

Virtual Teaching Experience of Selected Elementary Teachers towards Enhanced Online Teaching-Learning Tools

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Abstract

The purpose of this study was to assess the effectiveness of virtual teaching practices and explore the influencing factors that could affect the virtual learning of the selected virtual school teachers in one of the selected schools in China. The virtual school teachers assessed that the technology involved in virtual teaching, the opportunities for interface communication, and the approach of virtual learning in general were effective in meeting the needs of students for a certain set of skills they need to acquire through virtual learning. Teachers perceived learning environment as a diverse platform where students engage and interact to learn new skills. Drawn upon interviews with the teacher-respondents with combined individual and focused-group discussion, this study provided implications for technology infrastructure, technical and administrative support, formative evaluation and assessment, and school leaders' managerial support. The study suggests that providing virtual school teachers with adequate and practical trainings and professional development, and creating course design appropriate for online teaching tools and resources can achieve more quality learning outcomes. In the same manner, school administrators, academic managers and school heads can meaningfully design and implement purposive instructional and mentoring strategies in order to instill professional growth and thereby achieve success in delivering quality education through virtual learning. Thus, based on the findings gleaned from this investigation, the study served as the source for suggesting interventions for enhanced online teaching-learning tools.

Keywords

Virtual school teachers, Virtual learning environment, Contributing factors, Tools and resources.

1. Introduction

The opportunities for acquiring knowledge, obtaining information and advancement of education through online are virtually and powerfully limitless. Internet-based education provides students the ability to access learning opportunities day and night from every corner of the globe. Since the influx of technology and invention of advanced machineries were developed, educational institutions, research centers, libraries, government agencies, commercial enterprises, advocacy groups, and a multitude of individuals have rushed to connect to the Internet.

In this study, the pedagogical, learning environment, problems and challenges encountered by the virtual school teachers will be explored by ascertaining teachers' perceptions, in order to contribute to the development of enhanced online teaching-learning tools. Pursuing this kind of scientific undertaking informs educators about the considerations and changes necessary for improving the quality of virtual teaching and learning. The purpose of this study is, therefore,

to assess the effectiveness of virtual teaching practices and explore the influencing factors that affect virtual learning.

This study assessed the effectiveness of virtual teaching practices and explored the influencing factors that affect virtual learning of the selected virtual school teachers in one of the selected schools in China. Specifically, this study aimed to find answers to the following problems: How may the effectiveness of virtual teaching and learning can be described in terms of the following: course content; teaching strategies; and learning environment? What are the pedagogical practices the teachers utilize in virtual education? What problems and challenges are encountered by the virtual teachers in teaching online? Based on the results, what virtual learning interventions can be proposed for enhanced online teaching-learning tools?

2. Related Literature and Studies

The researcher analyzed research works and related studies that pertain to the present study. This presents the selected literatures and studies on virtual learning environment, and students and teachers' relationship and roles in virtual learning, and other issues, recommendations and conclusions of various studies that dealt with the same topic. The following related literatures contributed to the content and substance of the study and served as foundation for wider understanding and appreciation of virtual education as a whole.

In this research literature, online education is variously termed as "distance education" "e-learning," "online learning," "blended learning," "computer-based learning," "web-based learning," "virtual learning," "tele-education," "cyber learning," "Internet-based learning," "distributed learning," etc. In this study these terminologies are considered to be sufficiently synonymous and used them interchangeably. Considerable research has been carried out into students' conceptions of 'conventional' (that is, face-to-face) learning and into teachers' conceptions of 'conventional' teaching.

3. Methodology

This study assessed the effectiveness of virtual teaching practices and explored the influencing factors that could affect virtual learning of the selected virtual school teachers in one of the selected schools in China.

The qualitative findings were gleaned from in-depth interviews through personal interaction and focused-group discussion with the teacher-respondents using the structured guide questions.

3.1. Research Design

The study involved forty (40) virtual school teacher-respondents who participated in the survey questionnaire and twenty (20) virtual school teachers who took part in the series of interviews to elicit the common pedagogical practices, problems and challenges encountered in virtual teaching environment.

The survey-questionnaire was used as the main instrument in gathering data for quantitative component of the study. It consisted of items that covered the virtual school teachers' effectiveness and current pedagogical practices in virtual education. The distribution of responses on the effectiveness of virtual teaching and learning were divided into three areas such as (1) course content, (2) teaching strategies, and (3) learning environment.

3.2. Research Paradigm

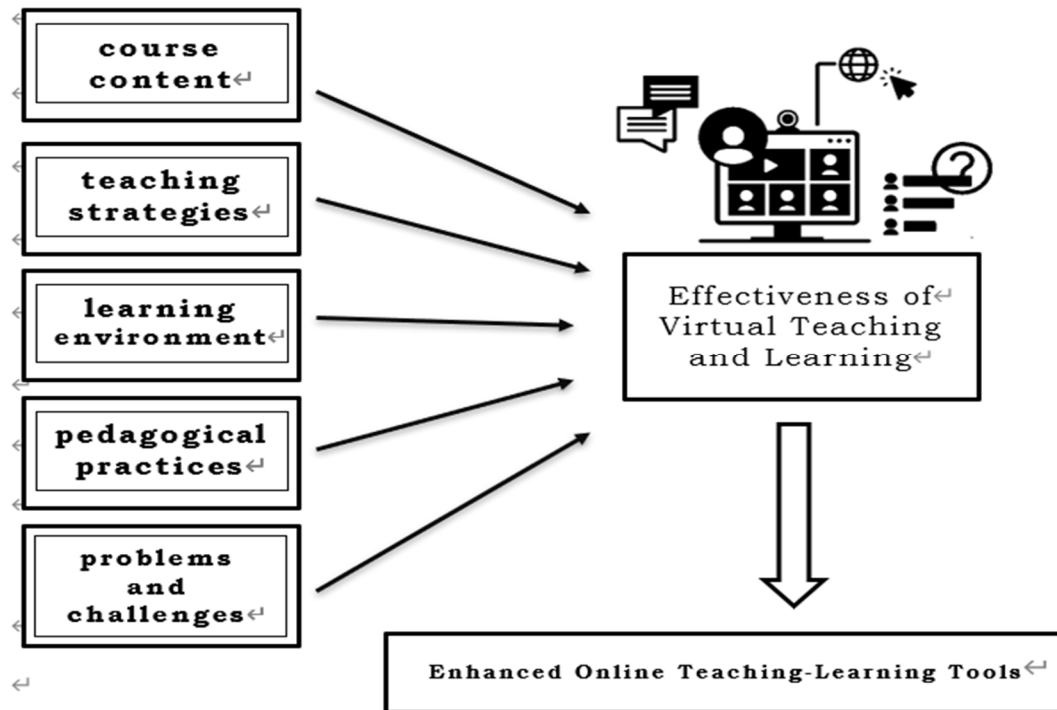


Figure 1. Research Paradigm

4. Presentation, Analysis and Interpretation of Data

4.1. Effectiveness of virtual teaching and learning

4.1.1. Course Content

This area provides the student with the ability to study alongside the learning materials for virtual education which allows the teachers and students to take part in the learning process. This content also refers to the framework as a guide for teaching and learning and is used for program improvement.

The virtual school teachers assessed that the technology involved in virtual teaching, the opportunities for interface communication, and the approach of virtual learning in general were effective in meeting the needs of students for a certain set of skills they need to acquire through virtual learning.

4.1.2. Teaching Strategies

Virtual teaching strategies contribute to the greater student success within virtual education. These are aimed at promoting and creating a student-centered learning environment in a blended learning classroom and encouraging students to use technology to learn, solve problems, communicate, and collaborate with one another.

The teacher-respondents' teaching strategies employed in virtual learning such as using different teaching resources to enhance their virtual teaching, providing multiple forms of assessment for learning, motivating students to interact with the target topic and language, and giving feedback to my student's learning performance were found often.

4.1.3. Learning Environment

Learning environment refers to the diverse physical locations, contexts, and cultures in which students learn, and in this context, through virtual learning experience. This environment

presents resources, activities and interactions within a course structure and provides for the different stages of assessment facilitated by the virtual school teachers.

Teachers perceived learning environment as a diverse platform where students engage and interact to learn new skills.

Table 1. Effectiveness of Virtual Education as to Course Content

Course Content		Weighted Mean	Interpretation
1	The interface communication with students helps them understand the lesson.	3.18	Effective
2	The technology involved in virtual teaching is helpful to students.	3.18	Effective
3	Students and parents have adequate access to track their progress and receive updates on submitted tasks.	2.95	Effective
4	The approach of virtual learning is better than traditional learning.	2.85	Effective
5	Students understand the lessons much easier through virtual learning.	2.93	Effective
6	Teachers find virtual learning helpful to students' learning.	2.93	Effective
7	The flexibility of virtual education accommodates students from different time zones.	3.28	Highly Effective
8	There is adequate time to revise and improve online courses.	3.35	Highly Effective
9	The courseware, videos and other teaching tools help students learn the lesson.	3.38	Highly Effective
10	The school provides training for online teaching and course development.	3.15	Effective
OVERALL MEAN		3.11	Effective

4.2. Teachers' pedagogical practices in virtual teaching and learning

Technology in learning and teaching does bring with it a change to educational innovations including the multifaceted roles of teachers and the nature of teaching in virtual education. Effective online teachers need a range of skills and knowledge, particularly in the areas of management, new perspectives in pedagogical approaches which will effectively enable the design, facilitation and assessment of the course; content knowledge; ability to support the social and emotional well-being of the students and in the aspects of technical skills.

The respondents attested that they often utilize instructional aids and other teaching platforms in virtual education.

4.3. Problems and challenges encountered by virtual teachers in teaching online

To corroborate the survey results revealed by virtual school teachers who served as the primary respondents, the study involved twenty (20) online teachers to facilitate the qualitative inquiry and thereby provide outcomes relative to their experience about the challenges and problems they encountered in teaching online, and other factors implicated during the interview.

Virtual education can profoundly change the relationship that students, teachers, parents, and the community share with their educational institutions and with one another. For school leaders, researchers and policymakers, those transformations pose some difficult choices as

well as opportunities to better improve education. These opportunities come with a sense of urgency.

- (1) Teacher's common problems in virtual teaching
- (2) Contributing factors in virtual education
- (3) Common online activities that motivate and engage students
- (4) Common tools and resources to support virtual teaching

4.4. Proposed interventions for enhanced online teaching-learning tool

Innovating and changing how teaching and learning happen under the new normal environment is currently being reinforced with the integration of multimedia technology such as providing the variety of instructional tools like audio, video, audio visual or multimedia while revolutionizing new paradigms in education by continuously enhancing and improving methods in which knowledge can be transferred to the learners through virtual teaching.

The pandemic has surely caused a change in the usual teaching and learning practices employed in the on-campus classroom environments, but this does not mean that crisis should not hamper the goals of education in transforming lives of the students. By instilling collaboration, frequent communication and active learning into classroom, teachers and other members of the academe can still ensure students receive valuable and engaging educational experiences, regardless of where learning takes place.

- (1) multimedia instructional tools
- (2) online teaching software and other teaching tools
- (3) virtual teaching tools for millennials and generation z learners

Table 2. Common Tools and Resources to support Virtual Teaching

Teacher 1	“School IT support team, hardware support, certain allowance, groups cooperated preparations.”
Teacher 4	“Professional development for online teaching and facility. We need to continually explore on online teaching program.”
Teacher 5	“Unified management regulations and evaluation system, technical guidance and support for online course teaching.”
Teacher 7	“It is necessary for schools to provide a high-quality online learning platform to ensure the quality of teaching. Meanwhile, it is also necessary for schools to earnestly fulfill the functions of teaching management, establish a management mechanism suitable for online teaching, and effectively implement it to all teachers and class teachers.”
Teacher 9	“We need useful teaching materials and some animation and even film and television materials, so as to attract students' attention and conform.”
Teacher 11	“It needs good teaching platform, smooth network and rich teaching resources.”
Teacher 12	“I need a powerful teaching platform and real-time interactive communication platform. I need to learn the emergency measures for online education emergencies, vivid and diversified teaching courseware, videos, pictures, music and other teaching materials, standard test papers and analysis software that can analyze students' learning needs.”
Teacher 14	“More technology for the students through the online learning system.”
Teacher 18	“I need online video teaching materials and professional equipment.”
Teacher 20	“In my opinion, in addition to the traditional classroom books and papers and other supporting materials, virtual classroom needs a lot of video and audio materials so as to attract students' attention”

5. Conclusion

Online teachers were familiar with online design and content standards, showed the ability to determine which standards are appropriate for their course design and delivery needs, and were able to demonstrate use of design and content standards in meeting the needs of their students.

The respondents in general were aware of the technical problems and classroom management issues that exist in virtual teaching and learning. Their pedagogical practices recognized various learning styles of the learners and involved different kinds of instructional materials and challenging tasks.

Majority of the virtual school teachers recognize the lapses and loopholes of online teaching and learning especially in technical facility, classroom management, and students' behavior and participation in online activities.

The virtual learning environment requires a high level of technological and administrative support and strong guidance on pedagogical practices. Teachers' and students' success in online learning environments rests heavily on the support system provided.

There is a wide array of teaching platforms that can be utilized in virtual teaching which teachers can employ to elevate the level of students' academic success through virtual education.

Based on the above findings and conclusions, the following recommendations are hereby given: Teachers should be adept at various platform features so that they can provide students with the opportunity for collaboration, increased level of engagement, up-to-date course design and supervision for hands-on practice with software applications.

Students should be given an opportunity to learn through online classroom, where they can interact with the content, and share learning interactively. Similarly, they also get an opportunity to collaborate with their peers in creating knowledge. Encouraging the virtual school teachers to explain abstract concepts with the help of animation and graphics will help develop imagination, critical thinking skills, reasoning, and confident communication among students.

Teachers should have sufficient facility to meet students' learning styles and needs, and should assure that the design and delivery of online courses include appropriate text explanations of online course videos, audios, and graphics.

School leaders, academic managers and program heads may initiate and organize school-based trainings, webinars and other trainings for continuous development and utilization of online teaching platforms, course designs, technical trouble shooting, current teaching strategies that will help virtual school teachers become more quipped in teaching online classes.

School administrators need to learn how to review online course delivery, looking for and evaluating teachers' skills in developing online communities of learners, fostering online discussions and team activities, effectively using online course delivery tools like grading books and enrollment systems, creating an effective online voice and presence, providing adequate and frequent feedback to discussions and student work postings, keeping course content up-to-date, modifying online course content to meet individual student needs, and effectively selecting and using appropriate online tools to support online instruction.

Future research can be developed using the same topic that focuses on the improvement of online teaching platforms and creation of educational tools and other resources for online teaching.

Further study is highly recommended in correlating students' digital literacy habits to the existing instructional practices in school. This can expound the internal and external aspects of virtual instruction that impact students' performance.

Researchers may opt to empirically identify high-quality online courses, as well as strategies that contribute to better student learning and performance outcomes in an online learning environment.

References

- [1] Shen Zhangming and Xu Yingying (2019). The generation logic and development direction of "core literacy": analysis based on relevant policy texts [J] Foreign Education Research, 2019, (11): 3-28.
- [2] Dong Cuixiang, Tian Lai and Yang Qingfeng (2020). Core quality oriented physical education and health teaching design [M] Shanghai: Shanghai Education Press, 6-7, 2020.
- [3] Wang Yehui and Xin Tao (2017). Key issues of curriculum reform based on core literacy [J] People's Education, 2017, (Z1): 37-40.
- [4] Cai Qingtian (2017). Curriculum development of core literacy in the field/subject [J] Shanghai Education Research, 2017, (2): 5-8.
- [5] Zhang Jianqiao (2017). Cultivating students' core quality requires teaching transformation [J] Chinese Journal of Education, 2017, (2): 6-12.
- [6] Tang Xiaojun (2017). Core Professional Literacy: Connotative Analysis and Training Path [J]. Jiangsu Education Research, 2017, (27): 70-73.
- [7] Han Tianxue, Zhang Hui and Qi Dapeng (2018). Exploration and Practice of Core Literacy Training for Higher Vocational Students -- Taking Shanghai Sibao Vocational and Technical College as an Example [J]. Higher Education Forum, 2018, (10): 104-107.19.
- [8] Qiao Wei (2018). The essence and cultivation of core literacy: based on the perspective of vocational education [J] Vocational and Technical Education, 2018, (13): 20-27.
- [9] Yao Changjia and Zhang Conghui (2019). Research on the Core Literacy and Curriculum Reform Path of Higher Vocational Education Economics and Management [J] China's vocational and technical education, 2019, (8): 52-57.
- [10] Zhang Xiaojuan (2018). Evaluation model and application of vocational college students' core literacy based on grey correlation degree [J] Southern Journal of Vocational Education, 2018, (6): 65-69.
- [11] Peng Chong and Zhong Wendan (2019). Based on the investigation and research on the vocational core quality of secondary vocational school students under the "life moral education concept" [J] Occupation, 2019, (11): 101-102.
- [12] Luo Huan (2019). Probe into the evaluation index system of vocational core competence of students in higher vocational education [J] Labor Security Research, 2019, (1): 58-59.20.