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| RESEARCH ARTICLE

An Investigation into Teachers' Concerns and Expectations of using Interactive Whiteboards to Teach English

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| ABSTRACT
Technology indeed plays an important role in education, and successfully integrating new technologies into the teaching and learning process is a major objective for educators and teachers. The interactive whiteboard (IWB) can stand out as a tool that teachers effectively utilize to enhance the effectiveness of the lessons in their classrooms. This study investigated the stages of concern and expectations of the teachers in the Faculty of Foreign Languages (FFL) at Dong Nai Technology University (DNTU) regarding the use of IWBs in teaching English. The study also explored the relationship between teachers' stages of concern and, their teaching experience and their using IWB experience. Data collection involved the distribution of questionnaires to fifty-two teachers in FFL at DNTU. The results explored differences in the concern levels among the respondents, with two prominent stages of concern for the participants: Stage 4 (Consequence) and Stage 1 (Informational). The study indicated that there was no relationship between teachers' stages of concern with their teaching experience and their IWB using experience. The study also showed the respondents had positive expectations of using IWBs in teaching English.

| KEYWORDS

Interactive whiteboard (IWB), stages of concern, expectations, Concerns-Based Adoption Model (CBAM).

| ARTICLE INFORMATION

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1. Introduction

The usage of technology in our daily lives has become increasingly significant. New technology and applications have been applied in many fields. In the field of education, the rapid advancement of technology has presented numerous opportunities to transform language classrooms, enhancing the effectiveness of teaching and learning languages.

Interactive whiteboard (IWB) is a unique audiovisual tool that consolidates various traditional teaching aids, including blackboards, television, video, projectors, CD players, and computers (Yáñez & Coyle, 2011). This tool enables educators to adopt more modern teaching methods and leverage a wide range of media, including texts, audio, images, and videos, to facilitate more engaging and effective learning experiences, even in routine classroom settings (Toscu, 2013).

In many countries, more and more classrooms have been equipped with IWBs. In Vietnam, IWBs began to be introduced in the last few years, especially in Hanoi and Ho Chi Minh City. Recently, most of the classrooms at our DNTU have been equipped with IWBs. However, there was little published research on IWBs in Vietnam; especially, there have not been any published studies on teachers' concerns and expectations of using IWBs to teach English. Therefore, the current study was conducted to focus on finding out the teachers' stages of concern about using IWB. The study could help teachers get to know which stages of concern they could experience and give them a chance to express their expectations of using this new technology.

The study focuses on three aims to investigate the teachers' concerns and expectations of using IWBs. The first aim is to explore teachers' stages of concern about IWB use in order to help them understand what they should do to use the useful innovation to teach English effectively. The second aim is to find out whether there was any relationship between the teachers' stages of concern about using IWBs and their years of teaching experience or their years of IWB using experience. The third aim is to investigate teachers' expectations of the IWB use in order to help education managers and policymakers make relevant decisions in training teachers and equipping IWBs.

To fulfill the given purposes, the current study was structured to address the following research questions: (1) What are the teachers' stages of concern about IWB use? (2) Is there any relationship between teachers' stages of concern regarding IWB use and their teaching experience or their IWB using experience? and (3) What are the teachers' expectations of IWB use in teaching English?

2. Literature Review

2.1. Concerns and Stages of Concern

Concerns are the higher priorities that get our attention at a particular time, and "depending on our personal knowledge and experience, each person perceives and mentally contends with a given issue differently; thus, there are different kinds of concerns" (Hall et al., 1991, p.12). In other words, concerns about an innovation are the feelings, attitudes, thoughts, ideas, or reactions an individual has related to it.

Frances Fuller, together with her colleagues, initiated a series of exploratory and descriptive studies aimed at further clarifying the concept of concerns and developing assessment procedures for them. They proposed that concerns could be categorized along a temporal or maturity spectrum, ranging from "early" concerns to "late" concerns, which they termed "stages of concern" (Hall et al., 1991). These stages of concern about the innovation delineate the various types of concerns individuals may experience over time in relation to the innovation. Hall, George, & Rutherford categorized this progression of teacher concerns as Unconcerned stage, Self-stage, Task stage, and Impact stage (as cited in George et al., 2006). Table 2.1 presents a more detailed depiction of these stages with a simplified scale.

Table 2.1. Typical Expression of Concern about an Innovation (George et al., 2006, p.4)

Stages of Concern		Expressions of Concern
"Impact"	6	I have some ideas about something that would work even better.
	5	I would like to coordinate my effort with others, to maximize the innovation's effect.
	4	How is my use affecting my students?
"Task"	3	I seem to be spending all my time getting materials ready.
"Self"	2	How will using it affect me?
	1	I would like to know more about it.
"Unconcerned"	0	I am not concerned about it.

2.2. Expectation

According to Merriam-webster Dictionary (2017), expectation is defined as a belief that something will happen or is likely to happen, or a feeling or belief about the potential success or quality of someone or something. In the context of teaching, expectations refer to the inferences that teachers make about future behavior or academic performance of their students based on their understanding of their students (Good, as cited Trouilloud et al., 2002, p.3).

Hoge (1979) confirmed the importance of teachers' expectations on students' achievement through the following model (Figure 2.1). He explained the model that "under some circumstances, a teacher's expectations for the pupil's performance have an effect on the teacher's behavior toward the child. Further, under some circumstances, the teacher's behavior has some impact on the pupil's behavior, which, again, has an impact on the pupil's level of achievement" (Hoge, 1979, p.7).

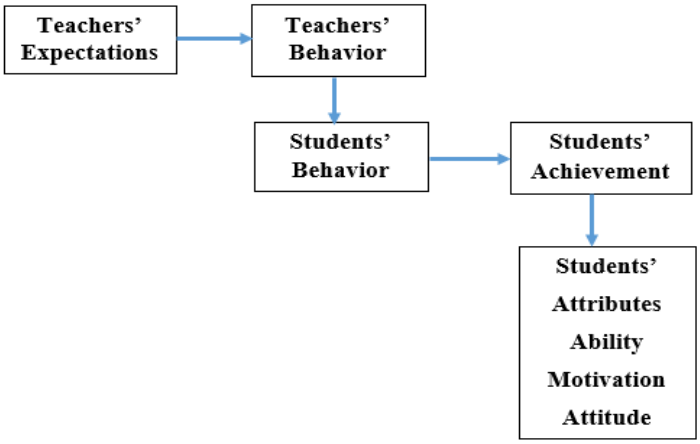

Figure 2.1. The model of Teachers' expectations on Students' achievement (Hoge, 1979)

2.3. Interactive Whiteboard (IBW) and the important role of IWB

Interactive Whiteboard (IWB) is a very special audiovisual material. It can help students remember quite a lot when being used in the teaching process. An IWB is a broad, touch-sensitive board that is linked to a digital projector and a computer (BECTA, 2003). Despite varieties of brand names and models, all IWBs have the same functions – namely, to enable the teacher or students to manage the computer from the board itself rather than using a keyboard and mouse, although these can be used as well. A diagram (Figure 2.2) is the most straightforward way of illustrating how an IWB works (BECTA, 2004, p8):

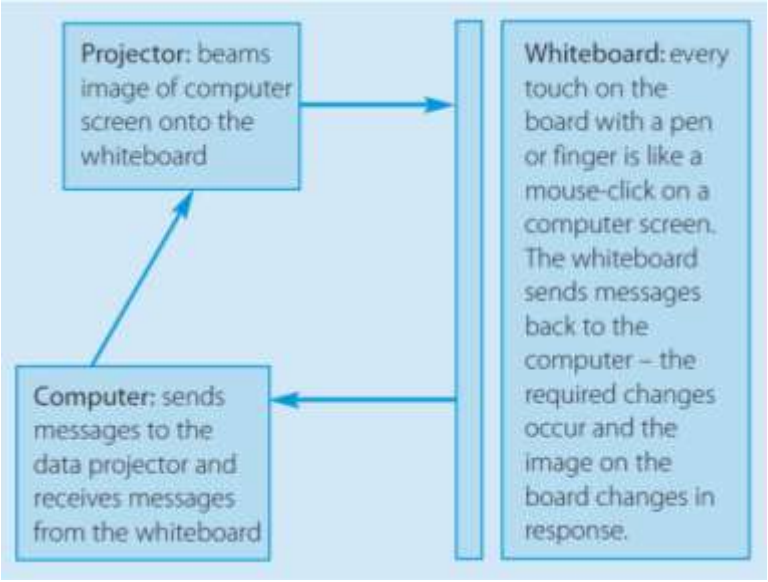

Figure 2.2. How an IWB works (BECTA, 2004)

Many psychologists have conducted their research to discover human memory and find the best solutions to help aid learners in retaining knowledge as much as possible for long periods. One of them was Edgar Dale, "father of modern media in education." He encouraged teachers to use audiovisual materials in teaching language. Because "students do not forget everything they are taught in school. But they forget, they lose, much more than need be forgotten and lost. If a skill or an attitude or a piece of information is important, well-taught, and used in everything living, it should become a "permanent" acquisition" (Dale, 1946, p. 12). He created the "Cone of Learning," which was adapted by Anderson in 2004 (Figure 2.3). The "Cone of learning" theory proposes that people's memory capability depends on the type of learning activity. According to this theory, people tend to remember about 10% of what to read, 20% of what to hear, 30% of what to see, 50% of what to hear and see, 70% of what to say, and 90% of what to say and do after two weeks. This means that by doing something and actively involving ourselves in the learning process, we are more likely to remember crucial things and details over time. (Anderson, 2004, p.1).

The IWB allows teachers and students to write directly onto the board, facilitating activities such as highlighting, labelling, and editing content. IWBs are particularly suitable for presentations since the presenter can control the application directly from the board itself (Yáñez and Coyle, 2011).

2.4. Benefits and problems of IWB use

The British Educational Communications and Technology Agency (BECTA), a government's principal agency for information and communications technology (ICT) in education, provides support to various associations, including the UK government, national organizations, schools, and universities in the usage and development of ICT in education. BECTA has identified many benefits of IWBs for teachers and students, such as the ability to prepare and retrieve saved work, access multimedia files conveniently, choose different software options, enhance engagement in lessons, and prompt responses (BECTA, 2004).

However, there are some problems that might occur inside classrooms, which were mentioned in the study of Al-Faki & Khamis. "There is no connection between the interactive whiteboard and computer or no correlation between board and projector– jamming of handwriting. The system does not enable immediate interactivity between the movement of users' hands and Smart Board – slow boot/delay loading or computer programs which are not updated such as multimedia program" (Al-Faki & Khamis, 2014, p.139).

2.5. Related studies

Alias and Zainuddin (2005) investigated the concerns of a group of lecturers regarding a technological innovation at the International Islamic University, Malaysia. Their findings revealed that the participants exhibited high scores at the Self-concern Stage (comprising Stage 0, Stage 1, and Stage 2). This was attributed to the participants' priorities of innovation over other activities and a lack of comprehensive understanding of its nature. Moreover, they observed that Stage 2 concerns were nearly as prominent as Stage 1 concerns, with a gradual increase in participants' engagement at Stage 6. Furthermore, they identified a favorable inclination towards collaboration and teamwork in adopting the innovation (Stage 5), while most participants displayed minimal concern regarding management-related issues (Stage 3).

McGurn (2014) conducted an investigation into teacher concerns regarding the implementation of the Common Core State Standards (CCSS) and how these concerns varied based on the demographic characteristics of the teachers. The study involved participants who were teachers from 127 school districts in the states of Kansas, Missouri, Iowa, Vermont, and Oregon in the United States. A mixed method was employed to analyze the responses. The findings of the study revealed identifiable stages of concern among the teachers, with the most pronounced concerns occurring in Stages 0, 1, and 2, which constitute Self concerns. This pattern is commonly observed among individuals who are new to innovation and are categorized as non-users. The study identified significant differences in the mean of the relative intensity of concern stages, depending on different state characteristics such as grade level taught, gender, whether the participant had received CCSS training and primary role. However, there were no significant mean differences in the relative intensity of concerns observed based on grouped years of experience.

Dang, H. T., and Nguyen, T. H. N. (2014) carried out a survey aimed at investigating the utilization of ICT in terms of its frequency of use, purposes, perceptions, and expectations among 149 English major students who were requested to complete a questionnaire. The results of the study revealed that the participants dedicated more time to utilizing ICT for personal activities than for English learning purposes. However, the majority of them exhibited positive attitudes toward the use of ICT for studying English and expressed a desire for increased integration of ICT into classroom settings to enhance language learning and teaching experiences.

2.8. Conceptual framework

The conceptual framework guiding this study was the Concerns-Based Adoption Model (CBAM). The CBAM was the result of a study by researchers at the Research and Development Center for Teacher Education at the University of Texas at Austin in 1973. Hall, Wallace, & Dossett (1973) "began an investigation of what happens when individuals are asked to change their practice or adopt an innovation" (as cited in George, Hall & Stiegelbauer, 2006, p. 1). This work resulted in the CBAM and further development of its diagnostic dimensions. The resulting model (Figure 2.3) is "a conceptual framework that describes, explains, and predicts probable behaviors throughout the change process, and it can help educational leaders, coaches, and staff developers facilitate the process" (George et al., 2006, p.1). The information gathered is derived from the diagnostic dimensions of the model. The CBAM model comprises three sections: Stages of Concern, Levels of Use, and Innovation Configuration.

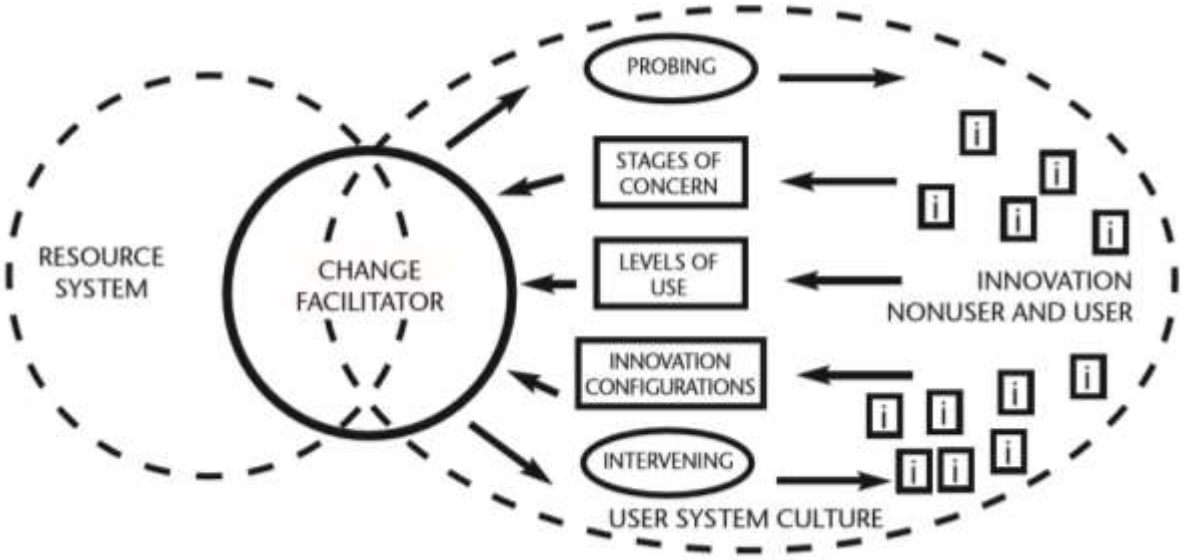

Figure 2.3. The Concerns-Based Adoption Model

The concept of Stages of Concern (SoC) came from the CBAM research as a component illustrating educators' articulation of concerns regarding teaching the adoption of new curriculum/programs or materials. According to the CBAM Stages of Concern framework, teachers can transition between seven distinct stages of concern; as some concerns are addressed, others emerge (McGurn, 2014). These stages can also be grouped into three subscales, namely Self stage (Stages 0- 2), Task stage (Stage 3), and Impact stage (Stages 4-6).

Stage 0 (Unconcerned) signifies the initial level where the participant displays no interest or concern regarding the use of an innovation. Stage 1 (Informational) involves the participant's aspiration to gain more knowledge about innovation. Stage 2 (Personal) entails the participant's curiosity about how the use of an innovation will personally impact them. Stage 3 (Management) reflected concerns regarding time management in relation to preparing lessons involving innovation. Stage 4 (Consequence) involves concerns about the impact of innovations on student learning and strategies to improve these effects. Stage 5 (Collaboration) involves the participant's concern for collaboration with others. Stage 6 (Refocusing) expresses that the participant has started developing and implementing ideas to further enhance the use of innovation (Hall, 2010).

3. Methodology

3.1. Context and Respondents

The study is conducted at Dong Nai Technology University (DNTU) in Trang Dai Ward, Bien Hoa City, Dong Nai Province, Vietnam. The sample for this study consisted of 52 teachers (13 male teachers and 39 female teachers) who are teaching full time and part time at DNTU. The respondents of the sample were relatively young, and 65.4% of the teachers were below 35 years old (N = 33). The teachers had varying degrees of experience in teaching English, with most of them (42.3%, N = 22) having between 1-5 years of experience, followed by 25% (N = 13) of respondents having between 6-10 years, 19.2% (N = 10) of them having between 11-15 years and 13.5% (N = 7) having over 15 years. Most teachers have used IWBs to teach English for over one year at DNTU.

Fifty-five teachers were invited to respond to the SoCQ; however, fifty-two participants completed the entire questionnaire with no missing data. Three participants failed to complete the survey, resulting in missing or incomplete data, and were therefore excluded from the analyses. In the first step of the data analysis, descriptive statistics are run to create an overall profile of the sample.

3.2. Research instrument

The instrument for this study is a questionnaire consisting of three sections about the teachers' concerns and expectations of the use of IWBs in teaching English, which is adapted from George et al. (2006) and Dang, H. T. and Nguyen, T. H. N. (2014). The first section of the questionnaire included four questions about teachers' demographic information that provided a general view of the respondents of the study. The second section was modified from the Stages of Concern Questionnaire (SoCQ) by George, Hall & Stiegelbauer (2006) to measure the respondents' stages of concern about IWB use. To be suitable for Vietnamese teacher-respondents, the present questionnaire was reduced to 21 items, and some words were changed to enable the respondents to understand and answer the questions easily and correctly. In particular, the word "innovation" is consistently used throughout;

however, the author recommended substituting this word for something more recognizable to the respondents (George et al., 2006). Consequently, the wording was adjusted slightly to replace "innovation" with Interactive Whiteboard or IWB. The items were carefully selected according to concerns theory to represent the seven fundamental Stages of Concern. There were three items for each stage. The respondents marked how true the item appears to them at the present time. The responses ranged from 0-7 on a Likert scale, with 0 indicating that the item is irrelevant and 7 indicating the item is very true at the present time. Scoring was achieved by summing the responses to the three items that made up each stage. The third section of the questionnaire consisted of 8 five-point Likert-scale items to measure the teachers' expectations of using IWBs in teaching English. Each item was expected to indicate how much teachers agree on a five-point Likert scale: (5) Agree strongly, (4) Agree, (3) Undecided, (2) Disagree and (1) Disagree strongly. This part was adopted from the ITCs questionnaire of Dang, H. T. & Nguyen, T. H. N. (2014). However, this present questionnaire has some changes to link to the topic and context of the study.

3.3. Data collection procedure and data analysis

The questionnaires were completed individually and confidentially within about 15 minutes by the teachers who have used IWBs in their classrooms.

The data collected from the questionnaire were entered and coded into SPSS Version 25.0 for analysis. Descriptive statistics, including frequencies and percentages, were used to describe the respondents' demography information and their stages of concern regarding using the IWB in the classroom. Cross tabulations in SPSS were utilized to examine the relationship between the respondents' stage of concern and their years of teaching experience, as well as their years of experience using the IWB.

4. Results and Discussion

4.1. Respondents' stages of concern

To address the first research question, the raw scores of each stage were initially calculated by using MS Excel to determine the teachers' stages of concern. The highest stage scores for each respondent were then quickly identified by circling these scores. After that, descriptive statistics, including frequencies and percentages, were applied to report the teachers' stages of concern.

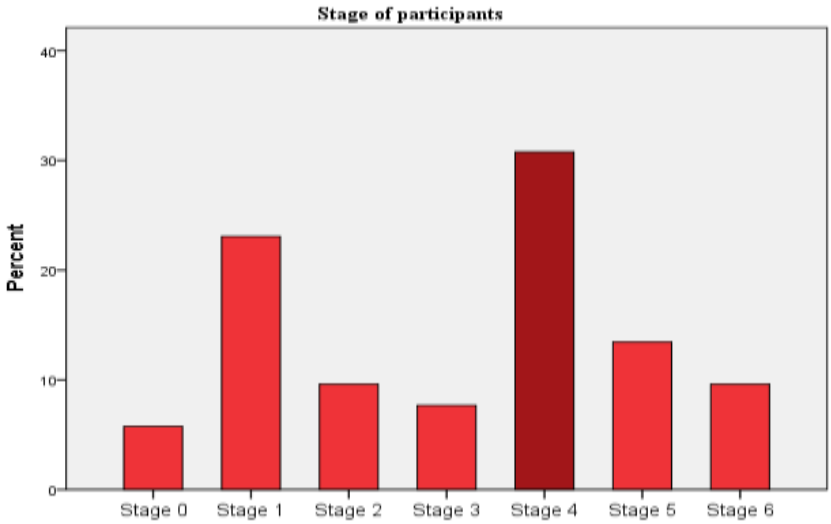

Figure 4.1. Teachers' stages of concern about IWB by percentages

The bar chart revealed an overview of the respondents' stages of concern, which were the most and least intense. The highest percentage was shown in Stage 4, and the lowest percentage was shown in Stage 0 (Figure 4.1).

Table 4.1. The teachers' stages of concern

		Frequency	Percent	Mean	Std. Deviation
Valid	Stage 0	3	5.8	9.75	3.564
	Stage 1	12	23.1	13.44	3.873
	Stage 2	5	9.6	12.21	3.409
	Stage 3	4	7.7	12.38	3.249
	Stage 4	16	30.8	14.31	3.352
	Stage 5	7	13.5	13.08	3.204
	Stage 6	5	9.6	13.15	3.134
	Total	52	100.0		

Table 4.1 shows more detailed information on the respondents' stages of concern. The highest concern stage was Stage 4 (Consequence), with a mean of (14.31), accounted for 30.8% of the sample, followed by Stage 1 (Informational) with 23.1% (N = 12); Stage 5 (Collaboration) with 13.5% (N = 7); Stage 2 (Personal) and Stage 6 (Refocusing) at the same percent of the sample with 9.6% (N = 5); Stage 3 (Management) with 7.7% (N = 4), and finally the lowest concern stage was Stage 0 (Unconcerned) with mean of (9.75), accounted for 5.8% (N = 3) of the sample.

Table 4.2 shows the respondents marked how true each item appears to them at the present time by stages. At Stage 0, 84.6% of the respondents said that other priorities prevented them from concerning about IWBs. 78.9% of the respondents spent little time thinking about IWBs, and 36.5% of them were not concerned about IWBs at the present time.

At Stage 1, a large number of respondents (90.4%) said that they knew very little about IWBs. 84.6% of teachers wanted to know about available resources to adopt IWBs, and 84.5% of them wanted to know how IWBs are better than what they are using now.

The vast majority of respondents (90.4%) at Stage 2 would like to know about their role in using IWBs. 78.8% of them wanted to have more information about IWBs. 73.1% of them would like to know the people who make decisions when using IWBs.

At Stage 3, all three items received a similar degree of concern; almost all respondents did not have enough time to organize themselves (88.4%). The respondents spent working with nonacademic problems related to IWBs (78.9%). They also could not manage all the IWB requirements (74.6%).

Stage 4 gained the highest concern of the sample. Almost all respondents (96.1%) were concerned about how IWBs affected their students. 90.4% of them were concerned about their students' attitudes toward IWBs, and 90.3% of them wanted to excite their students to use IWBs.

At Stage 5, a great number of respondents (94.3%) would like to maximize the IWB's effects. 92.3% of the respondents would like to familiarize other teachers with the progress of using IWBs. 88.5% of them wanted to know how IWB is used at other schools.

At the last stage – Stage 6, 92.3% of the respondents were concerned about revising the IWB use. 90.4% of them wanted to revise the IWB's instructional approach. 80.8% of them wanted to modify the IWB use based on their students' experiences.

Table 4.2. Percentage of statements on teachers' stages of concern arranged according to stages

Statements on teachers' stages of concern	**Responses in %**			
	Irrelevant	*Not true of me now*	*Somewhat true of me now*	*Very true of me now*
Stage 0				
I am not concerned about IWB at this time.	23.1	40.4	26.9	9.6
I spend little time thinking about IWB.	-	21.2	71.2	7.7
Currently, other priorities prevent me from focusing my attention on IWB.	1.9	13.5	67.3	17.3
Stage 1				
I have a very limited knowledge of IWB.	-	9.6	59.6	30.8

Statements on teachers' stages of concern	**Responses in %**			
	Irrelevant	*Not true of me now*	*Somewhat true of me now*	*Very true of me now*
I would like to know what resources are available if we decide to adopt IWB.	1.9	15.4	53.8	30.8
I would like to know how IWB is better than what we have now.	-	15.5	48.1	36.4
Stage 2				
I would like to know who will make the decisions in using IWB.	-	26.9	65.4	7.7
I would like to have more information on time and energy commitments required by IWB.	1.9	19.2	50.0	28.8
I would like to know how my role will change when I am using IWB	1.9	7.7	57.7	32.7
Stage 3				
I am concerned about not having enough time to organize myself each day.	-	11.5	61.5	26.9
I am concerned about my inability to manage all the IWB requires.	1.9	13.5	61.5	23.1
I am concerned about time spent working with nonacademic problems related to IWB.	5.8	15.4	63.5	15.4
Stage 4				
I am concerned about students' attitudes toward IWB.	-	9.6	50.0	40.4
I am concerned about how IWB affects students.	1.9	1.9	67.3	28.8
I would like to excite my students about their part in using IWB	1.9	7.8	50.0	40.3
Stage 5				
I would like to familiarize other teachers with the progress of using IWB.	-	7.7	75.0	17.3
I would like to coordinate my effort with others to maximize the IWB's effects.	-	5.8	71.2	23.1
I would like to know what other schools are doing in this area.	-	11.5	63.5	25.0
Stage 6				
I am concerned about revising my use of IWB.	-	7.7	65.4	26.9
I would like to revise the IWB's instructional approach.	-	9.6	59.6	30.8
I would like to modify our use of IWB based on the experiences of our students.	-	19.2	59.6	21.2

4.2. Relationship between teachers' stages of concern and their teaching experience and their using IWB experience.

To answer the second research question, two ANOVA tests were used to find out any statistically significant difference between teachers' stages of concern and, their teaching English experience and their using IWB experience.

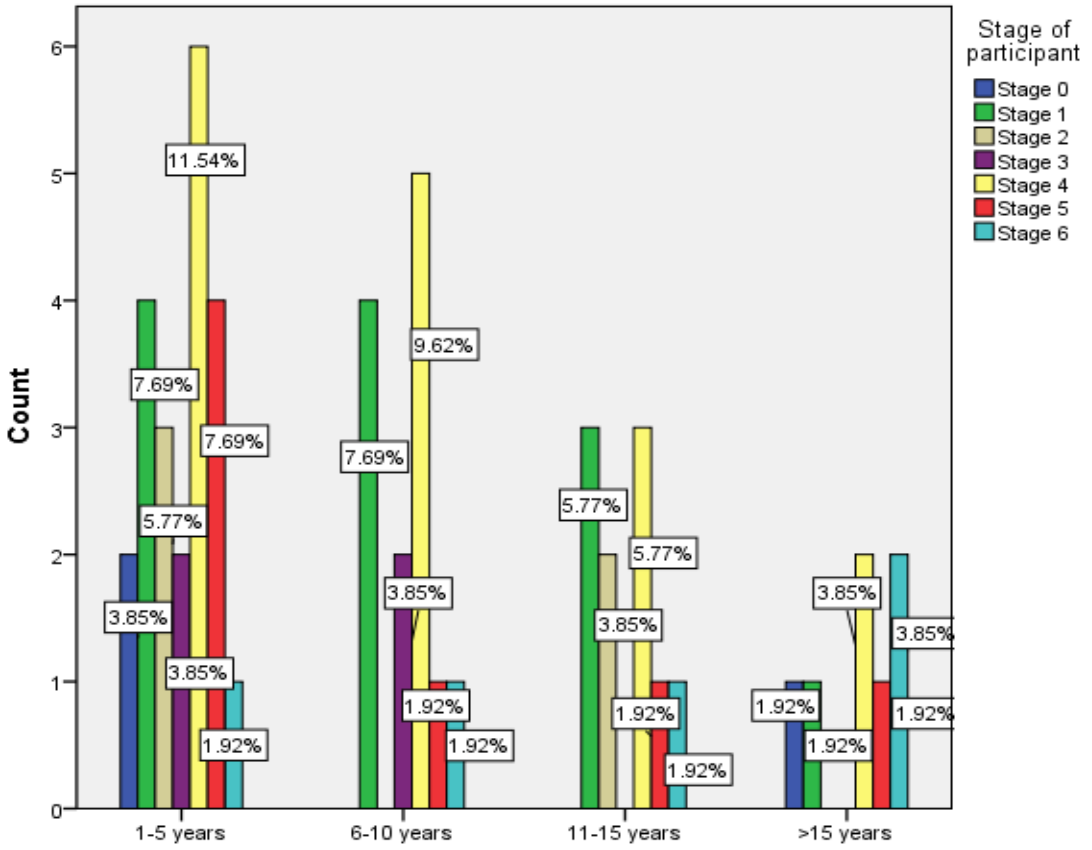

Figure 4.2. The percentages of stages of concern by years of teaching experience

As illustrated in Figure 4.2, the respondents with 1 to 5 years of teaching English experience scored the highest on Stage 4 (11.54%, N = 6), scored second highest on Stage 1 and 5 (7.69%, N = 4), followed by Stage 2 (5.77%, N = 3) and Stage 0 & 3 (3.58%, N = 2) and scored the lowest on Stage 6 (1.92%, N = 1). The respondents with 6 to 10 years of teaching English experience gained the highest on Stage 4 (9.62%, N = 5), gained second highest on Stage 1 (7.69%, N = 4), followed by Stage 3 (3.85%, N = 2) and gained the lowest on Stage 5 & 6 (1.92%, N = 1). The individuals with 11 to 15 years of teaching English experience got the highest on Stage 1 & 4 (5.77%, N = 3), followed by Stage 2 (3.85%, N = 2) and got the lowest on Stage 5 & 6 (1.92%, N = 1). The individuals who have taught for over 15 years scored the highest on Stages 4 & 6 (3.85%, N = 2) and the lowest on Stages 0, 1 & 5 (1.92%, N = 1).

The first ANOVA (Table 4.3) was conducted using raw stage scores and showed a statistically significant difference between the respondents' stages of concern and their years of teaching English experience at Stage 0 ($F = 3.943$, $p = .014 < 5\%$). The effect size = 0.04 showed that the difference between the respondents' concern stage and their years of teaching experience was moderate. The rest of the stages were not statistically significant because their p-values > 5%. This meant there was not any relationship between the respondents' teaching English experience and Stages 1, 2, 3, 4, 5, and 6.

Table 4.3. Relative Intensity of teachers' stages of concern by years of teaching experience

		Sum of Squares	df	Mean Square	F	Sig.
Stage 0	Between Groups	128.071	3	42.690	3.943	.014
	Within Groups	519.679	48	10.827		
	Total	647.750	51			
Stage 1	Between Groups	14.850	3	4.950	.317	.813
	Within Groups	749.977	48	15.625		
	Total	764.827	51			
Stage 2	Between Groups	44.275	3	14.758	1.292	.288
	Within Groups	548.398	48	11.425		
	Total	592.673	51			
Stage 3	Between Groups	33.413	3	11.138	1.059	.375
	Within Groups	504.895	48	10.519		
	Total	538.308	51			
Stage 4	Between Groups	14.064	3	4.688	.403	.752
	Within Groups	559.013	48	11.646		
	Total	573.077	51			
Stage 5	Between Groups	21.984	3	7.328	.701	.556
	Within Groups	501.709	48	10.452		
	Total	523.692	51			
Stage 6	Between Groups	32.113	3	10.704	1.096	.360
	Within Groups	468.656	48	9.764		
	Total	500.769	51			

Figure 4.3 indicated that the most intense stage among respondents having below one year of IWB using experience was Stage 2 (7.69%, N = 4); the second and the third most dominant concern stage were Stage 4 (5.77%, N = 3) and Stage 5 (3.85%, N = 2) and the least prominent stage was Stage 0, 2, 3 & 6 (1.92%, N = 1). The respondents with 1 to 2 years of IWB using experience got the highest on Stage 4 (15.38%, N = 8), got second highest on Stage 1, 2 & 5 (5.77%, N = 3), followed by Stage 6 (3.85%, N = 2) and got the lowest on Stage 0 & 3 (1.92%, N = 1). The most dominant concern stage among individuals having 3 to 4 years of IWB using experience was Stage 4 & 5 (3.85%, N = 2), and scored the lowest on Stage 0, 1, 2 & 6 (1.92%, N = 1). The individuals who have used IWBs for over 4 years scored the highest on Stage 1 (7.69%, N = 4), scored second highest on Stage 4 (5.77%, N = 3), followed by Stage 3 (3.85%, N = 2) and scored the lowest on Stage 6 (1.92%, N = 1).

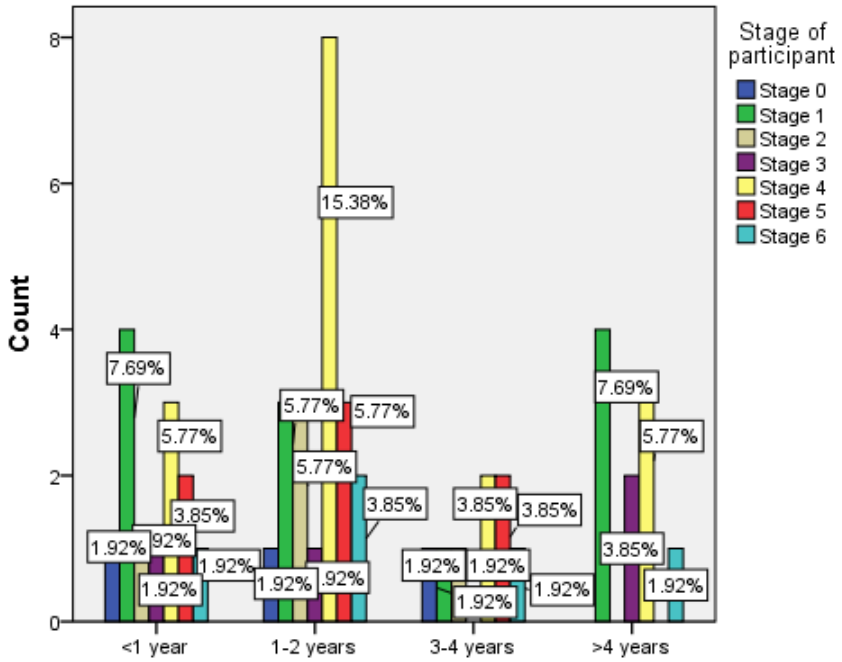

Figure 4.3. The percentages of stages of concern by years of IWB using experience

The second ANOVA (Table 4.4) was conducted to find out there existed a statistically significant difference between the respondents' stages of concern and their years of experience using IWBs. As shown in Table 4.4, all p-values > 5%, this meant there was not any statistically significant difference between the respondents' stages of concern and their years of experience using IWBs. In other words, there was no relationship between the respondents' IWB experience and their concern stages.

Table 4.4. Relative Intensity of teachers' stages of concern & their using IWB experience

		Sum of Squares	df	Mean Square	F	Sig.
Stage 0	Between Groups	42.517	3	14.172	1.124	.349
	Within Groups	605.233	48	12.609		
	Total	647.750	51			
Stage 1	Between Groups	111.825	3	37.275	2.740	.053
	Within Groups	653.002	48	13.604		
	Total	764.827	51			
Stage 2	Between Groups	11.527	3	3.842	.317	.813
	Within Groups	581.146	48	12.107		
	Total	592.673	51			
Stage 3	Between Groups	46.478	3	15.493	1.512	.223
	Within Groups	491.830	48	10.246		
	Total	538.308	51			
Stage 4	Between Groups	12.919	3	4.306	.369	.776
	Within Groups	560.158	48	11.670		
	Total	573.077	51			
Stage 5	Between Groups	15.054	3	5.018	.474	.702
	Within Groups	508.639	48	10.597		
	Total	523.692	51			
Stage 6	Between Groups	23.074	3	7.691	.773	.515
	Within Groups	477.695	48	9.952		
	Total	500.769	51			

Table 4.5 shows a specific description of teachers' expectations in terms of percentages. The percentages revealed the positive responses. Two items that received the highest percentage of agreement were "I hope there are more available resources and lesson plans on IWBs in my school" and "I hope my instruction will be more interesting when using IWBs" (86.6%). 80.8% of respondents hoped that there would be more IWBs equipped in their schools, and the same percentage of respondents hoped to use IWBs more frequently to improve their teaching process (80.8%). Most teachers agreed to share teaching materials with their colleagues (78.9%) and needed sufficient training to use IWBs (75%). However, 34.7% of them wanted to use another device that they knew better than IWB in the teaching process, and only 5.7% of respondents did not want to use IWB in teaching English.

Table 4. 5. Teachers' expectations of using IWBs

Statements on expectations of IWB use	**Response in %**				
	SD	**D**	**U**	**A**	**SA**
I hope there are more IWBs equipped in my school.	1.9	5.8	11.5	38.5	42.3
I need more sufficient training to use IWBs.	0.0	7.7	17.3	51.9	23.1
I hope to use IWBs more frequently to help me improve my teaching skills.	1.9	1.9	15.4	48.1	32.7
I hope there are more available resources and lesson plans on IWBs in my school.	1.9	3.8	7.7	**55.8**	**30.8**
I hope to share teaching materials with my colleagues.	3.8	5.8	11.5	57.7	21.2
I hope my instruction to be more interesting when using IWBs.	0.0	3.8	9.6	**65.4**	**21.2**
I want to use another device which I know better than IWB.	1.9	26.9	36.5	21.2	13.5
I do not want to use IWBs in teaching.	34.6	46.2	13.5	3.8	1.9
SA: Strongly Agree; **A**: Agree; **U**: Unknown; **D**: Disagree; **SD**: Strongly Disagree					

4.3. Discussion

The results revealed that Stage 4 – Consequence (30.8%) was the most dominant concern stage in using IWBs. This stage signified that the respondents were primarily concerned about the consequences of using IWB, specifically the impact it would have on their students (George et al., 2006). Followed by Stage 1 (23.1%), the high Stage 1 score explored a lack of understanding about IWBs. The respondents with high scores at Stage 1 wanted more "fundamental information about what the innovation is, what it

will do, and what its use will involve" (George et al., 2006, p.33). Following Stage 1, Stage 5 received the third-highest score (13.5%). At this stage, the respondents focused on coordinating and cooperating with others to utilize IWBs effectively. The relatively low Stage 2 score showed that the respondents were not particularly concerned regarding status, rewards, or the personal impact of using IWBs. Similarly, the Stage 6 scores were also relatively low, indicating that respondents were not currently concerned about refocusing their use of IWBs. However, the lowest score in Stage 0 (Unconcerned) indicated that only a few respondents expressed their disinterest or lack of involvement in using IWBs.

These results reflected the reality of the research context, as almost all the respondents have been using IWBs for at least one year in teaching English. Because more than half of the respondents (53.9%) had the highest stage in Stages 4, 5, or 6, this might reflect a positive concern when they collaborated and worked with others in using IWBs. It also showed the interest of teachers about the consequences of IWB for students. The results were due to the fact that most of the teachers in the survey were encouraged (or required) to use IWB regularly, and they were also trained to improve IWB use frequently. These results contradicted Alias and Zainuddin (2005) and McGurn (2014) as they reported the respondents of their studies had a prominent stage of concern at "Self-Stage" (Stages 0, 1, and 2).

Based on years of teaching experience, the results revealed that Stage 4 was the most dominant stage for teachers who had 1 to 5 years of teaching experience (11.5%), 6 to 10 years of teaching experience (9.6%), 11 to 15 years of teaching experiences (5.7%, the same level as Stage 1) and for teachers who had over 15 years of teaching experiences (3.8%, the same level as Stage 6). However, based on ANOVA tests, there was no relationship between respondents' stages of concern and their years of teaching English experience.

The results on years of using IWB experience also revealed similar results. Stage 4 was also the most prominent stage for teachers who had 1 to 2 years of using IWB experiences (15.4%) and 3 to 4 years of using IWB experiences (3.8%, the same level as Stage 5). However, little different results were found for teachers who had less than one year of using IWB and who had over 4 years of using IWB experiences because Stage 2 (7.7%) was recognized as the most dominant stage of concern of IWB use. ANOVA tests also indicated there was no relationship between respondents' stages of concern and their years of using IWB experience. These results suggested that there might be other factors influencing the respondents' stages of concern that have not been researched in the current study. The results were consistent with the study of McGurn (2014) study, as she also reported there was not any statistically significant difference in stages of concern by years of teaching experience.
The findings revealed that the respondents of the study had positive expectations of using IWBs. The respondents expected that there would be more IWBs equipped and more available teaching materials on IWBs at their schools. They also expected to use IWBs more frequently in order to make their instructions more interesting. Most respondents agreed to share teaching aids using IWBs with their workmates, and they also needed more training. However, there were some respondents who would like to use other devices they knew better than IWBs; even a few respondents did not like to use IWBs. In general, the respondents of the study had a positive expectation of using IWBs in teaching English because the IWB is a tool that makes the teaching process easier and more interesting for teachers and their students. The results were similar to Dang, H. T. and Nguyen, T. H. N. (2014), as they reported that most respondents expected that ITC should be used more often for the teaching and learning process.

5. Conclusion

The purpose of this study was to explore stages of concern that teachers have about using IWBs when teaching English and how those concerns differed by their teaching experience and their using IWB experience. The study was also an opportunity for teachers to raise their expectations of using IWBs in teaching and learning English process. The review of the literature was carried out to clarify the terms of IWB, Stages of Concern, and Concerns-Based Adoption Model hypothesis. Examination of the literature provided the foundation for the investigation of topics and studies related to the context of this study. The analysis of the results indicated that the teachers in the study belonged to differing stages of concern about using IWBs. As discussed earlier, the respondents' years of teaching English experience would predict their concern stage 0 moderately; however, there was no relationship between their years of teaching experience and the rest of the stages. There was also no relationship between the respondents' concerns and their years of using IWB experience. The teachers also gave some positive expectations of using IWB to teach English at DNTU.

From the results of the study, the researcher would like to give some suggestions for using IWBs to teach English in the EFL context. "Increasing teachers' knowledge and skills about e-learning will make them more interested in using the new technologies" (Zamani et al., 2011, p. 23). Therefore, teachers should be supplied with IWB knowledge through training workshops so that they can use IWBs to teach English effectively. ICT ought to be included in the pre-service and in-service teachers' training programs. The workshops should not be destined only for teachers but should include supervisors and administrators. This will help the administrators to support their teachers better. Schools might equip more IWBs to support teachers and students in effectively

integrating IWBs into the teaching and learning process. To save time to compose lesson plans and assemble more appropriate teaching materials, a support team should be set up at each school. Each member of the team can provide feedback and share information or materials on IWBs together, as well as any other assistance that they may need.

The study identified several areas that would benefit from further research. Firstly, an in-depth exploration of teacher stages of concern should be conducted using a larger sample size and incorporating additional factors that can predict the stage of concern. Subsequent research should investigate the relationships between stages of concern and various factors, such as teacher qualifications, training time, and length of time or frequency of using IWB to teach English. To better understand the extent to which teachers are adopting or "using" the change, future research could also utilize the Levels of Use (LOU) dimension of the CBAM framework. Additionally, conducting a qualitative study to gather more information about IWB use or to explore the administrators' attitudes regarding IWB use is recommended to expand and enhance the present study.

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