Nanotechnology Perceptions
ISSN 1660-6795
www.nano-ntp.com

A Study of Teachers' Experiences of the Integration of Educational Technology into the New English Language National Curriculum of China

Liu Jia, Sahar Taresh, Murtadho M. Alao

Research Scholar, Lincoln University College, Malaysia

This thesis examines the utilisation of educational technology by eight secondary school teachers in Beijing, China, for the purpose of teaching English. Additionally, it examines their viewpoints regarding the factors that impact the utilisation of technology. According to data analysis of classroom recordings and follow-up interviews, this research discovered that instructors mostly utilised PowerPoint as the most often utilised software in the classroom, despite also incorporating the internet and other new tools. One of the various ways educational technology was used in teaching was to address the need for improved instruction, generate teaching materials, and support professional growth. In addition, educators utilised technology to address the needs of their pupils, particularly in terms of enhanced student involvement, improved language acquisition, simplified understanding, and the establishment of a linguistic environment. The research findings indicate that teachers' technology usage is influenced by four key factors: teachers' perspectives, availability of resources, teachers' proficiency in technology, and their level of confidence in using it. According to this study, instructors might gain advantages by adopting a critical reflective approach to gain a deeper understanding of their own educational beliefs and requirements regarding the use of technology. Ongoing professional development opportunities can strengthen teachers' skill and confidence in utilising technology in the classroom. This chapter explores the intriguing history of English Language Teaching (ELT) in China and how teachers have been given the authority to adjust to new educational plans. Considering the current ecological systems in which students and educators are situated, the challenge of implementing theoretical concepts becomes increasingly evident.

Keywords: Teachers' Experiences, Integration Educational, Technology, English Language, National Curriculum, China.

1. Introduction

Contemporary educational technology Traditional methods of training have experienced substantial changes as a result of the widespread use of technology. Due to the widespread presence of technology in daily life, several educators and their students now have the opportunity to utilise novel resources that can improve language instruction. In recent years, there has been a significant emphasis on univsersities enhancing the calibre of their curricula and exploring innovative methods to educate students in addressing global issues (Liu, 2022).

Educators utilise technology in the following ways: producing and disseminating course materials, tracking student interaction with technology both within and outside of the classroom, and overseeing classroom procedures (as determined by classification). Technology integration refers to the incorporation of technology into classroom instruction, when teachers provide guidance and direction to students on how to use technology, even if the actual use of technology occurs outside of class. Technology adoption and technology integration are distinct concepts. Technology integration focuses on incorporating technology for instructional purposes, while technology acceptance assesses the amount to which instructors routinely utilise technology. Technology integration in the classroom cannot be considered unless technology instruments are used specifically to achieve educational goals. If an activity is solely intended to entertain children without any educational purpose, it cannot be considered as technological integration (Wang, 2022). The rapid growth of technology has had a significant impact on the integration of technology into education and the role of teachers in educational approaches. The integration of technology into the classroom is a frequent practice, however the methods and extent of incorporation might vary significantly. The activities in the classroom may be indicative of the teachers' opinions of effective teaching methods. When teachers are introduced to new technology, they frequently evaluate if it is in line with their educational goals and improves their teaching. Without a discernible correlation between the subject matter taught by instructors and their pedagogical objectives, it is improbable that teachers will use technology into their instructional practices. Technology in the classroom will only achieve its maximum effectiveness when educators recognise and appreciate the value and effectiveness of integrating it into their lessons (Yang, 2019).

2. BACKGROUND OF THE STUDY

This theory proposes that individuals' subjective task values, which include things like utility values, playfulness, and cost, as well as their expectations for the chances of success, which include things like self-efficacy, determine whether or not they do a work (Fu, 2020) while an individual has confidence in his or her capabilities, that individual is less likely to be pessimistic when working on a project and more likely to take pleasure in the process of accomplishing the work while they are working. As a consequence of all of these factors, there will be a larger degree of acceptance of that responsibility. Personal characteristics that are conducive to success, such as self-confidence, are linked to the achievement of constructive objectives in relation to the utilisation of contemporary technology. During the process of determining continued intention, a learning perspective is also taken into consideration in order to complete the TAM approach. Because of the strong personal intentions that teachers have to learn how to use technology in their teaching, there will be an increase in the amount of technology that is used in the classroom. This is the reason why learning behaviours have an impact on continuing intention (Cao, 2020). Because digital immigrants were exposed to technology at a later age than digital natives, who were born and raised before the digital era, it is more difficult for teachers to incorporate technology into their teachings for digital immigrants. This is because digital immigrants were introduced to technology at a latter age. Teachers, both pre-service and in-service, at universities and in the profession, have access to a number of courses that are meant to increase their competency in incorporating technology into the classroom. These programmes are designed to help teachers become more tech-savvy

(Wang, 2022). These instructors will be more likely to participate in technology development courses and engage in learning behaviours that will enhance their future use of technology if they have a strong conviction in their capacity to increase their technical competence via learning. For example, if they believe that they can improve their technological competence through learning. Based on studies conducted on student participation in the classroom, it has been shown that teachers who have a growth mindset are more likely to actively seek out chances to learn how to utilise technology. This should result in increased proficiency and a more sustained motivation to use technology in the classroom.

3. THE PURPOSE OF THE RESEARCH

The goal here is to find out whether there are any restrictions in this area that prevent instructors from doing their jobs well. In addition, the research seeks to comprehend the perspectives of educators on the integration of technology into their instructional strategies.

The study's secondary objective is to examine how quickly ESL educators have incorporated technological tools into their classroom practices. Its goal is to ascertain this adoption rate by analysing instructors' proficiency and understanding of technological tools.

The use of electronic devices in the process of language learning in China has received almost little attention from researchers, and even fewer studies have investigated the application of tech to learning in China in general. As a result, there has never been any other study carried out in the field of education that is comparable to this one. It is the first research to look at how primary school, high school and university teachers in China are using instructional technology into their lessons, according to the authors. The primary purpose of the research is to illuminate the voids in the relevant parties' readiness and the instructors' perspectives on the incorporation of technology into their educational approaches and practices.

4. LITERATURE REVIEW

New evidence suggests that teachers' intentions towards technology integration differ from their actual implementation in the classroom. Researchers have found conflicting results when looking at the relationship between instructors' views on technology use and their actual classroom practices. To rephrase, teachers' perceptions of student engagement with technology in the classroom may or may not align with their actual practices. Looking at the views of the instructors, most empirical research indicates that EFL teachers have a good opinion of students using electronic devices in class (Tang, 2021). This is evident when one examines the mindsets of educators in a more direct manner. Teachers' positive attitudes towards "computer-assisted linguistic learning" (CALL) and the integration of "internet & communications technology" (ICT) into the classroom stem from their own personal evaluations of the usefulness of such tools. For instance, they believe that technological advancements may enhance the effectiveness of instruction while simultaneously boosting students' understanding and engagement. Additionally, they believe that kids' listening and reading abilities, which are receptive skills, may be improved via the use of technology. In instance, believe that vlogs might help their students' listening and language skills (Liu, 2018). They also think that students' enthusiasm and creativity may be boosted by allowing them to use their cellphones

in class. Evidence suggests that educators in virtual classrooms believe their pupils learn just as quickly, if not quicker, than their in-person counterparts. The most recent evidence in favour of this view is this. According to Hsiao (2021), educators believe that technology enables them to tailor their lectures to the individual requirements of their pupils and gives them access to a variety of genuine educational materials. Another benefit that technology offers is this (Hsiao, 2021). According to a number of studies, however, instructors have a negative attitude towards the usefulness of technology in English instruction, despite the fact that there are perceived advantages associated with the usage of technology. They even believe that the incorporation of technology will raise their workloads, cause them to have technological problems, and diminish the amount of face-to-face engagement they have (Huang et al., 2019).

5. RESEARCH QUESTION

To fulfil the research aims a primary research question was formulated and then sub-divided into further sub-questions to be addressed. The main research question for this study is:

1. What are English language teachers' experiences of implementing the new English Language curriculum in primary schools in China?

❖ The main question is subdivided into sub-questions:

2. To what extent did teachers embed technology in the new curriculum?

3. What are the barriers/ enablers that teachers faced in embedding technology into

the new curriculum?

4. What were the rates of adoption of the curriculum innovation by the various teachers

involved in the study?

6. METHODOLOGY

The researcher will use convenient sampling technique in this study. The study's emphasis on psychological traits made it the pioneering use of a multi-method matrix. Other researchers began gathering data in various formats as a result of their study.

Research Design: The quantitative data will be analyzed using SPSS version 25. The strength and direction of the statistical association will be measured according to the odds ratio and the 95% confidence interval. The statistically significant level will report at $p < 0.05$. Descriptive analysis will be applied to understand the basic nature of the data. The primary approach employed in this research was interviewing. In a limited way, nevertheless, it may be regarded as mixed methods since an online survey was also used.

Sampling: Convenient sampling technique will be applied for the study. The subjects in the study will be Chinese Organisation.

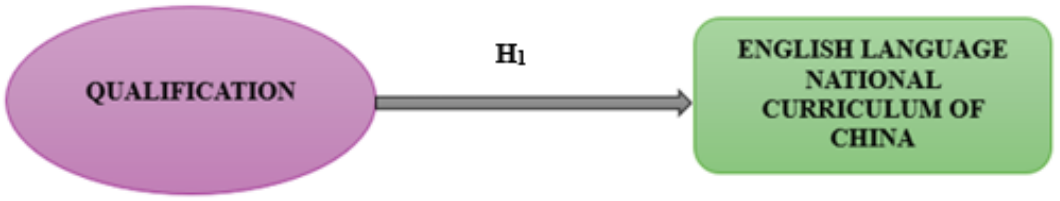
Data and Measurement: Primary data for the research study will be collected through quantitative analysis. Secondary data will be collected from multiple sources, primarily internet resources. Interviews are one of the most popular and effective ways to gather data

because of their versatility. Interviewing is a crucial qualitative data gathering technique that may be used to explore and describe educational practices and challenges, according to experts. Interviews enable a researcher to conduct a more thorough investigation of the topic with the interviewees than would otherwise be feasible. Researchers suggest using pre- and post-interviews until data saturation occurs. The goal of conducting interviews is to gather information about respondents' perspectives about the issue under investigation as well as to aid in the comprehension and assessment of various circumstances.

Statistical Software: MS-Excel and SPSS 25 will be used for Statistical analysis.

Statistical Tools: Descriptive analysis will be applied to understand the basic nature of the data. The researcher shall apply ANOVA for analysis of the data.

(i) CONCEPTUAL FRAMEWORK



7. RESULTS

- English Language National Curriculum of China

To keep up with significant social and technological developments since 1900, the Ministry of Education will create a modern basic education curriculum. Thirteen people formed the English curriculum project team in June 1999. They included diverse scholars, teacher educators, ELT consultants, and research fellows. During project development, three countrywide consultations were scheduled. The Ministry of Education (MOE) held a national consultation with hundreds of academics, scientists, businesspeople, classroom teachers, political consultative committee members, and people's congress representatives before releasing the pilot curriculum. Ten provinces consulted. The latest English curriculum is the most thorough. The ideas of superior education encourage pupils to extend their viewpoints by fostering creative thinking and pragmatic language skills. English teaching goals, subject content, methodologies, and evaluation have changed significantly (Mei, 2020). New curriculum highlights are included here. A Focus on Whole-Person Language Education The aim of the new curriculum is to rethink why we teach English as a second language. The emphasis shifts from language study to personal development during language learning. After developing language abilities, knowledge, emotion, learning techniques, and cultural awareness, students will be better at utilising English in all situations. The revised curriculum values teachers' multimedia technology proficiency in the classroom. It suggests using computers, the Internet, English language periodicals, TV and radio broadcasts, remote language study, and multimedia tools to maximise students' learning opportunities. After the new curriculum was created, textbook manufacturing policy changed,

enabling other firms to compete for national contracts. After approval, the MOE textbook review committee recommends them to schools. A new era in textbook creation will enable several textbooks to meet regional demands. More than twenty basic, seven junior, and two senior English books are available (Sun, 2020). This modification is crucial since instructors have been unfamiliar with the national curriculum for years. They focus on texts and examinations. Thus, instructors depend on textbook authors to include syllabus goals, subject content, and technique. The syllabus's broad criteria make it hard for classroom instructors to follow. Thus, textbooks have greatly influenced English language instruction (). With many textbooks and a new English curriculum, things should change. Testing will now be based on level descriptors in the new curriculum, not simply one textbook. Textbooks are still useful, but instructors need to grasp the new curriculum's requirements, levels, and standards to plan lessons.

- QUALIFICATION

Information and communication technology (ICT) are rapidly changing practically every aspect of human life. Technology in the classroom may boost student performance. Many experts (Walsh, 2021) believe that information and communication technology is becoming an essential aspect of national curriculum reform.Since the 1990s, information and communication technology has been viewed as a vital literacy skill for global success and a driving factor behind educational transformation and advancement (Saini, 2021). In 1996, the US Department of Education announced the first National Educational Technology Plan to prepare American students for the contemporary world by offering computer training and Internet connectivity to students and instructors. The International Standards for Technology in Education (ISTE), formerly known as the US National Educational Technology Standards (NETS), were published in 1998 for teachers, 2000 for administrators, and 2002 for students. Teachers' ICT proficiency in a variety of contexts is intended to be shown by the 1998 UK Council for Standards for Education ICT Standards. To increase technological competitiveness, the Japanese cabinet adopted a similar strategy in 2005 and introduced the Technology and Science Basic Plan. Since 2000, the Australian government has funded teacher ICT training significantly. Educational experts and policymakers believe that information and communication technology (ICT) affects national competitiveness and economic growth and can improve teacher and student performance compared to traditional methods of instruction (Sharma, 2021). Here, "information and communication technology (ICT) integrated teaching" involves using all kinds of ICT in the classroom to better serve students and enhance learning. Research shows that incorporating technology into EFL courses is beneficial. It may assist students become more engaged in their learning, establish a more genuine language environment for EFL education, and alter instructor-student relationships. Information and communication technology (ICT) may make language education more interesting, inspire students, and provide real-world language usage examples. ICT integrated teaching relies on teachers' technological pedagogical content knowledge and attitudes and beliefs about incorporating ICT into the curriculum. EFL teachers still struggle to employ technology-integrated teaching. Thus, EFL teachers' technical literacy, how they employ technology in their classes, and why they do so are crucial. This section defines "teachers' technology knowledge" as the information they need to utilise ICT to educate pupils. To do this, educators must be adept at leveraging technology to integrate multiple educational

methods and approaches into the classroom.

Assessing a person's credentials and professional background requires education and experience. An individual's greatest level of formal education includes a high school diploma, bachelor's degree, master's degree, or PhD. This aspect of educational performance involves acquiring information, skills, and certifications via academics. In contrast, "experience" refers to skills and information gained via work, internships, or other hands-on schooling. It measures knowledge, competence, and mastery in an area or profession by assessing length and depth of employment in related occupations or enterprises (Zhou, 2019).

ANOVA TEST RESULT

Table1: H_1 ANOVA

ANOVA					
Sum					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	39936.307	566	3993.631	2356.855	.000
Within Groups	145.083	633	1.630		
Total	40081.390	1199			

The outcome is noteworthy in this investigation. Statistical significance is achieved with a p-value of.000 (less than the.05 alpha level), and the value of F is 2356.855. "H_1: There is a significant relationship between qualification with English Language National Curriculum of China." is accepted and reject the null hypothesis.

8. DISCUSSION

When studying human populations, demographics are a useful piece of statistical data. The characteristics that set a population apart are its demographics. The application of demography allows for the analysis of societies or even small groups of people. Age, gender, level of schooling, racial or national background, and religious beliefs are all examples of demographic information. Researchers can split the population into subgroups based on age, gender, family income, race or culture, level of schooling, marriage status, job, and many other demographic factors. The cross-sectional design was economical and efficient since it only needed data collected at one point in time. A quantitative strategy was chosen by the researcher despite the limited time and resources available. After 1350 questionnaires were issued and 1280 were returned, 80 were eliminated because they were not completely completed; the Rao-soft algorithm calculated a sample size of 1,177. A total of one thousand two hundred people filled out the survey. The survey was sent to all respondents, and a random selection was made for the sample. Researchers briefed participants about the study and were on hand to answer questions while they waited for their turn to do the activity; individuals who consented to participate also received information about the investigation. An individual who is unable to read or write may have the researcher read aloud the survey questions & answer categories to

them if they are confined to a wheelchair. Following this, the researcher would transcribe the interviewee's words into the survey. Some locations provide surveys that people may fill out and transmit at the same time.

9. CONCLUSION

The ability to effectively use and manage a classroom that is heavily reliant on technology has never been more important for English instructors. This highlights the critical need of fully understanding what drives teachers to keep using technology into their lessons. The study's overarching goal was to identify the elements that influence the desire of English language instructors working in junior highs in Western China in maintaining their current level of technological proficiency (Kelly, 2019). This research sought to analyse the connections between the growth mindset, mediating confidence in oneself, enabling factors, interest, effort regulation, perceived ease of use, perceived value, and desire to continue. Numerous aspects, such as a growth mentality, conducive environments, effort control, assistance seeking, perceived usability, and perceived worth, impact teachers' desire to maintain technology usage. However, research showed that curiosity had little effect on the outcome. Indirectly influencing the desire to keep using the product were factors such as self-efficacy, enabling circumstances, and the sense of ease of use. Interactions between ongoing intention and traits including interest, perceived benefit, effort management, a growth mindset, and motivation were unmediated by self-efficacy. One strategy for keeping kids engaged with technology in the classroom has been for teachers to work on their own self-efficacy (Wang, 2021).

References

1. Wang, X.; Liu, Q.; Pang, H.; Tan, S.C.; Lei, J.; Wallace, M.P.; Li, L. What matters in AI-supported learning: A study of human-AIinteractions in language learning using cluster analysis and epistemic network analysis. Comput. Educ.2022,194, 104703.
2. Yang YF, Kuo NC (2020) New teaching strategies from student teachers' pedagogical conceptual change in CALL. System 90:102218.
3. Lin, C.-J.; Hwang, G.-J.; Fu, Q.-K.; Cao, Y.-H. Facilitating EFL students' English grammar learning performance and behaviors: Acontextual gaming approach. Comput. Educ. 2020,152, 103876.
4. Tang, K.-Y.; Hsiao, C.-H.; Tu, Y.-F.; Hwang, G.-J.; Wang, Y. Factors influencing university teachers' use of a mobile technology-enhanced teaching (MTT) platform. Educ. Technol. Res. Dev. 2021,69, 2705–2728.
5. Huang F, Teo T, Zhou M. Factors affecting Chinese English as a foreign language teachers' technology acceptance: a qualitative study. J Educ Comput Res. 2019;57(1):83–105. doi: 10.1177/0735633117746168.
6. Sun PP, Mei B. Modeling preservice Chinese-as-a-second/foreign-language teachers' adoption of educational technology: a technology acceptance perspective. Comput Assist Langu Learn. 2020 doi: 10.1080/09588221.2020.1750430.
7. Sharma, S.; Saini, J.R. On the Role of Teachers' Acceptance, Continuance Intention and Self-Efficacy in the Use of Digital Technologies in Teaching Practices. J. Furth. High. Educ. 2022,46, 721–736.
8. Scherer, R.; Siddiq, F.; Tondeur, J. The technology acceptance model (TAM): A meta-analytic structural equation modelingapproach to explaining teachers' adoption of digital technology in education. Comput. Educ. 2019,128, 13–35.
9. Siefert B, Kelly K, Yearta L, Oliveira T. Teacher perceptions and use of technology across content areas with linguistically diverse middle school students. J Digit Learn Teach Educ. 2019;35(2):107–121. doi: 10.1080/21532974.2019.1568327.