

Epistemological Beliefs: Implications to the Grade 11 Senior High School Students' Academic Performance in English

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Abstract

Personal epistemological beliefs engage students in a sophisticated way of knowing and learning that knowledge acquisition is linked to their academic performance in English. This study investigated the students' epistemological beliefs concerning their academic performance in English. The survey participants were Senior High School Students in one of the public schools in Zamboanga Del Sur for the School Year 2018-2019. Employing the descriptive correlational research design, the study involved 129 students from four sections. Schommer (1990) designed and developed a pilot-tested research instrument for collecting the data under investigation. Descriptive statistics and Pearson r Coefficient were employed. Findings reveal that students' personal epistemological beliefs, such as the source of knowledge, the certainty of knowledge, the structure of knowledge, speed of knowledge acquisition, and innate ability, were significantly correlated to their academic performance in English. This implies that Personal epistemological beliefs contribute to student's academic performance in English subjects. The study, therefore, recommended that English teachers give importance to the students' epistemological beliefs to strengthen their academic performance in English.

Keywords: *Epistemological Beliefs, English Academic Performance, Cognitive*

Introduction

Proficiency in the English language enables students to use the language effectively in real life. Filipino students must be competent in using English to become functional in professional, academic, and social settings. The present senior high school students are now in the 21st century, which demands a high level of English proficiency in their academic performance. In fact, according to Haydon (2010), people with a high level of English proficiency have the advantage and the opportunity in the developing economy.

However, a large percentage of Filipino students are still facing problems with the usage of the English language. According to Luz (2007), Filipinos are regarded as highly literate individuals, but their literacy performance is relatively low. In 2013, the result of the Philippine government survey called FLEMMS or Functional Literacy, Education and Mass Media Survey revealed that rural and urban students have a low literacy rate in English.

Moreover, the study conducted by Hopkins International (2015) shows that Filipino students ranked third in their academic performance in English among the ASEAN countries. Vargas et al. (2010) supported a report by saying that students from public schools suffer from severe intellectual anxiety regarding English language acquisition as it distresses them from being proficient and skillful. This is likely to happen when students have difficulty expressing their thoughts and experience mental block during class discussions, where their ability to use English in writing, speaking, and listening is a significant challenge (Azagra, 2017).

Arguably, personal epistemological belief is paramount in understanding the acquisition, nature, structure, and source of knowledge in students' academic performance in English (Karimi, 2013). The personal epistemological belief is linked to students' cognitive process, which helps them become proficient in English academic performance. Thus,

students who lack proficiency in academic performance in English are believed to have a problem with their cognitive ability.

Along with this contention, personal epistemological belief is integrated into knowledge and knowledge construction (Mansour et al. 2008). The learners' academic development should not be grounded on a simple idea. Instead, it should be connected to epistemological factors that count as knowledge that strongly relates to learners' intellectual capabilities and self-beliefs (Mohammed & El-Habbal, 2013).

This reality is a challenge observed among senior high school students in one of the schools in Zamboanga Del Sur, where the researcher is presently affiliated. Besides, there is growing evidence, as shown in a study conducted by Hofer (2002) and Schommer (1990), which suggests that educators and students need a better understanding of personal epistemological beliefs as contributing factors in English language learning. This study, therefore, intends to investigate the preceding supposition.

Theoretical and Conceptual Framework

This study argues that personal epistemological beliefs significantly contribute to student's academic performance in English. This assumption is supported by the theory of Jean Piaget (1972) on cognitive learning.

This cognitive learning theory postulates that a child develops concrete intellectual ability throughout childhood. Mergel (2000) explicates that cognitive function is based on the intellectual process of a person's behavior. When there are developments in the learners' minds, there are also changes in their behavior. Thus, the learners' cognition is working in acquiring knowledge which results in their academic progress and modified behavior.

Dasilva (2019) states that students acquire more complex knowledge when their cognitive structures mature. Piaget further intones that a student with mature cognition is regarded as an active constructor of knowledge, taking an active role in the learning process (Javier, 2010). The cognitive theory explains the role of matured cognition in learning and how students' internal mental structures collect, organize, store, and retrieve information.

Personal epistemological belief consists of the individual's understanding or knowing the knowledge as the function of cognition. Learners believe that the knowledge and the learning they acquire are not just grounded on a simple source. However, it is related to epistemology that helps them understand the growth of their intellectual ability. Therefore, one's personal epistemological belief is linked to the cognitive skills of students since their ideas and views on understanding knowledge continue to progress along with their intellectual skills (Cano, 2005; Hofer, 2001). Students construct new knowledge from the newly acquired learning and then apply such acquired knowledge to their academic goals (Mason 2000). However, given that academic disciplines are underpinned by different assumptions about what counts as valid knowledge (Becher, 2002), the relations between students' personal epistemological beliefs and their academic achievement may vary across disciplines (Parron, 2002).

Moreover, Schommer-Aikins (2002) explains that personal epistemological belief predicts the ability of students to employ higher-order thinking in academics. Students with more mature or complex beliefs on acquiring knowledge are more likely to think critically and perform proficiently in their academic performance (Dean 2003). Furthermore, students' ideas about knowledge and learning change as their education progresses. Students in their early years at school believe that knowledge is simple and from authority figures, but as they reach a higher level of educational attainment, their view about knowledge acquisition changes as well as critical and more complex thoughts (Francisco 2001).

Hence, personal epistemological beliefs influence students' learning ability while their knowledge acquisition is evolving to higher thinking.

On another note, Schommer's Model (1990) in epistemological belief regarding the five factors of personal epistemologies, namely, the source of knowledge, the certainty of knowledge, the structure of knowledge, the speed of knowledge acquisition, and innate ability are imperative factors that contribute to student's academic performance in English. Thus, the following paragraphs discuss the significance of personal beliefs to the academic performance of senior high school students in English.

The epistemological belief in the source of knowledge describes the foundation and basis for how learners acquire learning. According to Berding (2017), ranges of knowledge exist outside the individual's absolute view of knowledge and inside a person's sophisticated view of knowledge. The source of knowledge ranges from handed down by authority to glean from observation and critical reasoning thinking.

King (2002) stated that the role of the teacher as an authority figure inside the classroom is vital because most students believe that their proficiency in academics depends on the kinds of methods that the teachers use in their discussions. This view is from the absolute view of the students. Moreover, students' acquisition of knowledge evolves to a sophisticated view as their intellectual progress to more complex critical thinking in their academic performance in English.

The certainty of knowledge describes a variety of information that ranges from a naïve view of knowledge as absolute truth to a more sophisticated view that knowledge is tentative and progressing in the students' learning ability. Magolda et al. (2004) explain that students tend to move from absolutist to relativistic understanding of knowledge as they progress through higher education. Also, this belief stands as an integrated construction rather than fragmented or classified information (Magulod, 2016). Knowledge, therefore, is accurate and evolving for students in higher education. It is a blend of acquiring and learning as they work as one component in acquiring the English language through students' cognitive ability.

In addition, the knowledge structure shows the sequence of knowledge from simple information down to complex facts (King, 2017). Furthermore, based on the absolute view, the structure of knowledge consists of isolated elements, which means that there are assumptions in the acquisition of knowledge that are separated from the universal acceptance because of the weak evidence of its existence and from the sophisticated view, knowledge constituted by highly interrelated concepts because of the strong evidence that there is the consistency of higher thinking ideas in the acquisition of learning of the students (Berding, Wittlake & Buschenlange, 2017).

Moreover, students acquire learning in their academic proficiency in the English language from simple attainment of knowledge to complex acquisition as they progress to higher thinking.

The speed of knowledge is an epistemological belief that describes the period of knowledge acquisition, how fast the process of information is, and how long the facilitation of learning halts in the mind of the students. The lack of knowledge is a result of rapid learning that cause by short periods, narrow time, and limited production of ideas from the students. This belief is quickly obtained or perceived as a gradual process (King and Jackson, 2007).

In connection with this, students with knowledge deficiency or slow learners tend to have low-performance proficiency in the English language. In contrast, when the coverage of ideas is comprehensive, the acquired learning is complex and continuous. Therefore, the acquisition of learners in English proficiency is constant yet stable enough to facilitate learning that makes the students proficient in using the Language.

Lastly, innate ability is another epistemological belief in which knowledge acquisition is inherited naturally and based on genetics and grows from time to time (Jackson 2017). The acquisition of knowledge exists in the students' genes, and the procurement of learning is already attached to their personality and behavior. Moreover, students view that knowledge evolves throughout their maturity and grows and develops into more complex construction as it facilitates learning (Dwecks, 2000).

Consequently, the English language proficiency of the learners is naturally progressing to a higher level because language skill is deeply marked since birth in the learners' cognition.

Racca (2016) argued that proficiency in the English language is the basis for success in their academic pursuits. Proficiency in English language skills is composed of reading, writing, speaking, and listening. Students practice the more these language skills, the more effective their critical thinking can be. Thus, they would be more proficient in English (Lasaten, 2016).

However, good attainment in the English language is also determined by the students' epistemological beliefs. Cano (2005) stated that throughout secondary education, epistemological beliefs change, becoming more realistic and complex, and epistemological beliefs influence academic achievement directly and indirectly via students' learning abilities.

This study involved the three components of English academic subjects: Oral Communication, 21st Century Philippines and World literature, and English for Academic and Professional Purposes. These components comprise the overall English academic performance of the students in English.

Proficiency in the English language of senior high school students involves good communication skills, a comprehensive understanding of the context, and good writing skills. The students are guided to become proficient in using the English language. Thus, this 21st century demands to equip every student with expertise in acquiring the Language. Students are encouraged to enhance their ability to speak English through self-practice and improve their knowledge acquisition in the function of their cognitive process (Suelto, 2019).

Therefore, the factors of Personal Epistemological Beliefs and the previously mentioned theories are the paradigms that may contribute to the investigation of this study.

Methods

A descriptive correlation research design was used in this study to examine the relationships between grade eleven students' personal epistemological beliefs and their implication in their academic performance in English. A total of one hundred twenty-nine (129) student participants were chosen from the Grade-11 senior high school in one of the public schools in Zamboanga Del Sur, School Year. 2018-2019. The participants answered the 50 items Epistemological Beliefs

survey questionnaire by Schommer (1990). The data were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation to determine the extent of participants' epistemological beliefs and academic performance in English. Pearson's (r) or the correlation coefficient was used to determine the significant relationship between students' epistemological beliefs and academic performance in English.

Discussions of Results

The personal epistemological beliefs on the source of knowledge in the data reveal a high response with the mean of (M=3.92). This finding implies that students believe knowledge is from an absolute to sophisticated view (Berding, 2017). The students' source of knowledge in learning is manifested from a continuum process. Students are more constructivists and active in attaining knowledge as they progress to higher thinking. Moreover, students acquire knowledge of more complex processes as their cognitive structure matures.

The personal epistemological beliefs on the participants' certainty of knowledge were graded as high with the overall mean of (M=3.76). Students view such knowledge as evolving into higher learning (King, 2007). The student's belief in acquiring knowledge ranges from tentative to unchanging. Students acquire knowledge with hesitation and limitation because of the naïve view, but as their cognitive mature, their belief in knowledge becomes firm and evolves to higher learning.

Range	Interpretation	Personal Epistemological Beliefs									
		Source of Knowledge		Certainty of Knowledge		Structure of Knowledge		Speed of Knowledge Acquisition		Innate Ability	
		F	%	F	%	F	%	F	%	F	%
4.51 – 5.0	Very High										
3.51 – 4.50	High	11	8.53	7	5.43	11	8.53	5	3.88	14	10.85
2.51 – 3.50	Moderate	92	71.32	78	60.47	103	79.84	78	60.47	96	74.42
1.51 – 2.50	Low	26	20.16	43	33.33	15	11.63	45	34.88	18	13.95
1.0 – 1.50	Very Low	0	0.00	1	0.78	0	0.00	1	0.78	1	0.78
		0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		129	100.0	129	100.0	129	100.0	129	100.0	129	100.0
	Overall Mean		3.92		3.76		3.97		3.73		4.01
	Interpretation		High		High		High		High		High
	SD		0.42		0.46		0.40		0.47		0.46

The personal epistemological beliefs on the knowledge structure with the overall mean of (M=3.97) can be inferred that students were rated as high in their view. Jackson (2007) opines that students' interpretations of the structure of knowledge were composed of simple to complex pieces of information. The students understand that their knowledge acquisition ranges from isolated bits to integrated concepts. Hence, the students' exemplary academic performance is based on their complex thoughts and higher attainment of learning.

The personal epistemological beliefs on the speed of knowledge acquisition the data show that students' epistemological belief rated as high with the overall mean of (M=3.73). According to Wood and Kardash (2002), the information and learning absorbed by the students involved the period in acquiring knowledge. Hence, students acquire and understand learning through a gradual and steady process, resulting in proficient academic performance.

The personal epistemological beliefs on innate ability in the data confirm the overall mean of (M=4.01), rated as high. The students believed learning and acquiring knowledge is a born ability (Montgomery, 2009). This implies that students believe that their knowledge and learning are innate. Students were exposed to the idea that their cognitive ability to acquire knowledge originated from birth, and as they matured, their intellectual capacity developed into higher thinking.

		Academic Performance in English							
		Oral Communication		21st Century Philippine and World Literature		English for academic and professional purposes		General Average	
Scale	Description	F	%	F	%	F	%	F	%
90 above	Advance	1	0.78	2	1.55	4	3.10	3	2.33
85-89	Proficient	48	37.21	55	42.64	52	40.31	49	37.98
80-84	Approaching Proficient	60	46.51	54	41.86	59	45.74	59	45.74
75-79	Developing	20	15.50	18	13.95	14	10.85	18	13.95
74 below	Beginning	0	0.00	0	0.00	0	0.00	0	0.00
		129	100.00	129	100.00	129	100.00		
Overall Mean Interpretation		83.1	Approaching Proficient	83.4	Approaching Proficient	83.6	Approaching Proficient	83.4	Approaching Proficient
SD		3.45		3.21		3.31		3.20	

The findings in the overall average of the senior high school students in English mean that students' acquisition of knowledge and learning in English subjects progressed. Senior high school students develop their fundamental knowledge, skills, and core understanding in English subjects with little guidance that transfer understanding through authentic performance task.

Furthermore, senior high school students knew that there were specific standards in English subjects that they needed to achieve and attain to be proficient. Hence, students' continuous intellectual progress may result in improved academic performance in English.

Personal Epistemological Beliefs						
English Academic Performance	Measurement	Source of Knowledge	Certainty of Knowledge	Structure of Knowledge	Speed of Knowledge acquisition	Innate ability
Over all English Academic Performance	Pearson Correlation	.576**	.511**	.588**	.522**	.568**
	Sig. (2-tailed)	.000	.000	.000	.000	.000

** Correlation is significant at the 0.01 level (2-tailed).

Overall, the null hypothesis that no significant relationship exists between the students' epistemological beliefs and their academic performance in English can be rejected. Evidence shows that personal epistemological belief is nonetheless integrated into knowledge and knowledge construction (Mansour et al., 2008; Dasilva, 20190; Karimi, 2013).

Furthermore, the general findings in this study explained that senior high school students understand the nature of knowing their knowledge. The understanding of knowledge is linked to the students' epistemological beliefs, which influenced their academic performance in English. Moreover, students held different beliefs in knowledge but in general, intellectual skills function as one in acquiring learning. According to Schommer (1990), the relationship between students' academic performance and the five personal epistemological beliefs, namely, the source of knowledge, the certainty of knowledge, the structure of knowledge, the speed of knowledge acquisition, and innate ability, are vital concepts that are imperative on students' facilitation of knowledge and learning.

Kardash and Howell (2000) explained that epistemological beliefs are involved in the students' learning and acquisition of knowledge and are also associated with the cognitive process of the mind. Moreover, students' beliefs about knowledge and knowing affect their learning acquisition. Improve learning capacity, academic performance, and the ability to employ higher reasoning. It is essential to understand the relationship of the acquisition of learning to one's personal epistemological beliefs.

This assumption of knowing the knowledge is supported by the cognitive theory of Jean Piaget (1970). The student's cognitive process is liable for acquiring knowledge and facilitating learning.

In a nutshell, the comprehensive acquisition of knowledge and mature learning of the senior high school students in their academic performance in English were grounded in their epistemological beliefs linked to their cognitive process in the brain.

Conclusions

Personal epistemological beliefs of grade eleven senior high students may contribute to the increase in their academic performance in English. The results confirm the theory of Jean Piaget (1970) stating that cognitive functions on how students' internal mental structure, collect, organize, store, and retrieve information. As such, learners with strong epistemological beliefs tend to be proficient in their academic performance in English.

Generally, the study's findings confirm the researcher's assumption that personal epistemological beliefs (Kuhn & Weinstock, 2002) significantly contribute to students' academic performance in English. Moreover, teachers need to be aware that students' understanding of the nature of knowledge and acquisition of learning are grounded on their epistemological beliefs, which are vital in developing their academic performance in English.

Recommendations

Based on the preceding findings and conclusions of the study, the following recommendations were drawn:

1. To the school administrators and academic heads, they may:

- 1.1 Consider the possibility of integrating the presentation of the result of this study about personal epistemological beliefs of the students about their academic performance in English this coming inset training.
- 1.2 consider some insights from the study that effectively enhance the student's academic performance in English.

2. To the English teachers that they may:

- 2.1 Design an effective teaching and learning framework that helps in the enhancement of the cognitive process of the students in order to be proficient in their academic performance in English.
- 2.2. Provide importance to the personal epistemological beliefs of the students and use this to develop the student's proficiency in English and other disciplines.

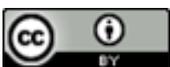
3. To the future researchers that they may:

- 3.1 Explore other variables that can cause significant relationships in the senior high school students' epistemological beliefs.
- 3.2 Conduct further studies on other factors like students' behavior and concentration on their performances to understand their cognitive development.

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