

MOTHER TONGUE (MT) AS LOI: SPEAKING ANXIETY AND WILLINGNESS TO TEACH AMONG NON-MT SPEAKERS MATHEMATICS PRE-SERVICE TEACHERS

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ABSTRACT: *Appropriate language choice determines the success of the delivery of quality education. It has been contended that children learn best when the language of instruction connects with the language of home. Studies have investigated the impact of Mother Tongue use in early education. However, a concern arises in cases when the medium of instruction is not the language teachers speak. This investigation on the teachers' speaking anxiety and willingness to teach Math in the Mother Tongue employed a descriptive-quantitative-correlational design utilizing a survey questionnaire. A total of 100 would-be elementary grade Mathematics teachers who are Non-Mother Tongue speakers were purposively drawn as respondents of the study. Analysis of the data revealed that the respondents are of 'high speaking anxiety' and are not willing to teach Math in the first language of their students. Moreover, a significant relationship was drawn between respondents' level of anxiety and their willingness to teach Math in the mother tongue.*

Keywords: Speaking anxiety, Mother Tongue, Science teacher, the language of instruction, Science

1. INTRODUCTION

1.1. BACKGROUND OF THE STUDY

For the teaching and learning process to take place, the role of language can never be overemphasized. In fact, [1] claimed that the success of education is very much dependent on the language chosen to serve as a medium of instruction. Therefore, the decision to be made related to which language is to be chosen as the 'language of education' is both critical and essential. Corroborating is the claim of [2] who explained that the language choice for instruction generally plays a vital role as the chosen language can either serve as a key to understanding or a barrier of learning. Along this line, as early as 1953, the United Nations Educational, Scientific and Cultural Organization (UNESCO) maintained that the first language of the child is the best language to be utilized as a medium in the delivery of education. [3] contended that when the language of instruction (LoI) connects with the language children speak and understand, education becomes effective. Addedly, [4] discussed that the language of instruction plays a crucial role in the learners' educational development, and is essential in the realization of communication and understanding between and among teachers and students. [5] reported that L1 use inside the classroom enables learners to interact naturally, and learners are able to communicate freely and with less restrictions [6]. Evidently, the nonuse of home language fosters difficulty to learners. [7] even claimed an educational system packaged in a medium of instruction not known to the learners is a form of 'torture' (p.2). Therefore, [6] concluded that it is best to educate children in their first language. It has taken decades before the idea was noted and accepted in the Philippines. For so long a time, the norm that favors monolingualism in education remained in the Philippines until the year 2013 when the Enhanced Basic Education Act was signed into law by the then President Benigno Aquino III, and through it the use of mother tongues in school has been institutionalized. Initially, 12 local major languages were used in MTB-MLE, and these are *Bikol, Cebuano, Chavacano, Hiligaynon, Iloko, Kapampangan, Maguindanao, Maranao, Pangasinense, Waray, Tagalog*, and *Tausug*. Consequently, in 2013, seven

(7) new languages were added and these were the *Ybanag, Ivatan, Sambal, Aklanon, Kinaray-a, Yakan* and *Surigaonon* [8]. In sum, there are 19 languages employed as learning areas or subjects and as media of instruction (MoI). From grades 1 to 3, learners are to take mother tongue as a subject in which the emphasis is on reading and speaking. The mother tongue as medium of instruction shall be used in all learning areas with exceptions of the Filipino and English subjects which are introduced in the third grade [8]. This new language reform has made the mother tongue as a language of instruction (LoI) as well as a separate subject area, hence referred to as mother tongue instruction [9]. The language policy, which has focused on the linguistic background of the learners, has neglected an essential consideration – the teachers. In the said policy teachers are tasked to educate young learners using their L1 which, in some if not most cases, is not the L1 of the teachers. When the question 'Which language to use inside the classroom?' is raised, the greatest if not the sole consideration is the learners. This, to an extent, is an error as teachers, who are also main factors as far as education is concerned, must also be accounted for and considered in policy development and implementation. The concern that this study brings to the fore is the idea that there are teachers who may have difficulty using students' L1 as a medium of instruction as such is not their L1 or they have not had training using it in class because their training an orientation in college was to teach in either English or Filipino (the national language). This study then intends to determine the speaking anxiety of teachers when teaching mathematics using the medium they do not speak or have identified themselves to be not fluent in. Additionally, the study investigates the pre-service teachers' willingness to teach the subject Math in the mother tongue (MT). Moreover, the investigation intends to determine if a significant relationship can be drawn between respondents' level of speaking anxiety and willingness to teach mathematics when the subject is taught in MT.

1.2 RESEARCH QUESTIONS

The study generally aims to determine whether or not a relationship exists between the level of speaking anxiety and willingness to teach mathematics in MT of the respondents; specifically, this study seeks to satisfy the following queries:

1. What is the level of Speaking Anxiety of the respondents who are non-MT speakers?
2. Are the respondents willing to teach Mathematics in the MT?
3. Is there a significant relationship between the respondents' level of Speaking Anxiety and their willingness to teach Mathematics using MT as LoI?

2. METHODOLOGY

2.1. RESEARCH DESIGN

The study, in order to realize determined objectives, utilized the quantitative-descriptive-correlational research design. Moreover, the study is non-experimental and cross-sectional. [10] cited in [11] explained that a descriptive study is one that utilizes minimal statistics, and is a research-focused at gathering and tabulating data about conditions, trends, and practices. This study aims to determine the respondents' speaking anxiety as they are to deliver education in a language, not their L1, and to determine whether or not are willing to teach Math in MT. With these mentioned objectives which shall simply utilize descriptive statistics, the study is claimed to be descriptive. Moreover, the study also investigates the relationship between two variables, speaking anxiety, and willingness, which qualifies the study to be noted as correlational. Furthermore, the research employed no utilization of treatment, and that there is no controlled group established hence classified as non-experimental ([12] cited in [13]). In addition, data collection was realized through the employment of a research questionnaire which is informed by the claim of [13] found in [14]. [13] explained that using the questionnaire as a tool for data gathering is an efficient mean when data is gathered from a large sample size. Further, as data collection was realized within a relatively short period of time, the study is claimed to be cross-sectional ([15] found in [1]).

2.2. PARTICIPANTS OF THE STUDY

Through purposive sampling technique, a total of 100 non-MT primary school pre-service teachers comprise the sample of the current study. The respondents have been identified to teach the subject Math using MT as LoI. All of the respondents were grade 3 students. Moreover, the respondents were sampled from six (6) Elementary schools which are all state-managed. From the total number of respondents, 55% are females. Additionally, the mean age of the respondents is 20.21 (SD=3.12).

2.3 THE RESEARCH INSTRUMENT

In order to determine the speaking anxiety of the respondents, an adapted questionnaire was used - the Teacher Foreign Language Anxiety Scale of [16]. Deletion and Modifications were done to the original questionnaire to suit the objective of the study and the context to which the questionnaire would be used.

In total, 19 items were included in the final draft of the questionnaire. Eighteen (18) items aimed to determine the speaking anxiety of the respondents when teaching using a

language which is not their MT. Table 1 provides details about the items.

Table 1: Number of Positive and Negative Statements on TFLAS

	Number of Statements		
	Positive	Negative	Total
Statement Number	1, 3, 5, 6, 7, 9, 10, 13, 15	2, 4, 8, 11, 12, 14, 16, 17, 18	18
Total	9	9	18

The questionnaire contained an equal proportion of positive and negative items. Odd numbers are positive statements, while even numbers are negative statements. Moreover, the original instrument used a 5-point Likert scale. In the modified questionnaire, the scale was reduced to only 4. This is to avoid participants from choosing a neutral response.

To determine whether the respondents are willing to teach Math in the MT, a question was formulated and stated simply as 'Are you willing to teach Math in the MT?'. This question was placed as the last or 19th item in the questionnaire. This item is answerable by 1=Yes and 2 = No.

2.4 RELIABILITY OF THE QUESTIONNAIRE

As essential modification of the original questionnaire was made; the adapted questionnaire was subjected for validity and reliability checking. The questionnaire was checked for validity by three (3) college teachers with doctorate degrees in Applied Linguistics. The determination was not limited to whether the items are able to measure what they intend to measure. Comprehensibility and appropriateness of language use were also noted. Minor comments limited to typographic errors were given. After validity checking of the instrument, the same questionnaire was subject for pilot testing. Ninety pre-service teachers who did not form part of the final sample comprise the pilot testing. Cronbach's alpha test was utilized to determine the reliability of the instrument. The analysis of the data revealed that the questionnaire was reliable (Cronbach's alpha = 0.85).

2.5 PROCEDURE

Before administering the data collection, the researchers comprehensively explained to the participants how the collected data will be utilized in the study and they are given the right to withdraw themselves without a need for explanation. After attaining their consent, the questionnaire is distributed and they began answering. In addition, as an ethical standard procedure, no markers of identity were solicited from the respondents. Moreover, assurance was provided that all data given shall be dealt with great confidentiality and that the gathered data shall not be used for other reasons apart from the ones explained and provided.

2.6 METHOD OF ANALYSIS

The respondents' answers to the questionnaire were coded. For positive statements, the coding of the responses is as follows: 4 for strongly agree; 3 for agree; 2 for disagree; and, 1 for strongly disagree. However, reverse coding was used for responses on negative statements. Moreover, to give interpretation to the mean score of the data collected related to the level of speaking anxiety of the respondents, table 2 is used.

Table 2: Level of Anxiety

Range	Description
3.25 – 4.00	Very High level of anxiety
2.50 – 3.24	High Level of Anxiety
1.75 – 2.49	Low Level of Anxiety
1.00 – 1.74	Very Low level of Anxiety

To determine the participants’ willingness to teach the subject mathematics, responses were coded as 1 for yes and 2 for no. The mean score is interpreted using table 3.

Table 3: Willingness to Teach

Range	Description
1.51 – 2.00	Not willing to teach
1.00 – 1.50	Willing to teach

In line with the objectives of the study, to be able to draw a significant correlation exists between the variables, the statistical tool known as Pearson r was utilized.

3. RESULTS AND DISCUSSION

3.1 RESPONDENTS’ LEVEL OF SPEAKING ANXIETY

To determine the level of speaking anxiety of the pre-service teachers who are non-MT speakers, the responses to questionnaire was coded, tabulated and computed. Moreover, the data descriptively analyzed (Mean and Standard Deviation) is presented in table 4.

Table 4: Level of Speaking Anxiety

Variable	Mean	Standard Deviation	Interpretation
Speaking Anxiety	2.68	0.16	High Level of Anxiety

Note : 3.25 - 4.00 – Very High Level of Anxiety, 2.50 – 3.24 -High Level of Anxiety, 1.75 – 2.49 - Low Level of Anxiety, and 1.00 – 1.74 - Very Low level of Anxiety.

Table 4 presents the level of speaking anxiety of the respondents. The data revealed that the mean score (2.68) corresponds to an interpretation of ‘high level of anxiety’. In addition, the standard deviation of 0.16 suggests that anxiety levels of the respondents are not extremes; instead, are close to one another. It implies that most of the respondents have rated their speaking anxiety to be ‘high level’. It is speculated that the pre-service teachers are having a hard time in delivering lessons and discussion using the L1 of children which is not their own or a language which the respondents have limited proficiency in. One seen reason for this is that the absence of training that would spell much difference. Teacher Education Institutions (TEIs) train pre-service teachers to write and deliver lessons in English; however, practice teaching in the field have demanded the respondents to present lessons in MT. This gap has evidently created difficulty for the pre-service teachers. It is further supposed that the respondents are facing hardships and are struggling in performing their duties as facilitators of learning. This is a troubling result because it further implies that the delivery of quality education is compromised.

3.2 RESPONDENTS’ WILLINGNESS TO TEACH

For the determination of the respondents’ willingness to teach Mathematics in the MT, the responses in the number 19 question of the research tool were coded, computed and analyzed. Descriptive statistics were used to analyze the data. Table 5 shows the data.

Table 5: Willingness to Teach

Variable	Mean	Standard Deviation	Interpretation
Willingness to Teach	1.75	0.24	Not Willing to Teach

Table 5 gives the respondents' willingness to teach Math in the MT. The data revealed that the mean score of 1.75 with a corresponding standard deviation of 0.24 is interpreted as ‘Not Willing to Teach’. This means that the respondents, in general, do not prefer to teach the subject mathematics in the MT. It is inferred that the respondents remain to like teaching mathematics in English. This is an expected result considering that teachers who do not speak the learners MT would find challenges in delivering the contents of the subject which translate to their unwilling stance towards the use of MT as MoI for the subject mathematics. It can also be inferred that the teachers may have had difficulty in providing translation to some terms used in the subject. The difficulty is seen to have rooted from the lack or deficiency of proficiency in so far as the MoI is accounted.

3.3. RELATIONSHIP BETWEEN RESPONDENTS’ LEVEL OF SPEAKING ANXIETY AND WILLINGNESS TO TEACH MATHEMATICS IN THE MOTHER TONGUE

To determine if a significant relationship can be drawn between the respondents' level of speaking anxiety and willingness to teach mathematics in the MT, The data were first tested for normality using the Shapiro-Wilk Test. The result of the test revealed that the p-value of 0.33 is greater than alpha = 0.05. It means that scores are normally distributed; hence, the parametric test known as the Pearson Product Moment Coefficient was the statistical treatment used. Table 6 presents the result of the analysis.

Table 6: Correlation Matrix: Level of Speaking Anxiety and Willingness to Teach Mathematics in the MT

Variables	p-value	r-value	Interpretation
Level of Speaking Anxiety			
Willingness to Teach Math in the MT	0.000*	0.788	Significant

Significant at alpha=0.005

Table 6 shows the correlation table between the level of the variable of speaking anxiety and willingness to teach mathematics in the MT. Analysis of the data revealed that the p-value of 0.000 is significant at alpha = 0.05. Moreover, the r-value of 0.788 suggests that the relationship between the variables is ‘high positive correlation’. This means that the respondents with ‘high’ level of speaking anxiety are most likely the ones who are not willing to teach math in the

mother tongue. Conversely, respondents with a low level of speaking anxiety are the ones most likely willing to teach math in the MT. This implies that the level of speaking anxiety of the respondents influences their preference as far as MoI is concerned. This means that if the pre-service teachers are less anxious in using the L1 of their learners they become more accepting and positive towards the idea of teaching mathematics in the MT.

4. CONCLUSION

In light of the results yielded from the data, the following are reasonable conclusions to make:

First, the pre-service teachers who are non-MT speakers are experiencing a high level of speaking anxiety. Second, the respondents of this study are not willing to teach mathematics in the MT. Last, respondents with a high level of speaking anxiety are preferring to teach the subject math in English while respondents who have low speaking anxiety prefer to teach math in the MT. This results point to the need for training teachers that they may develop the needed proficiency in the L1 of children. Developed speaking proficiency leads to better delivery of education.

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