

Perceptions of Challenges of Online English Language Learning and Teaching of Students and Teachers at a Chinese Middle School

Luo Dan¹, Anchalee Chayanuvat²

Affiliations Rangsit University^{1,2}

E-mail: 1071965792@qq.com^{1,2}

Received: September 26, 2022; Revised: October 11, 2022; Accepted: December 9, 2022

ABSTRACT

The objectives of this study were 1) to identify the challenges faced by the students towards online English language learning, 2) to identify the challenges faced by the teachers towards online English language teaching, and 3) to propose a workable online course for English language learning and teaching. The study was designed with a mixed method approach. Quantitative data were collected from 340 questionnaire respondents from the population of 1,340 by random sampling and all 21 teachers were purposively selected from Chengnan Middle School, Yunnan Province. The validity and reliability of the research tool, the questionnaire was tested with IOC and Pilot-Test. The score for IOC of the teacher questionnaire was 0.91, while the student questionnaire obtained a score of 0.85. The results of Pilot-Test, (α) of students questionnaire was 0.981, for teachers questionnaire was 0.984. For qualitative data, two groups of 10 teachers and 10 students volunteered to be interviewed. The IOC scores of the semi-structured interview were both 0.97, indicating both instruments were acceptable in this study. Descriptive statistics were utilized to analyze quantitative data, while interviewed data were content analyzed into themes. Analysis of quantitative data revealed that 1) for the teachers, the top three challenges in online learning and teaching were “Teaching Techniques and Preferences”, “School Facilities and Support” and “Roles of the Teachers and the Students”. 2) for the students, the top three challenges were “The Student Self”, “Learning Techniques and Preferences” and “Roles of Teachers and the Students”. 3) A workable online English learning and teaching course was proposed to focus on reliable network and facilities, teachers’ skills in using software, students’ self-control, interaction between the students and teachers as well as among students and appropriate supervision of students both at home and in class. Qualitative data collected from the teachers showed that they were not skillful in software use and teaching management. For the students, they admitted a lack of supervision and a need for self-control. Both groups suggested the needs for reliable network and facilities as well as enhancement of classroom interaction.

KEYWORDS: Perceptions of challenges in online learning and teaching, Chinese Middle School

Introduction

Currently, the globalized world has faced a serious threat from the spread of the Covid-19 pandemic, forcing many organizations introduce the familiar work from home (WFH) lifestyle (Samat, Chaijaroen & Wattanachai, 2019). Cema (2019) found that increasing inadequacies and inequities in the educational systems. According to the United Nations Educational Scientific Cultural Organization (UNESCO) statistics, COVID-19 pandemic has caused 1.53 billion students worldwide to suspend classes and accounting for 87.6% of school students (Li, 2019). Students must stay home and study online (Wang, 2020). Besides, “the teachers had to adapt to new pedagogical concepts and modes of delivery of teaching, for which they may not have been trained.” (OECD, 2020, p.4).

China also faces the effects of COVID-19 pandemic. To remedy the situation, the Department of Education encouraged middle schools and teachers to promote and use online communication applications (such as Ding Talk, MOOC, Tencent Video) to ensure more effective communication between teachers to students and between students to students. However, there are still challenges in online learning and learning processes for involved parties (Zhou, 2020).

Against this background, the study investigated the perceptions of the students and teachers at a Chinese Middle school towards challenges in online learning and teaching.

Although a number of similar studies (Bakieva & Muradkasimova, 2019) have been conducted and the problems and difficulties in studying during the COVID 19 have been identified, it is hoped that the could be offered experience in the field of English language learning and teaching they have been through in this particular situation. The findings will hopefully reveal how to best cope with the force of the COVID-19 pandemic circumstance and still maintain quality of provided for their students.

Research Objectives

In this study, the following research objective were explored.

1. To identify the challenges faced by the students towards online English language learning.
2. To identify the challenges faced by the teachers towards online English language teaching.
3. To propose a workable online course for English language learning and teaching.

Conceptual Framework of the study

Figure 1 below shows how the study was conducted. The questionnaire respondents in this study were divided into two groups, teachers and students respectively, to gather the challenges of online English learning and learning from both stakeholders' perspectives as well as to collect the corresponding suggestions from the two groups of research participants who have experienced the situation so that a workable online course for English teaching and learning can be proposed.

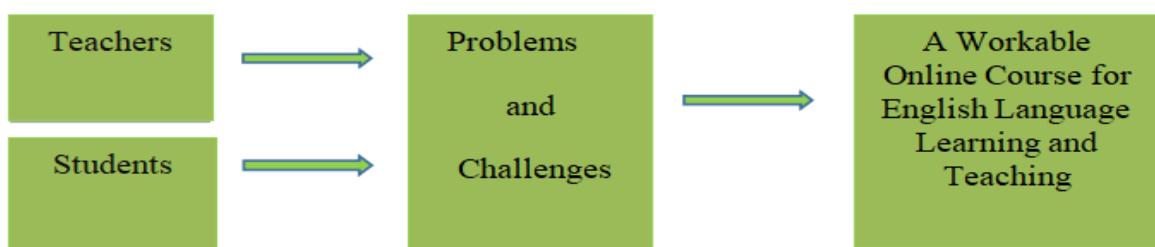


Figure1. Conceptual Framework of the Study

Significance of the Study

The study benefited the following groups.

Firstly, for students, the advantages and disadvantages of online English education can be obtained through research. The findings can help students find ways to improve their learning of online English and learn from the findings the good methods for learning and suggestions for improvement.

Secondly, for teachers, the study of the advantages and disadvantages of English education in the information age will help English teachers recognize, understand and design their online English to their advantage and avoid the disadvantages of their techniques.

Thirdly, the findings of the study can be used by administrators of the school. With these findings, they can plan how the teachers and the students of the schools can be appropriately supported.

Definitions of the keywords

Perceptions of Challenges of Online English Language learning and teaching

‘Perceptions of Challenges’ in this study refers to the personal opinions or ideas about the problems and challenges of online English learning and learning of 340 students and 21 teachers in Chengnan Middle School. These opinions come from students and teachers of different grades for middle one to middle three. They used online English teaching methods during the outbreak from 2020-2022, so their perceptions of challenges on online English teaching came from their personal experiences. Chinese Middle School

In this study, “Chinese Middle School” refers to the Chengnan Middle School of Yunnan Province, China, All of students and teachers have had experience of learning and teaching online during the COVID-19 Pandemic.

Literature Review

Shao & Bai (2021) believed that online learning was an innovative application of internet programs in the education industry. Students could use the Internet to take courses on their computers, which was an unprecedented way of learning. Tao (2020) believed that online learning referred to the formation of a shared learning platform for learning contents and materials on the Internet to achieve the effect of long-distance face-to-face learning. Zhang (2020) explained that online learning was a way to make use of online platforms, where teachers and students could freely interact for knowledge exchange. Hazaymeh (2021) stated that “online learning is a new social process that is beginning to act as a complete substitute for both distance and the traditional face-to-face class.

During the current COVID-19 pandemic, teachers combined resources and teaching methods to conduct online teaching in various ways because there were many possible formats to be adopted as a result of the necessity to cope with the situation at hand. Compared with the traditional teaching, online teaching was mainly based on the network, which changed the situation that teachers led conventional education in making students the main learning body. (Wingo, Ivankova & Moss, 2017). In traditional teaching classrooms, some teachers maintained discipline, but online teaching required more self-consciousness (Simamore, 2020). There were many problems and challenges, such as unstable network teaching conditions (Zeng, 2020), lack of timely feedback in teaching, and no specific evaluation standards (Wang & Ma, 2020). Anderson (2008) defined online learning as a complete network learning system, which consisted of teachers' teaching and students' learning, rich knowledge storage, learning habits and methods, media and paths, and management of learning resources.

Some related studies in this section proposed a number of online platforms to support the teachers which indicated that the teaching format of online classes must be modified to suit the changing situations.

In the design of online learning and teaching for maximum effectiveness, six major areas that need to be studied are: 1) Content (Yang, Wang, Yan & Liu, 2020), 2) Teaching Materials and Techniques (Guo, 2020), 3) The Teachers' Roles and Activities (Li, 2021), 4) The Students' Roles and Activities (Wang, 2021), 5) Resources (Wang, 2021), and 6) Assessment (Phipps & Merisotis, 2020). Thus, it was worth studying what would be the perceptions of challenges of online English language learning of the students and teachers at the school in the study. The findings of the study could be used to improve online teaching and learning of this school.

Methodology

Research Site

The study was conducted at Chengnan Middle School, Yunnan Province in China. This school is a medium-sized school very well known for its teaching philosophy, especially in concept of internationalization of students' development, English as a significant subject to make the students be highly proficient in English as much as possible. In early June 2020, in response to the huge impact of the COVID -19 pandemic on school teaching, the Chinese Ministry of Education issued "Suspending Classes without Stopping Learning" to require schools to carry out online teaching with information technology facilities based on local conditions during the pandemic, Yunnan Provincial Education Bureau. In order to ensure the smooth progress of online teaching, proficient teachers were mobilized from each district to conduct workshops on collective lesson planning, unified use of "Ding Talk APP for online teaching. This means the

Government is also training teachers to cope with online learning and teaching.

At this school, before the outbreak of the COVID-19, the English teaching method was still the traditional face-to-face classroom teaching. Most of the teaching were lecture-based. The primary learning content is the "New Curriculum Standard" English books (Yang, 2012). Writing on the blackboard for related knowledge or multimedia courseware were used. The teachers prepared courseware Power Point Program (PPT), video, audio, and so on, then played the media for students to watch and discuss in class. During the COVID 19 pandemic, all classes especially English language classes, automatically turned online, The teachers and the students were not well prepared to deliver online classes, so they have to face lots of challenges.

Research Instrument

The study adopted mixed methods of quantitative and qualitative research, first, quantitative data from the questionnaires for the students and the teachers. Secondly, qualitative data were collected by semi-structured interviews from volunteering teachers and students. The data required for this study came from two sets of the questionnaires: one for the students and the other for the teachers as well as interviewed data from 2 groups of data sources, the teachers and the students. The items for this part came from what was suggested by the literature review. This part listed several problems in topics such as Content, Teaching Techniques, Activities and Assessment This part adopted the five-Likert scale format. Modification resulted from the Item-Objective-Congruence (IOC) Step when three experts were invited to evaluate the two questionnaires and the individual interview questions for both groups. Some changes were suggested. The students' and teachers' questionnaire consisted of three parts:1)

Personal Characteristics (Items 1-4), 2) Perceptions about online teaching/learning (Items 5-41), 3)One Open-ended Question (Item 42).

Validity and Reliability

To ascertain the validity of the research instruments, the questionnaires and interview questions were sent to three content experts from Rangsit and other Thai government universities for Item Object Congruence (IOC). From the calculation, the score for IOC of the Teacher questionnaire was 0.91, while the student questionnaire obtained a score of 0.85. The semi-structured interview questions for teachers and students got the same score, 0.97, which means both instruments were acceptable in this study. The questionnaire item score was above 0.67 and so was an individual interview question score.

With the content validity ascertained by experts, the questionnaires were sent out for pilot testing to ensure reliability. A pilot test was conducted with a convenience sample of 30 students and 30 teachers from another middle school. The responses were collected and Cronbach's alpha (α) was employed to check the coefficient of reliability of the questionnaires. Using SPSS to calculate the alpha coefficient for the student's questionnaire (41 items) was 0.981, and the teacher's questionnaire (42 items) was 0.984, which means both instruments were acceptable in this study.

Data Collection

1) 340 questionnaires were distributed to the students of Grade Three using simple random sampling techniques by QQ group and 21 questionnaires were sent to 21 teachers using the same channel.

2) 10 teachers and 10 students were invited to participate in semi-structured interviews through We chat APP. During the

interview, the author carefully noted down the useful information provided by the interviewees. At the same time, the author recorded the conversation with the consent of the participants. In this way, the author could transcribe the content of the recording into words, check and supplement the information omitted in the recording process, and ensure the integrity of the interview content. The purpose of this exercise was to provide the author with more information and confirmation of the other sets of the data

Data analysis

For the quantitative data, SPSS 19.0 was used to process the collected data. Descriptive analysis revealed the analyzed data by percentage, mean and standard deviation. For the qualitative data, content analysis was used to summarize and report data in descriptive format (Cohen & Manion, 2018). The MAXQDA program was used to analyze qualitative data in terms of codes, themes and categories.

Ethical considerations

In this study were shown in the following:

(1)A certificate of ethical protocol of the study was obtained from the Ethics Committee of Rangsit University (Certificate No: RSUERB2022-059).

(2)The researcher took great care to protect the students' privacy by not revealing their real names and referring to them only by numbers. All information relating to the students is kept confidential at all times.

(3)In addition, the researcher obtained permission from Chengnan Middle School to conduct the research.

Findings

Analysis of Quantitative Data

(1) Personal Characteristics

The online questionnaires were

administered to 340 students, selected from grades 7-9, at the numbers of 121(35%), 115(34%) and 104 (31%), respectively. Regarding to their gender, the majority of the respondents (N=180, 52%) were female, The number of male respondents was (160, 48%), with different years of studying English. The majority of students in this study have studied English between 4 to 6 years (N=164/48%). For the teachers, the online questionnaires were administered to 21 teachers from grade 7-9, at the numbers of 7(35%), 10(52%), and 4 (14%) respectively. Regarding their gender. The majority of respondents (N=11, 57%) were females, while the number of the male respondents were 10 (43%), with different

years of teaching English. The majority of teachers have taught English for 3 years (N=6, 28%). However, with the combination of the respondents who have been teaching English for more than three years, it was found that 80% of the teachers have been teaching English from 3 to more than 5 years.

(2) Perceptions about online learning / teaching

The questionnaire was administered to 340 students and 21 teachers from ChengNan Middle school. The results of the analyzed questionnaire data are presented in the following table. The mean and SD were computed for all the statements.

Table1. The Results of Questionnaire of Students and Teachers

Category	Students' (Mean)	CD	Level	Teachers' (Mean)	CD	Level
School Facilities and Support	3.54	1.124	High	4.51	.551	Very High
The Student /Teacher Self	3.67	1.162	High	4.4	.557	Very High
Teaching Techniques and Preferences	3.64	1.126	High	4.63	.796	Very High
Roles of the Teachers and Students	3.61	1.208	High	4.46	.564	Very High

Comparison of the data analysis from the questionnaires between the student and the teachers revealed that perceptions of the teachers on online English teaching are different. The students perceived that the most significant factor affecting their online English learning was “The Students Self”, but the least significant one was the “School Facilities and Support”, On the other hand,

the teachers perceived that “The Teachers Self” was the least significant factor, whereas the most significant is preferences “Teaching Techniques and Preferences”. “Roles of Teachers and Students” was both perceived as thirdly significant.

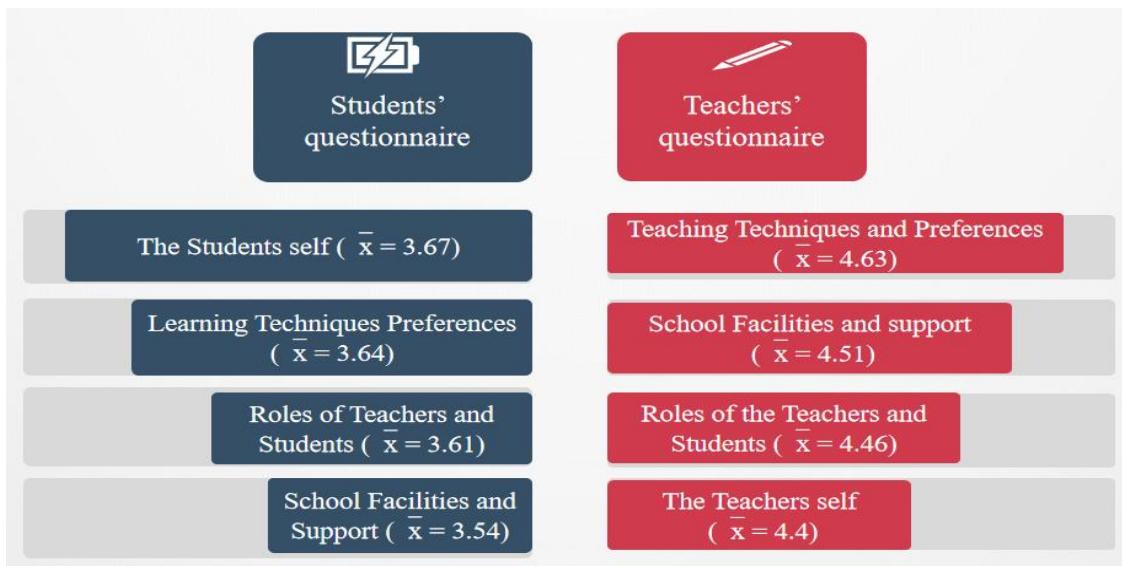


Figure 1. Comparison the Students and Teachers Perceptions about Online Learning/Teaching Questionnaire

According to the students, they perceived that contacting the teachers online was convenient ($x = 3.77$ /S.D. = 1.161), and they maintained good IT skills. They were confident and willing to study online for their learning achievement and improvement. They were trained to be responsible for their own learning, while working in online classes with good atmosphere. Although online classes were different from the onsite ones, they could still interact with their classmates and maximize their learning.

According to the teachers, they perceived that network system was reliable ($x = 4.80$ /S.D. = .512). Besides, they have been trained on how to use online platform and access to the system for online courses

in order to schedule the class was to be more convenient. Based on the responses, the teachers were satisfied with the facilities and support facilitated for their for online teaching. They perceived that students were very active. It can be assumed that the teachers' perceived that they handled online teaching, how they saw themselves performing and how they saw their students doing in positive ways.

(1) Open ended question

This is the last part of the teachers' questionnaire requesting more information from the respondents, which they could write on their own. "Please give additional comments and suggestions about online teaching and learning". The suggestions were shown in table 2.

Table 2. Suggestion from Students and Teachers Open Ended Question

Suggestion from students	Frequency	Suggestion from teachers	Frequency
Explain frequently encountered exercises	3	Increase interaction	4
Use variety of online teaching tools	2	More parental supervision of the students	4
Precise language expression	2	Ask lots of questions	3

The open ended responses from the teachers revealed that top responses in terms of frequency were “Increase interaction”, “More parental supervision of the students”, and “Ask lots of questions”. respectively, whereas students expected the teachers to “Explain frequently for the encountered exercises” and “Use a variety of online teaching tools.

Analysis of Qualitative Data

The students responses were analyzed in terms of themes showing the problems and the suggestions of the Online English Teaching and Learning, According to the codes. The responses were categorized into 6 themes shown in Table 3.

Table 3. Codes-Themes-Category From Students' Interview

Codes	Themes	Category
Not skilled in software (16)		
Prepare the lessons with new knowledge (6)	The teacher self	
Enrich teaching mode and method (2)		
Difficult to grasp the situation of the students (12)	Teachers' teaching management	
Students' exam plagiarism (7)		
Increase regulatory methods (2)		
Lack self-control (7)		
Low enthusiasm (5)	The student self	
Increase interaction (7)		
Less communication (6)	Interaction	
Affected by the network (6)	Network facilities	
Affected by the network (3)		
Lack Parental supervision (5)	Supervision	

Table 3.Examples of the teachers' responses for the theme of “The Teacher Self”.

The Teacher Self

Especially some software, I am not particularly skilled. (Teacher 1)

We are just starting to use some software in online courses and some features are not very easy to understand. (Teacher 2)

I am not particularly familiar with some functions when they first used these software. (Teacher 3)

School has given a special training on the use of relevant teaching software.(Teacher 3)

I firstly used online teaching software, so I was not familiar with functions and operations. (Teacher 5)

Most of our teachers have not been provided such a training in online teaching. (Teacher 5)

Because I firstly went to online

teaching mode because of the pandemic, and I have not been provided any training. (Teacher 6)

I would not use this live broadcasting equipment from the very beginning, and I was not very skilled in using this online teaching equipment. (Teacher 7)

A little training has been provided by the school, but we are not particularly skillful in the use of teaching equipment. (Teacher 10)

In summary, six areas have emerged from a combination of the qualitative findings of the students' and teachers' groups:1) Students' self; 2) Interaction; 3) Teacher's teaching management; 4) Teachers' self; 5) Supervision; 6) Network facilities

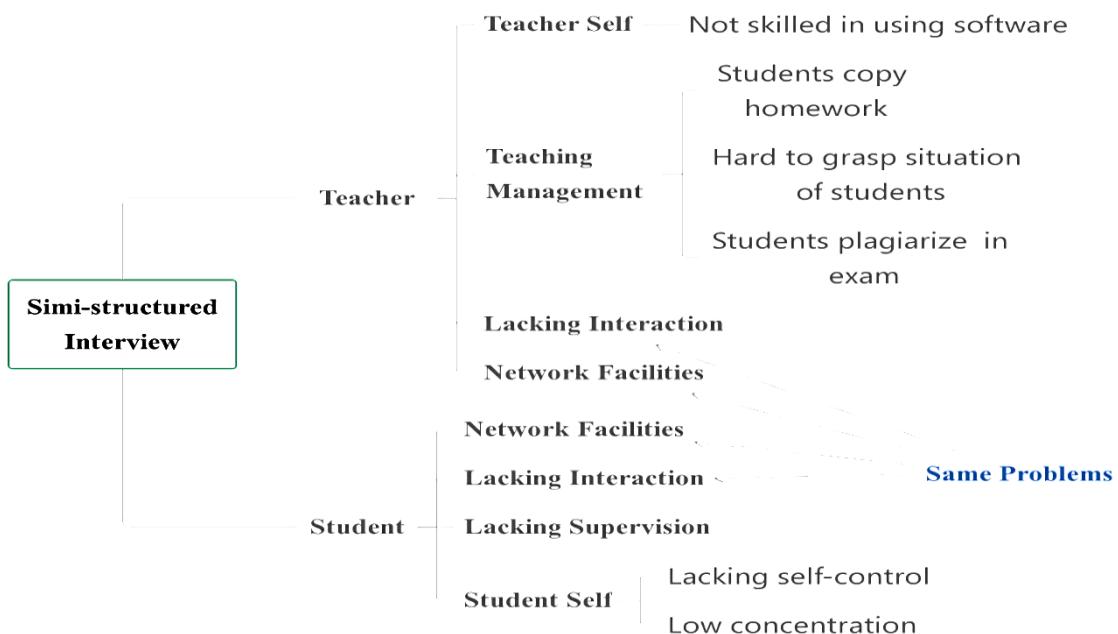


Figure 2. Comparison between the Students and Teachers Interviews

Regarding to the teachers' interviews, it was found that the students perceived they have problems in supervision and student self, and teachers have problems in teacher self and management. Both the students and teachers agreed that network facilities and the interaction between teachers and students were important factors affecting online English teaching. The teachers' teaching skills were considered as an important factor affecting teaching in the questionnaire, while parents' or teachers' supervision is very important in the interviews.

Discussion

Responses to Research Objective 1

Combined analyzed findings from both the questionnaires and the interviews revealed that the challenges affecting students' online learning were mainly in the following aspects:

1) Students' lack of self-control

Similar findings were claimed the Luo, Ma & Yao (2020), that online teaching directly affected children's own self-control and management ability to a large extent .

2) Lack of interaction between the teachers and the students

This finding supported the study of

(Yang, Wang & Yan 2020) that the separation of teaching under the pandemic made it difficult for teachers and students to interact with each other in terms of emotion, language and body language.

3) Lack supervision

This finding was also stated by Luo, Ma & Yao (2020). In the long run, the students without initiative and autonomy would learn less and ineffective ways. Due to their lack of goals and motivation, and their parents' lack of supervision ability, students did not listen to the lecture, were lazy, and did not really participate in online teaching.

4) A need for a reliable IT network and more modern facilities

This finding was supported by Wang and Ma (2020) who found that the correlation between the platform used in online teaching and the overall satisfaction of online teaching was higher than other factors, and nothing could be accomplished without the support of hardware devices.

Responses to Research Objective 2

Combined analyzed findings from both the questionnaires and the interviews revealed that the challenges affecting

teachers' online learning were mainly in the following aspects:

1) Insufficient skills of the teachers in using the online software

Wang (2020) found in his research on difficulties encountered in online teaching that teachers' unskilled use of equipment greatly affected online teaching. Sometimes, teachers could not deliver the teaching content efficiently due to their unfamiliarity with the use of the software. As a result, students would slowly lose interest in learning (Zhang, 2018). Wang & Ma (2020) found that the correlation between the platform used in online teaching and the overall satisfaction of online teaching was higher than that of other factors, including teaching methods, teachers' working attitude, teachers' ability and learning resources (Hiltz & Turoff, 2005).

2) Lacking interaction between the teachers and the students

Teachers find it difficult to mobilize students' learning enthusiasm and

enthusiasm (Dhuli & Arora, 2019). Moreover, online teaching leads to a decrease in cooperation and communication between students, believing that nobody would see and know what they are doing in front of the computer screen. Students who study in a face-to-face classroom can collaboratively work in groups under the supervision of the class teacher.

3) Teachers cannot supervise the students

In online teaching, usually, teachers cannot grasp the participation of students in online teaching, and they cannot clearly understand whether the after-class exercises are completed on time, how much time each student devoted to practice, and whether the hands-on practice is carried out (Wang, 2020).

Responses to Research Objective 3

The following figure was presented to show the significant components of a workable online course.

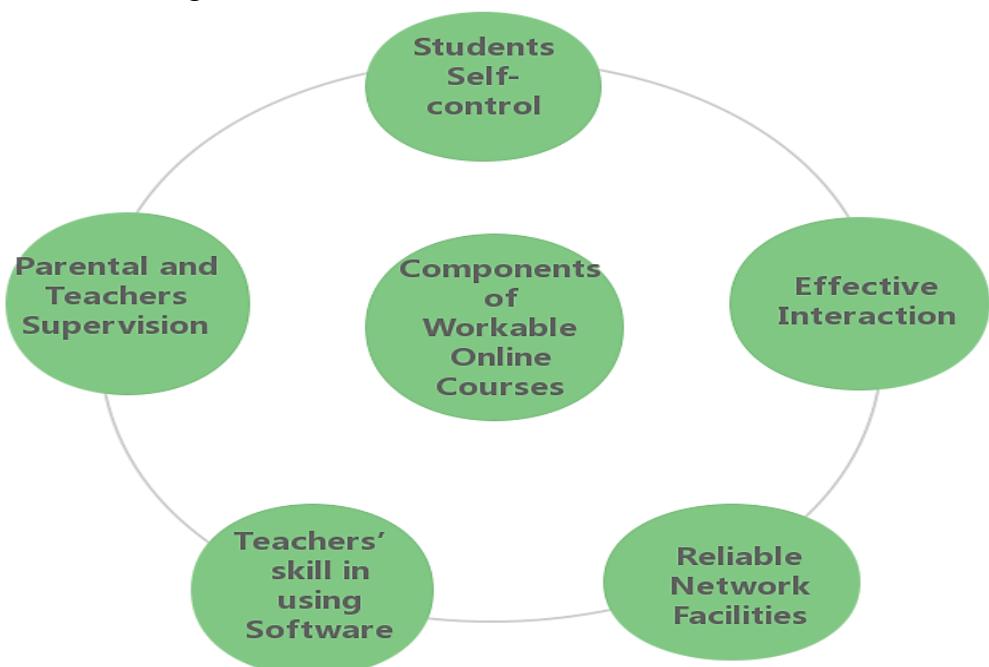


Figure3. Workable Online English Course

In order to achieve a workable online English course, the students and teachers should do the following.

For students

1) Self-learning ability and self-control should be improved and strengthened.

Students should find ways to solve difficulties by themselves first, and then find parents and teachers to cultivate the ability of self-learning (Wang, 2021). Students should make plans for their own study and can form groups with classmates to supervise each other's study (Ba & Yang, 2021).

2) Effective communication should be increased.

According to Guo (2020), in the process of online teaching, students should follow the teacher's teaching pace, answer the teacher's questions actively, ask the teacher if they do not understand something, and exchange their feelings and difficulties in online learning. In other words, online classes should be more interactive.

For Teachers

1) Teacher training should be developed to enhance their online teaching ability

Schools should choose suitable teaching platforms and provide teachers with centralized training to use computer technology to process pictures, text, audio and other multimedia information ability (Phipps and Merisotis, 2020).

2) Online interaction should be enriched.

Teachers should be able to use modern technology means to communicate and share in network teaching so that students have the opportunity to show their thinking results. (Geng Luo & Niu, 2019). Teachers could interact with students through the communication platform so that students can timely feedback the problems encountered in the process of autonomous learning, and then adjust the

design of online teaching (Codyaniu, 2020).

3) Varieties of teaching techniques and assessment formats should be established

In the student-centered network teaching, teachers need to establish a scientific and diverse assessment system (Karecaoglu, 2018). Various methods, such as teacher assessment, student mutual assessment, or group and within-group assessment should be utilized. (Anderson, 2008). Establish a joint supervision mechanism between parents and teachers

4) A joint supervision mechanism between parents and teachers should be initiated

Teachers should organize online parents' meetings regularly to strengthen communication with parents and know how students study at home (Gu, 2021).

Conclusion and recommendation

The research findings could bring benefits to the professional work of other researchers who are interested in the same topic areas, however they have to be aware that the findings from this study can only be applied to other similar contexts. For future studies, it is recommended to study with the sample from more than one school or a larger population and sample size. In addition, various instruments or methods can be adopted to investigate other aspects of online learning and teaching such as appropriate techniques and activities for the students learning achievement.

Limitation of the study

A limitation is seen in the scope of the study which only investigates online teaching and learning at only one school. Another limitation is the study focuses on the challenges of online learning and learning from the perspectives of the two major groups that experience this situation. The findings from this study, thus, can be used only for similar contexts.

References

Anderson, T. (2008). The Theory and practice of Online Learning. *Canada Athabasco University Press*, 4(2), 23-34.

Bakieva, G, Kh. & Murad kaaimove, K, Sh. (2019). Enhancing ICT Technologies in Teaching, Learning and Assessment of foreign languages in Uzbekistan. *IEEE*, 978(1),25-64.

Cema, L. (2019, October) Refugee education Integration models an practice in OECD contries, *OECD publishing*, 23(542), 349-364.

Cohen, L., Mariam, L., & Morrison, K. (2007). Research Methods in Education, *USA and Canada*: Routledge.

Gu, L. A. (2018). Research on the Status Quo and Countermeasures of Online Teaching in The Open University - a case study of Chengde Radio and TV University. *Hebei Normal University*, 89(11), 47-65.

Guo, B., & Li, H. (2020). Guidance Strategies for Online Teaching during the COVID-19 Epidemic: A case study of the teaching practice of Xinhua Shangya School in Guangdong, China. *Sci Insigt Edu Front*, 5(2), 547-551.

Guo, W. (2020) A Study on the Online English Teaching in Senior High School-A Case Study of Wuchang Wenhua Secondly School. *Sichuan Pressing*, 52(9), 589-601.

Geng, S., K. M., & Niu, B. (2019). Investigating Self -directed Learning and Technology Readiness in Blending Learning Environment. *International Journal of Educational Technology in Higher Education*, 16(1), 1-22.

Hazaymeh, W. A. (2021) EFL students' perceptions of Online Distance Learning for Enhancing English Language Learning during COVID-19 Pandemic. *International Journal of Instruction*, 14(3), 501-518.

Li, C. (2018). A Brief Analysis of the Strategies for constructing English Network Education Resources. *Junior Middle Schools* (19), 8-8.

Li, Y. (2019). A Study on the Integration of English Teaching and Network Teaching Resources in Junior Middle School. *New Oriental English: Middle School Edition*, (006):P.42-42.

Lu, J. (2020). Investigation on the Current Situation of English online teaching in R u r a l Junior middle school -- A Case study of Fengkai County. *Pearl River Education Forum*, 1, 70-71.

OECD, (2020). *Organisation for Economic Co-operation and Development*. <https://www.oecd.org>.

Phipps, R., & Merisotis, J. (2000). *Quality on the line : Benchmarks of Success in Internet-based distance Education*. ERIC Document Reproduction Service No. ED 444-407.

Samat, C., Chaijaroen, S., & Wattanachai, S. (2019). The designing of Constructivist Web-based Learning Environment to Enhance Problem Solving Process and Transfer of Learning for Computer Education Student. *International Journal of Applied Psychology*, 52(3), 117-126.

Shao, M. & Bai, (2021). Review of Online Classroom Interaction Model. *Language Teaching and Research*, 12, 1-14.

Simamore, R. M. (2020). The Challenges of Online Learning during the COVID-19 Pandemic: An essay analysis of performing arts education students. *Studies in Learning and Teaching*, 11(2), 86-103.

Tao, M. (2020) Analysis of online education in primary and secondly schools in the context of epidemic. *Education Science Form*, 214, 39-41.

Wang, C. (2020). On the application of Comprehensive Teaching Method in Teaching of Education Law. *Journal of New Development in Education*, 2 (7), 62-76.

Yang, Y., Wang, J., Yan, Y., & Liu, Y. (2020). Investigation and Analysis of Online Teaching during COVID-19 prevention and control. *Journal of Qingdao University (Medical Science)*, 56.

Zeng, L. (2020). Analysis on the implementation effect and influencing factors of off line teaching in the background of epidemic prevention and control. Factory east province of higher education. Investigation. *Higher Education Exploration* 27, 85-91.

Zhang, W., (2020). Practice and Thinking of online teaching on the background of suspension -- a case study of online teaching for 20 minutes in primary school. *Curriculum Teaching Research*, 4, 89-96.

Zhou, Y. (2020). Discussion on offline teaching mode of epidemic prevention and control – a case study of rain Classroom in college Comprehensive English course teaching. *Research on The Development and Innovation of Foreign Language Education and Translation* (Vol. 9). Chengdu: Sichuan Normal University Electronic Press, 56-59.

Wang, X. P., & Ma T. (2020). Investigation on online teaching in middle schools during epidemic period in Zhejiang Province. *Digital Teaching in Primary and Secondary schools*, 3, 66 -69.

Wang, F.,(2020) Some thoughts on online teaching during the epidemic. *Neijiang Science and Technology*, 4, 144.

Wingo, N., P., Ivanka, N., V., & Moss, J., A. (2017). Faculty perceptions about teaching online: Exploring the literature using the technology acceptance model as an organizing framework. *Online learning*, 21(4),15-35.

Wu, D. (2020) Survey on the teaching Ability of Chinese in a Foreign Language. *Master's dissertation of Hubei University of Technology*, 21, 18-20.

Yang, Y., Wang, J., Yan, Y. & Liu, Y. (2020). Investigation and analysis of online teaching during COVID-19 prevention and control. *Journal of Qingdao University (Medical Science)*, 56.