TEACHER'S ROLES IN THE ONLINE TEACHING

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ABSTRACT

Internet has particularly revolutionized the teaching and learning process as the spread of the Coronavirus 19 (COVID-19) pandemic has brought the disruptions to education across the world. Vietnam is not an exception. The lockdowns in response to COVID-19 have interrupted conventional schooling with nationwide school closures. Faceto-face teaching and learning turns into online process which leads to significant changes in teacher's roles; such demands of online teaching and learning during the pandemic crisis push teachers to raise intensive awareness of their roles as implementing this kind of teaching. Thus, this research is tremendously significant as online learning is a trend of education now. Apart from online teacher's challenges, this study intended to identify changes in teachers' roles towards the online teaching process during the COVID-19 pandemic. The study also examined the most important role that online teacher should play in the online teaching process. This research used a qualitative approach because the researcher describes teacher's roles toward online teaching. The participants of this research were 15 English teachers working in the University of Information Technology (UIT). To achieve the aim, the study utilized a questionnaire with 12 open-minded items included. The findings of this research revealed 8 dominant roles to the online teachers: researcher, content facilitator, assessor, adviser, process facilitator, manager, designer and technologist. Meanwhile, content facilitator is agreed to be the most prominent role for the online teacher. Hence, this study concludes that online teacher plays a lot of roles in the teaching process in which content facilitator is highlighted.

Key words: online teaching; COVID-19 pandemic; online teacher's role; content facilitator

1. INTRODUCTION

Lockdown policies, rapidly widespread of the virus and social distance have challenged global education system. To continue school activities and to lessen parents' concerns about their children's learning, online teaching and learning has been complimented as a measure against the educational suspension. Thanks to advanced technology, school activities can be maintained. According to Melor Md Yunus et al (2021), online learning is crucial, especially for higher education, and leading the trend of education in this particular situation when individuals are advised to stay home and encourage social distancing to prevent the spread of the virus. Consequently, students all over the world are moving their learning approach from physical classes to virtual learning process.

Some people unplanned and rapid move to online teaching and learning (with no training, insufficient bandwidth, and little preparation) will result in a poor user experience that is unconducive to sustained growth, others believe that a new hybrid model of education will emerge with significant benefits. In China, the Chinese Government has adopted the "School's Out, But Class's On" approach, "suspending classes without stopping learning" to provide online learning tutoring for students at home. Regardless of whether or not teachers and students are willing, they have to quickly adapt to this change and switch their roles in teaching methods. Since the outbreak of the COVID-19 pandemic, Vietnamese universities have seen an unprecedented massive "transition" from in-class face-to-face teaching and learning to online education due to the widespread of the virus. Unfortunately, it is a massive and disruptive migration to move all the existing courses online in a matter of days. Bao (2020) noted that a complete online course requires an elaborate lesson plan design, teaching materials such as audio and video contents, as well as technology support teams. However, due to the sudden emergence of the COVID-19, most UIT English teachers are facing the challenges of lacking online teaching experience, early preparation, or support from educational technology teams. In addition to the challenges that teachers are facing in teaching online, major problems also come from students who lack of good learning attitude, self-discipline, active academic involvement and learning motivation.

Most of the research has discussed a lot on the issue of benefits of using technology in teaching and learning but little research discusses at length what roles should the teachers get into their online teaching process. This research is significant because it addresses one of the biggest issues of the current online teaching situation in term of teacher's roles in COVID-19 pandemic. Furthermore, such large-scale online teaching practice provides a better look at some possible recommendations to improve teacher's online lesson.

2. LITERATURE REVIEW

2.1 Online teaching and learning in the context of Covid-19 pandemic

Before the COVID-19 pandemic, online learning and teaching had been predicted to be the future of education. According to Drucker (cited in Peter Goodyear et al., 2001), online continuing education is creating a new and distinct educational realm and it is the future of education. Peter Goodyear et al. said that online learning and teaching should be understood against a background of globalization and borderless education. However, it was predicted to be a major challenge for the world educational system. They explained the term online teaching and learning means teaching and learning that takes place over a computer network of some kind. Barbara A. Burd and Lori E. Buchanan defines online teaching and learning that takes place when the teacher and the student are separated by physical distance. As popularly seen, the online teaching can happen either in a synchronous environment or in an asynchronous environment.

According to Almutairi et al. (2020), online learning is a way of learning with the use of mobile computational devices which can happen anywhere and anytime. Their research revealed the expected IT impact on the educational process. They emphasized

that using Information Technology (IT) is considered to motivate teachers and provide educational improvements. Selwyn (2003) has the same point of view as discussing the use of IT in teaching and learning online. He believed that using ICT makes the online learning process more interactive and collaborative. In other words, it helps teachers to do administrative tasks more competently and students to learn more effectively.

It is admitted that online teaching and learning is a possible solution to deal with the educational suspension. However, it has also caused a number of problems as teachers conduct their virtual class in reality. As stated by Charlene A. Dykman and Charles K. Davis (2008) in their "Online Education Forum", potential pitfalls occurs for both students and for the teachers in online classrooms. Also in their journal, they tried to clarify the differences between teaching online and teaching conventionally with the aim to examine typical problems of the online teaching and learning. It is obvious that in traditional classroom, teacher can easily manage students and be assure that expectations are clear and that face-to-face communication helps teachers minimize or even clarify misunderstandings. Furthermore, students can get help from their classmates immediately if they do not understand teachers' instructions. Conversely, in online class teachers fail to have face-to-face communication and they are not sure the student is doing what the teacher intends. Ever worse, neither teachers nor students can realize the problems so that misunderstandings are unsolvable.

2.2 The benefits of technology in teaching online

We cannot deny the tremendous benefits that advanced technology brings for students in the online learning process. Most importantly, it helps reduce inequality in education (Fang, et al., 2019). Tian (2018) found that teachers can make use of technology to give students more autonomous learning after class which means the transition in teachers' roles from "leaders" to "helpers". So many people suspect whether technology can replace teachers. Yu (2018) stated virtual teachers can replace most of the roles of offline teachers whereas Zhou et al. (2018) argued that teacher-student relationship is still dispensable and essential to students' learning process.

Melor Yunus et al, (2021) said that lockdown policies around the world has led students and lecturers to have resorted to use the Internet and various online tools to get in touch with their students. Online learning has seen as phenomenon of worldwide lockdown of schools and educational institutions due to COVID-19 a big support. It is easily seen that in such situation, ICT helps the online teaching and learning earn lots of success. The benefits of using IT in teaching and learning are greatly explored in a variety of studies. Yakubu et al. (2018) stated that Internet access transformed, heralding a new era. Embracing advanced technology, teachers and students can make effective use of various online teaching and learning tools and platforms. Online applications have mushrooms such as ZOOM, Google Meet, Microsoft Teams or game-based tools such as Quizlet, Edpuzzle, Padlet which helps teachers save time in designing activities and engaging students' attention with an interesting and relaxing learning environment. Furthermore, using technology also helps teachers in assessing students, grading and giving feedbacks and keeping track on students' progress.

Kyong-Jee Kim (2003) and Curtis J. Bonk (2001) claimed technology has played and continues to play essential role to develop and expand the online education. The use of emerging technologies for online teaching is supposed to promote student collaboration and reflection. However, the guidance on how to use such tools effectively based empirical evidence, is lacking.

2.3 Teachers' roles in teaching online

Another issue regarding the online education is teacher's competences. Sudden transfer to online teaching has been a great challenge to teachers who have no prior preparations for such teaching method in terms of online activities, class management and curriculum adjustment to better be adapted to meet the course outcomes. Teachers who enjoy experiencing the use of technology in teaching may find Covid-19 pandemic is a favorable condition for them to conduct online class. Conversely, teachers who ignore technology benefits and prefer the conventional classroom face a variety of nuisance due to the fact that they have more roles to play in online class.

A number of research has discovered the teacher's roles in the teaching process in either online or conventional classroom. It is obvious that teachers always play a significant role in the teaching process. According to John Hattie (cited in Jijun Yao et al, 2020), teachers' teaching strategies and methods have great influence on students' academic performance. They explained that with face-to-face communication in conventional classrooms, teachers can timely give students feedback and formative evaluation which is considered as key factors to improve students' academic results. It is true that some people believe that teachers' role start to be faded because the computers have been helping them to progress in their study quicker than when compared with an original classroom. In reality, the presence of a teacher is quite essential for students because they acknowledge students' deficiencies and help them solve their problems in the fastest way. Hattie's analysis also revealed that self-controlled learning by students themselves may not be an effective way to improve academic output.

Regarding online teachers' roles, Berge's taxonomy provides different roles in online teaching: a social role, a pedagogical role, a management role, and a technological role. The research of Morris and Finnegan (2008-2009) showed that novice teachers lean to use management role which aims to give students detailed instructions on their assignments whereas apart from instructions, effective online teachers also make learning resources and instructional activities available. Another study by Young et al. (2001), from students' perspective, effective online teachers should build up relationships with students and try their best to create a successful learning environment in the online class.

Researchers (Brew, 2008; Morris & Finnegan, 2008-2009) paid more attention to the role of facilitator which according to Alison King (1993) requires different set of pedagogical skills to improve students' collaborations to develop personal understanding of course content and to encourage student initiative.

Grasha (2000) suggested five teaching styles online teachers should notice among which is the role of facilitator. As a facilitator, teachers will encourage student-teacher interactions and develops independent learning activities in a consultative fashion.

2.4 How to improve teachers' performance in online classrooms

In the research of Giorgi Basilaia and David Kvavadze "Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia", the results confirm that the quick transition from conventional to online education went successful and gained experience can be used in the future. They also give a significant lesson drawn from the study is that this transition will provide new laws, regulations, platforms and solutions for future online education and educators as well as learners will be more prepared to make this method much more effective in the future.

According to Bao (2020), to be more effective in online education, five principles are revealed. Firstly, teaching content should be relevant to students' online learning characteristics. Secondly, teacher's delivery speed needs to be considered because of students' low concentration. Thirdly, it is essential to give students timely feedback and support after class. Fourthly, feasible solutions should be implemented to engage students' contributions. Finally, contingency plans should be ready for dealing with problems such as connection problems. He also added it is significant to provide relaxing learning environment to ensure their active and effective engagement.

3. METHODOLOGY

3.1 Objective

The main purpose of the study is to investigate what roles teachers should play in online classrooms. In addition, the research will describe various kinds of problems and challenges that English teachers at University of Information Technology have been facing in their teaching. Based on teachers' perceptions, the most important role is explored. Furthermore, some feasible solutions are suggested in order to help teachers have better teaching methods to meet students' output.

1.2 Research design

The study employed a descriptive approach since the researcher tries to describe online teachers' roles as well as difficulties and challenges they have had. The results were then analyzed quantitatively by the researcher.

1.3 Participants

The participants of the research were 15 English teachers at UIT who have been conducting online classes. All teachers have had more than 3-year-experiences of teaching English. They are in charge of teaching different levels including General English levels, TOEIC and English-majored courses. Generally, most teachers admitted that they taught online lessons for the first time, exactly because of the pandemic whereas some teachers have experienced teaching online.

3.4 Instrument

To achieve the aim, a questionnaire was used to analyze online teachers' roles during the pandemic. It consists of 12 open-minded questions which are divided into three parts. The initial part focuses on asking general information on teachers' thoughts about online teaching process and UIT students' learning of English. The second part regards questions on what problems and challenges that UIT English teachers have with students in virtual classrooms. The final part, also the most important one, includes questions on online teachers' roles and which role teachers think is the most significant. Moreover, teachers are also asked to express their opinions on solutions to perform better in their online classes.

3.5 Data collection

Due to the COVID-19 pandemic, the data collection procedure was totally conducted online. The questionnaires were sent to teachers using Google Forms. The data was collected in three weeks so that teachers had much time to provide more thoughtful information on the issue. All participants voluntarily filled in the online questionnaire via the link given.

4. FINDINGS AND DISCUSSION

4.1 Teachers' perceptions on teaching online and UIT students' learning of English

Firstly, most of the teachers said that teaching online is time-consuming. They at least have to spend twice as much as usual to find out which online tools are relevant and effective to get students involved in the lesson. Particularly, they need more time to design the lesson plan and think carefully about appropriate activities for group work, pair work and individual work. They admit when technical problems occur such as unstable connection, both teachers and students have to manage to reconnect, leading to unexpected interruption. Another concern about online teaching is using various online tools at a time. They added that teaching English requires more interesting activities for speaking and learning vocabulary. As a result, teachers have to use many tools for inclass activities which is considered to take much time as changing and showing the lessons.

Secondly, as being asked about teaching online, teachers confessed that designing lesson plan for online classes is much more complicated. Tasks, exercises and activities should be considerably chosen to fit the allotted time and importantly to meet the lesson outcome. In order to check students' understanding, teachers also need more online activities, games and quizzes. Unlike offline classes, in online class, teachers find it hard to control students. They need to think some back-up activities or tasks to occupy other students while working with specific individuals. In general, teachers emphasize that mini-tests for frequent assessment and choosing reliable materials is something teachers should give priority to so that students can develop their self-learning. Thirdly, a minority of teachers mention appealing slides as thinking about teaching online. From their perspective, eye-catching slides are powerful tools to attract students' attention. In addition, problem prediction is also regarded. It is necessary for teachers to predict some possible problems as conducting the activities and design backup activities to make sure students get involved and keep up with the lesson focus.

Finally, most teachers have above-mentioned perception about teaching online due to students' reality of learning English. Teachers all agree that UIT students find listening and speaking skills are the most difficult. Concerning students' involvement in class, teachers answered that students lack interaction with teachers and are not willing to take part in communicative activities and lazy to speak English. Moreover, students show they have no motivation in learning English. That is why they are passive and much depend much on teachers. In other words, they lack self-study spirit.

4.2 Online teachers' problems and challenges

The very first thing is the technical problems which have caused disturbance during the lesson. They explained that unstable internet connection, problems with the sound system or webcam device, waiting for students to join class is time-consuming. It is easy to understand that kind of technical problems is popular for those who get involved in teaching and learning online.

Another problem UIT English teachers have in virtual class is students' involvement. Students do not pay much attention to this subject as it is not their major. Consequently, they lack motivation in learning as judged by teachers. They rarely interact with teachers and classmates as well as do not try to cooperate with each other. Especially, when they are asked questions, they prefer typing to answer orally, or they even keep silent, pretend to have technical problems. This is really difficult for teachers to communicate with such passive students.

Another concern is class management. If the lesson is conducted in offline class, teachers can apply rules to students and easier control students. However, it is particularly challenging in online class as teachers cannot see students and have no idea about what students are doing. Furthermore, teaching English requires more and more activities to draw students' attention and to enhance their understanding. But the question is how teachers can conduct speaking activities, group work as effectively as in face-to-face classroom. Teachers admitted that it is quite difficult to kindle students' interest and control the whole class due to the fact that some students have no self-discipline such as eating, sleeping when learning.

Last but not least, assessment is also one of the biggest issues for teachers. They reported it is hard to conduct a reliable test for students because they can easily cheat on it. A variety of browsers can make it convenient for students to find out the answers not only in the tests but in doing quizzes as well. Therefore, students' real learning endeavors are impossibly valued.

From the above-discussed problems, UIT English teachers also summarized the main challenges they have been facing as using online teaching methods in the VOCID-19 pandemic. What they consider as problems is also the challenges they need to overcome. Firstly, how teachers can get students involved in the lesson. As mentioned, speaking and listening skills are the most difficult for UIT students. That is the reason why the textbook Business Partner is chosen to improve these two skills. The point is that online speaking activities are great challenges because of not having teachers' timely correction and assistance. Secondly, how teachers can explore students' true learning abilities to see whether they meet the course requirements. It is undoubted that students admit cheating in the online exams with the use of technology around. They have no good control or cannot detect sophisticated dishonesty of students. Some teachers agree that unstable internet connection also causes unpredictable problems for students may affect their test results. Thirdly, how teachers can enhance students' communication and interaction when the gap between teachers and students is too large, especially when they just see each other on the screen. Finally, using technology is a challenge for teachers who have not used much technology in teaching. They find it complicated and troublesome. They spend much time exploring how to use digital teaching platforms, other online tools for designing activities as well as for online assessment.

4.3 Online teachers' roles

This part is the heart of the study and earns lots of teachers' viewpoints. They discussed a variety of roles in teaching online. Their responses revealed many crucial roles which are content facilitator, process facilitator, assessor, researcher, tutor, advisor, co-learner, and technologist.

4.3.1 Content facilitator

Most teachers acknowledge the significance of content facilitator which benefits for them and their students in various aspects. First of all, from their experience in teaching online, if they play the role of facilitator, students can find it easier to understand, concentrate on the main point of the lesson and have a deeper understanding. Secondly, they can orient students' learning goals as well as help students work together better, realize their common objectives, and then plan how to achieve these objectives during activities in class. Finally, teachers reckon that well-organized contents combined creative activities can draw students' attention and motivate them.

As a content facilitator, teachers can be flexible, active and effective while still creating full transmission. In other words, they can effectively transfer content and get students involved in the lesson. Furthermore, more things should be done to redesign the content to make it more suitable for the students and provide instructions so that students know how to catch the content. A prominent benefit of content facilitator is to help students create useful cognitive maps, relate one idea to another, and address misconceptions.

4.3.2 Process facilitator

Another emerging role is process facilitator which is considered to be essential in teaching online. Activities for speaking and listening are always pay most attention to if teachers desire to improve students' communication skills and engage them in the lesson. Teachers expressed how hard they conduct speaking activities in offline. But now in virtual class, without face-face communication between teachers and students, it turns into a phobia for online teachers to conduct any activities. As a result, teachers have to facilitate the online activities conducted to support students.

As explaining further advantage, teachers concurred that being a process facilitator can reinforce students' contributions from students, encourage and motivate them in learning. Their detailed instructions can guide discussion in keeping with lesson goals and objectives. What is more, teachers can support students both individually and as a group and can ensure students' active role as working in groups.

Finally, teachers also emphasized that as a process facilitator helps them create a

student-centered environment. They brief the main points that students achieve in their discussions, also decide when not to interfere into students' discussions to respect their privacy and let them develop their self-learning.

1.1.3 Assessor

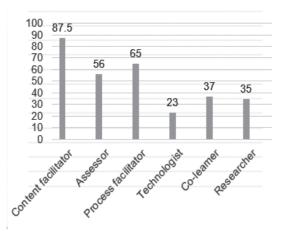
Apart from content and process facilitator, UIT English teachers have to play the role of assessor. As students work in group or on individual basis, teachers provide feedback, grades and evaluation of learners' work. This role proves its significance as they are face students' dishonesty and cheating in tests and exams.

1.1.4 Researcher

A few teachers explained that the online teaching requires teachers to look for new knowledge which is relevant to the lesson being taught. They recognized that they need to be more flexible in designing supplementary materials and redesign the lesson so this role is also a must.

1.1.5 Advisor, tutor, co-learner and technologist

Other roles mentioned by teachers are advisor, tutor, co-learner and technologist. During the learning online process, teachers need to give advice to students on any problems occurring in the course. They help students discover how they can improve their performance. In some cases, they need to give private explanation or instruction to students, show them how to be involved in the learning process. Particularly, being a technologist is concerned with figuring out appropriate tools or platforms that improve students' learning environment.



1.1.6 The most important role of online teachers

Teachers' responses on the most important roles in teaching online

The bar chart shows teachers' feedback on teachers' most important role in virtual class. Of the data gathered, a very large proportion of teachers agreed that content facilitator is the most important role. It is logical to what teachers discussed above. They are supposed to meet the requirements of the course which is the improvement in communication skills while it is hard for them to help students realize what they need to achieve for the course. Process facilitator comes the second with 65 percent. Process

facilitator comes the second (65%) as they think students need more instructions on their assignments and in-class activities so that they can achieve the learning goals. Over a half voted for the role of assessor who should give students relevant forms to assess students' true progress and learning capacities. Co-learner and researcher share the same percentage. Teachers believe if they do more research on suitable teaching methods and materials, students will have more effective self-learning after class and understand the lesson deeply. Besides, they need to accompany with students in terms of giving timely feedbacks and instructions to let students think teachers are not only teachers but co-learner as well. The least important role, according to teachers' opinions, is technologist because the school are quite supportive and they can learn more things from the center's training sessions and from those who are experienced in teaching online.

4.4 How to be an effective online teacher

1.1.1 Enhancing in-class communication

Teachers believed that they need to shorten the gap between students and teachers, then make the most of opportunities to communicate with students. Also, they advised to intentionally interact with students by constantly asking them questions to get them involved. Finally, try to create the most comfortable atmosphere in class as they can to let students free from pressure during class time.

1.1.2 Develop students' self-learning abilities

At this point, teachers explained that as learning online, students hardly understand and remember the lesson as much as in offline class. Therefore, they need to help student to take care of self-learning by providing more activities for students to review as well as more formative assessment. As for UIT students, teachers found that students love using social media and networking sites so they can make effective use of this to exchange information regularly and support students such as courses, email, Facebook and Zalo. However, they noted assigning students with homework to make them have a sense of responsibilities for their study after class but not too much because being overwhelmed with homework can discourage them from learning English.

1.1.3 Motivating students

Firstly, teachers can stimulate students' interest in their study by giving them rewarding points for their work. Let the students realize what they deserve having for their great efforts. Secondly, constantly motivate and encourage students' contributions but do not require too much from students. Finally, teachers should give timely feedbacks and necessary correction so that students can do it better next time. It is essential to show how much teachers care for their contributions.

1.1.4 Showing positive qualities

UIT English teachers cared much about personal qualities in teaching online. They thought that they should be more patient as problems constantly occur and more flexible in conducting online activities. Moreover, they need to be more creative in designing the lessons. That means it is significant to explore students' learning styles so that teachers

can redesign or replace suitable materials to facilitate students' learning process. Like conventional teaching method, teaching online also needs friendly, understanding, humorous and resourceful teachers

1.1.5 Being a good technologist

In order to be more effective in teaching online, UIT English teachers think that being good at using ICT in teaching online is also a must. As they explained, using technology has never been essential in such period. If they are good technologists, they can, to some extent, sort out some major technical problems. Furthermore, they apply more interactive tools to get students involved in the lesson.

5. CONCLUSION

In response to COVID-19 pandemic, sudden migration from conventional to online teaching and learning has brought a number of problems for teachers and students at UIT when only 3 out of 15 teachers have had experience in such teaching methods. The study shows that teachers are facing the technical problems, difficulties in class management, assessment. As for students, they lack of motivation to communicate in online class, self-learning autonomy after class. Teachers also clarify their roles in teaching online such as content facilitator, process facilitator, researcher, assessor, technologist, co-learner in which content facilitator is the most important. Based on students' current learning situation, teachers realize some ways to improve students' learning of English such as enhancing students' in-class communication, developing their self-learning abilities, motivating students, showing positive qualities and being good at technology.

Based on the findings, some recommendations need to be considered. Firstly, regarding teachers' problems in teaching online, the school should provide more training sessions to give them more skills of make effective use of technology in teaching online. More information about technical problems may occur in teaching so that they can handle. Secondly, to help students engage in their learning process, teachers should play various roles as they discussed in the study. In order to improve the communication between teachers and students, Charlene and Charles (2008) suggest that teachers must take initiative and communicative early with each student in an online class but it takes a lot of effort. Besides, teachers must be proactive, positive and supportive. A part from that, teachers should pay more attention to content and process facilitator to conduct individual and group work for students to get them involved in communication.

Although online teaching and learning in current situation of COVID-19 pandemic has been undergone lots of hardships, it is believed to set some new learning and teaching methods which are more effective for schools and universities in the future.

REFERENCES

- Bailey, C. J., & Card, K. A. (2009). Effective pedagogical practices for online teaching: Perception of experienced instructors. The Internet and Higher Education, *12*(3-4), 152-155.
- Bao, W. COVID-19 and online teaching in higher education: A case study of Peking University. Hum. Behav. Emerg. Technol. 2020, 2, 113–115.

- Basilaia, G., & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research, 5*(4), em0060._
- Berg, Z. L. (1995). Facilitating computer conferencing: Recommendations for the field. Educational Technology, 40(5), 53–56.
- Burd, B. A., & Buchanan, L. E. (2004). Teaching the teachers: teaching and learning online. Reference Services Review.
- C. J. Bonk (2001) Online Teaching in an Online World. Bloomington, Ind.: CourseShare.
- Charlene A. Dykman, Charles K. Davis (2008). Online education forum: Part two Teaching online versus teaching conventionally
- Chickering, A.W. and Ehrmann, S.C. (1996), "Implementing the seven principles: technology as lever", AAHE Bulletin, October, 3-6.
- Fang, C., Wang, G., Huang, B. (2019) Can information technology promote the development of students' cognitive ability? An estimate based on the net effect of educational value-added measurements. Open Edu Res, 25(4):100-110.
- Grasha, A. (2000), "Integrating teaching styles and learning styles with instructional technology", College Teaching, Vol. 48 No. 1, 2-11.
- Hattie, J (2008) Visible Learning: A synthesis of over 800 meta-analysis relating to achievement. Routledge.
- J.-L. Lee (2004). Analysis of Essential Skills and Knowledge for Teaching Online. The Association for Educational Communications and Technology, Chicago.
- King, A. (1993). From sage on the stage to guide on the side. College Teaching, 41(1), 30–35.
- Md Yunus, M., Ang, W. S., & Hashim, H. (2021). Factors affecting teaching English as a Second Language (TESL) postgraduate students' behavioural intention for online learning during the COVID-19 pandemic. Sustainability 2021, 13, 3524. https://doi. org/ 10.3390/su13063524
- Morris, L. V., & Finnegan, C. L. (2008–2009). Best practices in predicting and encouraging student persistence and achievement online. Journal of College Student Retention, 10, 55–64.
- Peter Goodyear; Gilly Salmon; J Michael Spector; Christine Steeples; Sue Tickner (2001). Educational Technology, Research and Development. Wilson Education Abstracts.
- Rosalina, E., Nasrullah, N., & Elyani, E. P. (2020). Teacher's Challenges towards Online Learning in Pandemic Era. LET: Linguistics, Literature and English Teaching Journal, 10(2), 71-88.
- Selwyn (2003) N. ICT in Non-Formal Youth and Adult Education: Defining Territory; OECD/NCAL International Roundtable: Philadelphia, PA, USA, 2003.
- Tian, Y, Yao, J., Ding, J. (2020). How the school's information technology hardware investment affects students' achievements: Based on the empirical research of

Nanjing middle school. Edu Res Month, 37(1):87-94.

- Yakubu, M.N.; Dasuki, S.I (2018). Factors Affecting the Adoption of e-Learning Technologies among Higher Education Students in Nigeria: A Structural Equation Modelling Approach. Inf. Dev. 2018, 35, 492–502.
- Young, S., Cantrell, P., & Shaw, D. (2001). Online instruction: New roles for teachers and students. Academic Exchange Quarterly, 5(4), 11–16.
- Yu, S. (2018). The future role of artificial teachers. Open Edu Res, 34(1):16-28
- Zhou, S., Gu, H., Yao, J. (2018) From "strict learning" to "smart learning": an analysis of the key factors affecting students' academic performance: an empirical study based on the academic quality monitoring data of 262245 students in Jiangsu province. Prim Mid Sch Manag.