTION

COVID-19 pandemic has had a huge impact on education sector. The Community quarantine requirements necessitate a digitization push, forcing educational institutions all around the world to reinvent traditional classroom instruction and shift to an online learning paradigm for ongoing access to education. The pandemic and the accompanying implementation of social distancing protocols resulted in a quick transition to online learning for most higher education institutions around the world in March and April 2020, irrespective of whether or not teachers were prepared (UNESCO IESALC, 2020). This move from traditional face-to-face to online learning entails the upskilling of school leaders and teachers in order to cope with the new learning modalities, ensuring that learning remains accessible to students even when faced with challenges. As a result, it has become evident that the educational system is vulnerable to external threats (Bozkurt & Sharma, 2020). Ribeiro (2020) correctly pointed out that the digital transformation of instructional delivery comes with a number of logistical and behavioral changes. Teachers' capacities to educate online are crucial to the quality of online learning in today's world.

In order to ensure that all students have equal access to high-quality teaching and learning, it is now necessary to examine a variety of factors related to teachers' adoption and use of online teaching, particularly in order to assist institutions in better improving teaching and learning in online spaces (Kebritchi et al., 2017). It is critical to recognize that teachers' judgments of their preparation for online learning are a complex issue (Martin et al., 2019). Teachers' conviction in their efficiency in terms of student engagement, instructional tactics, classroom management, and student discipline, for example, is one of these views; hence, their role as one of the drivers of innovation and progress in schools (Gilbert, Tait-McCutcheon & Knewstubb, 2021). Teacher efficacy is one of the most important factors in predicting teacher effectiveness and performance in schools (Flood & Angelle, 2017; Derrington &

Angelle, 2013; Casanova & Azzi, 2015; Veisi, Azizifar, Gowhary & Jamalinesan, 2015; Karabiyik & Korumaz, 2014; & Gurcay, 2015). Teachers' self-efficacy refers to teachers' perceptions of their ability to influence and cope with students who struggle with motivation and learning (Yilmaz & Cokluk Bokeoglu, 2008), whereas collective teacher efficacy refers to teachers' perceptions that their collective efforts can have a positive impact on students (Yilmaz & Cokluk Bokeoglu, 2008). (Goddard, 2001).

The leadership conduct of supervisors has a favorable impact on the efficacy of teachers. There is a link between principal behavior and teacher efficacy, according to Walker and Slear (2011). This suggests that teachers' perceptions of administrators' leadership conduct have an impact on their ability to teach effectively (Staggs, 2002). Individual teachers' mentoring and their perceptions regarding principals' leadership actions have a favorable impact on their overall efficiency. In a research of the links between school administrators' instructional leadership behaviors and teacher efficacy, Calik, Sezgin, Kavgaci, and Kilinc (2012) discovered that teachers' efficacy rises depending on the instructional leadership they perceive. Furthermore, the association between instructional leadership and collective teacher efficacy was mediated by teachers' self-efficacy. Furthermore, Nir and Kranot (2006) discovered that the good experiences that teachers have on the work, mostly in terms of satisfaction, mediate the Association between the principal's leadership style and personal teacher efficacy.

Furthermore, this association has a beneficial effect on instructors' self-efficacy but has no effect on their effectiveness. As a result, these two factors have a considerable positive association (Ghasemi, 2010). Several studies on teacher self-efficacy, collective teacher efficacy, and instructional leadership have already been undertaken; however, these studies have all been quantitative and conducted in a traditional face-to-face classroom context. Researchers have indicated that the distinctions between the face-to-face and virtual classroom contexts are significant enough to justify a separate study and comparison of the teaching/learning experience's aspects and characteristics (Rice, 2006). As a result, more research and initiatives aimed at improving teacher self-efficacy in online learning are worthwhile investments of time and money, as they can lead to increased student achievement (Corry & Stella, 2018). Some scholars have proposed doing qualitative studies on teachers' self-efficacy (Chao, Chow, Forlin, & Ho, 2017; Kormos & Nijakowska, 2017; Sharma & Sokal, 2016; Bent, Bakx, & Brok, 2016; Zee et al. 2016). Furthermore, in order to acquire more authentic

findings, instructors' perceptions of efficacy must be assessed not just through surveys but also through interviews and observations (Chao et al. 2017; Kormos and Nijakowska, 2017; Sharma and Sokal 2016; Bent et al. 2016; Zee et al. 2016).

In the middle of the pandemic, the University of Saint Louis, a private Catholic educational institution in the Northern Philippines, has moved to flexible learning to ensure that students continue to receive education. There are four types of flexible learning offered by the University: fully online, blended, electronic correspondence, and printed correspondence. The majority of students are enrolled in the full online modality, in which teaching and learning are given online via the university's learning management system, which had been in use for a long time before the pandemic. Various communication applications, such as Zoom, Google Meet, Microsoft Teams, Discord, Facebook Messenger, and others, are used to facilitate full online learning. Both synchronous and asynchronous online learning are used by teachers in hybrid online learning. Teachers are required to present their lectures and conversations with students through video conferencing once a week for synchronous learning. Teachers use a learning management system to make learning content or electronic modules available to students, and learning activities are posted for students to complete within a week. Although teachers and school administrators have attended in-service training and webinars on online learning, and students have evaluated teachers' online facilitation/teaching, no studies on school leadership and teacher efficacy in online learning have been conducted, and the findings should provide a solid foundation for upskilling and professional development of both school leaders and teachers. Using the various literature gaps presented, this mixed-method study aims to investigate the relationship between instructional leadership and teacher efficacy in online learning, and to provide scholarly studies as the foundation for better support for teachers in online learning environments.

Research Questions

This study was sought to examine the deans'/principals' instructional leadership behaviors and teacher efficacy in online learning. Specifically, this study answers the following questions:

1. What is the profile of the respondents in terms of the following?
1.1. Personal Profile
    a. Sex

b. Age
c. Civil Status
d. Highest Educational Degree
e. Department
f. Field of Specialization
g. Number of Years of Teaching
h. Number of Seminars/Training Attended Related to Online Learning for the Past Two Years

1.2. ICT Resources
a. Number of Gadgets Used
b. Source of Internet Connectivity
c. Monthly Amount Spent for Online Learning

2. What are the dean's and principal's instructional leadership behaviors along the following dimensions?
2.1. Instructional Resource
2.2. Visible Presence
2.3. Professional Development
2.4. Instructional Time
2.5. Monitoring Students' Progress
2.6. Feedback on Teaching Learning
2.7. Curriculum Implementation

3. What is the level of teachers' self-efficacy in online learning in terms of the following?
3.1. Student Engagement
3.2. Instructional Strategies
3.3. Classroom Management
3.4. Use of Computer

4. What is the level of the teachers' collective efficacy in online learning in terms of the following?
4.1. Instructional Strategies
4.2. Student Discipline

5. Is there a significant difference in the teachers' efficacy in online learning when grouped according to the profile variables?

6. Is there a significant relationship between deans'/principals' instructional

leadership behaviors and teachers' efficacy?

7. What are the enabling and restraining factors to teachers' self- and collective efficacy in online learning?

Hypotheses

1. There is no significant difference in the teachers' efficacy when grouped according to the profile variable.
2. There is no significant relationship between the deans'/principals' instructional leadership behaviors and teachers' efficacy.

Significance of the Study

This study could help school leaders and educational institutions develop programs and activities to address contemporary educational issues. This study's findings could enhance policy, work satisfaction, teacher recruitment and retention, teacher professional advancement techniques, teacher leadership development, and student academic progress. The outcomes of this study are also intended to contribute new dimensions to educational research on instructional leadership, teacher efficacy, and collective teacher efficacy in online learning. It will also potentially contribute for educators to examine on their own practice and craft in terms of instructional practices and their impact on efficacy. As a result, the study's findings will help policymakers and practitioners make informed plans and execute interventions aimed at improving teacher efficacy in online learning.

Underpinning Theory

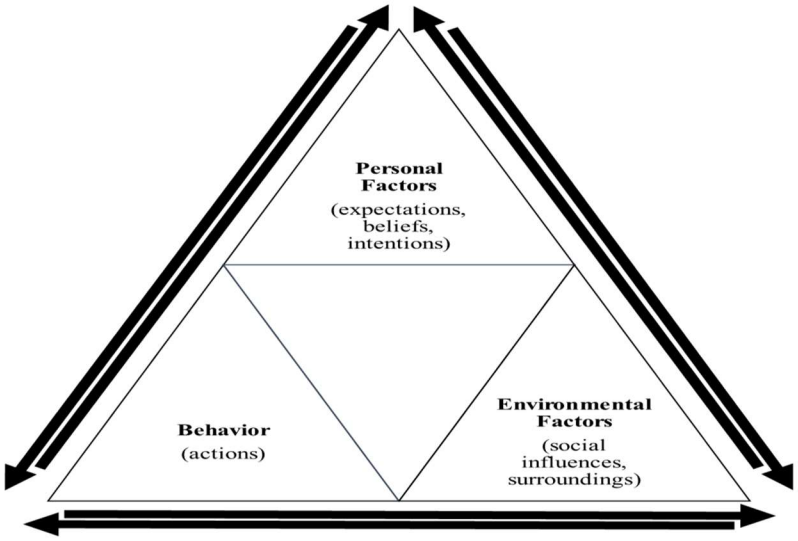

Figure 1. Bandura's (1989) social cognitive model of triadic reciprocal causation.

The basic tenets of Bandura's (1989) social cognitive theory are used in this study. Figure 1 depicts how human agency acts within an interdependent causal system incorporating triadic reciprocal causation. When it comes to individual choices, this is a "reciprocal determinism" approach, according to Bandura. Choices are a function of interactions between behavior, personal variables, and environmental factors, as shown by this model. Behavior, personal variables, and environmental factors all exhibit reciprocal causation, meaning they can affect each other in both directions at different periods and with varying degrees of strength. This means that, though this interplay and influence of these three major groups of determinants varies for different activities, under different conditions, and at varying rates, they all have a significant impact on our self perceptions, decisions, and behaviors (Zhou, 2019). Teachers must collaborate interdependently within a network of social structures to attain goals in an educational setting with enhanced accountability at school. Teachers' capacity to maintain a strong sense of efficacy was influenced by isolation in the classroom and a lack of teacher collegiality, according to Ashton and Webb (1986). This suggests that teacher collegiality is important for teacher professional

development, job happiness, organizational and professional dedication, and school quality and student performance (Shah, 2012). Pierce-Friedman (2018) discovered that more experiences of working in isolation predicted weaker feelings of self-efficacy for online teachers in her study on self-efficacy and isolation in online teaching

Research Paradigm

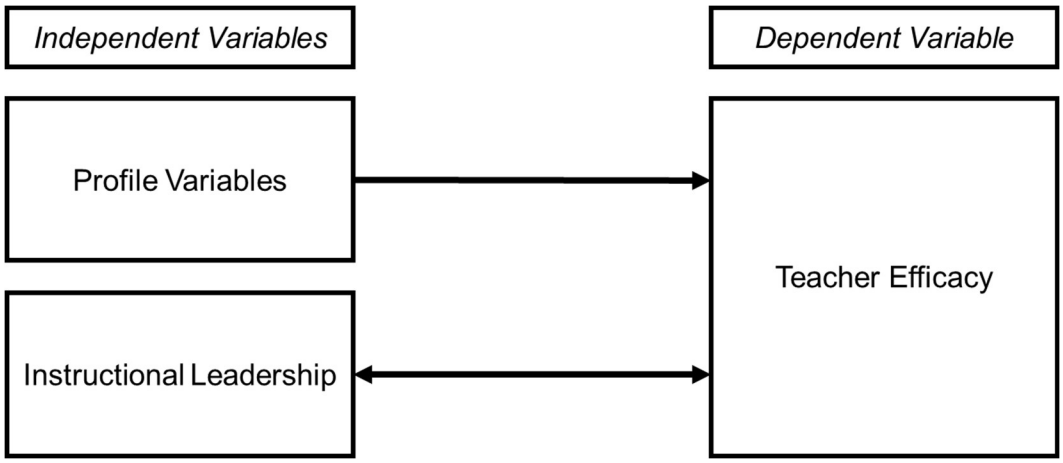

Figure 2: Research Paradigm of the Study

Figure 2 presents the research paradigm of the study. The paradigm makes use of the IV DV Model. This model is appropriate to be utilized as it describes the relationship between "causal" and "effect" variables of the study. The two-headed arrow between instructional leadership and teacher efficacy suggests their association or relationship. This means that instructional leadership may influence teachers' level of self- and collective efficacy while the latter may also impact the former. The broken arrow between the profile variables and teachers' self- and collective efficacy implies the effect of the profile of teachers to their level of efficacy.

METHODS

Research Design

Mixed-methods research was used in this study. Teachers' characteristics, deans' and principals' instructional leadership, and teachers' self-efficacy and collective efficacy were all described using a descriptive survey design. The correlational methodology was used to investigate the relationship between instructional leadership provided by school heads and teachers' self-efficacy and collective efficacy. The qualitative design was utilized to dig further into the study's quantitative findings.

Locale of the Study

This study was conducted at University of Saint Louis in Northern Philippines. The school implements the online learning modality across all academic levels. There are seven (7) academic departments in the University: Elementary; Junior High School (JHS); Senior High School (SHS); School of Accountancy, Business and Hospitality (SABH); School of Engineering, Architecture and Information Technology Education (SEAITE); School of Education, Arts and Sciences (SEAS); and School of Health and Allied Sciences (SHAS). The online learning modality is supported by a learning management system which has long been utilized prior to the COVID-19 pandemic.

Respondents of the Study

There were three sets of respondents of the study. First were the academic deans/principals of the different academic departments. The seven (7) academic deans/ principals rated their instructional leadership skill. Second were the full time teachers of the various academic departments selected through total enumeration. Only full-time teachers from various departments were asked to participate in the study. Only 76.06% of the teachers were able to rate their academic dean's/ principal's instructional leadership and their self- and collective efficacy. This is because some of the teacher-respondents were out of school and were challenged by the intermittent internet connection in their respective residences. Third were the students from across the different departments selected through purposive sampling. The one hundred (100) students who took part in the study were student leaders of the different student councils and organzations. Only student leaders from department councils, college co-curricular student organizations, and year-level and classroom officers from elementary, junior high, and senior high schools were included in the study.

Table 1: Frequency Distribution of the Respondents of the Study

Department	Population	Sample size	
		Frequency	Pecent
Elementary	23	23	11.68
Junior High School	57	48	24.37
Senior High School	53	38	19.29
SABH	23	13	6.60
SEAITE	38	26	13.20
SEAS	40	34	17.26
SHAS	25	15	7.61
Total	259	197	76.06

* as of Short Term 2021

Research Instruments

Instructional Leadership Questionnaire (Akram, Kiran, & Lan, 2017), Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT) Instrument (Robinia & Anderson, 2010), and Collective Teacher Efficacy Scale- CTES were the instruments utilized in the study (Tschannen- Moran & Barr, 2004). Other researchers can utilize these tools because they are publicly available on the internet. Cronbach's alpha was used to measure the questionnaires' reliability. The overall reliability of the instructional leadership questionnaire (ILQ) is 0.980 which means that the tool has an excellent internal consistency; hence, the reliability of each of its seven (7) dimensions: instructional resource (0.938), visible presence (0.886), professional development (0.962), instructional time (0.798), monitoring student progress (0.797), feedback on teaching- learning (0.944), and curriculum implementation (0.956). The reliability coefficients of the sense of efficacy for online teaching (SEOT) are 0.981 for its overall score and 0.906, 0.962, 0.949, 0.910 for each of its dimensions which include student engagement. classroom management, instructional strategies, and use of computers; hence, the tool's excellent internal consistency. The total scale of the collective teacher efficacy scale (CTES) has an internal consistency of 0.965, whereas the instructional strategies and student discipline subscales have internal consistency of 0.941 and 0.914, respectively. The internal consistency of each of the questionnaires shows that it is appropriate for measuring instructional leadership, self- and collective efficacy perceptions.

Instructional Leadership Questionnaire- ILQ

The ILQ was adapted and used to assess the respondents' perceptions of

deans'/principals' instructional leadership behaviors in online learning. Akram, Kiran, and İLĞAN created and validated the scale (2017). The questionnaire includes seven dimensions: instructional resource provider (IRP), maintaining visible presence (MVP), teacher professional development (TPD), maximizing instructional time (MIT), monitoring students' progress (MSP), feedback on teaching and learning (FTL), and curriculum implementer (CI). For IRP (7 items), MVP (6 items), TPD (7 items), MIT (6 items), MSP (4 items), FTL (5 items), and CI (5 items), the total internal consistency of the 40 items is.95,and the alpha reliability of the seven dimensions is.87,.86,.82,.78,.78, and.80, respectively (Akram, Kiran, & Lan, 2017).

Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT) Instrument

The MNESEOT is based on Tschannen- Moran and Woolfolk-Teacher Hoy's SelfEfficacy Scale (TSES) (2001). The TSES is a 24-item questionnaire with three subscales: student engagement efficacy (SE), instructional strategies (IS), and classroom management efficacy (CM) . Each subscale has eight items, each of which is evaluated on a nine-point scale ranging from nothing (1) to a lot (9). The reliability coefficients for the original scale are a =.94 for the total scale, and.87,.91, and.90 for the subscales SE, IS, and CM, respectively (Tschannen-Moran & Woolfolk- Hoy, 2001, s. 801). Robinia & Anderson (2010) updated the TSES for online teaching with 32 questions divided into four subscales: student involvement, classroom management, online instruction, and computer use. Dolighan and Owen (2021) utilized the instrument in their study "Teacher Efficacy for Online Teaching During the COVID-19 Pandemic." With this sample (n=132), the instrument had a Cronbach alpha of.951, indicating its dependability.

Collective Teacher Efficacy Scale- CTES

The CTES was used to determine the respondents' overall efficacy beliefs. Tschannen-Moran and Barr (2004) developed the scale, which was based on the Teacher Self-Efficacy Scale (Tschannen- Moran & Woolfolk- Hoy, 2001). The CTES is a 12-item scale with two subscales: instructional techniques (ISt) and student discipline (Student Discipline) (SD). Each subscale has six items that are answered on a 9-point Likert scale that ranges from none at all (1) to a lot (9). The total scale has an internal consistency of.97, whereas the IS and SD subscales have internal consistency of.96 and.94, respectively. The internal consistency of CTES shows that it is appropriate for measuring collective efficacy perception while remaining consistent with the theoretical background (Klassen et al., 2011).

Open-Ended Question

The teachers' self-efficacy and collective teacher efficacy were examined holistically and comprehensively using questions. These questions prompted the participants to consider their own viewpoints on the phenomenon under investigation. These questions are also known as "nondirective" or "flexibly structured" questions (Bogden & Biklen, 2003), because participants will answer them freely and honestly in their own environments and at their own pace, rather than being urged by a planned interview.

Data Gathering Procedure

The University Administrators were notified of a request for approval of the study's conduct. The data collection followed strict health regulations, hence internet tools were used to collect data. The research questionnaire, which included open-ended questions, was sent using a Google form. The form's link was individually sent through messenger to academic deans/principals, teachers and students. A copy of the faculty evaluation by students during the 2nd semester of SY 2020-2021 was requested from the Office of the Vice President for Academics through the deans/principals for the document analysis. The researchers rigorously adhered to ethical considerations, such as maintaining the confidentiality and identity of the respondents in accordance with the Data Privacy Act.

Data Analysis

Teachers' characteristics, the quality of instructional leadership provided by school heads, and teachers' self-efficacy and collective efficacy were all described using descriptive statistics such as frequency and percentage, mean and standard deviation. When the teachers were grouped according to profile factors, the T-test and ANOVA were used to find significant variations in their self-efficacy and collective efficacy. Below are the scoring and interpretation guides which were taken into account for the descriptive analysis of the dean's/principals' instructional leadership, teacher self-efficacy and collective efficacy.

Table 2. Scoring and Interpretation Guide for the Dean's/Principal's Instructional Leadership

Range	Descriptive Value	Interpretation
4.50 – 5.00	Always	The dimension is observed constantly.

3.50 – 4.49	Often	The dimension is observed in many instances.
2.50 – 3.49	Sometimes	The dimension is observed from time to time.
1.50 – 2.49	Rarely	The dimension is seldom observed.
1.00 – 1.49	Never	The dimension is certainly not observed.

Table 3. Scoring and Interpretation Guide for Teacher Self-Efficacy and Collective Teacher Efficacy (Atalay, 2019)

Range	Descriptive Value (DV)	Interpretation
8.13 – 9.00 7.24 – 8.12 6.35 - 7.23 5.46 – 6.34	Sufficient	The individual skill/ shared skill is adequate to promote student learning and engagement in online learning.
4.57 – 5.45 3.68 – 4.56	Moderately sufficient	The individual skill/ shared skill isfairly enough to promote student learning and engagement in online learning.
2.79 – 3.67 1.90 – 2.78 1.00 – 1.89	Insufficient	The individual skill/ shared skill isnot enough to promote student learning and engagement in online learning.

The Pearson product-moment correlation (r) was used to determine the associations between variables. Participants' responses to open-ended questions

and students' comments in their evaluation of the faculty were analyzed using the open axial selective coding. The transcript of responses and comments were broken into discrete parts and codes were created to label them. The connections among the created codes were drawn to organize the data. The organized codes were brought together to select one core/ overarching category that captures the essence of the research, that is, identification of one big idea that captures a recurring trend in the qualitative data.

DISCUSSION

Dean's/Principal's Instructional Leadership in Online Learning

One of the purposes of this study was to see how deans/principals handled instructional leadership in online learning. Despite worries regarding rigor and effectiveness, schools have embraced online learning to guarantee that learning continues in the face of the COVID-19 pandemic's problems. In today's educational environment, effective online leadership is becoming increasingly vital (Quilici & Joki, 2011). This abrupt change in educational landscape poses many questions about leading and supporting learning in a digital/virtual/online work environment; thus, the need for deans/principals to exercise digital instructional leadership (Pollock, 2020).The online school places a high value on educational administrators, who are responsible for building an environment in which faculty members feel driven to achieve the specified goals and objectives, and have the skills and support structures in place to fulfill students' expectations (Tipple, 2010). Student achievement, a healthy classroom climate, good teaching and learning activities, and, most importantly, sustaining the school's high academic standards all benefit from instructional leadership (Uddin, Akhter & Hena, 2018).

According to Jabeen and Mirza (2018), head teachers should use instructional leadership skills to help teachers build a shared mission and vision, as well as a collaborative culture that can help assure quality education. Instructional resources, visible presence, professional development, instructional time, monitoring student achievement, feedback on teaching-learning, and curriculum implementation are among its seven dimensions (Akram, Kiran, & İLĞAN, 2017). Except for visible presence which is rarely practiced, this study discovered that deans/principals practice six dimensions of instructional leadership more frequently from among the seven components. The provision of instructional resources, professional development, maximizing instructional time, gathering feedback on teaching-learning, and curriculum implementation are among these dimensions.

Academic coaches offer online instructional assistance to students and faculty. The major contextual component impacting result expectancy is providing classroom resources, which are tied to instructional leadership activities (Sindhvad, Mikayilova & Kazimzade, 2020). As instructional leaders, the deans/principals always give services to teachers' critical instructional needs by delivering online resources and materials. This means they are capable of

managing time and money, utilizing existing material resources, and mobilizing human resources in the planning of innovations (Suyitno, 2021). In their capacity as instructional resource providers, deans/principals encourage teachers to freely use online instructional materials, organize and deliver online instructional materials to teachers, ensure that students and teachers have sufficient access to online instructional resources, and recommend online resources in areas where teachers require them. Castro and Tumibay's study (2021) emphasizes the relevance of instructional design as well as the active role that institutions play in providing support structures for educators and students, including instructional materials. It is important to remember that institutions should make every effort to guarantee that every student and faculty member has access to the necessary resources (Dhawan, 2020).

A teacher's professional development should be led by a learning manager, and a learning manager should be an inspiration for lifelong learning (Chalikias, Raftopoulou, Sidiropoulos, Kyriakopoulos, & Zakopoulos, 2020). This indicates that school leaders' primary responsibility is to assist and encourage the development of others; as a consequence, they must prioritize the development of their teachers. As a result of the change to online learning, school leaders must adjust to an era where technology has crept into many facets of the profession, necessitating teacher professional development (Sterrett & Richardson, 2020). According to the findings, deans/principals provide and promote chances for professional development to help teachers improve their online teaching skills. These opportunities include designing, organizing, executing, and evaluating teacher training sessions. Accessibility knowledge and practice have been greatly influenced by professional development training in online learning (Guilbaud, Martin, & Newton, 2021). As a result, instructional leaders must provide a variety of support methods to ensure that professional learning is allocated in a way that improves teaching quality and practices, resulting in improved student learning outcomes (Macleod, 2020). Available professional development programs in the context of online learning heighten the need to integrate online teaching competence as a primary goal into teacher education and professional development programs in order to keep up with the skills of 21st century students (Mujallid, 2021). Universities should invest in faculty professional development today more than ever to keep them up to date on good educational practices, whether or not they employ online technologies (Rapanta, Botturi, Goodyear, Guadia, & Koole, 2020).

In the current situation, with the Covid-19 outbreak and the only source of

education being online, attendance during lessons is an issue. According to the current survey, about 22% of teachers are not attending lessons. Teachers are taking online lessons in the remaining 78 percent. Students are not attending their classes at all, according to 17 percent of students, while 14 percent of teachers teaching online classes are unaware of their students' attendance (Agarwal & Dewan, 2020). Instructional time is a critical component of learning success (Liu, 2021). Nearly all children could be academically successful if they were given enough time and a suitable learning environment (Guskey & Anderman, 2013). According to the findings, deans/principals collaborate closely with instructors and students to improve and protect instructional time for purposes of instruction, assessment, and other online learning activities. In particular, deans/principals ensure that students are active and compliant during synchronous and asynchronous online learning while ensuring that learning is uninterrupted, encourage teachers to be well-prepared and on time when attending online classes, ensure that only students with valid reasons for absence are allowed in class, and resolve discipline issues.

In online learning, maximizing instructional time ensures student learning. In her study, Nieuwoudt (2020) discovered that having multiple opportunities for students to participate and interact online, as well as to attend classes synchronously or asynchronously, can help them achieve academic achievement. The degree of student learning activities like as attendance, assignments, conversations, and others can be linked to the effectiveness and efficiency of online learning (Setiawan, Rofi & Jatmikowati, 2021). In order to maximize instructional time, schools must supervise children's online behavior when conducting online lessons (Jena, 2020).

Cavalcanti et al (2021) found that 65.07 percent of studies show that automated feedback improves student performance in activities in their study on automatic feedback in online learning settings. This means that feedback is an important part of learning scaffolding. Learners' support in reaching learning goals and increasing self-regulation abilities is revealed through feedback. According to the findings, deans/principals meet with instructors on a regular basis to discuss students' development, academic performance, work, and progress reports. A key approach in online teaching and learning is to closely monitor student involvement in and interaction with instructional materials (Archambault et al., 2013; Rice and Carter, 2015; Rice and Carter, 2016). Furthermore, when instructors pay systematic attention to student thinking, provide individualized

feedback, and evaluate student progress, online learning increases considerably (Young Ae et al, 2021).

To ensure improvement, school administrators and teachers should collaborate; thus, the main mechanisms for ensuring supervision, such as evaluation, inspection, rewards, and sanctions, must be implemented (Klç, 2021). Deans/principals frequently locate instructional needs by discussing instructional issues, inspecting the classroom learning process, and giving and supporting change through public and private praise for performing teachers and students, according to the findings of this study. Instructional supervision has an impact on a teacher's quality of instruction (Valdez, Mangorsi, & Canapi, 2021); thus, even though learning is done online, the principal as a supervisor continues to supervise by implementing online-based supervision (Fitria, Ahmad & Novita, 2021). Regular instructional supervision, such as checking students' notebooks, classroom visits/inspections by school administrators, checking teachers' lesson plans, and inspecting teachers' record keeping, has a significant relationship with teachers' performance and students' academic achievement (Rikichi & Yakubu,2021). Furthermore, instructional leaders who publicly and privately commend high-performing teachers and students help to foster a positive learning environment (Iqbal, Munir & Nawaz, 2021). The principal's primary responsibility is instructional leadership, which entails overseeing the teaching and learning process from curriculum development forward. As a result, principals must approach curriculum evaluation as a collaborative task and process (Arrieta, 2021). According to the findings of this study, deans/principals maintain an environment in the classroom that promotes the effective functioning of instructional content, arrangement, interventions, management, and monitoring. It is necessary to implement online learning while also ensuring that the school's intended learning outcomes are met (Asha, 2021). The monitoring of curriculum implementation focuses on teachers' enactment of the curriculum, the quality of materials and their effects on student achievement, and professional development to support teacher learning and curriculum implementation (Pak, Polikoff, Desimone, & Saldvar Garca, 2020). If school heads follow up on school operations and processes on a regular basis and address day-to-day school issues, their visible presence is greatly felt in the school. (Suyitno, 2021). Deans/principals are rarely physically visible in all aspects of online learning, according to the findings of this study. They rarely attend co-curricular activities or synchronous and asynchronous learning activities to identify online instructional issues. Similarly, they hold few meetings to discuss online instructional issues and other teacher concerns about online learning. Learning

management systems or online learning should be used by school principals to expand the use of updated data in teaching and to learn from teachers, students, and parents (Akram & Khan, 2020). To improve the quality of learning practices and student learning outcomes in schools, school principals must monitor and evaluate online learning in a planned, programmed, and continuous manner, and use the monitoring and evaluation results for professional development (Karwanto, 2020).

The COVID-19 pandemic has changed the way school administrators work. School leaders are expanding their roles as instructional leaders to include safe schooling and setting the tone for future learning while also expanding their role as instructional leader to include digital instructional leadership (Pollock, 2020). The findings of this study demonstrated that school leaders' instructional leadership still applies to online learning. Effective instructional leadership under atypical circumstances is required to ensure continuous learning (Varela & Fedynich, 2020).

Teacher Self-efficacy in Online Learning

Although teacher self-efficacy is still being empirically validated in face-to-face settings, it is still a relatively new concept in online education. The balance of technical and pedagogical information that fosters the development of teacher self-efficacy is still being studied by researchers (Corry & Stella, 2018). According to Kundu (2020), selfefficacy, or one's level of confidence in one's ability to do a task, is a significant factor among teachers and students using online platforms, and increased efficacy can encourage online activities. Teachers' confidence in supporting learning in an online mode is satisfactory, according to this study. Teachers, in particular, have sufficient abilities in student engagement, classroom management, instructional tactics, and computer use to ensure that learning occurs online. Faculty and student outcomes in online course delivery are influenced by online instructor self-efficacy (Young, 2021). A prerequisite for learning is student engagement, which is fueled by motivation. Teachers in online learning must use digital support tools to better meet the needs of students, which were predictors of engagement (Chiu, 2020). Furthermore, positive student–teacher and student–student connections are critical for online learning platforms to drive students to participate in learning activities (Luo, Li, Zhao, Wu, & Zhang, 2020). Teachers have adequate skills to assist students think critically, inspire students, help students value learning, foster individual student creativity, and increase comprehension of a student who

is failing in online learning, according to this study. Abou-Khalil, Helou, Khalifé, Chen, Majumdar, and Ogata (2021) discovered 10 levels of effective student involvement in online learning in their study. These strategies include (1) ffective synchronous content delivery, (2) asynchronous content engagement, (3) diversifying content delivery methods, (4) providing and receiving feedback, (5) constantly clarifying requirements, (6) personalizing student-instructor interactions, (7) providing a space for student-student interactions, and (8) transforming students into synchronous content creators. Fazza and Mahgoub's study (2021), which found that student involvement in online learning is sustained through emotive expression, open communication, and group cohesion, backs up these levels of student engagement in online learning. It's worth noting that pupils who are exposed to a wider range of socioemotional and academic learning opportunities are more likely to be engaged (Domina, Renzulli, Murray, Garza, & Perez, 2021).M.P.G. & Alex (2018) identify classroom management as a critical component of optimizing the student learning process in terms of promoting academic (materials) and socio-emotional (maturity and social skills) learning, as well as maintaining class control (Chandra, 2015). This shows that online learning teachers should employ the same classroom management best practices as they do in face-to-face situations, such as setting clear expectations, modeling appropriate conduct, and providing timely and specific feedback to students (Lohmann, Randolph, & Oh, 2021). Teachers have enough skills to control disruptive behavior, make their expectations about student behavior clear, establish routines, get students to follow established rules for assignments and deadlines, control dominating students, establish an online course with each group of students, develop an online course that facilitates student responsibility, and respond to defiant students, according to the findings of this study. The classroom management construct, according to Stevens (2020), contains questions about instructors' ability to prevent disruptions during synchronous instruction, as there have been numerous reports of students or unwanted visitors disrupting learning or even sharing lewd content during Zoom sessions. Kucukakin and Demir (2021) go on to say that in online learning, classroom management is divided into four themes: a positive learning environment, the physical environment in classrooms, management of learning tasks and instructional activities, and motivation and academic engagement. Furthermore, teachers' creativity nurturing behavior influences their fitness for 21st-century classroom management; as a result, they should encourage positive pedagogical adjustments to transform the classroom into a more engaged learning community with greater potential for creativity (Apak, Taat, & Suki, 2021). To keep students in online courses, the curriculum must be presented in more

accessible and case-based ways, so that they understand the importance of each learning objective and assessment. Integration of active learning strategies that can take use of the variable time that is not common in traditional classroom settings is one possibility (Mahgoub & Sundaravadivel, 2021). Teachers in online learning have sufficient skills to respond to difficult questions from students, gauge student comprehension, craft questions or assignments that require students to think by relating ideas to prior knowledge and experience, adjust their lessons for different learning styles, use a variety of assessment strategies, and provide an alternative explanation, according to this study. According to Mahmood (2021), five of the seven instructional styles for online learning complement these sufficient teaching skills. These strategies include creating interactive online classes and sharing class materials, improving students' learning abilities, receiving feedback from students on their online learning experience, thinking more critically, practically, and creatively, and providing flexible teaching and assessment policies. Teacher-led instructional strategies, supervised and monitored learning strategies, and self-directed learning strategies were all found to be positively associated with students' perceptions of online teaching effectiveness and self-reported academic success in online learning (Cheng, Ma, Luo, Chen, Wei, & Yang, 2021).

In the Covid-19 pandemic situation, teachers' ability to innovate in designing and gathering resources, learning methods, and selecting the appropriate applications in line with the material and procedures will examine their success in conducting online learning (Rahayu & Mirza, 2020). This means that teachers must be able to manage online learning, which includes using reliable sources, navigating online platforms, creating and establishing online courses, using asynchronous and synchronous discussions, using computers for word processing, internet searching, and email communication, and facilitating student participation. According to the findings of this study, these are skills that teachers are confident in having to promote successful learning in an online modality. The study of Bigatel, Ragan, Kennan, May and Redmond (2012) cited that technological competence is critical aspect of online course instructor preparation. The two behaviors that loaded onto this competency reflect the need for adequate instructor preparation with the technological learning system and the subsequent instructor confidence with these technologies. This suggests that the use of computer in online learning must not only ensure the provision of resources but also the interaction between students are maximized. It is important to note that in today's online teaching environment, simply

providing teaching resources is insufficient; therefore, using more live broadcasts to foster greater teacher-student communication and immediate feedback is an effective way to improve student performance. Also, more attention and feedback should be given to students during the online teaching process in order to form an effective online communication mechanism, as only this way can the teaching goals be met more efficiently (Yao, Rao, Jiang & Xiong, 2020). Specifically, the use of both asynchronous and synchronous online activities is important to empower student engagement and interactive learning. Students thought this was a great learning opportunity, which they appreciated because of the positive feedback provided by the facilitators (Rehman & Fatima, 2021). In her research, Nieuwoudt (2020) found that providing various options for students to participate and interact online, as well as to attend classes synchronously or asynchronously, can help them achieve academic success.

Given the advancements in information and communication technology in the twenty-first century, the need to develop teachers' capabilities for online teaching cannot be overstated (Yang, 2021). Teachers' self-efficacy must be developed in order for them to be more open to new teaching methods, set more challenging goals for themselves, demonstrate a higher level of planning and organization, direct their efforts toward problem solving, seek assistance, and adjust their teaching strategies when faced with difficulties (Lazarides & Warner, 2020). Teachers' self-efficacy, along with student engagement, classroom management, instructional strategies, and computer use, will ensure effective instructional delivery in the online learning modality, just as it does in face-to-face learning.

Collective Teacher Efficacy in Online Learning

Following the pandemic's education reform, the renewal of the school environment appears to be moving toward greater openness to working team consultation. Collaborative work, which is viewed as a way to break down barriers between teachers and other types of staff in complementary services, can contribute to students' overall development by ensuring greater consistency in interventions (Northover, Hewitt & Newell-McLymont, 2021). According to research, collective teacher efficacy is a major factor influencing student achievement (Ernst, 2021). This means that student achievement is based on the faculty's collective belief that they can improve student achievement, and one way for school administrators to improve student achievement is to work to increase faculty efficacy beliefs (Hoogsten, 2020). The concept of collective teacher efficacy suggests that when teachers pool their efficacy, it has a greater impact on student achievement (Kocak & zdemir, 2020). Teachers'

shared beliefs about instructional strategies and student discipline are sufficient to positively affect students' online learning, according to this study. Specifically, two significant outcomes emerged from this study in terms of collective teacher efficacy. To begin, online learning teachers have a sufficient shared belief in their abilities to provide meaningful learning, persuade students that they can succeed, support students in grasping topics, promote deep comprehension, assist students in critical thinking, and nurture student creativity. Second, in online learning, teachers have a sufficient shared belief in their ability to set clear expectations for student behavior, establish rules and procedures that facilitate learning, respond to defiant students, control disruptive behavior, get students to follow learning policies, and help students feel safe. These findings are backed up by Holzberger and Prestele (2021), who claim that schools with high collective teacher efficacy have superior instructional quality and teachers with high collective teacher efficacy have better classroom management. Several studies demonstrate that teacher development must include opportunities for teachers to increase their collective efficacy, which plays such an essential role in instructional quality and classroom management (Moosa, 2021). Teachers will get the abilities to employ suitable instructional strategies for meaningful learning, as well as the skills to maintain student discipline in a well-managed online classroom as a professional learning opportunity, positively influencing student achievement (Hussain & Anderson, 2021). It's worth mentioning that increased collective teacher efficacy seems to motivate individual teachers to make better use of their existing skills (Hattie, 2016). Interactions with colleagues were extremely important in preparing teachers for remote learning continuity, according to Brelsford et al. and Hauseman et al. (2020), pointing to the role educational leaders could play in future crises to facilitate and ensure collaboration for problem-solving, instructional expertise, and reflection among staff. The ability of teachers to support student online learning is demonstrated by the sufficient level of collective efficacy reported in this study. Teachers' collective efficacy, as Ibrahim, Fasasi, and Ishola (2021) put it, is an essential predictor that may be used to increase students' academic progress. Furthermore, instructors' collective efficacy has an effect on their performance and output. Instructors with high collective efficacy are more likely to devote themselves to educational goals, whereas teachers with poor collective efficacy are more likely to disengage. Teachers who believe in the benefits of collaboration contribute more to the educational quality of their students. As a result, determining the collective self-efficacy of teachers is crucial (Zincirli & Demir, 2021).

Teachers' Efficacy in Online Learning when Grouped According to Profile Variables

The efficacy of teachers in online learning was investigated using profile characteristics to categorize them. This study yielded two significant results. First, teachers' online learning self-efficacy varies by department, field of specialization, and number of online teaching and learning seminars attended. Second, instructors' collective efficacy varies when they are grouped by sex, department, and field of specialization. Teachers' self-efficacy in online learning varies by department. Teachers in elementary and junior high school departments had higher levels of self-efficacy than teachers in SABH, SEAITE, and SEAS departments in terms of engaging students in online learning; senior high school teachers had higher levels of self-efficacy than teachers in SABH and SEAITE departments; and teachers in SEAS had higher levels of selfefficacy than teachers in SEAITE. Engagement is a term that refers to a person's level of attention, focus, belief, interest, and emotions. When pupils do not actively participate in classroom activities, they become bored. Engaging students, according to studies, leads to more meaningful learning experiences and enhanced skills in all areas of learning (Tovani & Moje, 2017). Engaging kids in their learning is a critical component of excellent primary education (Yehya, 2020). This explains why teachers in elementary and secondary schools are best prepared to engage students in online learning. The majority of instructors in elementary, high school, and SEAS departments have finished a teacher education program, implying that they have undergone student engagement pre-service training. One aspect that determines teachers' capacity to engage pupils is their pedagogical skill (Tamah, Triwidayati, & Utami, 2020). According to Üstünbaş (2020), undergraduate education and teaching practice have an impact on teachers' self-efficacy. Teachers' self-efficacy in classroom management has been linked to similar findings.

Compared to teachers in SABH, SEAITE, and SEAS, elementary and junior high school teachers had higher levels of self-efficacy; senior high school teachers had higher levels of self-efficacy than teachers in SABH and SEAITE; and SEAS and SHAS teachers had higher levels of self-efficacy than teachers in SEAITE. Again, this can be attributed to thefact that the majority of teachers in elementary, high school, and SEAS departments have completed a teacher education program, which has provided them with pedagogical training (Tamah, Triwidayati, & Utami, 2020; Üstünbaş 2020). Furthermore, persons who have dedicated themselves to the study of education and teaching are likely to have higher

levels of efficacy for teaching and possibly a better comprehension of what the teaching process comprises (Fives & Looney, 2009). Teachers in the health and allied sciences (SHAS) have greater levels of self-efficacy than teachers in engineering, architecture, and information technology education (SEAITE), which could be explained by health educators' baseline sense of efficacy for partaking in new experiences (Robinia & Anderson, 2010). According to Zamani-Alavijeh, Araban, Harandy, Bastami, and Almasian (2019), "unexpected events" and "client trust" have an impact on health educators' professional self-efficacy beliefs in the delivery of health education. Teachers in junior high school had better levels of self-efficacy in instructional techniques and computer use than teachers in SABH, SEAITE, and SEAS, as well as in other areas. This indicates that JHS teachers are more effective in terms of instructional strategies and computer-assisted online learning. This could be explained by the concept of self-mastery (Kundu, 2020), in addition to their pre-service preparation, as they have finished a teacher education degree (Fives & Looney, 2009). Self-mastery is the acquisition of skills such as thinking, intuiting, speaking, leading, feeling, doing, and being that are required for academic success and are seen as the ultimate learning objective (Cunanan and Chua, 2015). In online education, self-mastery is most important in boosting participants' self-efficacy, which is reinforced through appropriate coaching, practice, and involvement. The ualitative data from this study demonstrates that junior high school instructors have used the University's learning management system to perform synchronous and asynchronous learning activities on a regular basis.

The self-efficacy of teachers in online learning varies by field of specialization. The program where teachers teach was used as the basis for categorizing teachers according to departments in this study; hence, the cause for self-efficacy variance in terms of both department and field of expertise was discovered. Though the pre-pandemic study of Dalanon & Matsuka (2017) negates this finding, this disparity is further corroborated by Dilekli and Tezci's (2020) study, which found that teachers' self-efficacy beliefs for teaching differ depending on the field in which they teach. Teachers who specialize in teacher education are more efficient in terms of student engagement, classroom management, and instructional tactics, according to this study. Given their completion of a teacher education degree, the enhanced teaching skills they obtained throughout their practicum period may have provided opportunities for them to learn more about their personal teaching skills and develop a sense of teacher competence. According to Wah (2007), this contributed to the mastery experience, which remained the most powerful influence on teacher self-efficacy

(Furtado Nina, Soares Ramos, Holanda Ramos, Souza da Costa Silva, de Oliveira Fernandez & Ramos Pontes, 2016). Furthermore, a characteristic that affects teachers' self-efficacy is their background in terms of content knowledge, pedagogical knowledge, and experience (Kaya, Borgerding & Ferdous, 2021). When teachers are categorized according to the number of seminars or training sessions they have attended relevant to online learning, their self-efficacy in this area differs. Teachers who have attended eleven or more seminars or training sessions are more efficient when it comes to using instructional methodologies and computers in online learning, according to the study. Teachers' self-efficacy in online teaching is positively influenced by their involvement in professional development programs (Kelley, Knowles, Holland, & Han, 2020; Perera, & John, 2020; and Romijn, Slot, Leseman & Pagani, 2020). Faculty development can help teachers feel more confident in their abilities (Hampton et al., 2020). Gümüş & Bellibaş (2021) propose that job-embedded professional development activities, such as coaching or mentoring, teacher networks, and action research, are better solutions for teachers' higher self-efficacy beliefs.

The collective efficacy of teachers differs by gender. Female teachers show higher collective efficacy than male teachers in both areas of using instructional practices that promote meaningful learning and controlling student conduct in online learning, according to this research. This suggests that female teachers are more willing to collaborate with the school in order to improve student performance. The findings of this study replicated the trend that identifies women as having higher levels of efficacy for teaching. This is corroborated by Ekornes & Bele's (2021) study, which found that female teachers reported less nfavorable collaboration than male teachers. Female teachers' greater levels of collective efficacy may be explained by their understanding of their role in society and socialization methods that allow them to be more closely aligned with their work (Fives & Looney, 2009). This is supported by Habib's (2019) research, which found that female teachers have stronger professional commitments than male teachers. The finding is contrary to researches which found out that the difference in male and female teachers' collective effectiveness yielded that males scored slightly higher than their female counterparts (Curry, 2015; Parthasarathy & Premalatha, 2017; and Guidetti, Viotti, Bruno & Converso, 2018).

When teachers are grouped by department, their collective efficacy varies. Three main facts were highlighted in this study. First, along instructional strategies, teachers in elementary, junior high school, senior high school, and SHAS had

better collective efficacy than teachers in SABH, SEAITE, and SEAS. Second, instructors in elementary, junior high, and SHAS had stronger collective efficacy in terms of student discipline than teachers in SABH, SEAITE, and SEAS. Finally, SHS teachers had higher collective efficacy in student discipline than SABH and SEAITE teachers. The study by Donohoo, O'Leary, and Hattie (2020) may explain the greater levels of collective efficacy among basic education teachers. Empowered teachers, embedded reflective practices, cohesive teacher knowledge, goal consensus, and supportive leadership are among the five enabling characteristics for collective teacher efficacy highlighted by the study. Given that the majority of basic education teachers are teacher education graduates, this finding can be explained by their shared view of the goal of education and the use of appropriate instructional strategies. Teachers in basic education are required to work eight hours per day (DepEd Memorandum No. 291, s. 2008), so they may have the opportunity to collaborate in their everyday work and share ideas and experiences (McLaughlin & Talbert, 2006). When teachers work together to teach the same class or prepare teaching materials, for example, they form relationships and collaborate. This is mutual learning, which is critical to the professional development of teachers and, as a result, will improve their collective efficacy (Yang, Cheng & Huang, 2021). Mutual learning may also explain the collective efficacy of SHAS and senior high school teachers, since they undertake coteaching, especially when two or more teachers are managing similar subjects. For SHAS, they use parallel teaching, in which one teacher is assigned to lecture and the other to laboratory, whereas senior high school teachers use team teaching, in which teachers of similar courses collaborate to prepare teaching materials and facilitate learning in the unit of study assigned to them. Teachers apply their skills and competences to the co-teaching partnership in ways that generate an instructional dynamic that is greater than they could achieve alone (Lock, Clancy, Lisella, Rosenau, Ferreira & Rainsbury, 2016). Mullaney's study (2021) demonstrated the necessity to offer opportunity for meaningful collaborative practices to address roles and responsibilities, time to co-plan, and professional learning in order to build collective efficacy among teachers. Stronger collaboration results in major changes in teachers' work and students' learning, according to Kunnari, Ilomäki, and Toom (2018), and success is contingent on teacher teams' ability to build their common work practices.

In terms of teachers' fields of specialization, collective teacher efficacy differs. This study found that teacher education teachers and engineering and

architecture teachers have different levels of collective efficacy in instructional strategies; teacher education teachers and health sciences teachers have higher levels of collective efficacy in student
discipline than teachers in social sciences and humanities; and health science teachers had higher levels of collective efficacy than teachers in social sciences and humanities, accountancy and management, and engineering and architecture. During their practice teaching stint, teacher education teachers receive pre-service preparation as a group. This has equipped students to work collaboratively with their coworkers, cooperating teachers, and other members of the school's personnel. Pre-service and in-service teacher professional development are crucial for establishing the best appropriate inclusive
practice and maintaining teacher efficacy (Sharp et al., 2018; Abraham, 2020). Näykki, Kontturi, Seppänen, Impiö, & Järvelä (2021) discovered that pre-service training allowed pre-service teachers to watch and learn about real-world school procedures, collaborate with instructors and students, and experience and learn about classroom instruction. In addition, the pre-service training allowed them to learn what it meant to collaborate with instructors and gave them a concrete opportunity to grow as future educators, according to the study. The concept of interprofessional collaboration (IPC) may explain the levels of collective efficacy of teachers in the health sciences. In healthcare, interprofessional collaboration is a collaboration amongst a variety of health professionals to deliver highquality treatment to patients, their families, and carers (Franklin et al, 2015; WHO, 2020). IPC makes use of team members' unique and collective abilities and experience, allowing them to operate more effectively and provide a higher level of care than they could if they were working alone (Busari, Moll & Duits, 2017). In the same way, pharmacists, medical technologists, and nurses in the teaching profession work together to provide high-quality instruction to health students. Creating and maintaining collaborative cultures allows health care providers to provide high-quality care (Ansa, Zechariah, Gates, Johnson, Heboyan & De Leo, 2020). Furthermore, teachers in computer-related subjects exhibited higher collective efficacy than teachers in engineering and architecture, according to this
study. This may be explained by Lawal, Rafi, Idris, and Joseph's (2021) study, which found that collaboration and teamwork are two of the most essential computer disciplines' graduate traits that are desirable for graduate employability and entrepreneurship. Collaboration is a key indicator of collective teacher efficacy (Meyer, Richter & HartungBeck, 2020; Glassman, Kuznetcova, Peri & Kim, 2021).

Instructional Leadership and Teachers' Efficacy in Online Learning

The importance of teachers' views about their capacity to influence student achievement both collectively and individually is a vital component of effective school change (Thornton, Zunino & Beattie, 2020). Because most educational institutions have transitioned to online learning platforms as a result of the pandemic, it's important to look at how teachers individually and as a team foster meaningful learning, as well as how school administrators assist teachers in achieving student success. According to research, a strong focus on organizational vision and institutional values aids leaders' decisionmaking and informs key decisions in uncertain times (Prewitt et al., 2011; Boin et al., 2013). The study's main goal was to look into the link between instructional leadership and teacher efficacy in online learning. The study discovered that the dean or principal's instructional leadership behavior had a beneficial effect on instructors' self- and collective efficacy in online learning.

Various studies on teachers' self-efficacy completed prior to the COVID pandemic confirm this finding, indicating a robust and favorable association between principals' instructional leadership practices and instructors' self-efficacy (Mehdinezhad & Mansouri, 2016; Isa, Mansor, Wahab & Alias, 2018; Cansoy & Parlar, 2018). This means that instructional school leaders play a critical role in assisting teachers in improving the instruction in their classrooms through monitoring, feedback, professional development, and assistance with curriculum and assessments (Al-Husseini, 2016). Similarly, prepandemic research on collective teacher efficacy found that instructional leadership had a direct and positive impact on collective teacher efficacy (Calik, Sezgin, Kavgaci & Kilinc, 2012; Derrington & Angelle, 2013; Akan, 2013; Angelle & Teague, 2014; Cansoy & Parlar, 2018). This means that instructional leaders use tactics to boost collective efficacy within schools or teams and leverage team expertise. Teachers' confidence in their abilities to achieve in the most challenging of conditions would be strengthened by actions such as offering opportunities for collaborative sharing or witnessing colleagues executing best practice tactics (Prelli, 2016). Strong instructional leadership is necessary to improve the quality of teacher performance, according to Barrera-osorio (2017), as quoted by Bafadal, Nurabadi, and Gunawan (2018). As a resource provider, he/she is able to manage time, condition the classroom, and motivate teachers; as an instructional resource person, he/she is able to promote effective classroom conditions to support learning outcomes; as a communicator, he/she

communicates the school's vision and purpose to teachers; and as a meaningful presence, he/she interacts with and influences all school staff (Jenkins,
2009). Recent research, particularly in the context of online learning, has revealed the strong association between instructional leadership and teacher efficacy. This suggests that instructional leadership activities such as defining the school's mission, managing the instructional program, and cultivating a healthy school learning atmosphere have a favorable impact on teachers' self-efficacy (Ozturk, Ozdemir & Sahin, 2020; Li & Liu, 2020; Ma & Marion, 2021; Fackler, Malmberg & Sammons, 2021). The significant direct effect of principals' instructional leadership on instructional quality (Bellibaş, Gümüş & Liu, 2021)
implies that teachers who deliver the actual teaching-learning have to be capacitated of necessary skills to promote meaningful online learning. The most important contextual component impacting outcome expectations is instructional leadership (Sindhvad, Mikayilova & Kazimzade, 2020). To ensure that teachers have the necessary skills, instructional leaders must devote time to stakeholder engagement and school management tasks such as providing classroom resources and professional development, monitoring instructional time and student progress, communicating teaching-learning feedback, and ensuring curriculum implementation. In addition, instructional leaders must implant the school's vision-mission, organize educational programs, supervise instruction, build school culture, and provide professional development for instructors, according to Kılıç (2021). Furthermore, school leaders must serve as curriculum managers, effective planners, motivators, and supporters of highquality education (Iqbal, Munir & Nawaz, 2021). Teachers will have appropriate abilities in student engagement, classroom management, instructional approaches, and computer use as a result of these instructional assignments. It's worth noting that instructional leaders are in charge of creating the environment for instructors to effectively integrate technology, particularly in online learning (Barton & Dexter, 2020). Collective teacher efficacy refers to teachers' perceptions of themselves as part of an effective instructional team capable of motivating students to learn. According to previous research, a school staff with a high feeling of collective efficacy is more likely to produce high student accomplishment (Tschannen-Moran & Barr, 2004; Eells, 2011; Donohoo, 2018). This study's findings that instructional leadership favorably promotes collective teacher efficacy to improve school achievement were validated by pre-pandemic investigations (Fancera & Bliss, 2011). Cansoy and Parlar (2018) found that as school principals' effective leadership behaviors improved, teachers' collective efficacy perceptions in their schools improved as well. At the same time, school administrators' effective school leadership behaviors predicted collective teacher efficacy in a favorable

and substantial way. Confirmatory studies are needed to back up the findings of this study, which was done in the context of online learning during the epidemic. Fathi, Ahmadnejad, and Salehi's study (2021) found that principal instructional leadership had a favorable impact on collective teacher efficacy. In other words, when instructors believe their school administrators' instructional management actions are suitable, they will be more committed and professionally engaged.

According to Goddard et al. (2004), as referenced by Prelli (2016), instructional leaders can always use tactics to boost collective efficacy within schools or teams, as well as capitalize on team expertise. Teachers' confidence in their ability to succeed in the most difficult of conditions would be strengthened by actions such as offering opportunities for collaborative sharing or witnessing colleagues executing best practice tactics. They might also recall how important it is to remind followers of previous accomplishments in employing persuasion as a mediator for sustaining and fostering efficacy. According to Ross and Gray (2006), as referenced by Hoogsteen (2021), principals can predict that boosting teacher attitudes about their collective capacity will contribute modestly but significantly to improved student accomplishment.This study's findings, which have been verified by numerous research conducted before and after the pandemic, clearly indicate the role of instructional leadership in boosting teachers' self- and collective efficacy. It is consequently critical that deans and principals continue in their instructional roles, particularly in exceptional situations like as the present epidemic, to guarantee that teachers give high-quality education for students' academic performance (Varela & Fedynich, 2020).

Enabling and Restraining Factors for Teacher Efficacy in Online Learning

Given the rapid adoption of online learning by most educational institutions, this study intended to identify the enabling and limiting elements that influence teachers' efficacy in online learning. Participants in this study were asked to respond to an openended question about the factors that helped or hindered their ability to promote meaningful learning during the pandemic. Their responses were divided down into smaller chunks, and codes were created to classify each one. To organize the data, the linkages between the produced codes were drawn. The organized codes were combined to form one core/overarching category that encapsulates the substance of the study—that is, the discovery of one significant notion that embodies a recurrent tendency. Five themes were identified as factors which enable and restraint teacher efficacy: technology, training, administration, stakeholders, and self-motivation. It was also discovered that the

absence or reduced presence of each of these factors limits teacher efficacy, but the prevalence of each of these factors increases teacher efficacy.

Online peer networks, such as social media sites and online forums, are critical components of online learning. They allow students to gain from social contact and teamwork, as well as from their peers' personal experiences and various viewpoints (Pappas, 2016). Internet access is seen as both a benefit and a hindrance by teachers when it comes to teaching online. Their capacity to communicate with their students and facilitate learning is hampered by a poor internet connection. The core issue that students and teachers have in online learning, according to Chung, Subramaniam, and Dass (2020), is internet connectivity. This has also been revealed in a number of research (Dube, 2020; Sahoo, 2020; Henaku, 2020; Nandal, Nandal, & Jora, 2021; Maqableh & Alia, 2021). The Internet allows for quick access to information technology in a variety of disciplines, which increases efficiency and saves time (Szymkowiak et al., 2021). This suggests that having a fast internet connection facilitates social interaction, which is beneficial to the quality of online learning (Baber, 2021). According to Arora and Chauhan (2021), teachers have trouble sustaining personal contacts with students because of poor internet connections. Poor connectivity also makes it difficult to access learning materials and other resources for improved teaching and learning (Dankwah, Nyarko & Mensah, 2021).

The availability, accessibility, and adequacy of resources required for online learning are referred to as resource support. Learning management systems, instructional software, learning applications, and physical and electronic books and references are some of the resources available. Teachers in this study identified this aspect as both facilitating and limiting their online teaching efficacy. Gebremariam, Gheorghita, TorMorten, and Wu-Yuin (2018) stated that in order toensure that online learning runs well, experience among educators also needs to be good especially on the learning platforms and mediums used in online learning. The availability and quality of digital infrastructures ensure effective online learning as facilitated by teachers (Allam & Aligarh, 2020). In addition, the efficiency of digital platforms utilized in synchronous and asynchronous modes to enable accessibility and connectivity is critical to students' meaningful online learning (Jaber, 2021). Teacher efficacy is also influenced by electronic resources. They provide up-to-date information, complete information from various sources, quick and easy access to information, and more to teachers and students. The supply of relevant Internet/server to boost the accessibility of e-resources, online user recommendations for accessing e-resources, and the

construction of user-friendly interfaces for simple access to online information can all help to improve access to electronic resources (Anyim, 2021).

During the epidemic, there was a dramatic change from face-to-face to online instruction, and most teachers were caught off guard. As a result, teachers' technological readiness must be polished and improved in order to produce engaging, meaningful, and purposeful lessons (Lukas & Yunus, 2021). Lockee (2021) states that the global shift to digital instruction in the early stages of the COVID-19 pandemic necessitated nearly instantaneous provision of teacher professional development for outcomes-based learning, as most educators and students had little to no experience with these instructional delivery approaches. Teachers in this study believed that having or not having training opportunities to improve their pedagogical and technological abilities influenced their efficacy for online learning with students. They will be able to create well-designed instructional materials, well-planned lessons, and a variety of assessments if they have access to a sufficient number of appropriate professional development opportunities, ensuring that students have an engaging, meaningful, and evidence-based learning experience. "Digital Competences for Teacher Professional Development: A Systematic Review," by Fernández-Batanero et al. (2020), underlined the relevance of digital competence as one of the difficulties facing teachers today. A lot of studies have revealed a shortage of teacher training and insufficient ICT training, according to the study. Ferri, Grifoni, and Guzzo (2020) identified pedagogical challenges in online learning, which are primarily linked to teachers' lack of digital skills, the lack of structured content versus the abundance of online resources, learners' lack of interactivity and motivation, and teachers' lack of social and cognitive presence (the ability to construct meaning through sustained communication within a community of inquiry).

Professional development training for teachers is necessary in today's atypical educational circumstances in order to improve the quality and quantity of online and blended courses (Richardson et al., 2020; Hassan, Mirza & Hussain, 2020). Teachers' perceptions of administrative support were favorably connected with teacher self-efficacy, according to Stipek (2012). Administrative support is critical in the effective and efficient use of technology in educational institutions when it comes to online learning (Ghavifekr & Quan, 2020). Teachers' efficacy in online learning is influenced by the support they receive from their school administration, according to this study. Specifically, teachers' efficacy is influenced by school administration decisions and policies linked to online learning, work environment,

workload, and performance evaluation. This means that administrators in an online school must be able to build and sustain a foundation dedicated to academic achievement and continuous improvement. Teachers can set the framework for an effective online program by developing and supporting a culture of institutional learning, ownership, and designing and managing online programs. Yang (2010) outlined the duties of administrators in maintaining the quality of online programs, emphasizing that administrators have long held a disproportionate amount of power over school policy, faculty morale, and the learning environment. Administrators must be strategists, motivators, promoters, and supporters in order to assure high-quality online programs. Administrators can begin to take big efforts toward achieving excellent online education for students once they have a clear understanding of their duties and the impact their contributions have on the quality of online educational programs. Furthermore, the role of leadership in providing necessary and appropriate support is critical to the success of launching a new online program or renovating an old one (Barefield & Meyer, 2013; Norris, 2021).

Teachers' collaboration with school's stakeholders like students, parents, and coworkers helps promote a successful online learning. This is similar to the social challenges in online learning identified by Ferri, Grifoni, and Guzzo (2020), which are primarily related to the lack of human interaction between teachers and students, as well as among the latter, the lack of physical spaces at home to receive lessons, and the lack of support from parents who are frequently working remotely in the same spaces. Teachers in this study stated that their efficacy in online learning was influenced by the support they received from students, parents, and co-teachers. This is supported by Cohen's study (2021), which found that external motivational factors for innovative teachers to teach successfully include feelings of recognition from others at the school, such as colleagues, parents, and students. According to Rodrigues (2021), mutual awareness between teachers and students during the teaching-learning process improves teacher efficacy and increases student confidence. Teachers get pedagogical and psychological abilities for developing meaningful learning through respectful dialogue and student-teacher interaction in learning and teaching (Marakova, 2021). A close link between home and school is a vital factor in students' academic achievement (Deeba, Khan & Saleem, 2021). Teachers and parents, according to Deeba, Khan, and Saleem (2021), must develop a culture of open communication, aiding, creating resources, embracing roles, and welcoming duties in order for kids to learn meaningfully. Parentteacher collaborations should be seen as a responsive and collaborative

movement toward shared goals based on mutual respect, complementary knowledge, and a willingness to learn from one another, rather than as a static relationship (Green & Edwards, 2021). Collegial collaboration in the classroom improves teaching quality (Nordgren et al., 2021). Hatlevik & Hatlevik (2018) found that collegial collaboration among teachers has a favorable relationship with online teaching efficacy, as noted by Dolighan & Owen (2021). Furthermore, in the case of experienced challenges, collegial support functions as a mitigating factor (Thomas, et al., 2020). Collegial collaboration involves teachers working together to develop pedagogical concepts and practices, as well as justifying their pedagogical choices through online spaces (Niemi, 2021). Though working in groups takes time, teachers were satisfied with team teaching and co-planning (Benade, 2017). Furthermore, when modified practices boost teacher collaboration, create shared accountability, reduce isolation, and foster continual professional learning, the whole teaching culture improves (Hargreaves & Fullan, 2012; Vescio, Ross, & Adams, 2008). Teachers in the study identified self-driven factors as enablers and restraints of their online teaching efficacy. These are a person's intrinsic motivation to accomplish what he or she like rather than relying on external motivation such as rewards and compliments (Zaid & Afnizul, 2021). Moreover, it is similar with the concept of self-motivation which refers to the ability to drive oneself to take initiative and action to pursue goals and complete tasks. Teachers' self-driven characteristics that keep them going to promote meaningful online learning are their motivation to persevere and dedication to give high quality education and generate high-quality content. The study of Waweru, Kihoro & Gachunga (2021) revealed that teachers with higher teaching efficacy portray more enthusiasm for teaching and have greater commitment to teaching. In a similar manner, Panisoara et al. (2020) discovered that intrinsic motivation has the most direct impact on teachers' online instruction. This shows that intrinsic motivation has a greater impact on teachers' intentions to continue teaching and promote meaningful learning online.

CONCLUSION

The ability of teachers to give meaningful education in the face of an unexpected change to online learning is influenced by the dean's or principal's instructional leadership behaviors. Instructional leaders must effectively manage factors that enable teachers' efficacy in online learning. Provision of adequate technological resources; customized and needs-based training; strong support from school administrators, colleagues, parents, and students; and activating self-motivation are just a few of the enablers for teacher efficacy. Continuing professional

development is an important strategy for providing teachers the opportunity to gain new skills that will help them grow and succeed at work, particularly in unconventional settings.

RECOMMENDATIONS

Given the favorable relationship between instructional leadership and teacher efficacy, continuing professional development opportunities have to be well thought off both for educational managers and teachers.

A functional leadership development plan for educational managers could be implemented by schools to help them advance their instructional leadership skills in managing instructional resources, maintaining visible presence, providing professional development opportunities for teachers, maximizing instructional time, monitoring student progress, listening to feedback on teaching-learning, and implementing the intended curriculum.

Differentiated professional development programs for teachers can be organized, conducted, and monitored to address the varying degree of online teaching efficacy of teachers based on their department and field of specialization. Specifically, a capacitating approach to improve their skills in classroom management and maintaining student discipline may be done for teachers in business and hospitality, engineering and architecture, and computer-related fields.

A training program for college teachers to improve their skills in ensuring student engagement in online learning may also be conducted. Teachers' efficacy in online learning will improve as a result of these capacitybuilding or training activities.

Schools may reinvent their digital learning platforms to include offline e-learning for the enhancement of distant learning contexts for students who are deprived of strong internet connectivity, as it has continuously been mentioned as an issue for both teachers and students.

Learners can use their learning management system even if they don't have access to the internet with offline e-learning. This means they'll be able to access

and complete full courses on their phone or computer without having to connect to the internet.

The findings of this study may be incorporated into the syllabi of courses related to leadership development and advancement in graduate studies, notably the doctor of education degree. A study instrument based on the identified parameters that both permit and limit teacher efficacy might be constructed, verified, and used by researchers to further investigate the relationship between these factors and teacher efficacy in online learning.

Furthermore, the findings of this study could be used to create a framework for teachers' ongoing professional development.

Further studies to identify other factors affecting teachers' self-efficacy and collective efficacy in online learning may be conducted. Such factors may include professional learning community, collegial collaboration, parent-teacher collaboration, teachers' self-motivation, and various school leadership styles. A follow-up study to confirm the association between collaboration skills and collective teacher efficacy of instructors in computer-related subjects might be done.

A research of the relationship between intra-professional collaboration and collective teacher efficacy of instructors in the health and allied sciences may also be undertaken. Also, a study on teaching efficacy and student learning outcomes in online learning maybe conducted.

REFERENCES

Aas, M., & Paulsen, J. M. (2019). National strategy for supporting school principal's instructional leadership. Journal of Educational Administration. Abdelmalak, M. M. M. (2015). Web 2.0 technologies and building online learning communities: Students' perspectives. Online Learning, 19(2).

Abedini, F., Bagheri, M. S., Sadighi, F., Yarmohammadi, L. & Serpa, S. (2018). The constituent elements of collective teacher efficacy beliefs and their contributing factors in different ELT educational contexts: A qualitative study, Cogent Social Sciences, 4:1.

Abou-Khalil, V., Helou, S., Khalifé, E., Chen, M. A., Majumdar, R., & Ogata, H. (2021). Emergency online learning in low-resource settings: Effective student engagement strategies. Education Sciences, 11(1), 24.

Abraham, J. (2021). Self-Efficacy and the Inclusive Teacher. BU Journal of Graduate Studies in Education, 13(1), 47-51. Adams, C.M. and Forsyth, P.B. (2006). Proximate sources of collective teacher efficacy. Journal of Educational Administration, 44(6), 625-642.

Adedoyin, O. & Soykan, E. (2020): Covid-19 pandemic and online learning: the challenges and opportunities, Interactive Learning Environments,

Agarwal, S. & Dewan, J. (2020). An analysis of the effectiveness of online learning in colleges of Uttar Pradesh during the COVID 19 lockdown. ournal of Xi'an University of Architecture & Technology, 12(5).ji

Akan, D. (2013). The relationship between school principals' leadership styles and collective teacher efficacy. Educational Research and Reviews, 8(10), 596-601.

Akram, M., & Muhammad Khan, A. (2020). Exploring e-leadership of principals: Increasing school effectiveness by learning management system. Journal of Education & Social Sciences, 8(1), 15-30.

Alegado, P. J. E. (2018). The challenges of teacher leadership in the Philippines as experienced and perceived by teachers. International Journal of Education and Research, 6(6), 291-302.

Al-Husseini, D. I. (2016). The Impact of Head Teachers' Instructional Leadership Role on Teachers' Professional Practices in Four Private Schools in Dubai (Doctoral dissertation, The British University in Dubai (BUiD)).

Allam, M., & Aligarh, A. M. U. (2020). A Study on the Availability of Digital Infrastructure for Online Learning among the Students of AMU.

Allen, I. E., & Seaman, J. (2008). Staying the Course: Online Education in the United States. Needham MA: Sloan Center for Online Education.

Angelle, P. & Teague, G. (2014). Teacher leadership and collective efficacy: teacher perceptions in three US school districts. Journal of Educational Administration, 52(6), 738-753.

Ansa, B. E., Zechariah, S., Gates, A. M., Johnson, S. W., Heboyan, V., & De Leo, G. (2020, September). Attitudes and behavior towards interprofessional collaboration among healthcare professionals in a large academic medical center. In Healthcare (Vol. 8, No. 3, p. 323). Multidisciplinary Digital Publishing Institute.

Anub, C. D. (2020). Instructional Leadership Practices, Teachers' Satisfaction and School Performance Indicators. Journal of World Englishes and Educational Practices, 2(4), 50-64.

Anyim, W. O. (2021). Relevance of Electronic Resources and Improvement of Access for Effective Distance Learning and Continuing Education Programme. International Journal of Asian Education, 2(1), 52-63.

Apak, J., Taat, M. S., & Suki, N. M. (2021). Measuring Teacher Creativity-Nurturing Behavior and Readiness for 21st Century Classroom Management. International Journal of Information and Communication Technology Education (IJICTE), 17(3), 52-67.

Archambault, L., Kennedy, K. and Bender, S. (2013), "Cyber-truancy: addressing issues of attendance in the digital age", Journal of Research on Technology in Education, Vol. 46 No. 1, 1-28.

Arora, R. G., & Chauhan, A. (2021). Faculty perspectives on work from home: Teaching efficacy, constraints and challenges during COVID'19 lockdown. Journal of Statistics and Management Systems, 24(1), 37-52.

Arrieta, G. S. (2021). Curriculum Evaluation: Inputs for Principal's Instructional Leadership. International Journal of Social Learning (IJSL), 1(2), 147-162.

Arrieta, G. S., Ancho, I. V., Pineda, M. D., Carandang, H. A., & PF, K. A. P. D. (2020). Assessment Of Principal's Instructional Leadership In Selected Public Schools: Basis For Instructional Development Program. Jurnal Penjaminan Mutu, 6(2), 146- 158.

Asha, L. (2021). Online Learning Problems and the Principal's Efforts to Overcome the Problems. AL-ISHLAH: Jurnal Pendidikan, 13(2), 1247-1258. Aure, M. & Jugar, R. (2017). A cross-sectional study on the self-efficacy of preservice science and mathematics teachers in a Philippine State University. Annals of Tropical Research 39[1], 135-146.

Baber, H. (2021). Social interaction and effectiveness of the online learning–A moderating role of maintaining social distance during the pandemic COVID-19. Asian Education and Development Studies.

Bafadal, I., Nurabadi, A., & Gunawan, I. (2018). The Influence of Instructional Leadership, Change Leadership, and Spiritual Leadership Applied at Schools to Teachers' Performance Quality. In International Conference on Education and Technology (ICET 2018). Atlantis Press.

Baker, A. (2003). Faculty development for teaching online: Educational and technological issues. The Journal of Continuing Education in Nursing, 34(6), 273-278.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. Educational Psychologist, 28(2), 117–148.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.). Encyclopedia of human behavior (Vol. 4, pp, 71-81). New York, NY: Academic Press.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W.H. Freeman and Company.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W.H. Freeman and Company.

Barefield, A. C., & Meyer, J. D. (2013). Leadership's role in support of online academic programs: Implementing an administrative support matrix. Perspectives in health information management/AHIMA, American Health Information Management Association, 10(Winter).

Barni, D., Danioni, F., & Benevene, P. (2019). Teachers' Self-Efficacy: The Role of Personal Values and Motivations for Teaching. Frontiers in psychology, 10, 1645.

Barr, B. & Miller, S. (2013). Higher Education: The Online Teaching and Learning Experience. University of Phoenix Faculty School of Advanced Studies

Barton, E. A., & Dexter, S. (2020). Sources of teachers' self-efficacy for technology integration from formal, informal, and independent professional learning. Educational Technology Research and Development, 68(1), 89-108.

Bellibas, M. S., & Liu, Y. (2017). Multilevel analysis of the relationship between principals' perceived practices of instructional leadership and teachers' self-efficacy perceptions. Journal of Educational Administration.

Bellibaş, M. Ş., Gümüş, S., & Liu, Y. (2021). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. School effectiveness and school improvement, 32(3), 387-412.

Bellibas, MS & Liu, Y. (2017). Multilevel analysis of the relationship between principals' perceived practices of instructional leadership and teachers' self-efficacy perceptions. J Educ Adm.

Benade, L. (2017). Teachers' critical reflective practice in the context of twenty-first century learning. Open Review of Educational Research, 2(1), 42–54.

Ben-Jacobs, M. G., Levin, D. S. & Ben-Jacobs, T. K. (2000). The learning environment of the 21st century. International Journal of Educational Telecommunications. 6 (3), 201-211.

Bent, G. J., Bakx, A., & Brok, P. D. (2016). Primary education teachers' self-efficacy beliefs for teaching Geography lessons. International Research in Geographical and Environmental Education, 150-165.

Bigatel, P. M., Ragan, L. C., Kennan, S., May, J., & Redmond, B. F. (2012). The identification of competencies for online teaching success. Journal of Asynchronous Learning Networks, 16(1), 59-77.

Bitto, L., & Butler, S. (2010). Math teacher self-efficacy and its relationship to teacher effectiveness. Journal of CrossDisciplinary Perspectives in Education, 3 (1), 40- 45.

Bogdan, R. C., & Biklen, S. K. (2003). Qualitative Research of Education: An Introductive to Theories and Methods (4th ed.). Boston: Allyn and Bacon. Boin, A., Kuipers, S., and Overdijk, W. (2013). Leadership in times of crisis: a framework for assessment. Int. Rev. Public Adm. 18, 79–91. doi: 10.1080/12294659.2013.10805241

Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to Corona Virus pandemic. Asian Journal of Distance Education, 15(1), i–iv

Brelsford, S. N., Camarillo, E. E., Garcia, A. S., Garcia, G., Lopez, V. R., Montoya, C. P., Mora R., III, Olvera, Brierton, S., Wilson, E., Kistler, M., Flowers, J., & Jones, D. (2016). A comparison of higher order thinking skills demonstrated in synchronous and asynchronous online college discussion posts. NACTA Journal, 60(1), 14-21.

Brierton, S., Wilson, E., Kistler, M., Flowers, J., & Jones, D. (2016). A comparison of higher order thinking skills demonstrated in synchronous and asynchronous online college discussion posts. NACTA Journal, 60(1), 14-21.

Brogden, L.M., & Couros, A. (2002). Contemplating the virtual campus: Pedagogical and administrative considerations. The Delta Kappa Gamma Bulletin, 68(3), 22-30.

Brooks, M. C., & Brooks, J. S. (2019). Culturally (ir) relevant school leadership: Ethnoreligious conflict and school administration in the Philippines. International Journal of Leadership in Education, 22(1), 6-29.

Browne, E. (2005). Structural and pedagogic change in further and higher education: A case study approach. Journal of Further and Higher Education, 29(1), 49-59

Bueno, D. C. Twenty-first Century Instructional Leadership Skills vis-à-vis School Culture in the Division of Zambales, Philippines.

Busari, J.O.; Moll, F.M.; Duits, A.J. Understanding the impact of interprofessional

collaboration on the quality of care: A case report from a small-scale resource limited health care environment. J. Multidiscip. Healthc. 2017, 10, 227–234. [Google Scholar] [CrossRef] [PubMed]

Bush, T. (2014). Instructional leadership in centralized contexts: Rhetoric or reality?.

Calcasola, K. (2021). The relationship between collective teacher efficacy and professional learning communities

Calik, T., Sezgin, F., Kavgaci, H., Kilinc, A. C. (2012). Examination of Relationships between Instructional Leadership of School Principals and Self-Efficacy of Teachers and Collective Teacher Efficacy. Educational Sciences: Theory & Practice, 12(4), 498–505.

Cansoy, R. and Parlar, H. (2018), "Examining the relationship between school principals' instructional leadership behaviors, teacher self-efficacy, and collective teacher efficacy", International Journal of Educational Management, 32(4), 550-567.

Cansoy, R., & Parlar, H. (2018). Examining the relationship between school principals' instructional leadership behaviors, teacher self-efficacy, and collective teacher efficacy. International journal of educational management.

Caprara G. V., Barbaranelli C., Borgogni L., Steca P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. J. Educ. Psychol. 95 821–832.

Casanova, D. & Azzi, R. (2015). Personal and Collective Efficacy Beliefs Scales to Educators: Evidences of Validity

Castro, M.D.B., Tumibay, G.M. (2021). A literature review: efficacy of online learning courses for higher education institution using meta-analysis. Educ Inf Technol 26, 1367–1385. https://doi.org/10.1007/s10639-019-10027-z

Cavalcanti, A. et al (2021). Automatic feedback in online learning environments: A systematic literature review, Computers and Education: Artificial Intelligence, 2.

Chaeruman, U. A., & Maudiarti, S. (2018). Quadrant of Blended Learning: a Proposed Conceptual Model for Designing Effective Blended Learning. Jurnal Pembelajaran Inovatif, 1(1), 1-5. doi: https://doi.org/10.21009/JPI.011.01

Chalikias, M., Raftopoulou, I., Sidiropoulos, G., Kyriakopoulos, G., & Zakopoulos, V. (2020). The school principal's role as aleader in teachers' professional development: the case of public secondary education in Athens. Problems and Perspectives in Management, 18(4), 461-474. doi:10.21511/ppm.18(4).2020.37

Chandra, R. (2015). Classroom management tools for effective teaching. Int. J. Educ. Psychol. Res., vol. 4, no. 4, (2015), pp. 13–15.

Chao, C. N. G., Chow, W. S. E., Forlin, C., & Ho, F. C. (2017). Improving teachers' selfefficacy in applying teaching and learning strategies and classroom management to students with special education needs in Hong Kong. Teaching and Teacher Education, 66(2017), 360-369.

Cheng, X., Ma, X. Y., Luo, C., Chen, J., Wei, W., & Yang, X. (2021). Examining the relationships between medical students' preferred online instructional strategies, course difficulty level, learning performance, and effectiveness. Advances in Physiology Education, 45(4), 661-669.

Chiu, T. K. (2021). Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic. Journal of Research on Technology in Education, 1-17.

Cho, M. H., Kim, Y., & Choi, D. (2017). The effect of self-regulated learning on college students' perceptions of community of inquiry and affective outcomes in online learning. The Internet and Higher Education, 34, 10-17. https://doi.org/10.1016/j.iheduc.2017.04.001

Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning readiness among university students in Malaysia amidst COVID-19. Asian Journal of University Education, 16(2), 46-58.

Clark, C., Strudler, N., & Grove, K. (2015). Comparing asynchronous and synchronous video vs. textbased discussions in an online teacher education course. Online Learning, 19(3), 48-69.

Cohen, R. (2021). WHY DO THEY DO IT? THE MOTIVATION SOURCES OF INNOVATIVE TEACHERS. Knowledge International Journal, 45(2), 361-366.

Conrad, D. (2004). Universities instructors' reflections on their first online teaching experiences. Journal of Asynchronous Learning Networks, 8(2), 31-44.

Corry, M., & Stella, J. (2018). Teacher self-efficacy in online education: a review of the literature.

Corry, M., & Stella, J. (2018). Teacher self-efficacy in online education: A review of the literature. Research in Learning Technology. COVID-19 pandemic in Manitoba schools. International Studies in Educational Administration, 48(2), 70–77.

Cunanan, E.J. and Chua, C. (2015), "How teachers view the need to develop self- mastery skills among teacher education students?", Asia Pacific Journal of Multidisciplinary Research, Vol. 3, pp. 105-111.

Curry, T. D. (2015). A Comparison between Collective Teacher Efficacy and Collective Teacher Effectiveness. Union University.

Dalanon, J. & Matsuka, Y. (2017). Filipino teachers sense of efficacy in inclusion classes. Asia Pacific Journal of Research 1(58).

Dana, B. & Lucy, S. (2007). Building Collective Efficacy: How Leaders Inspire Teachers to Achieve. Center for Comprehensive School Reform and Improvement

Dankwah, E. A., Nyarko, I. A., & Mensah, D. D. (2021). Support Teaching in Schools: Perceptions of Teacher Trainees. Social Education Research, 289-297.

Deeba, F., Khan, H. K., & Saleem, A. (2021). Family School Partnership: A Cohesive Perception of Teachers and Parents.

Depaepe, F., & Konig, J. (2018). General pedagogical knowledge, self-efficacy and instructional practice: Disentangling their relationship in pre-service teacher education. Teacher and Teacher Education, 69(2018), 177-190.

Derrington, M. & Angelle, P. (2013). Teacher leadership and collective efficacy: Connections and links. International Journal of Teacher Leadership, 4(1).

Dhawan S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal of Educational Technology Systems,49(1):5-22. doi:10.1177/0047239520934018

Digap, A. L. (2016). Self-efficacy, English proficiency and effectiveness of teachers of English in the secondary schools. SMCC Higher Education Research Journal 2.

Dilekli, Y., & Tezci, E. (2020). A cross-cultural study: Teachers' self-efficacy beliefs for teaching thinking skills. Thinking Skills and Creativity, 35, 100624.

Dolighan, T. & Owen, M. (2021). Teacher efficacy for online teaching during the covid-19 pandemic. Brock Education Journal 30 (1):95 – 116.

Dolighan, T., & Owen, M. (2021). Teacher efficacy for online teaching during the COVID- 19 pandemic. Brock Education Journal, 30(1), 95-95.

Dolighan, T., & Owen, M. (2021). Teacher efficacy for online teaching during the COVID- 19 pandemic. Brock Education Journal, 30(1), 95-95.

Domina, T., Renzulli, L., Murray, B., Garza, A. N., & Perez, L. (2021). Remote or removed: Predicting successful engagement with online learning during COVID-19. Socius, 7, 2378023120988200.

Donkor, A. K., & Asante, J. (2016). Instructional leadership of basic schools in Ghana: The case study of schools in Kwaebibirem District. American International Journal of Contemporary Research, 6(4), 65-75.

Donohoo J. & Katz, S. (2019). What drives collective efficacy? Educational Leadership, 76, 24–29.

Donohoo, J. (2018). Collective teacher efficacy research: Productive patterns of behaviour and other positive consequences. Journal of educational change, 19(3), 323-345.

Donohoo, J. (2018). Collective teacher efficacy research: productive patterns of behavior and other positive consequences. J Educ Change 19, 323–345

Donohoo, J., Hattie, J. & Eells, R. (2018). The power of collective Efficacy. Educational Leadership Vol 75 No 6 ASCD

Donohoo, J., O'Leary, T. and Hattie, J. (2020), "The design and validation of the enabling conditions for collective teacher efficacy scale (EC-CTES)", Journal of Professional Capital and Community, Vol. 5 No. 2, pp. 147-166.

Dube, B. (2020). Rural online learning in the context of COVID 19 in South Africa: Evoking an inclusive education approach. Multidisciplinary Journal of Educational Research, 10(2), 135-157.

Duyar, I., Gümüş, S. & Bellibaş, M. S. (2013). Multilevel analysis of teacher work attitudes (Teacher Self-Efficacy and Job Satisfaction): The influence of principal leadership and teacher collaboration. International Journal of Educational Management 27(7)

Eells, R. J. (2011). Meta-analysis of the relationship between collective teacher efficacy and student achievement (Doctoral dissertation, Loyola University Chicago).

Eells, R. J. (2011). Meta-analysis of the relationship between collective teacher efficacy and student achievement (doctoral dissertation). Loyola University, Chicago, IL.

Ellis, J., & Romano, D. (2008, November). Synchronous and asynchronous online delivery: How much interaction in e-learning is enough in higher education?. In E Learn: World Conference on E- Learning in Corporate, Government, Healthcare, and Higher Education (pp. 2615-2620). Association for the Advancement of Computing in Education (AACE).

Ernst, S. (2021). How can leaders develop and maintain high achieving elementary schools? A single case study exploring collective teacher efficacy, principal leadership, and high reliability organization principles (Doctoral dissertation, Colorado State University).

F. Barrera-osorio, F. Barrera-osorio, C. R. Schwab, W. Oates, J. Rice, dan S. Sanders, “Felipe Barrera,” Barrera-Osorio, F., dan Raju D. 2017. Teacher Performance Pay: Experimental Evidence from Pakistan. Journal of Public Economics, 2017.

Fabelico, F. & Afalla, B. (2020). Perseverance and passion in the teaching profession: teachers’ grit, self-efficacy, burnout, and performance. Journal of Critical Reviews 7(11).

Fackler, S. & Malmberg, L. (2016). Teachers' self-efficacy in 14 OECD countries: Teacher, student group, school and leadership effects. Teaching and Teacher Education, 56,185-195.

Fackler, S., Malmberg, L. E., & Sammons, P. (2021). An international perspective on teacher self-efficacy: personal, structural and environmental factors. Teaching and Teacher Education, 99, 103255.

Fancera, S. & Bliss, J. (2011). Instructional leadership influence on collective teacher efficacy to improve school achievement. Leadership and Policy in Schools, 10(3), 349-370.

Fancera, S. F., & Bliss, J. R. (2011). Instructional leadership influence on collective teacher efficacy to improve school achievement. Leadership and Policy in Schools, 10(3), 349-370.

Fathi, J., Ahmadnejad, M., & Salehi, M. (2021). An investigation of the relationship among principal instructional leadership, collective teacher efficacy and teacher job satisfaction: A structural equation modeling approach. Journal of School Administration, 9(2).

Fazza, H., & Mahgoub, M. (2021). Student engagement in online and blended learning in a higher education institution in the Middle East: Challenges and solutions. Studies in Technology Enhanced Learning, 1(2).

Fernández-Batanero, J. M., Montenegro-Rueda, M., Fernández-Cerero, J., & GarcíaMartínez, I. (2020). Digital competences for teacher professional development. Systematic review. European Journal of Teacher Education, 1-19.

Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. Societies, 10(4), 86.

Fitria, H., Ahmad, S., & Novita, D. (2021). The Effectiveness of Internet-Based Supervision on The Covid 19 Pandemic Situation. Tadbir: Jurnal Studi Manajemen Pendidikan, 5(1), 19-32.

Fives, H., & Looney, L. (2009). College Instructors' Sense of Teaching and Collective Efficacy. International journal of Teaching and Learning in Higher education, 20(2), 182-191.

Flimban, R. (2020). A study of the impact of instructional leadership on elementary teacher efficacy. Dissertations/Theses - Doctoral Dissertations. ProQuest LLC.

Flood, L. & Angelle, P. (2017). Organizational influences of collective efficacy and trust on teacher leadership

Francescucci, A., & Rohani, L. (2019). Exclusively synchronous online (VIRI) learning: The impact on student performance and engagement outcomes. Journal of marketing Education, 41(1), 60-69. https://doi.org/10.1177/0273475318818864

Franklin, C.M.; Bernhardt, J.M.; Lopez, R.P.; Long-Middleton, E.R.; Davis, S. Interprofessional Teamwork and Collaboration between Community Health Workers and Healthcare Teams. Health Serv. Res. Manag. Epidemiol. 2015, 2. [Google Scholar] [CrossRef] [PubMed]

Furtado Nina, K. C., Soares Ramos, E. M. L., Holanda Ramos, M. F., Souza da Costa Silva, S., de Oliveira Fernandez, A. P., & Ramos Pontes, F. A. (2016). Fuentes de autoeficacia en profesores. Revista de psicología (Santiago), 25(1), 01-20.

Fusco, K. (2019). Technology leaders' impact on teachers' self-efficacy and integration of instructional technology in secondary schools. Dissertations/Theses - Doctoral Dissertations. ProQuest LLC.

Gavish, B. & Friedman, I. A. (2010). Novice teachers' experience of teaching: a dynamic aspect of burnout. Social Psychology of Education, 13(2), 141–167.

Gawlik, M. (2018). Instructional leadership and the charter school principal. Gebremariam, M., Gheorghita, G., Tor-Morteni, G. & Wu-Yuin, H. (2018). Special Issue on "Authentic Edutainment with Advanced Technologies" Journal of Educational Technology & Society.21(4), pp. 157-170.

Gerlich, R. N. (2005). Faculty perception of distance learning. Distance Education Report, 9(17), 8.

Ghasemi, Sh. (2010). The relationship between leadership style (transformational,exchange oriented, participatory) self-employee directors of the National Bank Alborz Province. The first international conference and innovation management

Ghavifekr, S., & Quan, T. Y. (2020). Effect of Administration Support on Teachers' ICT Utilization in the Malaysian Context. Utilizing Technology, Knowledge, and Smart Systems in Educational Administration and Leadership, 282-300.

Gilbert, A., Tait-McCutcheon, S., & Knewstubb, B. (2021). Innovative teaching in higher education: Teachers' perceptions of support and constraint. Innovations in Education and Teaching International, 58(2), 123-134.

Glanz, J., & Hazi, H. M. (2019). Shedding light on the phenomenon of supervision traveling incognito: A field's struggles for visibility. Journal of Glassman, M., Kuznetcova, I., Peri, J., & Kim, Y. (2021). Cohesion, collaboration and the struggle of creating online learning communities: Development and validation of an online collective efficacy scale. Computers and Education Open, 2, 100031.

Goddard R, Hoy W, Hoy A (2000) Collective teacher efficacy: its meaning, measure, and impact on student achievement. Am Educ Res J 37(2):479–507.

Goddard, R. (2001). Collective efficacy: A neglected construct in the study of schools and student achievement. Journal of Educational Psychology 93(3), 467-476. Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. American Educational Research Journal, 37(2), 479–507.

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. Educational Researcher, 33(3), 3–13.

Goddard, R., LoGerfo, L., & Hoy, W. (2004). High school accountability: The role of collective efficacy. Educational Policy, 18(3), 403-425. http://dx.doi.org/10.1177/0895904804265066

Gonzales, G., Gonzales, R., Costan, F. & Himang, C. (2020). Dimensions of motivation in teaching: relations with social support climate, teacher efficacy, emotional exhaustion, and job satisfaction. Education Research International Green, H., & Edwards, B. (2021). Working in partnership with parents. In Leading on Inclusion (pp. 141-151). Routledge.

Grosse, C. U. (2004). How distance learning changes faculty. International Journal of Instructional Technology and Distance Learning, 1(6). Retrieved June 19, 2009 from http://www.itdl.org/journal/un_04/article05.htm

Guerreiro-Casanova, D. C., & Gurgel Azzi, R. (2015). Personal and collective efficacy beliefs scales to educators: Evidences of validity. Psico-USF, Bragança Paulista, 20(3), 399–409.

Guidetti, G., Viotti, S., Bruno, A., & Converso, D. (2018). Teachers' work ability: A study of relationships between collective efficacy and self-efficacy beliefs. Psychology Research and Behavior Management, 11, 197.

Guilbaud, T., Martin, F., & Newton, X. (2021). Faculty perceptions on accessibility in online learning: knowledge, practice and professional development. Online Learning, 25(2),6-35.

Gümüş, E., & Bellibaş, M. Ş. (2021). The relationship between the types of professional development activities teachers participate in and their self-efficacy: a multicountry analysis. European Journal of Teacher Education, 1-28.

Gunawan, I. (2017). Instructional Leadership Profile of Junior High School's Principal (A Case Study of Junior High School in Malang). International Research-Based Education Journal, 1(1).

Guskey, T. R., & Anderman, E. M. (2013). In search of a useful definition of mastery. Educational Leadership, 71, 18-23.

Hallinger, P. (2005). Instructional leadership and the school principal: A passing fancy that refuses to fade away. Leadership and Policy in Schools, 4 (3), 221-239.

Hallinger, P., Hosseingholizadeh, R., Hashemi, N., & Kouhsari, M. (2018). Do beliefs make a difference? Exploring how principal self-efficacy and instructional leadership impact teacher efficacy and commitment in Iran. Educational Management Administration & Leadership, 46(5), 800-819.

Hampton, D., Culp-Roche, A., Hensley, A., Wilson, J., Otts, J. A., Thaxton-Wiggins, A., ... & Moser, D. K. (2020). Self-efficacy and satisfaction with teaching in online courses. Nurse educator, 45(6), 302-306.

Hargreaves, A., & Fullan, M. (2012). Professional capital. Transforming teaching in every school. New York: Teachers College Press.

Harlow, J. (2007). Successfully teaching bible languages online at the seminary level: Guiding principles of course design and delivery. Teaching Theology and Religion, 10(1), 13-24.

Harris, Alma; Jones, Michelle; Cheah, Kenny Soon Lee; Devadason, Edward; Adams, Donnie (2017). Exploring principals' instructional leadership practices in Malaysia: insights and implications. Journal of Educational Administration, 55(2), 207– 221. doi:10.1108/JEA-05-2016-0051

Hassan, M. M., Mirza, T., & Hussain, M. W. (2020). A critical review by teachers on the online teaching-learning during the COVID-19. International Journal of Education and Management Engineering, 10(8), 17-27.

Hatch, L., & Clark, S. K. (2021). A study of the instructional decisions and lesson planning strategies of highly effective rural elementary school teachers. Teaching and Teacher Education, 108, 103505.

Hatlevik, I. K., & Hatlevik, O. E. (2018). Examining the relationship between teachers' ICT self-efficacy for educational purposes, collegial collaboration, lack of facilitation and the use of ICT in teaching practice. Frontiers in psychology, 9, 935.

Hattie, J. (2016). Third Annual Visible Learning Conference (subtitled Mindframes and Maximizers), Washington, DC, July 11, 2016.

Hattie, J. (2016, July). The current status of the visible learning research. Presentation at the third annual Visible Learning Conference, Washington, DC.

Hauseman, C., Darazsi, S., & Kent, S. (2020). Collaboration, Communication and Wellness: Response to the COVID-19 Pandemic in Manitoba Schools. International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management (CCEAM)), 48(2).

Henaku, E. A. (2020). COVID-19 online learning experience of college students: The case of Ghana. International Journal of Multidisciplinary Sciences and Advanced Technology, 1(2), 54-62.

Hodges, C. (2008). Self-efficacy in the context of online learning environments: A review of the literature and directions for research. Performance Improvement Quarterly 20(3-4):7 – 25.

Holzberger, D., & Prestele, E. (2021). Teacher self-efficacy and self-reported cognitive activation and classroom management: A multilevel perspective on the role of school characteristics. Learning and Instruction, 101513.

Hoogsteen, T. J. (2020). Collective teacher efficacy: A critical review of education's top influence. Advances in Social Science Research Journal,

Hoogsteen, T. J. (2020). Collective Teacher Efficacy: A Critical Review of Education's Top Influence. Advances in Social Sciences Research Journal, 7(6) 574-586.

Hoogsteen, T. J. (2021). Fostering Collective Efficacy: What School Leaders Should Know?. Advances in Social Sciences Research Journal, 8(2). Horton, T. (2013). The relationship between teachers' sense of efficacy and perceptions of principal instructional leadership behaviors in high poverty schools. Theses and Dissertations. University of Texas.

Hoy, A. W., Hoy, W. K., & Davis, H. A. (2009). Teachers' self-efficacy beliefs. In K. R. Wenzel & A. Wigfield (Eds.), Educational psychology handbook series. Handbook of motivation at school (p. 627–653). Routledge/Taylor & Francis Group.

Hoy, W. (2012). School characteristics that make a difference for the achievement of all students: A 40-year odyssey. Journal of Educational Administration, 50(1), 76–97.

Hoy, W. K., Smith, P. A., & Sweetland, S. R. (2003). A test of a model of school achievement in rural schools: The significance of collective efficacy. In W. K. Hoy & C. G. Miskel (Eds.), Theory and research in educational administration (pp. 185– 202).

Hrastinski, S. (2008). Asynchronous and synchronous e-learning. Educause Quarterly, 31(4), 51-55.

Hrastinski, S., Keller, C., & Carlsson, S. A. (2010). Design exemplars for synchronous elearning: A design theory approach. Computers & Education, 55(2010), 652-662. doi: 10.1016/j.compedu.2010.02.025

Hussain, A., & Anderson, K. (2021). Promoting Collective Teacher Efficacy in schools in China: The role of professional learning approach. RIPE, 69.

Ibrahim, Y. L., Fasasi, Y. A., Ishola, M. A., & Suleiman, Y. (2021). Teachers' Collective Efficacy as a Predictor of Students' Academic Performance in North Central Nigeria. Multidisciplinary Journal of School Education, 10(1 (19)), 101-120.

Iqbal, M., Munir, F., & Nawaz, F. (2021). Comparison of Principals' Instructional Leadership Style for Quality Learning between Public and Private Schools. Global Educational Studies Review, VI, 6, 1-10.

Iqbal, M., Munir, F., & Nawaz, F. (2021). Comparison of Principals' Instructional Leadership Style for Quality Learning between Public and Private Schools. Global Educational Studies Review, VI, 6, 1-10.

Isa, N., Mansor, A., Wahab, J., & Alias, B. (2018). Principals' instructional leadership towards teachers' self-efficacy. International Journal of Engineering and Technology 7(3.3):449-452.

Ismail, S. N., Don, Y., Husin, F., & Khalid R. (2018). Instructional leadership and teachers' functional competency across the 21st century learning. International Journal of Instruction, 11(3), 135-152.

Jaber, R. (2021). The Implementation and Management of the Digital Platforms and Online Resources in Online Distance learning Amidst COVID-19 Pandemic-A case study in a School in UAE (Doctoral dissertation, The British University in Dubai (BUiD)).

Jackson, J. (2009). Organizational citizenship behaviors, collective teacher efficacy, and student achievement in elementary schools. Dissertations, Theses, and Masters Projects.

Jena, P. K. (2020). Online Learning during Lockdown Period for COVID-19 in India (May 31, 2020). International Journal of Multidisciplinary Educational Research (IJMER), 9, 5(8), 82-92.

Jenkins, B. (2009). "Instructional," Principal, vol. 88, no. 3, hal. 34–37

Jones, P., Kolloff, M. & Kolloff, F. (2008). Students' Perspectives on Humanizing and Establishing Teacher Presence in an Online Course. In K. McFerrin et al. (Eds.), Proceedings of Society for Information Technology and Teacher Education International Conference 2008 (pp. 460-465). Chesapeake, VA: AACE.

Josephson, B. (2019). Professional reflection: its implementation in instructional

leadership and affect on collective-efficacy. Dissertations, Theses, and Masters Projects. Thompson Rivers University

Joshua, R. (2013). Instructional leadership practices and teacher efficacy beliefs: crossnational evidence from TALIS. Dissertations/Theses - Doctoral Dissertations. ProQuest LLC

Karwanto, K. (2020). The Impact of Covid-19: What School Principals as Instructional Leaders Act?. IJEBD International Journal Of Entrepreneurship And Business Development eISSN 2597-4785 pISSN 2597-4750, 3(3), 331-336.

Kaya, F., Borgerding, L. A., & Ferdous, T. (2021). Secondary Science Teachers' SelfEfficacy Beliefs and Implementation of Inquiry. Journal of Science Teacher Education, 32(1), 107-121.

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. Journal of Educational Technology Systems, 46(1), 4–29.

Keengwe, J., Kidd, T. T., & Kyei-Blankson, L. (2009). Faculty and technology: Implications for faculty training and technology leadership. Journal of Science Education and Technology. 18 (1), 23-28.

Kelley, T. R., Knowles, J. G., Holland, J. D., & Han, J. (2020). Increasing high school teachers' self-efficacy for integrated STEM instruction through a collaborative community of practice. International Journal of STEM Education, 7(1), 1-13.

Kılıç, M. E. (2021). What are the expectations of primary school teachers from instructional leaders during the distance education period. Athens Journal of Education.

Kim, Y. A., Rezende, L., Eadie, E., Maximillian, J., Southard, K., Elfring, L., ... & Talanquer, V. (2021). Responsive Teaching in Online Learning Environments: Using an Instructional Team to Promote Formative Assessment and Sense of Community. Journal of College Science Teaching, 50(4), 17-24.

Klassen R. M., Tze V. M. C. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: a meta-analysis. Educ. Res. Rev. 12 59–76.

Knapczyk, D. R., Frey, T. J., & Wal-Marencik, W. (2005). An evaluation of web conferencing in online teacher preparation. Teacher Education and Special Education, 28(2), 114-124.

Koçak, S. & Özdemir, M. (2020). Evaluation of collective teacher efficacy from the perspective of four-frame leadership model. Education and Science, 45(202), 347- 365.

Kocak, S., & Özdemir, M. (2020). Evaluation of collective teacher efficacy from the perspective of four-frame leadership model. Egitim ve Bilim, 45(203).

Kormos, J., & Nijakowska, J. (2017). Inclusive practices in teaching students with dyslexia: Second language teachers' concerns, attitudes and self-efficacy beliefs on a massive open online learning course. Teacher and Teacher Education, 68(2017), 30-41.

KUCUKAKİN, P., & DEMİR, C. G. (2021). The Relationship Between Classroom Management and Students' Learning: A Systematic Review. Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi, 11(2), 843-861.

Kundu, A. (2020). Toward a framework for strengthening participants' self-efficacy in online education. Asian Association of Open Universities Journal.

Kunnari, I., Ilomäki, L., & Toom, A. (2018). Successful teacher teams in change: The role of collective efficacy and resilience. International Journal of Teaching and Learning in Higher Education.

Kurt, T., Duyar, I. and Çalik, T. (2012). Are we legitimate yet? A closer look at the casual relationship mechanisms among principal leadership, teacher self-efficacy and collective efficacy. Journal of Management Development, 31(1), 71-86.

Lang, M. L. (2019). Planning for Differentiated Instruction: Instructional Leadership Practices Perceived by Administrators and Teachers in Middle Schools. Educational Planning, 26(2), 29-45.

Lao, T., & Gonzales, C. (2005). Understanding online learning through a qualitative description of professors and students' experiences. Journal of Technology and Teacher Education, 13(3), 459-474

Lawal, B., Rafi, A. S., Idris, B., & Joseph, A. A. (2021). Perceptions of academics in Nigerian higher education institutions on graduate attributes in computing disciplines that are desirable for employability and entrepreneurship in Nigeria. Global Journal of Engineering and Technology Advances, 8(1), 019-027.

Lazarides, R., & Warner, L. M. (2020). Teacher Self-Efficacy. In Oxford Research Encyclopedia of Education. Lee, J., & Busch, P. E. (2005). Factors related to instructions' willingness to participate in distance education. Journal of Educational Research, 99(2), 109-115.

Li, L. & Liu, Y. (2020). An integrated model of principal transformational leadership and teacher leadership that is related to teacher self-efficacy and student academic performance. Asia Pacific Journal of Education

Lincuna, M. L. B., & Caingcoy, M. E. (2020). Instructional Leadership Practices of School Administrators: The Case of El Salvador City Division, Philippines. literature. Research in Learning Technology, 26. https://doi.org/10.25304/rlt.v26.2047

Liu, S., & Hallinger, P. (2018). Principal instructional leadership, teacher self-efficacy, and teacher professional learning in China: Testing a mediated-effects model. Educational Administration Quarterly, 54(4), 501-528.

Liu, X.Y. (2021) A Review on the Effects of Instructional Time and Teacher Quality on Language Learning Performance. Open Access Library Journal, 8, 1-14. doi: 10.4236/oalib.1107834.

Lock, J., Clancy, T., Lisella, R., Rosenau, P., Ferreira, C., & Rainsbury, J. (2016). The lived experiences of instructors co-teaching in higher education. Brock Education Journal, 26(1).

Lockee, B. B. (2021). Shifting digital, shifting context:(re) considering teacher professional development for online and blended learning in the COVID-

19 era. Educational Technology Research and Development, 69(1), 17-20.

Lohmann, M. J., Randolph, K. M., & Oh, J. H. (2021). Classroom Management Strategies for Hyflex Instruction: Setting Students Up for Success in the Hybrid Environment.Early Childhood Education Journal, 1-8.

Lorenzetti, J. P. (2004). Changing faculty perceptions of online workload. Distance Education Report, 8(20), 1-6.

Lowenthal, P., Dunlap, J., & Snelson, C. (2017). Live synchronous web meetings in asynchronous online courses: Reconceptualizing virtual office hours. Online Learning Journal, 21(4), 177-194.

Lukas, B. A., & Yunus, M. M. (2021). ESL Teachers' Challenges in Implementing Elearning during COVID-19. International Journal of Learning, Teaching and Educational Research, 20(2), 330-348.

Luo, N., Li, H., Zhao, L., Wu, Z., & Zhang, J. (2021). Promoting Student Engagement in Online Learning Through Harmonious Classroom Environment. The Asia-Pacific Education Researcher, 1-11.

Luyt, I. (2013). Bridging spaces: cross-cultural perspectives on promoting positive online learning experiences. Journal of Educational Technology Systems, 42, 3-20.

M. P. G. and A. T. Alex (2018). Classroom Management: a Theoretical Overview. Sch. Res. J. Humanit. Sci. English Lang., vol. 6, no. 29, (2018), pp. 8089–8102

Ma, X. & Marion, R. (2019). Exploring how instructional leadership affects teacher efficacy: A multilevel analysis. Educational Management Administration & Leadership

Ma, X., & Marion, R. (2021). Exploring how instructional leadership affects teacher efficacy: A multilevel analysis. Educational Management Administration & Leadership, 49(1), 188-207.

Mabrito, M. (2006). A study of synchronous versus asynchronous collaboration in an online business writing class. American Journal of Distance Education, 20(2), 93– 107. doi:10.1207/s15389286ajde2002_4

MacLeod L. (2020) Shaping Professional Development of Educators: The Role of School Leaders. In: White M.A., McCallum F. (eds) Critical Perspectives on Teaching, Learning and Leadership. Springer, Singapore. https://doi.org/10.1007/978-981- 15-6667-7_10

Magno, C. & Sembrano, J. (2007). The role of teacher efficacy and characteristics on teaching effectiveness, performance, and use of learner-centered practices. The Asia-Pacific Education Researcher 16 (1).

Mahgoub, Y., & Sundaravadivel, P. (2021, March). Improving the Instructional Strategies of Traditional Electrical Engineering Course During the Pandemic. In ASEE 2021 Gulf-Southwest Annual Conference.

Mahmood, S. (2021). Instructional strategies for online teaching in COVID-19 pandemic. Human Behavior and Emerging Technologies, 3(1), 199-203.

Makarova, E. (2021). Teacher-student interaction in the context of higher education. In SHS Web of Conferences (Vol. 99, p. 01041). EDP Sciences.

Mante-Estacio, M. H. (2018). The Sense of Efficacy for Literacy Instruction: The Case of Filipino Teachers of English. De La Salle University-Manila

Maqableh, M., & Alia, M. (2021). Evaluation online learning of undergraduate students under lockdown amidst COVID-19 Pandemic: The online learning experience and students' satisfaction. Children and Youth Services Review, 128, 106160.

Marfoglio, L. (2006). Change is inevitable: Preparing faculty to make the shift. In C. Crawford et all. (Eds.), Proceedings of Society for Information Technology and Teacher Education International Conference 2006 (pp. 1264-1268). Chesapeake, VA: AACE.

Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. Online Learning Journal, 23(3), 97–119.

McBrien, J. L., Jones, P., & Chang, R. (2009). Virtual spaces: Employing a synchronous online classroom to facilitate student engagement in online learning. International Review of Research in Open and Distance Learning, 10(3), 1–17. https://doi.org/10.19173/irrodl.v10i3.605

McLaughlin, M. W., & Talbert, J. E. (2006). Building schoolbased teacher learning communities: Professional strategies to improve student achievement (Vol. 45). Teachers College Press.

Mehdinezhad, V. & Mansouri, M. (2016). School principals' leadership behaviours and its relation with teachers' sense of self-efficacy. International Journal of Instruction, 9(2), 51-60.

Meyer, A., Richter, D., & Hartung-Beck, V. (2020). The relationship between principal leadership and teacher collaboration: Investigating the mediating effect of teachers' collective efficacy. Educational management administration & leadership, 1741143220945698.

Moosa, V. (2021). Review of collective teacher efficacy research: Implications for teacher development, school administrators and education researchers. International Journal of Theory and Application in Elementary and Secondary School Education, 3(1), 62-73.

Moran, M. & Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. Teaching and Teacher Education, 17, 783-805.

Mpisane, S. (2020). Instructional leadership practices in 21st-century education centred schools: a case study of three schools in Gauteng (Doctoral dissertation).

Mujallid, A. (2021). Instructors' readiness to teach online: a review of TPACK standards in online professional development programmes in higher education. International Journal of Learning, Teaching and Educational Research, 20(7).

Mullaney, D. (2021). Collective efficacy of elementary co-teachers (Doctoral dissertation, Rutgers University-Graduate School of Education).

Nandal, N., Nandal, N., & Jora, M. N. (2021). Perception of Online Learning Among College Students: A Systematic. International Journal of Modern Agriculture, 10(1), 1142-1149.

Näykki, P., Kontturi, H., Seppänen, V., Impiö, N., & Järvelä, S. (2021). Teachers as learners–a qualitative exploration of pre-service and in-service teachers' continuous learning community OpenDigi. Journal of Education for Teaching, 1- 18.

Nelson, S. J., & Thompson, G. W. (2005). Barriers perceived by administrators and faculty regarding the use of distance education technologies in pre-service programs for secondary agricultural education teachers. Journal of Agricultural Education, 46(4), 36-48.

Nguyen, D. T., Ng, D., & San Yap, P. (2017). Instructional leadership structure in Singapore: A co-existence of hierarchy and heterarchy. Journal of Educational Administration.

Nguyễn, H. T., Hallinger, P., & Chen, C. W. (2018). Assessing and strengthening instructional leadership among primary school principals in Vietnam. International Journal of Educational Management.

Niemi, K. (2021). 'The best guess for the future?'Teachers' adaptation to open and flexible learning environments in Finland. Education Inquiry, 12(3), 282-300.

Nieuwoudt, J. E. (2020). Investigating synchronous and asynchronous class attendance as predictors of academic success in online education. Australasian Journal of Educational Technology, 36(3), 15-25.

Nieuwoudt, J. E. (2020). Investigating synchronous and asynchronous class attendance as predictors of academic success in online education. Australasian Journal of Educational Technology, 36(3), 15-25. https://doi.org/10.14742/ajet.5137

Nir, A. & Kranot, N. (2006). School principal's leadership style and teachers' self-efficacy. Planning and Changing, 37(3&4), 205–218.

Nkonge, B., & Geuldenzolph, L. (2006). Best practices in online education: Implications for policy and practice. Business Education Digest, 15, 42-53.

Nordgren, K., Kristiansson, M., Liljekvist, Y., & Bergh, D. (2021). Collegial collaboration when planning and preparing lessons: A large-scale study exploring the conditions and infrastructure for teachers' professional development. Teaching and Teacher Education, 108, 103513.

Nordick, S. (2017). Fundamental features of fostering teacher collective efficacy: principals' attitudes, behaviors, and practices (doctoral dissertation). Utah State University

Norris, S. E. (2021). High Quality Online Programs: The Role of Leadership and Teamwork to Support Student-Centered Graduate Education. In Research Anthology on Preparing School Administrators to Lead Quality Education Programs (pp. 1552-1570). IGI Global.

Norris, S. E. (2021). High Quality Online Programs: The Role of Leadership and Teamwork to Support Student-Centered Graduate Education. In Research Anthology on Preparing School Administrators to Lead Quality Education Programs (pp. 1552-1570). IGI Global.

Northover, K., Hewitt, G., & Newell-McLymont, E. F. (2021). Teacher Collaboration: The Need for Trust in the Classroom Context. Available at SSRN 3839572.

Offir, B., Lev, Y., & Bezalel, R. (2008). Surface and deep learning processes in distance education: Synchronous versus asynchronous systems. Computers and Education, 51(3), 1172-1183.

Ozturk, N., Ozdemir, G. & Sahin, S. (2020). Teachers' self-efficacy perceptions in terms of school principal's instructional leadership behaviors. International Journal of Progressive Education, 16(1), 25-40.

Pak, K., Polikoff, M. S., Desimone, L. M., & Saldívar García, E. (2020). The adaptive challenges of curriculum implementation: insights for educational leaders driving standards-based reform. AERA Open, 6(2), 2332858420932828.

Palloff, R. M., & Pratt, K. (2011). The excellent online instructor: Strategies for professional development. John Wiley & Sons.

Pang, L., & Jen, C. C. (2018). Inclusive dyslexia-friendly collaborative online learning environment: Malaysia case study. Education and Information Technologies, 23(3), 1023-1042. https://doi.org/10.1007/s10639-017-9652-8

Pangallo, R. (2021). The Relationship between Collective Teacher Efficacy and Professional Learning Community

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

Pappas, C. (2016). 5 tips for using connectivism in elearning (Web log post). Retrieved from https://elearningindustry.com/5-tips-using-connectivism-elearning.

Park, M. H., Dimitrov, D. M., Das, A., & Gichuru, M. (2016). The teacher efficacy for inclusive practices (TEIP) scale: Dimensionality and factor structure. Journal of Research in Special Educational Needs, 16(2016), 2-12.

Parthasarathy, J., & Premalatha, T. (2017). Impact of Collective-Efficacy and Self-Efficacy on the Innovative Work Behaviour of Teachers in the Nilgiris District, Tamil Nadu. The International Journal of Indian Psychology, 5(1).

Pearce, M. (2017). The effects of instructional leadership on teacher efficacy. (2017). ProQuest Dissertation Theses, 109.

Perera, H. N., & John, J. E. (2020). Teachers' self-efficacy beliefs for teaching math: Relations with teacher and student outcomes. Contemporary Educational Psychology, 61, 101842.

Phon, N. T. T., & Locke, T. (2015). Sources of self-efficacy of Vietnamese EFL teachers: A qualitative study. Teacher and Teacher Education, 52(2015), 73-82

Pitpit, G. M. (2020). Elementary School Principals' Instructional Leadership Practices to Retain Novice Teachers in the Philippines. Walden Dissertations and Doctoral Studies

Pollock, K. (2020). School Leaders' Work During the COVID-19 Pandemic: A TwoPronged Approach. International Studies in Educational Administration, 48(3), 38.

Pollock, K. (2020). School Leaders' Work During the COVID-19 Pandemic: A TwoPronged Approach. International Studies in Education, 48(3), 38-44.

Portin, B. (2004). The Roles That Principals Play. Educational Leadership. 61.

Prado, N., Tan, D. & Pabualan, M. (2016). Mathematics teachers' self-efficacy beliefs survey in all levels of education in Bukidnon, Philippines. CMU Journal of Science 20 (2), 44-58.

Prewitt, J. E., Weil, R., and McClure, A. Q. (2011). Crisis leadership: an organizational opportunity. Aust. J. Bus. Manage. Res. 1, 60–74.

Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during pandemic Covid-19. Jurnal Penelitian Pendidikan, 20(3), 392-406.

Ramakrishnan, R., & Salleh, N. M. (2018). Teacher's Self-Efficacy: A Systematic Review. International Journal of Academic Research in Business and Social Sciences, 8(12), 2379–2402.

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. Postdigital Science and Education, 2(3), 923-945.

Rehman, R., & Fatima, S. S. (2021). An innovation in Flipped Class Room: A teaching model to facilitate synchronous and asynchronous learning during a pandemic. Pakistan Journal of Medical Sciences, 37(1), 131.

Reushle, S., & Loch, B. (2008). Conducting a trial of web conferencing software: Why, how, and perceptions from the Coalface. Turkish Online Journal of Distance Education, 9(3), 19-28.

Ribeiro, R. (2020, April 14). How university faculty embraced the remote learning shift. EdTech Magazine.

Rice, K. L. (2006). A comprehensive look at distance education in the K-12 context. Journal of Research on Technology in Education, vol. 38, no. 4, pp. 425–448.

Rice, M.F. and Carter, R.A. (2015), “When we talk about compliance, it’s because we lived it: online educators’ roles in supporting students with disabilities”, Online Learning, Vol. 19 No. 5, 18-36.

Rice, M.F. and Carter, R.A. (2016), “Online teacher work to support self-regulation of learning in students with disabilities at a fully online state virtual school”, Online Learning, Vol. 20 No. 4, 118-135.

Richardson, J. W., Lingat, J. E. M., Hollis, E., & Pritchard, M. (2020). Shifting Teaching and Learning in Online Learning Spaces: An Investigation of a Faculty Online Teaching and Learning Initiative. Online Learning, 24(1), 67-91.

Rikichi, F. E., & Yakubu, F. A. (2021). Impact of instructional supervision on academic achievement of secondary school students in Jaba Local Government Area, Kaduna State. Journal of Educational Assessment and Pedagogical Process (JEAPP) Online Journal: Vol, 1(1).

Robinia, Kristi Adair, "Online Teaching Self-Efficacy of Nurse Faculty Teaching in Public, Accredited Nursing Programs in The State of Michigan" (2008). Dissertations. 811

Rodrigues, F. P. (2021). The Wheel of Competencies to Enhance Student-Teacher Role Awareness in Teaching-Learning Processes: The Use of a Classical Coaching Tool in Education. In Coaching Applications and Effectiveness in Higher Education(pp. 48-77). IGI Global.

Romijn, B. R., Slot, P. L., Leseman, P. P., & Pagani, V. (2020). Teachers' self-efficacy and intercultural classroom practices in diverse classroom contexts: A cross-national comparison. International Journal of Intercultural Relations, 79, 58-70.

Ross, J. & Gray, P (2006) Transformational leadership and teacher commitment to organizational values: The mediating effects of collective teacher efficacy. Sch Effectiveness Sch Improvement 17(2):179–199.

Rubin, M., Goldring, E., Neel, M. A., Rogers, L. K., & Grissom, J. A. (2020). Changing Principal Supervision to Develop Principals' Instructional Leadership Capacity. Exploring Principal Development and Teacher Outcomes: How Principals Can Strengthen Instruction, Teacher Retention, and Student Achievement, 35.

Ruiz, J. G., Mintzer, M. J., & Leipzig, R. M. (2006). The impact of e-learning in medical education. Academic Medicine, 81(3), 207–212. doi:10.1097/00001888- 200603000-00002

Sahoo, S. (2020). E-readiness and perception of student teachers' towards online learning in the midst of COVID-19 pandemic. Available at SSRN 3666914.

Schechter, C. & Tschannen-Moran, M. (2006). Teachers' sense of collective efficacy: an international view. International Journal of Educational Management, 20(6), 480- 489.

Schipper, T., Goei, S. L., Vries, S. D., & Veen, K. V. (2018). Developing teachers' selfefficacy and adaptive teaching behavior through lesson study. International Journal of Educational Research, 88(2018), 109-120.

Sebastian, J., Allensworth, E, & Huang, H. (2016). The role of teacher leadership in how principals influence classroom instruction and student learning. American Journal of Education 123

Sehgal, P., Nambudiri, R. and Mishra, S.K. (2017). Teacher effectiveness through selfefficacy, collaboration and principal leadership. International Journal of Educational Management, 31 (4), 505-517.

Sellani, R. J., & Harrington, W. (2002). Addressing administrator/faculty conflict in an academic online environment. Internet and Higher Education, 5, 131-145.

Setiawan, B. A., Rofi, S. & Jatmikowati, T. E. (2021). The Student Learning Activity Levels on the Online Learning During the Covid-19 Pandemic. Jurnal Pendidikan Islam Indonesia, 5(2), 186-197. https://doi.org/10.35316/jpii.v5i2.289

Shafeeu, I. (2019). Relationship between Principals' Instructional Leadership and School Effectiveness. Does It Make a Difference? Evidence from the Maldives. Doctoral dissertation, Durham University.

Shah, M. (2012). The Importance and Benefits of Teacher Collegiality in Schools – A Literature Review. Procedia - Social and Behavioral Sciences, 46, 1242-1246.

Shaked, H. (2019). Boundaries of Israeli Assistant Principals' Instructional Leadership. Leadership and Policy in Schools, 1-15.

Sharma, U., Shaukat, S.,& Furlonger, B. (2014). Attitudes and self-efficacy of pre-service teachers towards inclusion in Pakistan. Journal of Research in Special Educational Needs, 50(1), 20-30.

Sharp, K., Jarvis, J. M., & Mcmillan, J. M. (2018). Leadership for differentiated instruction: Teachers' engagement with on-site professional learning at an Australian secondary school. International Journal of Inclusive Education, 24(8), 901-920.

Shoepe, T. C., McManus, J. F., August, S. E., Mattos, N. L., Vollucci, T. C., & Sparks, P. R. (2020). Instructor Prompts and Student Engagement in Synchronous Online Nutrition Classes. American Journal of Distance Education, 1-17. https://doi.org/10.1080/08923647.2020.1726166

Sindhvad S, Mikayilova U, Kazimzade E. (2020). Factors influencing instructional leadership capacity in Baku, Azerbaijan. Educational Management Administration & Leadership. doi:10.1177/1741143220938364

Skylar, A., Higgins, K., Boone, R., Jones, P., Pierce, T., & Gelfer, J. (2005). Distance education: An exploration of alternative methods and

types of instructional media in teacher education. Journal of Special Education, 20(3), 25-33.

Steen, H. (2008). Effective eLearning Design. MERLOT Journal of Online Learning and Teaching , 4 (4), 526-532

Sterrett, W. and Richardson, J.W. (2020) Supporting professional development through digital principal leadership. Journal of Organizational & Educational Leadership, 5(2).

Stevens, A. (2020). 'One more challenge during virtual learning: Lewd zoom sessions', Atlanta journal constitution. Available at: https://www.ajc.com/news/cops-say students-are-streaming-porn-during-virtual class/34SMJL4QQ5C7PLPS7SJAJ3RMBI/.

Stipek, D. (2012). Context matters: Effects of student characteristics and perceived administrative and parental support on teacher self-efficacy. The Elementary School Journal, 112(4), 590-606.

Sugar, W., Martindale, T., & Crawly, F., (2007). One professor's face-to-face teaching strategies while becoming an online instructor. The Quarterly Review of Distance Education, 8(4), 365-385.

Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. Computers & education, 50(4), 1183-1202.

Suyitno (2021). Instructional Leadership of School Principals and Their Schools' National Achievement Test Performance: A Search of Relationship. https://doi.org/10.31219/osf.io/hbqr8

Suyitno. (2021, May 25). Instructional Leadership of School Principals and Their Schools' National Achievement Test Performance: A Search of Relationship. https://doi.org/10.31219/osf.io/hbqr8

Szymkowiak, A., Melović, B., Dabić, M., Jeganathan, K., & Kundi, G. S. (2021). Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. Technology in Society, 65, 101565.