

# Comparing Teacher Cognition for L2 Grammar in a Thai Tertiary Context Focusing on a Single Eastern Province in Thailand

Justin Pulleyblank, Burapha University, Thailand  
 Denchai Prabjandee, Burapha University, Thailand  
 Chalong Tubsree, Retired Professor, Chonburi, Thailand

**Abstract:** *Drawing upon theories and frameworks established by Teacher Cognition, this study investigate the role of teacher cognition in the Thai tertiary context as it implies to university English as a foreign language (EFL) lecturers. The study aimed to answer the questions about: level of education, gender, and Native English speaker (NES) to Non-Native English speaker (NNES).*

*This study employed a mixed method approach. The questionnaire was analyzed quantitatively and a lesson plan artifact was analyzed qualitatively via iterative thematic analysis This study used a questionnaire and lesson plans to collect the basic information from the 37 participants in three universities all located in a single province in Eastern Thailand. The study divided grammar into five components: Meaning of grammar, Importance of grammar, Approach to teaching grammar, Feedback and error correction and Teaching practices and activities. The results of the study indicated that level of education and gender had no significant difference in any of the categories of grammar. When comparing Thai and NES significant difference was found in one of the categories of grammar (approach to teaching grammar). The lesson plans were analyzed using iterative thematic analysis and looked at where grammar was taught in the lesson and if the activities were teacher or student led. When comparing teacher by highest degree earned The Master degree group taught grammar in more instance than the Bachelor degree group. Gender did not yield any significant differences. Again comparing Thai teacher and NES the results indicated that Thai teacher taught grammar in more spots of the lesson plan than the NES and the Thai teachers also favored teacher led activities more so then the NES.*

**Keywords:** Teacher Cognition, EFL, ESL, Thai Context, English Grammar

## Literature review

Johnson (2006) explained the importance on teacher cognition to the field of L2 teacher education:

Many factors have advanced the field's understanding of L2 teachers' work, but none is more significant than the emergence of a substantial body of research now referred to as teacher cognition (in L2, see Borg, 2003; Freeman, 2002; Woods 1996). This research has helped capture the complexities of who teachers are, what they know and believe, how they learn to teach and how they carry out their work in diverse contexts throughout their careers (p. 236). Teachers are active and use an active thought process to make all decisions on what they do in all the classroom including what instruments they add, they make these decision consciously and deliberately and by drawing upon what they were taught, what they have seen work (Borg, 2003). Beliefs are a fundamental aspect of the teacher cognition studies (Burns, 1992; Borg, 2003; NG & Farell, 2003; and Yim, 1993). But teachers' beliefs are not easily defined. Yet, attempts have been made Borg (2001) defined teacher beliefs as "teachers' pedagogic beliefs, or those beliefs of relevance to an individual' s teaching" (p. 187). Kagan (1992) defined teacher beliefs as "teachers' sense of self-efficacy and content-specific beliefs" (p.67).

So, beliefs are “individual” (Borg, 2001) or about the “self” (Kagan, 1992) and are content specific or to do with teaching. Teachers’ cognition is broader than just beliefs as belief is one aspect of teachers’ cognitions (Borg, 2001 and Kagan 1992) Moini (2009) phrased the complex relationship between teachers belief and teachers cognition like this “Research into teachers’ cognition has both provided good insights into teachers’ cognition at the same time raised more questions about several issues of teachers’ beliefs.” (p. 144). It is important to remember that beliefs can influence practices but practices can also lead to a change in beliefs (Phipps & Borg, 2007).

This study aims to build off of Moini (2009) study on Teacher cognition in L2 Grammar. That study compared two groups of Iranian teachers and found that where the teacher works, the education level and years of work experience changed some aspects of their view on grammar. Whereas a variable like gender did not change any aspect of their view on grammar. My study focused on education level, gender and nationality.

### Research Questions

The following research questions were explored:

1. What are the differences between teacher cognition of teachers with bachelor degree (BA) and those with a higher degree (master degree) about grammar and the way to teach it?
2. What are the differences between male and female language teachers’ teacher cognition about grammar and the way to teach it?
3. What are the difference between foreign English language teachers and native Thai teachers’ teacher cognitions about grammar and the way to teach it?

### Hypothesis

This research hypothesizes:

1. That there is a difference in teacher cognition due to the highest degree attained by the teacher (Moini, 2009).
2. There was no difference in cognition due to gender (Moini, 2009).
3. There is a significant difference in teacher cognition between Thai and Native English speakers (NES). Andrews (1999) and Ellis (2006) indicates that Thai will have a better grasp on L2 grammar and how to teach it, but the views of grammar will be the same and so will the style in which they teach; if they are correct the Thai teachers should have a greater knowledge about grammar and how to teach it.

### Participants and Settings

This study was conducted in Thailand. The population of the study were all L2 lecturers at three universities in a single Eastern province of Thailand. These three universities were at or near the capital of the province. Thirty-seven lecturers chose to participate to varying extents at filling out the questionnaire.

Table 1: Questionnaires completed

University	Questionnaire completed	Total number of teachers
A	1	5
B	28	33
C	8	11
Total	37	49

\*75.51% completed

As table 1 clearly shows the number of participants who completed the questionnaire was 37 and the total population was 49, according to Kejcie and Morgan (1970) this is an insufficient sample to measure the whole despite the fact 75.51% completed the questionnaire.

Table 2: Lesson plan completed or partial completed

University	Lesson plan completed	Total number of Questionnaires
A	1	1
B	15	28
C	8	8
Total	24	37

\*64.86% at least partial completed

As table 2 clearly shows the number of participants who completed the Lesson plan artifact was 24 and the total population was 37, according to Kejcie and Morgan (1970) this is an insufficient sample to measure the whole despite the 64.86% completed the Lesson plan artifact.

### Research instrument

This mixed method study used a questionnaire, to explore the issue quantitatively and an artifact that was part of the questionnaire to explore the issue qualitatively via iterative thematic analysis. The instrument used to collect the data was a 25- item 5-point Likert scale questionnaire, which had three sections and included one long answer question and two questions on lesson planning. The questionnaire was adapted from Moini (2009).

Section one asked information, about the teachers' background. In the first section it asked about gender, gender was defined in the traditional sense as male and female and only these two options were available. It had a question about the respondents' nationality where they could write it in and the third question was about the highest degree earned and the major of that degree.

The second section was used to collect information on the teachers' beliefs about teaching grammar this section had a long answer question and 25 5-point Likert scale questions used to ascertain the teachers beliefs in the following categories: meaning of grammar, importance of grammar, approach to teaching, feedback and error correction and teaching activities and practices. The questionnaire used the five-point Likert scale, so participants could express the degree in which they agree and disagree with a statement. The instructors and lecturers were required to mark their response to the options that best explain their beliefs.

Meaning of grammar can be divided into the subcategories of: structural view, communicative-functional view, and both form and meaning. Importance of grammar can be divided into two subcategories: how much time and how important for second language learning. Approach to teaching can be divided into the following three subcategories: meaning based, inductive/deductive teaching and both form and meaning. Feedback and error correction can be divided into the following subcategories: importance of providing feedback, teacher feedback and correction, self correction and feedback, peer feedback and correction, immediate feedback and global/local errors. Teaching activities and practices can be broken down into the following subcategories: variety, use of aids, assignments, oral and written form, games, tasks drills and exercise.

For meaning of grammar the questionnaire is focused on finding the meaning of grammar to the individual teacher (Moini, 2009, p150). The second category Importance of grammar is concerned with finding the amount of importance the individual teacher puts on teaching grammar to his or her students. The approach part “the main concern was to know about teachers’ beliefs about issues of teaching grammar such as form focused structural view, communication emphasis view, implicit-explicit teaching, and deductive-inductive teaching” (Moini, 2009, p150). In the error and feedback part the teachers state their beliefs about how to best provide feedback and do error correction what kind of feedback is necessary for the learners.

In the final category “finally in the fifth category teachers’ beliefs about actual presentation and practice activities they use in teaching grammar were sought, more specifically, formed- based, meaning-based, or task-based activities” (Moini, 2009, p150). The last section of the questionnaire was about lesson planning. This section will also be referred to as the artifact. Lesson plans are a written piece of evidence of a teachers thoughts, writing a lesson plan requires drawing upon theories that were taught at school and decision about what the teacher thinks will be effective with their students. Lesson plans are divided into 4 parts: Motivation, Lesson, Evaluation and Summary. Motivation is the hook the little introduction that peaks the students interest. The lesson is where information between the student and the teacher is exchanged via lecturer or elicitation. Evaluation is where the students do work that can be used to check how much or how little they learned. The summary is the closing part where the lesson is wrapped up. Lesson plans also show is the teacher employs student led or teacher led activities.

This section had two questions. The first question asked the teacher to sketch out a quick lesson plan with an assigned grammar point and vocabulary point and an example. The second question was to write out a more detailed lesson plan without any assistance coming from assigned points to cover.

The first lesson plan question was to write a lesson plan for a one hour class with an assigned grammar point and vocabulary point and an example. The assigned grammar point was to use who, what, where, when and why to ask questions about the topic (WH questions) and the vocabulary point was sports. The example included estimated time and an activity without much of a description.

The second question was to write a more detailed lesson plan without an assigned grammar or vocabulary point designed for a three hour long class. Furthermore it did not include an example. The questionnaire was done by those who choose to do it and the teachers had a month to complete it.

The artifact section was interpreted with iterative thematic analysis which is a tool of qualitative research used to find and record pattern or themes within the data by careful reading and re-reading of the data to the themes emerge and can be categorized for analysis. (Fereday & Muir-Cochrane, 2006) Iterative thematic analysis was used to find out about the way grammar was taught as the act of writing a lesson plan is a conscious act and requires thought and planning thus by examining a lesson plan you can gather empirical evidence of a teachers thoughts and core beliefs.

### **Ethical considerations**

Ethical considerations are an integral issue when doing research in any scientific endeavor. The ethical considerations that were taken into account in the study included concerns

about participants' rights and the sensitivity of the information about personal and professional values, attitudes and experiences.

Before doing the experiment ethical approval was obtained from the Research ethic committee at Burapha University, Bang Saen campus, Chonburi, Thailand.

All participants taking part in the questionnaire were provided with an information sheet containing the following information: (1) research objectives and a description as well as their rights as participants in this study; (2) a consent form to participate in the study. In addition to the written consent the following things were explained verbally; research objectives and a description as well as their rights as participants in this study. Most importantly no real names or real nick names will be used anywhere in the study. The participants' identity, position, institution and city at which they work is confidential.

The schools had been purposely selected to get the maximum number of NES.

Only a single province was selected, with all the participating schools being located near the capital city.

## Results

The results will be presented first by questionnaire which was analyzed by a T test, second by Lesson plan artifact which was analyzed using Iterative thematic analysis.

RQ 1: What are the differences between beliefs of teachers with bachelor degree (BA) and those with a higher degree (MA) about grammar and the way to teach it?

Table 3: T-Test results for education level

	<b>Bachelor Teachers Mean score (10)</b>	<b>SD</b>	<b>Master Teachers Mean score (25)</b>	<b>SD</b>	<b>DF</b>	<b>T-Value</b>	<b>Significance (2 Tailed)</b>
Meaning of grammar	4.10	0.89	4.46	0.58	33	-1.39	0.17
Importance of grammar	3.35	1.42	3.70	1.02	33	-0.82	0.42
Approach to teaching grammar	3.70	0.54	4.08	0.52	33	-1.93	0.06
Feedback and error correction	4.18	0.53	4.14	0.48	33	0.24	0.81
Teaching practices and activities	4.14	0.76	3.91	0.50	33	1.08	0.29
Total	3.89	0.61	4.07	0.49	33	-0.89	0.38

\*p<0.05

Table 3 shows the results of the questionnaire for the 35 university lecturers with either a Master degree or a Bachelor degree. Twenty-five lecturers had a master degree whereas only 10 had bachelor degree. One lecturer had a PhD and one had a post doctorate they were excluded as they did not meet the criteria for inclusion. As Table 3 clearly shows meaning of grammar, importance of grammar, approach to teaching, feedback and error correction and teaching activities and practices had no significant differences. The five subcategories when totaled together also did not have significant differences.

As the education level did yield any statistically significant results we will look at the second part of the question “the way to teach it.” To make this clear iterative thematic analysis was used as the results are presented in Table 4. Table 4 shows the number of times grammar is taught, the type of activity (teacher led or student led) and where in the lesson it was taught (motivation, lesson, evaluation and summary) for the 1-hour lesson, 3-hour lesson and the total (1-hour lesson plus 3-hour lesson).

Table 4: Iterative thematic analysis of lesson plan for education level

<b>1 hour lesson WH Question and sports vocabulary</b>	<b>Bachelor degree (10)</b>	<b>Master degree (15)</b>
Times grammar is taught	7	26
Teacher led	(4) 57.14%	(17) 65.38%
Student led	(3) 42.86%	(9) 34.62%
Motivation	(2) 28.57%	(7) 26.92%
Lesson	(3) 42.86%	(9) 34.62%
Evaluation	(1) 14.29%	(4) 15.38%
Summary	(1) 14.29%	(6) 23.08%
3 hour lesson no assigned points	Bachelor degree (9)	Master degree (12)
Times grammar is taught	8	14
Teacher led	(2) 25.00%	(5) 35.71%
Student led	(6) 75.00%	(9) 64.29%
Motivation	(1) 12.50%	(3) 21.43%
Lesson	(4) 50.00%	(4) 28.57%
Evaluation	(2) 25.00%	(4) 28.57%
Summary	(1) 12.50%	(3) 21.43%
1 and 3 hour lesson combined	Bachelor degree (19)	Master degree (27)
Times grammar is taught	15	40
Teacher led	(6) 40.00%	(22) 55.00%
Student led	(9) 60.00%	(18) 45.00%
Motivation	(3) 20.00%	(10) 25.00%
Lesson	(7) 46.67%	(13) 32.50%
Evaluation	(3) 20.00%	(08) 20.00%
Summary	(2) 13.33%	(09) 22.50%

This artifact analysis on the 1-hour lesson plan showed that 10 Bachelor degree group did not teach as much grammar as their 15 Master degree group teacher counterparts. The Bachelor degree group taught grammar 7 times and the Master degree group taught grammar 26 times. In the Bachelor degree group it was teacher led 57.142% of the time and student led 42.857% of the

time this is similar to the Master degree group where it was teacher led 65.384% of the time and student led 34.615% of the time. For the Bachelor degree group 42.857% of the instance of grammar teaching happened in the lesson section of the lesson plan and the same can be said for the Master degree group with 34.615%.

The 3-hour lesson plan showed further similarity. The 9 teacher Bachelor degree group taught grammar 8 times and the 14 teacher Master degree group taught grammar 14 times. In the Bachelor degree group it was teacher led 25% of the time and in the master group it was teacher led 35.714% of the time. In the Bachelor degree group it was student led 75% of the time and in the Master degree group it was 64.286% of the time.

If the two lessons are added together instead of being treated individually a total number for the 2 lesson looks like this: grammar is taught by the Bachelor degree group 15 times and by the Master degree group 40 times. The Bachelor degree group favours student led activities with 60% of the 15 activities being student led. The masters group favours teacher led activities with 55% of their 40 activities being teacher led. Both groups with Bachelor degree group at 46.667% and masters at 32.5% favour grammar activities being taught in the content part of the lesson plan.

RQ 2: What are the differences between male and female language teachers' beliefs about grammar and the way to teach it?

Table 5 shows the results of the questionnaire for the 37 university lecturers that self identify as either male or female. Fifteen lecturers self identified as male and 22 self identified as female.

Table 5: T-Test results for gender

	<b>Male Teacher Mean score (15)</b>	<b>SD</b>	<b>Female Teachers Mean score (22)</b>	<b>SD</b>	<b>DF</b>	<b>T-Value</b>	<b>Significance (2 Tailed)</b>
Meaning of grammar	4.15	0.60	4.48	0.74	35	-1.46	0.15
Importance of grammar	3.50	1.20	3.68	1.06	35	-0.49	0.63
Approach to teaching grammar	3.89	0.51	3.99	0.56	35	-0.54	0.60
Feedback and error correction	4.12	0.44	4.17	0.52	35	-0.27	0.79
Teaching practices and activities	3.93	0.72	4.05	0.48	35	-0.58	0.57
Total	3.93	0.513	4.07	0.51	35	-0.83	0.41

\*p<0.05

As Table 5 shows there were no significant differences in: meaning of grammar, importance of grammar, approach to teaching, feedback and error correction and teaching activities and practices. The total of the aforementioned five subcategories did not yield any significant differences.

Iterative thematic analysis was used to find common themes about the way grammar was taught. A lesson plan can be divided into four sections: motivation, lesson, evaluation and summary. When examining the lesson plan I marked the instance of grammar being taught in a section so this tells us where grammar was incorporated into the lesson. Each of the four sections was divided into two subcategories teacher led and student led.

As the gender of the teacher did not yield any statistically significant results from the T-test, we should look at the second part of the question “the way to teach it.” To make this clear iterative thematic analysis was used as the results are presented in Table 6 Table 6 shows the number of times grammar is taught, the type of activity (teacher led or student led) and where in the lesson it was taught (motivation, lesson, evaluation and summary) for the 1-hour lesson, 3-hour lesson and the total (1-hour lesson plus 3-hour lesson).

Table 6: Iterative thematic analysis of lesson plan for gender

<b>1 hour lesson WH Question and sports vocabulary</b>	<b>Male (11)</b>	<b>Female (15)</b>
Times grammar is taught	14	20
Teacher led	(9) 64.29%	(12) 60.00%
Student led	(5) 35.71%	(8) 40.00%
Motivation	(4) 28.57%	(5) 25.00%
Lesson	(5) 35.71%	(7) 35.00%
Evaluation	(4) 28.57%	(4) 20.00%
Summary	(1) 07.14%	(4) 20.00%
3 hour lesson no assigned points	Male (9)	Female (13)
Times grammar is taught	10	14
Teacher led	(3) 30.00%	(6) 42.86%
Student led	(7) 70.00%	(8) 57.14%
Motivation	(3) 30.00%	(2) 14.29%
Lesson	(2) 20.00%	(6) 42.86%
Evaluation	(3) 30.00%	(3) 21.43%
Summary	(2) 20.00%	(3) 21.43%
1 and 3 hour lesson combined	Male (20)	Female (28)
Times grammar is taught	24	34
Teacher led	(12) 50.00%	(18) 52.94%
Student led	(12) 50.00%	(16) 47.06%
Motivation	(07) 29.17%	(07) 20.59%
Lesson	(07) 29.17%	(13) 38.24%
Evaluation	(07) 29.17%	(07) 20.59%
Summary	(03) 12.50%	(07) 20.59%

This artifact analysis on the 1-hour lesson plan showed that the 11 male teachers taught grammar 14 times and the 15 female teacher taught grammar 20 times. The male group used more teacher led 64.286% of the time and student led 35.714% of the time this is similar to the master group where it was teacher led 60% of the time and student led 40% of the time. For the male group 28.571% of the instance of grammar teaching happened in the lesson section of the lesson plan and the female group had the highest score 35% in the same part.

The artifact analysis on the 3-hour lesson plan comparing the 9 teachers that self identified as male and the 13 that self identified as female found the male group taught grammar 9 times during the lesson and the female taught grammar 14 times. In the 3-hour lesson plan student led activities were favored, male 70% and female 57.143% of the activities used to teach grammar were student led. The male group equally distributed their grammar teaching in two places: motivation and evaluation both had a score of 30%. The female group lessons favored the content part of the lesson plan with a score of 42.857%.

When looking at the combined scores of both the 1-hour lesson and the 3-hour lesson the male group taught grammar 24 times and the female group taught grammar 34 times. In the male group teacher led and student led were 50% each. In the female group teacher led activities had the slightest advantage 52.941% compared to student led with 47.059%. For the male group 29.167% of the instance grammar was taught occurred in; motivation, lesson and evaluation. The three places shared the led equally. With the female group the majority with a score of 38.235% of the instances grammar was taught was in the lesson section of the lesson plan.

RQ 3: what are the difference between foreign language teachers and native Thai teachers' beliefs about grammar and the way to teach it?

Table 7: T-Test results for nationality

	<b>Thai Teacher Mean score (24)</b>	<b>SD</b>	<b>Non Thai Teachers Mean score (07)</b>	<b>SD</b>	<b>DF</b>	<b>T-Value</b>	<b>Significance (2 Tailed)</b>
Meaning of grammar	4.48	0.62	4.31	0.71	29	0.61	0.54
Importance of grammar	3.92	0.87	3.36	1.14	29	1.40	0.17
Approach to teaching grammar	4.08	0.51	3.49	0.32	29	2.87	*0.01
Feedback and error correction	4.17	0.51	4.09	0.53	29	0.32	0.75
Teaching practices and activities	4.00	0.53	3.75	0.68	29	1.01	0.32
Total	4.14	0.48	3.80	0.42	29	1.70	0.10

\*p<0.05

As Table 7 shows meaning of grammar, importance of grammar, feedback and error correction, teaching practices and activities and Total all did not garner a statistically significant result with P-values of 0.544, 0.173, 0.748 0.319 and 0.100 respectively. The statistically significant result was in comparing the approach to teaching grammar between Thai teachers (M=4.075, SD=0.510) and Native English speakers (M=3.486, SD=0.324) it was statistically significant difference with a T-value of 2.873 and a p-value of 0.008.

The artifact was interpreted using Iterative thematic analysis. The themes found are presented in four parts, by question and by group. Eleven Thai and 5 NES for a total of 16 answered both questions and 13 Thai and 7 NES for a total of 20 answered only the first question. Iterative thematic analysis was used to find common themes about the way grammar was taught. A lesson plan can be divided into four sections: motivation, lesson, evaluation and summary. When examining the lesson plan I marked the instance of grammar being taught in a section so this tells us where grammar was incorporated into the lesson. Each of the four sections was divided into two subcategories teacher led and student led.

As the nationality of the teacher yielded statistically significant results in only 1 area, we should look at the second part of the question "the way to teach it." To make this clear iterative thematic analysis was used as the results are presented in Table 8. Table 8 shows the number of times grammar is taught, the type of activity (teacher led or student led) and where in the lesson it was taught (motivation, lesson, evaluation and summary) for the 1-hour lesson, 3-hour lesson and the total (1-hour lesson plus 3-hour lesson).

Table 8: Iterative thematic analysis of lesson plan for nationality

<b>1 hour lesson WH Question and sports vocabulary</b>	<b>Thai Teacher (13)</b>	<b>Non Thai Teacher(7)</b>
Times grammar is taught	20	7
Teacher led	(13) 65.000%	(3) 42.857%
Student led	(07) 35.000%	(4) 57.143%
Motivation	(5) 25.000%	(2) 28.571%
Lesson	(9) 45.000%	(2) 28.571%
Evaluation	(2) 10.000%	(2) 28.571%
Summary	(4) 20.000%	(1) 14.286%
3 hour lesson no assigned points	Thai Teacher (11)	Non Thai Teacher(5)
Times grammar is taught	13	5
Teacher led	(5) 38.462%	(1) 20.000%
Student led	(8) 61.538%	(4) 80.000%
Motivation	(2) 15.385%	(1) 20.000%
Lesson	(4) 30.769%	(2) 40.000%
Evaluation	(4) 30.769%	(1) 20.000%
Summary	(3) 23.077%	(1) 20.000%
1 and3 hour lesson combined	Thai Teacher (11)	Non Thai Teacher(5)
Times grammar is taught	33	12
Teacher led	(18) 54.545%	(04) 33.333%
Student led	(15) 45.455%	(08) 66.667%
Motivation	(07) 21.212%	(03) 25.000%

<b>1 hour lesson WH Question and sports vocabulary</b>	<b>Thai Teacher (13)</b>	<b>Non Thai Teacher(7)</b>
Lesson	(13) 39.393%	(04) 33.333%
Evaluation	(06) 18.181%	(03) 25.000%
Summary	(07) 21.212%	(02) 16.667%

For the 1-hour lesson plan the 13 Thai teachers taught grammar 20 times and the 7 NES taught grammar 7 times. The Thai teachers favored teacher led activities with 65.000% and NES favored student led with 57.143%. The NES put grammar in these three sections equally: motivation, lesson and evaluation with 28.571% and the Thai teachers put the grammar in the lesson with 45.000%.

For the 3-hour lesson plan the 11 Thai teachers taught grammar 13 times and the 5 NES taught grammar 5 times. The Thai teachers favored student led activities with 61.538% and NES favored student led with 80.000%. The Thai teachers put the grammar in the lesson and evaluation equally with 30.769% and the NES put grammar in the lesson with 40.000%. For the combination of the 1-hour and 3-hour lesson plan the 24 Thai teachers taught grammar 33 times and the 12 NES teachers taught grammar 12 times. The Thai teachers favored Teacher led activities with 54.545% and NES favored student led activities with 66.667%. The Thai teachers put grammar in the lesson section the most at 39.393% the NES also put grammar the most in the same section with 33.333%.

Statistically significant results were only found in one of the eighteen, T-test I ran. The only statistically significant result (T-value of 2.873 and a p-value of 0.008) was found when comparing NES (M=3.486, SD=0.324) with Native Thai speakers (M=4.075, SD=0.510) in approach to teaching grammar. When research is done there is always a risk for false positives and statistical anomalies, in the case of this research only one of 18 T-test yielded significant results and one in 20 results could be significant by chance alone. But some interesting things were noticed about the way grammar was taught by using iterative thematic analysis on the lesson plans. When comparing teacher by highest degree earned The Master degree group taught grammar in more instance than the Bachelor degree group. The Bachelor degree group taught grammar 7 times in the 1-hour lesson, 8 times in the three for a total of 15 times where as the Master degree group taught grammar 26 times in the 1-hour lesson, 14 times in the three hour lesson and 40 times in total. The Bachelor degree group also seemed to favor student led activities and the Master degree group seemed to favor teacher led activities. Gender did not yield any significant differences. When comparing Thai teacher and NES the results indicated that Thai teacher taught grammar in more spots of the lesson plan than the NES and the Thai teachers also favored teacher led activities more so then the NES. Thai Teacher taught grammar 20 times in the 1-hour lesson, 13 times in the 3-hour lesson and 33 times in total. The NES group taught grammar 7 times in the 1-hour lesson, 5 times in the 3-hour lesson and 12 times in total. The Thai teachers nearly tripled the NES in the amount of times was grammar taught in lesson. Thai teachers favored teacher led activities 13 of 20 in the 1-hour lesson 5 of 13 in the 3-hour lesson and 18 of the 33 total activities included in the lesson plans were teacher led. NES teachers favored student led activities 4 of 7 in the 1-hour lesson, 4 of 5 in the 3-hour lesson and 8 of the 12 total activities were student led.

## Discussion

Moini (2009) found that the highest degree earned had a significant effect on three of the five areas (meaning of grammar, approach to teaching grammar and teaching practices and activities). In my opinion it is self evident that if a person has more formal education the way they think about grammar should be different than those with less education, but education level in my research did not show significant results in any of the tested areas: Meaning of grammar, Importance of grammar, Approach to teaching grammar, Feedback and error correction, Teaching practices and activities and Total.

What about the “way to teach it” when comparing the type of activities used. The Bachelor degree group favoured: teacher led (57.14%), student led (75.00%) and student led (60.00%) while the master group favoured: teacher led (65.38%), student led (64.29%) and teacher led (55.00%) for the 1-hour, 3-hour and combined respectively. The other major difference that can be observed from the analysis of the lesson plan is that the bachelor group had fewer grammar teaching moments than the master degree group 15 compared to 40. The approach to teaching grammar was not statistically significant ( $t$  value= -1.930, P-value =0.062) but was very close and the type of activity used and the times grammar was taught might indicate why this was so close to being statistically significant.

Moini (2009) did not find any differences in teacher cognition based off gender. The questionnaire my study is using is based off Moini so I hypothesized that there would be no difference from gender. My hypothesis was correct. With 15 male teachers and 22 female teachers I found that there were no statistically significant differences in; Meaning of grammar, Importance of grammar, Approach to teaching grammar, Feedback and error correction, Teaching practices and activities and total.

Moini (2009) and I came up with the exact same results, no significant difference based off the same set of questions and questionnaire. What about the “way to teach it” when comparing the type of activities used does this support the data from the questionnaire. The male group taught grammar 14, 10 and 24 times and the female group taught grammar 20, 14 and 34 times for 1-hour, 3-hour and combined respectively. The male group used teacher led (64.29%), student led (70.00%) and even (50.00% each) and female group used teacher led (60.00%), student led (57.14%) and slight advantage to teacher led (52.94%) for 1-hour, 3-hour and combined respectively. The male group distributed the grammar teaching more evenly throughout the lesson plan and the female group also distributed grammar evenly throughout but did favour the lesson section. In the 1-hour lesson both males and females spent the most time teaching grammar in the content part of a lesson plan, in the 3-hour lesson plan the male taught grammar in motivation and evaluation the most whereas the females still taught the most grammar in the content part of a lesson plan and in the combined males taught grammar in a three way tie in motivation, lesson and evaluation and the females favoured the lesson part of the lesson plan.

Moini (2009) did not compare NNES and NES, so to formulate my hypothesis I drew upon Andrews (1999) and Ellis (2006) who found that NNES had better grasp on grammar than NES. This was my only  $t$  test that got a significant result, the statistically significant result was in the approach to teaching grammar ( $t$  value = 2.87,  $p$ -value = 0.01).

In the way to teach it part of my question the Thai teachers taught grammar 20, 13 and 33 times and the NES teachers taught grammar 7, 5 and 12 times for 1-hour, 3-hour and combined respectively. So the Thai teachers clearly taught grammar more often. The Thai teachers used teacher led (65.00%), student led (61.54%) and teacher led (54.55%) and the NES

male used student led (57.14%), student led (80.00%) and student led (66.67%) for 1-hour, 3-hour and combined respectively. So the NES preferred student led activities whereas the Thai teachers preferred teacher led activities.

The Thai group favour the lesson section, 45.00%, 30.77% and 39.39% for 1-hour, 3-hour and combined respectively. The NES group distributed the grammar teaching more evenly throughout the 1-hour lesson plan resulting in a three way tie at 28.57 between motivation, lesson and evaluation, but the lesson part was favoured in both the 3-hour lesson at 40.00% and combined at 33.33%.

## References

- Andrews, S. (1999). All these like little name things: A comparative study of language teachers' explicit knowledge of grammar and grammatical terminology. *Language Awareness*, 8(3/4), 143-159.
- Borg, S. (2001). Teachers' beliefs. *ELT Journal*, 55(2), 186-188.
- Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe and do. *Language Teaching*, 36(2), 81-109.
- Burns, A. (1992). Teacher beliefs and their influence on classroom practice. *Prospect*, 7(3), 56-66.
- Ellis, E. M. (2006). Language learning experience as a contributor to ESOL Teacher Cognition. *TESL EJ*, 10(1). Retrieved from <http://tesl-ej.org/ej37/a3.html>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1). Retrieved from [https://sites.ualberta.ca/~iiqm/backissues/5\\_1/PDF/FEREDAY.PDF](https://sites.ualberta.ca/~iiqm/backissues/5_1/PDF/FEREDAY.PDF)
- Freeman, D. (2002). The hidden side of the work: Teacher knowledge and learning to teach: A perspective from north American educational research on teacher education in English language teaching. *Language Teaching*, 35(1), 1-13.
- Johnson, K. E. (2006). The sociocultural turn and its challenges for second language teacher education. *TESOL Quarterly*, 40(1), 235-257.
- Kagan, D.M. (1992). Implication of research on teacher belief. *Educational Psychologist*, 27(10), 65-70.
- Krejcie, R. V., & Morgan, D. W. (1970). *Educational and Psychological Measurement*. Danville, Ill.: Interstate Printers and Publishers.
- Moini, M. R. (2009). The impact of EFL teachers' cognition on teaching foreign language grammar. *Pazhuhesh-e Zabanha-ye Khareji*, 49, 141-164.
- Ng, E. K. J., & Farrell, T.S.C. (2003). Do teachers' beliefs of grammar teaching match their classroom practices? A Singapore case study. In Deterding, D., Brown, A., & Low, E. L. (Eds.), *English in Singapore: Research on grammar*. (pp. 128-137). Singapore: McGraw Hill.
- Phipps, S., & Borg, S. (2007). Exploring the relationship between teachers' beliefs and their classroom practice. *The Teacher Trainer*, 21(3), 17-19.
- Woods, D. (1996). *Teacher cognition in language teaching*. Cambridge: Cambridge University Press.
- Yim, L.W. (1993). *Relating teachers' perceptions of the place of grammar to their teaching practices*. Master's thesis, National University of Singapore.