



# The Effect of Teacher's Assistance on Malaysian Rural Learners' Writing Self-efficacy: A Case Study

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## Abstract

The purpose of the study is to explore the Malaysian rural learners' self-efficacy in writing after assistance given by a teacher. The social cognitive theory and socio-cultural theory are used as the theoretical framework to pursue the discussion on the effects of teacher's assistance on learners' writing self-efficacy. A case study approach is adopted where three learners and a teacher were chosen from a form four class through purposive sampling. Learners' writing self-efficacy is evaluated using a writing self-efficacy scale adapted from Bottomley, Henk and Melnick (1998) and also classroom observation. Wang and Pape (2007) categories were used as guidelines to analyze observation data in order to understand the participants' self-efficacy phenomena in their learning to write. Overall, this study places a heavy emphasis on the perceptions and actions of the selected form four learners and teacher.

## Introduction

Writing is a highly complex and demanding task that requires a number of skills to be performed at the same time. It is a complex cognitive activity involving attention at multiple levels: thematic, paragraph, sentence, grammatical and lexical (Lavelle, Smith & O'Ryan, 2002). Hidi and Boscolo (2008) noted that "writers, in contrast to readers, produce/create texts rather than simply consume them and, writers often have minimal environment/curricular input" (p.145). For example, "when given a topic to write about, the ideas and text generated require a knowledge base on which the individual can draw" (MacArthur, Graham & Fitzgerald, 2008, p.145). In addition, "the complexity of the task, the solitary nature of the activity, with no immediate feedback and the effort needed to persist in the task are other aspects of writing that can adversely affect writing" (Hidi & Boscolo, 2008, p.145). Although writing is teachable, the transformation of thought into written communication is a difficult activity that requires many other levels of complementary skills.

Some of the necessary skills contributing to the complexity of writing were described by Montague and Leavell (1994, as cited in Scott and Vitale, 2003, p.220), "Writing requires coordination and integration of multiple processes, including planning, production, editing, and revision. Composing requires prior knowledge of topic, genre, conventions, and rules as well as the ability to access, use and organize that knowledge when writing."

Given the complexity of writing tasks, it is not surprising that learners experience a wide variety of writing skill deficits and are often overwhelmed by writing activities (Scott & Vitale, 2003). Scott and Vitale (2003) also identified that learners' writing problems range from "lower level mechanical problems such spelling, capitalization, and punctuation, to higher order cognitive and metacognitive problems such as planning and revision" (p.221).

In Malaysia, there has always been concern about the achievement in English of learners in Malaysian rural schools. The Malaysian Deputy Prime Minister at the time, Datuk Seri Najib Razak (Utusan Malaysia, April 16, 2008) expressed his worries towards the declining English achievement especially among rural learners since the results from two major examinations (PMR and SPM) showed a big gap between the rural and urban learners. Detailed analysis by the Malaysian Ministry of Education (2008) identified the writing section, which carried the greater portion of the total marks, as the major factor that affected the learners' English results (Utusan Malaysia, April 16, 2008). Chitravelu, Sithamparam and Teh Soo Choon (2005) also pointed out that writing is the skill most Malaysian learners are less proficient in and they do not know how to accomplish the written task in a satisfactory way. Year after year, examiners have expressed great dismay at the fact that after having learnt English for eleven years, Malaysian rural learners, in most cases, still fail to produce even a short paragraph of intelligible writing (Samuel & Zaitun Bakar, 2008). This is because writing is a complex task which involves many thinking skills, such as generating, organizing and expressing ideas. Due to the challenges in writing, Malaysian learners are reluctant to use the language, never try to communicate in English (Utusan Malaysia, April 16, 2008), and have lower self-efficacy in the English language as compared to their counterparts in the city (Rahil Mahyuddin, Habibah Elias, Loh Sau Cheong, Muhd Fauzi Muhamad, Nooreen Noordin & Maria Chong Abdullah, 2006). In addition, writing becomes even more difficult in Malaysian schools as in most places especially the rural areas, social interaction in English such as with teachers or peers are almost non-existent (Chitravelu, Sithamparam & Teh Soo Choon, 2005).

Given the problems faced by Malaysian rural learners in English writing, there is a need to analyze factors that can improve learners' writing self-efficacy and skills. Recently, teacher's roles have been given prominence in the Malaysian education field as this is the factor that poses a great influence on the development of learners, both intellectually and emotionally (Mok Soon Sang, 2008). Thus, in the area of writing, teacher's role is important in developing the learners' self-efficacy and skills. This relationship is illustrated in Figure 1 below.

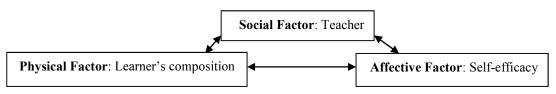


Figure 1: Inter-relationship of social and emotional factors with affective classroom management in the learning environment (Mok Soon Sang, 2008)

Figure 1 shows that a teacher needs to help learners to develop writing skills by giving feedback or assistance in writing composition. The teacher's feedback or assistance received by the learners indirectly influences the learners' confidence in writing (i.e. their writing self-efficacy). Effective assistance allows learners to believe that they can carry out the writing tasks, whereas negative comments or less assistance from the teacher reduces the learner's self-efficacy (Rahil Mahyuddin, Habibah Elias, Loh Sau Cheong, Muhd Fauzi Muhamad, Nooreen Noordin & Maria Chong Abdullah, 2006). When the learners have high self-efficacy, they feel competent and confident, and they are more willing to persevere when confronting obstacles (Pajares & Valiante, 2008). As the learner works on his/her composition, it also gives him/her the impression of how capable he/she is in writing, and thus affects the confidence to perform. In addition, learners' performance in writing also tells the teacher of the type and level of assistance the learners need when completing the task (Mok Soon Sang, 2008).

Based on the argument above, learners obviously need support from teachers in developing positive self-beliefs in writing and finally help in improving their writing skills. Self-belief, or more specifically 'self-efficacy', is important here because it "influences the course of action people choose to pursue, how much effort they put forth in given endeavors" (Bandura, 1997, pp.3). Self-efficacy is defined in the theoretical framework by Bandura as "cognitive construct that represents individual's beliefs and personal judgments about their ability to

perform at a certain level and affects choice of activities, effort, and performance" (Hidi & Boscolo, 2008, p.148). From the social cognitive perspective, self-efficacy can affect how individuals behave, their thoughts and emotional reactions in achievement settings. By having teacher's assistance or feedback, it may help to boost writers' self-efficacy and as a result, skills in writing. This is because "self-efficacious individuals are more willing to participate, to work harder, and persists longer in tasks and have less adverse reactions when encountering difficulties than those who doubt their capabilities" (Hidi & Boscolo, 2008, p.148). Researchers (Pajares & Johnson, 1995; Pajares, 2002a, 2002b; Linnenbrink & Pintrich, 2003; Schunk, 2003; Rahil Mahyuddin, Habibah Elias, Loh Sau Cheong, Muhd Fauzi Muhamad, Nooreen Noordin & Maria Chong Abdullah, 2006; Schunk & Zimmerman, 2007) who have investigated self-efficacy beliefs and essay writing agree that the two are related. Thus, the teacher needs to act proactively by assisting the learners emotionally and physically. It means that the teacher needs to be aware of how the learners feel or think; to motivate and encourage them. At the same time, the teacher needs to support the learning process by providing assistance in terms of materials, ideas, suitable approach and guidance in writing.

Socio-cultural theory by Vygotsky (1978) has also pointed out that teachers' roles are important components in the writing process and contribute to the improvement of the writing self-efficacy and skills. Socio-cultural theory argues for viewing writing as a mode of social action, and not simply as a means of communication. This means that a writing activity is succeeded by an interactive and collaborative discourse in which mental activity is distributed and shared between the teacher and learners. In Vygotskian (1978) terms, "cognitive processes are acquired on an intermental or social plane as the expert and novice jointly combine their mental resources to perform a process" (Englert, Mariage & Dunsmore, 2008, p.209). Overall, writing involves particular kinds of people institutions and cultures. Thus, by seeing writing as mediated means and a mode of social action, writing activities should be recognized as collaborative, involving divisions of labor and forms of co-authorship. These divisions of labor may range from "direct, face-to-face co-production of texts to the provision of very anonymous resources (e.g. the word text)" (Prior, 2008, p.62). In addition, throughout the process of collaborating and division of labor, teacher's assistance is important to ensure an effective cooperation.

The assistance provided by the teacher is represented by the concept of scaffolding proposed by Vygotsky (1978). In other words, it refers to the assistance and interactional support given by an adult in the zone of proximal development. From social cultural terms, "scaffolding is sensitively tuned to what the learner presently understands, getting him to concentrate on what he can/she can manage while the teacher fills in the parts that the learner cannot do" (Smith, 1997, p.24). Accordingly, scaffolding provides a facilitating context which allows a writing task to be completed. As Donovan and Smolkin (2008) explained, judicious questioning and commenting about a piece of writing provides the scaffolding for the writer's ideas to be further developed and clarified. In the end, the writer is better able to develop and clarify ideas without the same level of support. Indirectly, Vygotsky's notion of scaffolding lends a picture to teaching of writing that assistance in the form of interaction or conversation between the teacher (as a more capable individual) and the writers is important in molding their writing skills and confidence in pursuing the task.

Equally, Vygotsky's notion of scaffolding is in line with Bandura's ideas of socio-cognitive theory where a learner is seen as an active agent and needs to interact with his/her environment in order to develop his/her skills and confidence in writing. Both theories similarly propose the importance of reciprocal relationship between social environment and learners as the main factor in learning and development, and thus bringing a different perspective of teaching approach from traditional writing classroom. Based on both theoretical explanations on self-efficacy and teacher's assistance, it is therefore the aim of this study to find the importance of the teacher assistance in learners' writing self-efficacy development. In Malaysia, writing in English is part of the most important assessment in education, in which rural learners are facing a major problem. Based on this scenario, it is therefore pertinent to find out how teachers actually assist these rural learners and whether it affects the rural learners' writing self-efficacy. Specifically, two research questions discussed in detail in this paper are:

- 1. How does the teacher assist rural area learners in teaching and learning of writing?
- 2. How does teacher's assistance affect the rural area learners' writing self-efficacy?

#### Methodology

This study employs a case study approach to explore the effects of teacher's assistance on rural learners' writing self-efficacy. In this study, a teacher and three learners were chosen based on the writing self-efficacy scale adapted from Bottomley, Henk and Melnick (1998).

Data for teachers' assistance was obtained through non-participant classroom observations and interviews with the teacher and learners which were conducted once a week for five months. Meanwhile, learners' behavior associated with the self-efficacy in writing was also observed once a week to understand the participants' self-efficacy phenomena in their learning to write. A detailed report which included the learners' action and dialogues was prepared to show an interpretive description of their writing learning process which is associated with self-efficacy.

According to Wang and Pape (2007), evidence of the learner's self-efficacy beliefs can be classified into three categories: persistence in accomplishing language tasks, self-awareness of English proficiency, and willingness to engage in language activities. These three categories are used as the guidelines for this study. In addition, interviews were conducted with the three selected learners and the English teacher to gain further insights into learners' writing self-efficacy. In order to ensure that the measure and categories used to analyze data from each observation and interview are reliable, the data were given to two raters for the purpose of inter-rater reliability. These two raters analyzed the categories and data reported by the researcher. The raters' reports were then examined to measure the level of agreement between the two sets of rating over the coding of the items. According to Creswell (2008), inter-rater reliability "has the advantage of negating any bias that any one individual might bring to scoring, ironed out any differences and the coding is more reliable" (p.171). The reliability index was calculated using the Cohen Kappa measurement instead of just using percentage agreement. This is because "percentage agreement can make two raters appear to be highly reliable even if they are scoring completely at random" (Wood, 2007, p.2). The data were analyzed and calculated using SPSS 14.0 to get the value of Kappa.

#### **Findings and discussion**

#### 1. How does the teacher assist rural area learners in teaching and learning of writing?

Method 1: The teacher used MsWord to show and teach writing process to the learners. During the lesson, the teacher prompted questions and did not give direct answers to the learners. She would not directly teach the format of the essay, but developed the idea for the writing first by discussing it with the learners. She would ask learners one by one and provoke questions from the learners' answers and comment on the learners' responses. For example, on 1<sup>st</sup> July 2009, the teacher asked each learner to contribute ideas for the topic 'How to score an A for the English paper'. The teacher started the first sentence and then asked Haslina to continue and suggest one idea. Haslina suggested "*This can improve and achieve our lesson during study*". The teacher commented that she had not elaborated on it properly. Farah then suggested "*After plan it...*" but stopped when the teacher commented that the sentence did not fit into the paragraph. Other learners then suggested replacing it with "*We must plan on how to achieve our goal*". The teacher agreed and typed the sentence on the screen.

Method 2: The teacher pointed out the mistakes or errors in the learners' writing in general and then asked the learners to write the correction. She looked over the learners' work while they were correcting their writing. She walked around the class and looked at how the learners corrected their essay. She would sit with certain learners and asked why they made the changes that they did. She also answered questions posed by the learners regarding the comments she gave for their writing.

For example, on 8<sup>th</sup> July 2009, the learners were asked to correct their essays after the teacher explained the mistakes in general. While the learners were correcting mistakes, the teacher walked around the class and looked over their work. Teacher stopped at Farah's desk and read her correction. Teacher pointed out that the sentence was incomplete as she used the word *'weird'* but not referring to any noun. Teacher explained that *'weird'* is an adjective, so there should be a noun after that. Farah said that she actually meant *'janggut'* in English but didn't know the spelling. The teacher asked whether she meant the long bushy or the short one. Farah said *'janggut'*, a short one. The teacher asked the class to guess the word for *''short 'janggut*'' in English but the class didn't know the word. The teacher then gave a clue that the word starts with the letter 'g' but nobody could give the answer. The teacher finally gave the answer 'goatee'.

Method 3: The teacher liked to ask the learners to work in small groups when composing an essay. She would limit 4 learners in a group and set a writing task. She would walk around the class and check the learners' mistakes during the group discussion. When a group made many errors in their writing, she would sit down with the group and gave suggestions on how to improve their essay. Once the learners completed their essay, they would have to present

their essay and from here, the teacher would explain to the class the mistakes that they did when writing the essay.

For example, on  $29^{th}$  July 2009, the teacher asked the learners to form a group of four and try to complete the story she gave in about 100 words. The teacher monitored each group, and went to Haslina's group. Haslina's group tried to write about the appointment of a new leader. They asked the teacher the word '*sebagai*' in English and teacher suggested '*as*'. Teacher checked their grammar and asked them to correct their articles 'a, an, the'. Haslina's group cancelled any word with 'the' and replaced it with '*a*'. The teacher then moved on and checked on Aishah's group's work. The teacher asked them to check on the usage of '*s*' with apostrophe whether to show belonging or not, such as '*it*'s' or '*its tail*'. Aishah's group was quiet and they chose the one with apostrophe '*it*'s' to show belonging. The teacher advised them to check again and said that the answer was wrong. After they finished, the learners wrote their story on a mahjong paper and presented it to the class.

#### II. How does teacher's assistance affect the rural area learners' writing self-efficacy?

Each writer (Learners A, B and C) reacted differently towards the teacher's questioning and discussion during the writing process. Learner A showed a positive development in terms of confidence in writing where she became more confident to write when asked questions by the teacher. On the other hand, Learner B felt a bit uncomfortable to write and was not confident to pursue the task when the teacher kept checking and asking about her writing progress. Similarly, Learner C also felt less confdent to write but only because she was embarrassed and afraid when the teacher asked questions or sat with her to discuss her writing in class. The summary is illustrated below according to the specific categories by Wang and Pape (2007).

# Table 1: Summary of learner A, self-efficacy development (High self-efficacy writer)

Aspects of self-efficacy	Effects (Explanation)
Persistence in accomplishing writing	- Teacher's questions boosted her confidence to elaborate her ideas and encouraged her to write more,
task (s)	- In class, she became active when provoked with questions by teacher and she
	frequently raised her hand even though her answers were wrong or the teacher did not ask her to answer.
Willingness to engage	- Group discussions and teacher's questions made her put more effort into
in language activities	finishing tasks,
	- In class, when the teacher commented on her work, she referred to her friend's answer and compared it with hers. She jotted down notes when other learner gave the correct answer and even tried to mimic the teacher's recital of a text.
Self-awareness of	- She sought teacher's help when she realized she made mistakes,
English proficiency	- From the interview, she admitted that she understood her mistakes more after discussing it with the teacher in class rather than working on her own or with friends.

## Table 2: Summary of learner B self-efficacy development (Average self-efficacy writer)

Aspects of self-efficacy	Effects (Explanation)
Persistence in accomplishing writing task (s)	-She showed no interest in class, constantly day dreaming and she did not respond to teacher's question. Instead she asked her friend to answer questions for her, -In the interview, she admitted that she did not feel comfortable and could not
	speak in English. Thus, it made her unconfident to write as she was quite lost when the teacher asked questions and did not know how to start writing. To her, writing and speaking are two different things.
Willingness to engage	- She asked friends for help to correct her mistakes and admitted never sought
in language activities	teacher's help,
	- In class, she didn't respond to the teacher but would actively respond to friends in group discussions. In the interview, she admitted she felt more confident to carry out a writing activity if conducted with friends. Teacher's questioning only made her feel bashful to engage in the activity.
Self-awareness of	- Teacher commented that she's very weak in writing and had many major
English proficiency	sentence structure errors. Learner B however felt hers is average and could write well if in a group.

## Table 3: Summary of learner c self-efficacy development (low self-efficacy writer)

Aspects of self-efficacy	Effects (Explanation)
Persistence in	- She became afraid and embarrassed when the teacher asked questions. She
accomplishing writing	trembled and produced an unclear voice each time the teacher asked her questions,
task (s)	- She admitted in interview that she was very afraid if the teacher asked her
	anything and as a consequence she forgot all of her ideas,
	- She needed friends to help her give answers and only respond to the teacher if
	her friend checked her answers first. She admitted she felt confident if a friend
	looked at her answer first before responding to teacher.
Willingness to engage	- She didn't stop writing and always referred to dictionary. In group discussions,
in language activities	she worked on her own when her group was quiet by translating her writing from
	Malay to English. She didn't refer to the teacher and admitted that she felt safe
	working that way as she could write more.
Self-awareness of	- In class, she couldn't write even in a group. She told her friends that she could
English proficiency	not translate her writing into English and that she was not good in English. She
	was quiet and lowered her head each time teacher commented on her work.
	- In the interview, she admitted that she could write more and feel more confident
	if the teacher didn't ask questions, and if she was working with someone she was
	close to.

#### Conclusion

The findings show that the three learners were able to seek options and foster their own creativity to produce an effective piece of composition through discussion and questioning processes. Furthermore, in this research, the teacher's assistance in terms of questioning technique was found to be helpful in improving the quality of written drafts. Therefore, teachers should view themselves as facilitators in the writing tasks. They should provide help and assistance to the learners-writers to clarify their ideas in the process of writing. As indicated by the finding, the teacher not only helped the writers to clarify ideas but also to develop their ideas as well. The teacher helped to improve the composition by giving new ideas and different views on the topic. Besides that, the teacher also helped the writers to omit unnecessary statements. Thus, this implies that evaluators of the compositions should not be based only on grammatical and structural accuracy but the emphasis should also be given to the clarity of expressions and ideas as well. In addition, coherence, cohesion and good choice of words should also be parts of an effective composition.

However, questioning techniques may have different effects on writers with low or average self-efficacy. Though teacher's assistance through questioning and discussion could boost the high self-efficacy writers to write more and expand their ideas, low and average self-efficacy writers might not experience the same changes. These writers may prefer to approach writing differently. Therefore, determining the level of assistance in teaching is very important. In other words, some writers may need more assistance than others. Working in groups is also probably suitable as it allows the learners of various language proficiency levels or skills to interact and exchange ideas with one another. Overall, the research shows that teachers need to be aware of the kind of scaffolding that they need to provide for each writer who has a different level of writing self-efficacy as it determines the writer's persistence in completing the task.

#### References

Bandura, A. (1997). Self-Efficacy: The Exercise of Control. New York: W.H. Freeman & Company.

- Bottomley, D., Henk, W., & Melnick, S. (1997/1998). Assessing children's views about as writers using the writer self perception scale. *The Reading Teacher*, 51(4), 286-291.
- Chitravelu, N., Sithamparam, S. & Teh Soo Choon (2005). ELT Methodology: Principles and practice. Shah Alam: Penerbit Fajar Bakti Sdn.Bhd.
- Creswell, J.W. (2008). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (Third edition). New Jersey: Pearson Education International.
- Donovan, C.A. & Smolkin, L.B. (2008). Children's understanding of genre and writing development. In Charles MacArthur, Steve Graham, and Jill Fitzgerald (Eds.). *Handbook of writing research* (pp 131-143). New York: The Guilford Press.
- Englert, C.S., Mariage, T.V & Kailoniie, D. (2008). Tenets of sociocultural theory in writing instruction research. In Charles MacArthur, Steve Graham, and Jill Fitzgerald (Eds.). *Handbook of writing research* (pp 208-221). New York: The Guilford Press.
- Hidi, S & Boscolo, P. (2008). Motivation and writing. In Charles MacArthur, Steve Graham, and Jill Fitzgerald (Eds.). *Handbook of writing research* (pp 144-157). New York: The Guilford Press.
- Lavelle, E., Smith, J. & O'Ryan, L. (2002). The writing approaches of secondary learners. British Journal of Educational Psychology, 72(3), 399-419.
- Linnenbrink, E.A. & Pintrich, P.R. (2003). The role of self-efficacy beliefs in learner engagement and learning in the classroom. *Reading and Writing Quarterly*, 19, 119-137.
- MacArthur C.A, Graham, S. & Fitzgerald, J. (2008). Handbook of Writing Research. New York: The Guilford Press.
- Ministry of Education, Malaysia. (1991). Process writing. *English Language Teaching Journal, Compendium 3*, 1-9.
- Ministry of Education, Malaysia (2008). Pelaporan data keputusan peperiksaan PMR dan PMR 2006-2008.
- Mok Soon Sang (2008). Educational Psychology & Pedagogy: Learner and learning environment. Selangor: Penerbitan Multimedia Sdn. Bhd.
- Najib bimbang penguasaan bahasa Inggeris menurun. (2008). Utusan Malaysia, 16 April, pp.2
- Pajares, F. (2002a). Self-efficacy beliefs in academic contexts: An outline. Retrieved from http://des.emory.edu/mfp/efftalk.html
- Pajares, F. (2002b). Gender and perceived self-efficacy in self-regulated learning. *Theory into Practice*, 41, 116-125.
- Pajares, F. & Johnson, M. (1995). The role of self-efficacy beliefs in the writing performance of entering high school learners: A path analysis. Poster presented at the meeting of the American Educational Research Association, San Francisco: April 18-22.
- Pajares, F & Valiante (2008). Self-efficacy beliefs and motivation in writing development. In Macarthur, C.A, Graham, S., Fitzgerald, J. (Eds.). *Handbook of writing research* (pp158-170). New York: Guilford Press.
- Prior, P. (2008). A sociocultural theory of writing. In Charles MacArthur, Steve Graham, and Jill Fitzgerald (Eds.). *Handbook of writing research* (pp 54-66). New York: The Guilford Press.
- Rahil Mahyuddin, Habibah Elias, Loh Sau Cheong, Muhd Fauzi Muhamad, Nooreen Noordin & Maria Chong Abdullah (2006). The relationship between learners' self-efficacy and their English language achievement. *Jurnal Pendidik dan Pendidikan*, 21, 61-71.
- Samuel, R. & Zaitun Bakar (2008). The effectiveness of 'VELT' in promoting English language communication skills: A case study in Malaysia. International Journal of Education and Development using ICT, 4(3), 1-14. Retrieved from http://ijedict.dec.uwi.edu/viewarticle.php?id=559&layout=html
- Schunk, D.H. (2003). Self-efficacy for reading and writing: Influence of modeling, goal setting, and selfevaluation. *Reading and Writing Quarterly*, 19, 169-172.
- Schunk, D.H. & Zimmerman, B.J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modeling. *Reading and Writing Quarterly*, 23, 2-25.
- Scott, B.J. & Vitale, M.R. (2003). Teaching the writing process to learners with LD. *Intervention in School & Clinic*, 38(4), 220-226.
- Smith, A. (1997). Understanding children's development : A New Zealand Perspective. (3<sup>rd</sup> ed.). New Zealand : Bridget Williams Books Ltd.
- Vygotsky, L.S. (1978). Mind in society. Cambridge, MA: Harvard University Press.
- Wang, C & Pape, S.J. (2007). A probe into three Chinese boys' self-efficacy beliefs learning English as a second language. *Journal of Research in Childhood Education*, 21(4), 364-387.
- Wood, J.M. (2007, October 3). Understanding and computing Cohen Kappa: A Tutorial. University of Texas, El Paso: WebPsychEmpiricist. Retrieved from http://wpe.info/papers\_table.html.