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Shifting attitudes towards native speaker and local English teachers: An elaborative replication

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Abstract

Students' attitudes towards native English speaking teachers (NESTs) and local English teachers has been a fertile area of research for many years, but the commonly used surveys focusing on students' explicit attitudes have been criticised because of the influence of prejudice. An alternative is to use social psychology instruments such as the Implicit Association Test (IAT) to investigate both explicit and implicit attitudes as in Watson Todd and Pojanapunya (2009). This article is a direct replication of Watson Todd and Pojanapunya (2009), but, because the sociolinguistic context in Thailand has changed with greater use of English as a lingua franca (ELF) since the original study,

we aim to look for differences between the findings of the original study and those of the current study rather than confirm the original, a process we term elaborative replication. Using an IAT with 439 Thai university students, the results show that, in contrast to our expectations, students' implicit and explicit attitudes towards NESTs have become more positive in the ten years since the original study, a finding that casts doubt on the wider social impact of the ELF movement.

Keywords

student attitudes, native English speaking teachers, local English teachers, implicit attitudes, Thailand, elaborative replication

'The outer conditions of a person's life will always be found to reflect their inner beliefs'
(James Allen, *As a Man Thinketh*)

Within the field of language teaching, a fertile area of research into beliefs has been investigations of students' attitudes and beliefs towards native and non-native teachers. Much of the early work in the area used questionnaires to elicit students' beliefs about the two types of teachers (e.g. Lasagabaster and Sierra, 2005). More recently, researchers have used more nuanced instruments to elicit different types of attitudes (e.g. Aslan and Thompson, 2017). With a few exceptions (e.g. Moussu, 2006, 2012; Wilkinson, 2016), these studies have provided snapshots of student beliefs at a specific point in time and so have not examined how changes in 'the outer conditions' might influence the 'inner beliefs'. In this paper, we intend to replicate one of the earliest studies to investigate both implicit and explicit attitudes (Watson Todd and Pojanapunya, 2009) with the intention of examining whether changes to the sociolinguistic context have had an impact on attitudes towards the two types of teachers.

1 Native English speaking teachers and local English teachers

Since the publication of Medgyes' (1994) *The Non-Native Teacher*, comparisons of native and non-native speaker English teachers have been a common research focus in language teaching. Before we examine this research, we will briefly discuss the terminology we will use. Both the concept and the term *native speaker* have been the subject of much discussion and criticism with Dewaele (2018) proposing that the term should be replaced. While we are sympathetic to such arguments, in referring to types of teachers, native English speaking teachers (or NESTs) is so widely used and accepted that replacing NEST with, say, L1EST seems abstruse. For non-native speaking English teachers, on the other hand, we sympathise with the view that the term implies a deficit, and so, following Copland, Garton and Mann (2016), we will use local English teachers (LETs) since we are investigating Thai teachers of English in Thailand. In comparing NESTs and LETs, we acknowledge

that we are treating types of teachers as a simple dichotomy when the reality is more complex (Andrews, 2007).

The research comparing NESTs and LETs has focused on a variety of issues, such as employment conditions, self-image, perceived advantages and disadvantages, and students' attitudes. In this paper, we will focus on students' attitudes. Attitudes towards types of teachers are a problematic area to investigate since results obtained from traditional self-report instruments such as questionnaires and interviews 'may have reflected public opinion, shared group beliefs, or prejudiced beliefs toward NESTs or NNESTs' (Uzum, 2018). To obtain potentially more valid results, Watson Todd and Pojanapunya (2009) used a tool from social psychology specifically designed to investigate social attitudes where prejudice may play a role, the Implicit Association Test or IAT (Greenwald, McGhee and Schwarz, 1998). The IAT is a computer-based instrument that collects two types of data. First, explicit attitudes, or directly stated preferences or feelings, are collected through a traditional rating-scale questionnaire. Second, implicit attitudes, such as prejudices which the holder may not be explicitly aware of, are collected through response latencies in completing a classification task matching contrasting pairs of concepts and attributes. In Watson Todd and Pojanapunya (2009), the classification task involved matching positive and negative adjectives describing teacher attributes with typical names of native speakers and Thais (prefixed by the Thai honorific *ajarn* for a teacher).

Figure 1 illustrates how the IAT works. Subjects are presented with a sequence of stimuli (NEST names, LET names, positive attributes of teachers, negative attributes of teachers), and are required to categorise these stimuli into the appropriate pair of categories in the top corners as quickly as possible. If a subject has a positive implicit attitude to NESTs, their response latencies in the categorisation task should be lower for Block 4 (where NESTs and positive are a pair) than for Block 7 (where NEST and positive are in different pairs). By collecting reaction times as data, the IAT elicits implicit attitudes.

[FIGURE 1 NEAR HERE]

The results of the original study showed that Thai university students explicitly rated NESTs as preferable to LETs, but had no implicit preference. In addition, a further thermometer rating scale of feelings of warmth towards the two types of teachers showed a preference for LETs. Watson Todd and Pojanapunya (2009) has been cited over 100 times according to Google Scholar and we are not aware of any criticisms of the research methodology, meaning the study fits the criteria of Porte (2012) as a valid target for research replication.

There are two key weaknesses in the research oeuvre into attitudes towards NESTs and LETs. First, most studies investigate what students' attitudes are without attempting to find out why those attitudes are held. Second, little attention has been paid to how attitudes might change over time. Where attitude change has been a concern, the timeframe for change has been limited to one semester (Moussu, 2006, 2012). To address these weaknesses, we intend to conduct a direct replication of Watson Todd and Pojanapunya (2009). This will allow us to directly compare the results of the original study with those from the replication study to see if changes in the sociolinguistic context over the past ten years have led to changes in attitudes.

2 Changes in the Thai sociolinguistic context

Watson Todd and Pojanapunya (2009) investigated Thai university students' explicit and implicit attitudes towards NESTs and LETs, so we need to examine changes in the Thai sociolinguistic context over the last ten years. Although there are at least 62 languages spoken in Thailand, the linguistic landscape is dominated by central Thai with English the dominant foreign language. Historically, English in Thailand was associated with native speakers, and the national education curriculum for secondary schools still states that one purpose of studying English is to understand native speaker culture (Choomthong, 2014). However, two socioeconomic developments in the last ten years have reduced the importance of native speaker English in Thailand. These developments have coincided with the growth in promotion of English as a lingua franca in academic circles.

The first development is the massive growth in tourism, both in tourist numbers and in contributions to GDP, over the last ten years. From 2009 to 2018, there was a 177% increase in tourist numbers with income from tourism now roughly equivalent to 20% of GDP (all data are from the Thai Ministry of Tourism and Sports). For our purposes, it is a shift in the origins of tourists that is of relevance. In 2009, 14.1% of tourists came from core native English speaking countries. By 2018, although there had been a 39% increase in the number of such tourists, they only made up 7.8% of tourist numbers. In contrast, tourists from Asian countries increased by 220% in the same time period. This means that in a large sector of the Thai economy where English is important, the amount of English used with native speakers is a small proportion of overall use.

The second development is the implementation of the ASEAN Economic Community (AEC). The Association of South East Asian Nations is an organisation of ten countries with English as the official working language. At the beginning of 2016, the AEC came into effect facilitating labour mobility between countries, so that 'skillful laborers will increasingly work with a variety of laborers from ASEAN nations who are not native speakers' (Crocco and Bunwirat, 2014, p. 25). With English the most likely lingua franca in such contexts, countries such as Thailand which rank poorly on international comparisons of English proficiency (Watson Todd, 2015) initiated policies to promote English, especially in education. As society generally perceived English to be of growing importance, what English to teach came under scrutiny. Given that much communication under the AEC would be between English-as-L2 users, proposals were made to shift the model of English to be taught from native speaker standards to international standards (e.g. Dudzik and Nguyen, 2015).

Reflecting such shifts in patterns of use of English, in academia the concept of English as a lingua franca (ELF) has risen to prominence in the last ten years. For our purposes, the most relevant arguments in the ELF discourse concern 'implications for the type of teacher who might be most suitable' (Kirkpatrick, 2012, p. 132). In an ELF approach, native speakers hold no special position and 'local multilinguals who are suitably trained provide the most appropriate English language teachers' (Kirkpatrick, 2014, p. 21). These changes in the sociolinguistic context suggest that we might expect the explicit preference for NESTs found in Watson Todd and Pojanapunya (2009) to have weakened somewhat if we were to replicate the study.

3 Elaborative replication

The purpose of this study, then, is to replicate Watson Todd and Pojanapunya (2009) to see if changes in the sociolinguistic context have influenced attitudes towards NESTs and LETs in Thailand. In doing this, we intend to conduct a direct replication which involves reproducing a previous study 'with a new but comparable sample of participants' (Westfall, Judd and Kenny, 2015,

p. 390). We will therefore use the same instrument and the same data analysis procedures with a group of subjects drawn from the same population as the original study.

Although we are conducting a direct replication, our purposes differ from those traditionally associated with replication studies. Replications typically aim to ‘to confirm that a particular experimental procedure can reliably produce a particular empirical result’ (Westfall et al., 2015, p. 391). This study, however, attempts to see if there have been changes in the findings. In doing this, our purposes are similar to those of Fitzsimmons-Doolan (2018) who replicated a survey concerning Arizona’s medium of instruction policy six years after the original study to see if public perceptions had changed.

To understand why we consider the current study a replication study, we would like to draw parallels between replication research and triangulation. While the use of the term *triangulation* is usually reserved for taking multiple perspectives within a single study, replication research could be viewed as inter-study triangulation. Traditional definitions of triangulation, like definitions of replication research, have focused on the purpose of confirming findings (e.g. Seliger and Shohamy, 1989; Slavin, 1992). More recently, however, the confirmatory use of triangulation has been seen as just one of five possible uses of the procedure (Erzberger and Prein, 1997; Watson Todd, 2016). In addition to the confirmatory use, termed corroboration, the other purposes are elaboration (where the focus is to highlight different facets of a phenomenon), development (where one method sequentially informs another method), initiation (where the goal is to problematise the underlying framework or theory), and validation (where the goal is to identify the most valid data source). In focusing on changes in attitudes, we are concerned with differences between the original study and the replication study serving the purposes of elaboration. We will therefore term this study an elaborative replication study.

4 Research questions

In conducting a direct replication of Watson Todd and Pojanapunya (2009), we intend to answer the same research questions as the original study:

1. What are Thai university students’ explicit attitudes towards NESTs and LETs?
2. What are Thai university students’ implicit attitudes towards NESTs and LETs?
3. Is there a relationship between explicit and implicit attitudes towards NESTs and LETs?
4. Is there a relationship between previous learning experience with NESTs and attitudes towards NESTs and LETs?

In conducting an elaborative replication, we need one additional research question focusing on the differences from the original study:

5. How do the findings differ from the findings of Watson Todd and Pojanapunya (2009)?

5 Methodology

Since we are conducting a direct replication of Watson Todd and Pojanapunya (2009), in this section we will provide an overview of the research methodology. Full details of the instrument used (such as the examples of the concepts and attributes tested, and the sequence of blocks used in the IAT) can be found in the original article.

5.1 Subjects

The only aspect of the original research methodology that we are not replicating exactly is the subjects. In the original study, 295 students from King Mongkut's University of Technology Thonburi, a respected Thai university, completed the questionnaire and IAT, with 261 students fulfilling all criteria to be included as subjects. In the current study, 506 students from the same institution selected on the same criteria completed the questionnaire and IAT. Of these, the data from 439 students was usable. In both studies, the subjects comprised intact classes of undergraduate students studying English courses in the first three semesters of their degrees. In both cases, most of these students were at B1 CEFR level, were aged between 18 and 20, and were studying in the Faculty of Engineering. The data in the current study was collected in early 2019, three years after the AEC had been implemented. By using the same criteria to select subjects from similar populations which only differ in time, we believe that the two sets of subjects are directly comparable.

5.2 The instrument

Exactly the same instrument was used in the current study as in the original. The instrument consists of a questionnaire and an IAT. First, the subjects were asked whether they had previous learning experience with NESTs (for these students, it is reasonable to assume that all had learnt with LETs previously). Even though it might have been useful to ask about the extent of their experience with NESTs, this item was kept as a binary question to replicate the original instrument. Second, the subjects' explicit preferences for learning with NESTs and LETs were elicited using rating scales (points 2-4 in Table 1). Third, the subjects' feelings of warmth towards NESTs and LETs were elicited using thermometer rating scales (points 5 and 6 in Table 1). For these questions, as the questionnaire is in Thai, the socially prevalent terms for NESTs (อาจารย์เจ้าของภาษา, literally 'teacher who is the owner of the language') and LETs (อาจารย์ชาวไทย, literally 'teacher who is a Thai person') were used. The IAT eliciting implicit attitudes follows standard procedures to increase reliability with results from two of the seven blocks in the test included as data for analysis (points 7-10 in Table 1). The instrument (in Thai) is available at <http://sola.app.kmutt.ac.th:7878>. Table 1 shows the full details of the categories of data used in both the original article and this study.

[TABLE 1 NEAR HERE]

5.3 Data analysis

The same data analysis procedures as in the original article were used. Means and standard deviations were calculated for data sources 2 to 10 (answering research questions 1 and 2). To identify possible change over time (answering research question 5), the means from these sources from the original study and the current study were compared using T-tests (with a significance level of 0.01) and Cohen's D, an effect size statistic showing the size of any change in students' attitudes over the last ten years. Following Greenwald, Nosek, and Banaji (2003), the interpretations of Cohen's D are: less than 0.15, no difference; 0.15 to 0.34, slight difference; 0.35 to 0.64, moderate difference; 0.65 and above, large difference. For research question 3, T-tests were also conducted between certain pairs of data sources (3 and 4, 5 and 6, 7 and 8, 2 and 10) to see whether the results from the different data sources were related to each other (for both studies). Finally, to answer research questions 3 and 4, correlations were calculated between all pairs of data sources (using point biserial correlation for comparisons with data source 1, one-tailed tests for comparisons within

groups of data sources, and two-tailed tests for other correlations). Given the number of correlation comparisons made, a significance level of 0.001 was used to avoid Type I errors.

6 Results

For all findings, we will present the results from Watson Todd and Pojanapunya (2009) and the current study in parallel to highlight how students' attitudes have changed over the last ten years, the purpose of this elaborative replication.

Table 2 presents the descriptive statistics for the ten data sources in each study together with probability and effect size statistics for differences between the results from the two studies. For the explicit attitudes, we can see that the preference for NESTs over LETs has become slightly stronger in the last ten years, while the warmth of feelings towards NESTs and that towards LETs have become very similar. There appear to be no real changes in implicit attitudes.

[TABLE 2 NEAR HERE]

To confirm the patterns identified from Table 2, several T-tests were conducted between pairs of data sources, and the results are shown in Table 3.

[TABLE 3 NEAR HERE]

From Table 3, we can see that the previous explicit preference for NESTs has remained unchanged, the previous warmer feelings towards LETs have now become neutral, and the previous lack of any implicit preference has now become a weak implicit preference for NESTs. Overall, it appears that there has been a shift in attitudes of all types in favour of NESTs.

To see whether the various data sources are related to each other, correlations between each pair of data sources were calculated. These are given in Table 4. Notable changes in the correlations from the original study to the current study are:

- Experience with NESTs, which in 2009 was correlated with warmer feelings towards NESTs, in 2019 has no relationship with any other data source.
- Previously unidentified relationships between feelings and preferences have now emerged with cooler feelings towards LETs correlated with preferences towards NESTs, and warmer feeling towards NESTs correlated with reduced preferences towards LETs.

[TABLE 4 NEAR HERE]

The key findings answering the first four research questions are summarised in Table 5 which shows that, to answer research Question 5, attitudes towards NESTs of all types have become more positive in the ten years between Watson Todd and Pojanapunya (2009) and this elaborative replication study - the explicit preference for NESTs is stronger, feelings towards NESTs have become warmer, and there is now a weak implicit preference for NESTs.

[TABLE 5 NEAR HERE]

7 Discussion

The results show that, between 2009 and 2019, students' implicit and explicit attitudes and their feelings towards NESTs have become more positive leading to a stronger preference for NESTs

over LETs. This key finding stands in direct contrast to our expectation that the explicit preference for NESTs shown in Watson Todd and Pojanapunya (2009) would have weakened given the changes in the Thai sociolinguistic context.

Before we look at possible explanations for this unexpected finding, we must first acknowledge a weakness in the research. Both the original study and the replication set up types of teachers as a dichotomy of NESTs or LETs. This approach ignores the large number of English-as-an-L2 non-local English teachers employed in Thailand, most notably Filipinos who are exemplars of the ASEAN English expected under the AEC (Hickey, 2018). It is not clear, however, whether including such teachers as the objects of the research would affect students' ratings of NESTs and LETs.

One possible explanation for the findings is that NESTs have become more common and are now nearly ubiquitous as shown by that fact that in 2019 over 95% of students have previously studied with NESTs (this may also explain why in 2019 there is no relationship between experience and attitudes since so few students have had no experience). The greater exposure to NESTs may generate a stereotype of English in Thailand being taught by NESTs, even though there are far more LETs than NESTs in Thailand. Such a false stereotype may be generated through illusory correlation (Mullen and Johnson, 1990) which is founded on two constructs, distinctiveness and availability. Stereotypes generally include distinctive features, and English can be distinguished from other academic subjects by the fact that teachers are sometimes foreign (i.e. NESTs). The distinctive features of stereotypes must also be available, and the increased exposure to NESTs in 2019 implies that NESTs are available to be included in the students' stereotypes of English teachers. Having a stereotype that English is taught by NESTs would make NESTs the default teachers which may be linked to the stronger preference for NESTs.

A second possible reason is that, although the implementation of the AEC was linked to the need for improved English, the social discourse around the AEC focused purely on improved English, not on who English would be used with. A clear illustration of this can be seen in an analysis of brochures advertising private language schools (Kanchanapoomi, 2015). The majority of the brochures advertised the upcoming AEC as a reason to study English, but also advertised the school as employing NESTs. In one brochure, for example, the key slogan (in Thai) was 'Are you ready to step up for the AEC?', and the main reason for choosing the school was 'We have foreign native speaker teachers'. In the pictures in the brochures, all of the teachers (and even some of the students) are Caucasian. The realisation of an increased need for English appears to lead to a reinforcement of the false stereotype of NESTs as ideal English teachers and ignores the need for ELF.

For ELF advocates, such a situation is worrying. Although ELF has risen to a position of some prominence in academic discourse with numerous books and a major journal devoted to the topic, the impact of ELF on wider social discourse concerning English language teaching appears minimal. In social discourse in Thailand, the native speaker model of English and NESTs as ideal teachers still dominate. ELF advocates need to consider ways of addressing broader society, rather than restricting themselves to an academic audience.

Methodologically, we believe that conducting elaborative direct replications allows new insights to be gained. This study is unusual in that it is not a direct replication aiming to confirm previous findings. Exact replication for confirmation is the norm in the physical sciences since these fields assume that an objective reality exists. Replicating a study should therefore produce the same results if the original study is not flawed. In the social sciences, however, the existence of an unchanging objective reality is debatable, so that even a direct replication of a well-designed study

may not produce the same results. In direct replications where the wider social context has changed, we should not expect the same results and thus focusing on the differences as in elaborative replications can provide greater insights than attempting to confirm previous results. In this study, focusing on the differences has led to unexpected findings where ‘the outer conditions of a person’s life’ do not ‘reflect their inner beliefs’.

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Table 1 Categories of data

<i>Category of data</i>	<i>Data source</i>	<i>Data format</i>	<i>Purpose</i>
<i>Experience</i>			
1. Experience with NESTs	Question 1 of the questionnaire	Yes/No question	To elicit previous experience with NESTs
<i>Explicit attitudes</i>			
2. Preference for NESTs/LETs	Question 2 of the questionnaire	7-point rating scale where 1 = greatly prefer LETs and 7 = greatly prefer NESTs	To directly compare explicit attitudes towards NESTs and LETs
3. Preference for NESTs	Question 3 of the questionnaire	7-point rating scale for agreement with the statement 'I want to learn English with a native speaker teacher more than with a Thai teacher' where 1 = strongly disagree and 7 = strongly agree	To elicit explicit attitudes towards NESTs
4. Preference for LETs	Question 4 of the questionnaire	7-point rating scale for agreement with the statement 'I want to learn English with a Thai teacher more than with a native speaker teacher' where 1 = strongly disagree and 7 = strongly agree	To elicit explicit attitudes towards LETs
5. Feelings towards NESTs	Question 5 of the questionnaire	Thermometer rating scale of feelings towards NESTs where 0 = very cold and 10 = very warm feelings	To elicit explicit feelings towards NESTs
6. Feelings towards LETs	Question 6 of the questionnaire	Thermometer rating scale of feelings towards LETs where 0 = very cold and 10 = very warm feelings	To elicit explicit feelings towards LETs
<i>Implicit attitudes</i>			
7. Implicit attitudes 1	Response latencies from Block 4 of the IAT	Response times in milliseconds	To elicit implicit attitudes with quicker responses suggesting an implicit preference for NESTs ³
8. Implicit attitudes 2	Response latencies from Block 7 of the IAT	Response times in milliseconds	To elicit implicit attitudes with quicker responses suggesting an implicit preference for LETs ³
9. IAT effect	Mean response latency in Block 7 minus mean response latency in Block 4	Difference in response times in milliseconds	To compare implicit attitudes with positive figures for the IAT effect showing a preference for NESTs, and negative figures showing a preference for LETs
10. IAT interpretation	IAT effect divided by average response time	7-point scale where 1 = strongly prefer LETs and 7 = strongly prefer NESTs	To compare implicit attitudes on a 7-point scale

Table 2 Descriptive statistics for the data sources and comparisons between the studies

	<i>In 2009</i>		<i>In 2019</i>		<i>T-test</i>		<i>Effect size</i>	
<i>Data source</i>								
<i>Experience</i>	f (N=261)	%	f (N=439)	%				
1 Students with experience of NESTs	200	76.6	420	95.7				
	Mean	SD	Mean	SD	t	p	Cohen's D	Interpretation
<i>Explicit attitudes</i>								
2 Preference for NESTs/LETs	4.69	1.53	4.76	1.57	-.601	n. s.	0.045	-
3 Preference for NESTs	5.27	1.08	5.44	1.15	-1.987	n. s.	0.152	Slight increase
4 Preference for LETs	4.50	1.16	4.31	1.11	2.177	n. s.	-0.167	Slight decrease
5 Feelings towards NESTs	6.04	1.93	6.68	2.09	-4.129	$p < 0.001$	0.318	Slight increase
6 Feelings towards LETs	7.31	1.94	6.57	2.10	4.696	$p < 0.001$	-0.366	Moderate decrease
<i>Implicit attitudes</i>								
7 Implicit attitudes 1	1095.89	201.04	1095.59	229.56	.018	n. s.	-0.001	-
8 Implicit attitudes 2	1108.69	203.63	1131.66	242.25	-1.343	n. s.	0.103	-
9 IAT effect	12.80	185.79	36.06	246.00	-1.416	n. s.	0.107	-
10 IAT interpretation	4.13	1.52	4.23	1.46	-.828	n. s.	0.067	-

Table 3 T-tests comparing data sets

		<i>In 2009</i>				<i>In 2019</i>			
<i>Data source</i>	<i>Data source</i>	<i>t</i>	<i>p</i>	<i>Cohen's D</i>	Interpretation	<i>t</i>	<i>p</i>	<i>Cohen's D</i>	Interpretation
3 Preference for NESTs	4 Preference for LETs	7.636	$p < 0.01$	0.687	Large difference	13.699	$p < 0.01$	0.997	Large difference
5 Feelings towards NESTs	6 Feelings towards LETs	-8.295	$p < 0.01$	0.655	Large difference	.774	n. s.	0.053	No difference
7 Implicit attitudes 1	8 Implicit attitudes 2	-1.113	n. s.	0.063	No difference	-3.072	$p < 0.01$	0.106	No difference
2 Preference for NESTs/LETs	10 IAT interpretation	4.063	$p < 0.01$	0.367	Slight difference	5.647	$p < 0.01$	0.356	Slight difference

Table 4 Correlation between data sources

<i>Data source</i>		1	2	3	4	5	6	7	8	9
1. Experience with NESTs	In 2009	1								
	In 2019	1								
2. Preference for NESTs/LETs	In 2009	.123	1							
	In 2019	.032	1							
3. Preference for NESTs	In 2009	.013	.539*	1						
	In 2019	.072	.546*	1						
4. Preference for LETs	In 2009	.036	-.328*	-.057	1					
	In 2019	-.072	-.388*	-.176*	1					
5. Feelings towards NESTs	In 2009	.199*	.296*	.281*	-.062	1				
	In 2019	.016	.280*	.260*	-.175*	1				
6. Feelings towards LETs	In 2009	.018	-.112	.016	.168	.183	1			
	In 2019	.031	-.230*	-.187*	.196*	.046	1			
7. Implicit attitudes 1	In 2009	.058	.026	-.047	-.101	.029	-.051	1		
	In 2019	.018	-.083	.010	.079	-.120	.015	1		
8. Implicit attitudes 2	In 2009	-.010	.006	.008	-.029	.034	-.126	.579*	1	
	In 2019	-.010	.016	.112	-.017	-.003	-.039	.457*	1	
9. IAT effect	In 2009	-.073	-.021	.059	.077	.006	-.083	-.448*	.470*	1
	In 2019	-.026	-.093	.102	-.090	.109	-.052	-.483*	.558*	1
10. IAT interpretation	In 2009	-.103	-.064	-.007	.075	-.053	-.086	-.318*	.399*	.782*

In 2019	.010	.090	.076	-.125	.091	-.031	-.467*	.490*	.918*
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* Correlation is significant at $p < 0.001$

Table 5 Summary of findings of the two studies

<i>Research question</i>	<i>Findings in 2009</i>	<i>Findings in 2019</i>
RQ1 Explicit attitudes		
Explicit preferences	Strong explicit preference for NESTs	Very strong explicit preference for NESTs
Feelings	Warmer feelings towards LETs	No difference between feelings for NESTs and LETs
RQ2 Implicit attitudes		
	No difference in implicit attitudes towards NESTs and LETs	Weak implicit preference for NESTs
RQ3 Relationship between explicit and implicit attitudes		
	Large contrasting differences between explicit attitudes, implicit attitudes and feelings	Smaller differences between explicit attitudes, implicit attitudes and feelings with all attitudes more positive towards NESTs
RQ4 Relationship between experience with NESTs and attitudes		
	Experience with NESTs related to warmer feelings towards NESTs	No relationship between experience with NESTs and attitudes

Figure 1 Stages in the IAT

IAT [Block 4]

Press "E" for		Press "I" for
Native English Speaking Teacher		Thai Teachers of English
or		or
Positive	Ajarn Michael	Negative
If you make a mistake, a red X will appear. Press the other key to continue.		

IAT [Block 7]

Press "E" for		Press "I" for
Native English Speaking Teacher		Thai Teachers of English
or		or
Negative	creative	Positive
If you make a mistake, a red X will appear. Press the other key to continue.		