Positive Approach: Learning Style Preferences and Teaching Styles

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Abstract

This study investigates the effectiveness of particular teaching styles, inductive method and deductive method, in stimulating significant improvement on the reading comprehension skills of the third-year college education students in Cebu Technological University-Danao with specific learning style preferences, sequential learners and global learners. The particular Learning Style Preferences (LSP's) observed belongs in the Cognitive Personality domain which is perceived to be permanent and insusceptible to external influences, while the teaching styles used are assumed to address the needs of each of the LSP based on their preferred way of taking in information. It utilizes a quantitative and qualitative approach of data analysis and presentation; the method is quasi-experimental research. The experiment was performed in teaching the Literature 2 – Literatures of the World course. The findings show that both Sequential and Global learners can learn in any of the two teaching methods and can cope despite the methodical incongruences in the teaching-learning situation.

Introduction

Washburn (2014) emphasized the importance of valuing the uniqueness of each student, stressing the necessity of adjustments in teaching to accommodate the concept of individuality. This statement demonstrates the measures that all educators have to undertake as the view of the teaching-learning process is rapidly advancing in the 21st century. Twenty-first century education is primarily student-centered (21ˢᵗ Century Schools), thus, the individuality of learners is given emphasis, and with it, the concept of learning style has continued to attract educators. As Ignacio Estrada stated, "If a child cannot learn the way we teach, maybe we should teach the way they learn."

This study is anchored on the concept of a positive approach between learning styles and teaching styles, indicating that compatibility of both ends would improve students' interest and performance in any subject area and may even result to instructors' satisfaction (Fenton & Watkins, 2012). This is supported by the idea of meshing hypothesis which states that "that an alignment between instruction and learning style will produce optimal learning outcomes" (Adams, 2013). Reid (1995) expressed support to this concept stating that teachers should consider the learning styles of their students in designing instruction, for it would "affect the students' learning potential and their attitudes towards learning" (cited by Gilakjani, 2012)

Meshing hypothesis has been a subject of interest since the 1980's and eventually, the benefits it offers reached the realms of Language Education. Language educators acknowledged and applied meshing hypothesis in classroom instruction. Most of those who did, reported great results in their teaching engagements.

Felder and Henriques believe that mismatches of teaching styles and learning styles in language classrooms bring negative effects on students' performance. It bores and discourages the learners, resulting to their poor performance (1995).

Gilakjani stated that based on several authors' recommendations, language instructors need "to identify the learning styles of the students as well as their teaching styles and then vary their teaching methods to meet the range of learner's preferences"

(2012). He also indicated that, "findings on English learning indicated that in order to be effective ESL/EFL teachers, one should have knowledge about learners' learning needs, individual differences in learning, the required teaching methods, learners' preferences as well as necessary teaching materials required to meet learners' needs in the educational setting."

But lately, experimental studies were conducted which aimed at validating the significance of the meshing hypothesis. Unfortunately, these studies demonstrated opposite results to what the authors' mentioned above claimed.

One is the research of Huxland and Land which found out that the satisfaction level of those students whose learning style is compatible with their instructors and of those who do not display insignificant difference (2000). Brown discussed that the exceptional results of earlier studies on the positive approach were due to the fact that students are exposed to varied teaching methods and approaches, which eventually honed their flexibility to adopt to any learning situations (2003). Renaldi and Gurung even concluded in their study that there is no need for instructors to bother themselves on matching their teaching styles to students' learning styles; instead, they should provide learners with diverse styles to enhance the learning process (2008).

Furthermore, Pashler, Macdaniel, Rohrer, and Bjork presented the most controversial notion. With the findings at hand, they criticized and challenged the validity of learning styles, including the idea of meshing hypothesis. They claimed that there are large numbers of studies related to learning styles, yet, very few ventured towards experimental research that are capable of attesting the validity of learning styles, particularly on instruction. They concluded that, "at present, there is no adequate evidence base to justify incorporating learning-styles assessments into general education practice" (Pashler, McDaniel, Rohrer, & Bjork, 2009). Glenn discussed that Pashler recommends instructors to concentrate on matching their teaching style to the content they are teaching than to the students' learning styles (2009).

However, Pashler does not entirely deny the existence of learning style and the positive effect of meshing hypothesis, but challenges the experts to conduct studies that can validate its significance. The exact challenge is to conduct studies that would display how a teaching style matched to students' learning style helps students to

perform better in class while it harms the other students whose learning style do not match with the teaching style (Brown, 2003).

Continued endeavor to prove the positive and significant effects of meshing hypothesis is brought by the educators' belief on the importance of learning styles – that applying the concept of learning style to instruction would help in the development of the teaching-learning process. In language learning, it is as important for educators to identify and accommodate the learning styles of the students in the classroom (Muniandy, 2013).

In the Philippines, the Department of Education's implementation of the new K to 12 Curriculum (2012) and Commission on Higher Education's Outcomes-Based Education (2014) are two of the few attempts of the government to cope with the changes in the 21st century education. With the change taken by CHED to align with the K to 12 curriculum implementation, the educators and students under the education program are faced with the challenge of adapting the new features of the curricula.

As mandated by CHED in their CMO No. 30 series 2004, graduates of education programs are expected to be competent – having "basic and higher literacy, communication numeracy, critical thinking, learning skills needed for higher learning…" Also, recently, CHED developed the New General Education Curriculum (CMO 20, series 2013), stating the desired outcomes in categories; one of which is the "intellectual competencies" that specifically indicated the need for "higher levels of comprehension (textual, visual, etc.)" Intellectual competencies are vital and are basic to achieving competence in the more complex skills. Hence, all academic institutions in the Philippines are determined at strengthening these basic skills among their students. Cebu Technological University is just one of these institutions set at realizing the outcomes above, amply driven to improve students' academic performances in all areas and to provide better training among education students.

As future educators, the BEED students of the university are expected to develop the aforementioned competence (CMO 20, 2013) through the study of Literature courses. Litetrature develops competence in reading comprehension such as characterization, identifying the theme, identifying conflict, finding cause and effect, etc. These basic skills (Bernardo, 2015) are key to developing higher intellectual skills,

therefore, there is an obvious need and imperative to improve instruction for the said course.

One possible way to achieve it is to apply the concept of a positive approach in designing instruction.

With this, the study assessed the effectiveness of the teaching styles to learners' Learning Style Preferences (LSP) on the reading comprehension skills of the Third Year BEED Major in Content Education students in Cebu Technological University – Danao City Campus.

Specifically, this study finds out:

1. The LSP of students in Class A and Class B.
2. Pretest reading performance of both classes among sequential learners and global learners.
3. Posttest reading performance of both classes among sequential learners and global learners.
4. The significant improvement on the reading comprehension skills of these learners in both classes.
5. The significant difference in the mean gain scores of the sequential and the global learners in both classes.
6. The general comments or feedback about teaching styles by learners in both classes.

Matching the Teacher's Teaching Style to Students' Learning Style Preferences
Learning Style Preferences

The idea of learning style was first introduced by David A. Kolb, a professor of organizational behavior at Case Western Reserve University, in 1960's. Since then, learning style has gained popularity. One of the firsts who created a model of it are the experts Dunn and Dunn in 1979, presenting a model of learning style with 18 elements. The second model developed was Curry's Onion Model in 1983 which presented the concept with four layers: (1) "Instructional Preference" – individual's preferred choice of learning environment; (2) "Social Interaction" – individual's preference for social interaction during learning; (3) "Information Processing Style" – individual's

intellectual approach to the processing of information; and (4) "Cognitive Personality Style" – individual's approach to adapting and assimilating information (Curry, 1983). The first two are considered temporary while the latter two are considered permanent and unique (Cassidy, 2004). Cognitive personality style is identified as a permanent preference for learners since it pertains to an individuals' unique manner of processing information (Markham, 2004). This can be supported by Stronck's study in 1980, claiming that each human brain possesses several unique type of cells "which occur throughout the brain structure".

Subsequently, in 1988, Felder and Silverman formulated a learning style model composed of four domains. In 1991, Keefe described "Learning Style" as a combination of both "student characteristic and instructional strategy"; He explains that "learning style is an indicator of how a student learns and likes to learn" and "instructional strategy informs the cognition, context, and content of learning" (Hood, 1995). In 2001, Fleming introduced VAK (Visual, Auditory, and Kinesthetic) model which later developed to VARK (Visual, Auditory, Reading & Writing, Kinesthetic). One of the latests and comparable to Curry's Onion Model is Felder and Soloman's Index of Learning Styles Preferences (LSP) which determines the learning styles of the students using a 44-item questionnaire. Like Curry's, it indicates 4 different domains: (1) visual or verbal – Instructional Preference, (2) active or reflective – Social Interaction, (3) sensing or intuitive – Information Processing Style, and (4) sequential or global – Cognitive Personality Style (Felder, 2002).

Furthermore, cognitive personality style domain can be classified into two distinct learning styles: (1) sequential learners and (2) global learners.

Sequential learners (SL) are said to learn skills better in a step-by-step, chronological order (Felder & Soloman, 1988). It is believed that SL's prefer inductive method of teaching (Ciaccio, 2004); however, there have been arguments about the compatibility of inductive method to global learners (GL) and its effectiveness to both types of learners. Abraham (1985), indicated that when taking exams, GL's prefer the structure with examples (a distinguishing characteristic of inductive method) (Abraham, 1985). According to Leech in 1994, inductive method is a superior method that works to both types of the learners when teaching receptive skills (Paradowski, 2009). SL's

are even observed to be good at remembering names or details (Fleming, 2016), to excel when exposed to a carefully elaborated set of printed materials (Ediger & Rao, 2007) and to prefer multiple choice type of test (Educational Tools, 2016). Apart from these strengths, SL's weaknesses is caused by their analytic characteristic – being particular about the details that they get stuck in one detail before moving on to the next (Fleming, 2016).

Unlike the first learning style, global learners (GL) perform better when first presented with the big idea (Felder & Henriques, 1995), and have slight tolerance to details (Ciaccio, 2004). GL's prefer deductive method (Ciaccio, 2004), which refutes Abraham's argument stating that deductive approach is matched to sequential learners' LSP. Thornbury (1999) also believes that SL's can improve even in deductive method because they still get to practice the skills in examining and analyzing details upon verifying general ideas (Paradowski, 2009). Another is that deductive method is characterized by less explaining involved in the teaching-learning process which appeals to both learners (Paradowski, 2009). GL's are observed to learn and perform best when exposed to visual materials (Ediger & Rao, 2007) and when given opportunity to experiment (Ciaccio, 2004). These characteristics influence the global learners' preference to open-ended questions over multiple choice exams (Educational Tools, 2016). The weakness of GL's is their strong drive to pursue the general idea of contexts while disregarding important details that come out in tests (Fleming, 2016). Another problem is impatience to long passages (Fleming, 2016) which is present in reading comprehension tests, and limited interest that is only stimulated by contexts related to real-life experiences (Bell, 1997) which is hardly considered in exams.

Considering all these and the natural academic structure used in universities, SL's would likely excel than GL's. In 1999 Kimmell stated that SL's make up most of the school population, estimating the number of GL's to be at 30% (Ciaccio, 2004). However, this proportion of SL's and GL's is contested with a recent study conducted among 21 BSc Education students in 2016, which found out that most of the subjects are GL's and strongly prefer such learning style (Elayyan, 2016).

Teaching Styles

In the recent years, with the advent of learning style models and debates regarding its existence, teaching style has also been defined and classified in a number of ways.

First, teaching style may pertain to the three aspects of the teaching practice: (1) teaching strategies; (2) classroom management; and (3) teaching approach (Gill, 2013).

The teaching style based on teaching strategies is classified into: (1) Authority style that is teacher-centered, characterized by pure lecture; (2) Demonstrator style which is authority in nature, only that it values the importance of demonstration and practice of skills; (3) Facilitator style that encourages learners' critical thinking skills through discovery; (4) Delegator style which is best for laboratory related subjects, still highlighting the importance of self-learning; and (5) Hybrid style that pertains to the blending of the teacher's style with the learners and curriculum's needs.

Next, the teaching styles according to classroom management are Expert, Formal authority, Personal model, Facilitator, and Delegator. Expert style is comparable to a coach's style which establishes authority and expertise on a particular subject area. The Formal authority style pertains to the authoritative way of managing the class which is characterized by less student interaction. Personal model style applies the blended style which is characterized by a teacher blending his teaching style with the learners' need and the environments' situation. Facilitator style pertains to involving learners to activities and projects for better learning. Delegator style refers promotes the social way of learning through the delegation of group activities and tasks.

Finally, the teaching styles based on teaching approach are classified into Empty vessel, Active vs. Passive, Knowledge vs. Information, Interactive classrooms, and Constructivists teaching methods. But for the purpose of this research, the teaching style is defined based on the teacher's teaching method. Several teaching methods have existed today, but all of these emerged from the two classical methods of teaching, particularly, Inductive and Deductive methods of teaching.

The Inductive method of teaching follows five steps: (1) Preparation, (2) Presentation, (3) Abstraction, (4) Generalization, and (5) Evaluation, while the Deductive method of teaching follows the four steps (1) Motivation, (2) Generalization,

(3) Verification, and (4) Evaluation.

Matching Learning Style Preferences and Teaching Styles

From the two permanent learning styles (Sequential and Global), Felder and Soloman's Index of LSP's describes specific teaching approaches that are compatible with the learning styles of SL's and GL's. These are as how they stated it in their material:

"Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections, and then suddenly 'getting it'."

"Sequential learners tend to follow logical stepwise paths in finding solutions; global learners may be able to solve complex problems quickly or put things together in novel ways once they have grasped the big picture, but they may have difficulty explaining how they did it [16]."

Based on the descriptions on how SL's and GL's perceive information, the methods of teaching that can be positively linked to both are the inductive and deductive methods of teaching. It is assumed that each method corresponds to the need of each type of learner: inductive method for SL's and deductive method for GL's. The positive approach is expected to produce desired responses and performance of the students, specifically improving their reading comprehension skills.

Methodology

This study utilizes a quantitative and qualitative approach of data analysis and presentation. The method is quasi-experimental research.

Research Subjects

The third year BEED (Bachelor of Elementary Education) major in Content Education students of Cebu Technological University – Danao Campus are the subjects of this study. The university applies a block sectioning system and the researcher will therefore choose two (2) day session sections of the said degree and level for the experiment. There are two sections of BEED Program in the university for the day

session, namely, BEED 3A and BEED 3B; each has a population of 30 students. BEED 3A has 3 males and 27 females while BEED 2B has 2 males and 28 females. These students were taking their LIT 2 – Literatures of the World course in the second semester.

Research Environment

The research was conducted in Cebu Technological University-Danao, Room 8, which is capable of holding classes with a maximum of 40 students and is equipped with 40 armchairs. The students were divided into two groups according to their learning style preference. On each group, the chairs will be arranged with four columns having five rows each.
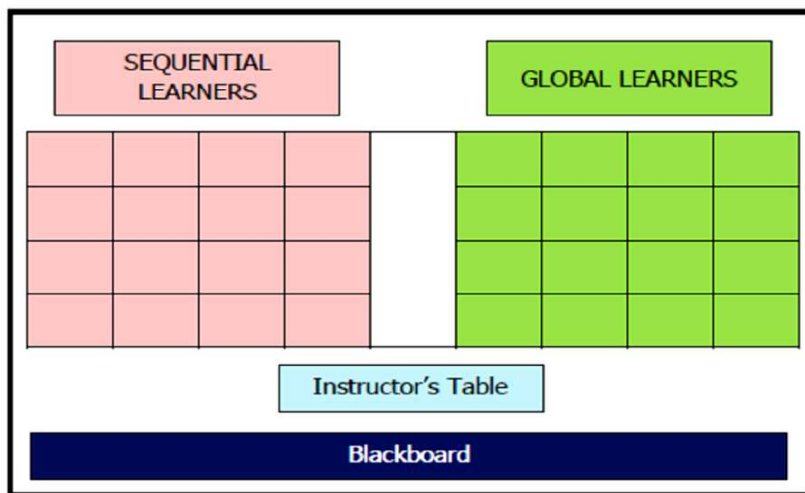

FIGURE 1. CLASSROOM SEAT PLAN USED FOR THE EXPERIMENT

Research Instruments

First, the *reading comprehension skills test* served as a pretest to determine the current level of comprehension skills of each student at the start of classes of the first semester, 2015-2016. After implementing the 18 lessons, the test is again given to the students as a posttest. This was used to evaluate the improved or unimproved reading comprehension skills of the students after the Teaching Style used in teaching certain LSP's.

Second, the *44-item Index of Learning Styles Questionnaire of Felder and*

Soloman was distributed to the students. The computations for identifying the LSP of the students was done automatically through the available website provided by the authors mentioned above. The answered questionnaires were encoded in this website and the result were printed individually.

Third, *lesson plans* were created for each LSP. The Inductive method of teaching was utilized to teach both types of learners in BEED 3A while the Deductive method of teaching was utilized to teach both types of learners in BEED 3B.

Fourth, a Focused Group Discussion was conducted to the learners using a *Focused Group Interview Questionnaire* at the end of the experiment to elicit responses from the learners regarding the teaching style utilized in their class throughout the semester.

Data Gathering Procedure

In the first phase of the study, the researcher conducted the reading comprehension skills test (Summative Test in Literature 2) to the subjects. The students had the entire one and a half hour to answer the pretest. With this, the reading comprehension skills level of the students in these two sections were identified and recorded.

On the following meeting, the students were given the 44-item Index of LSP Questionnaire to answer. After which, the answers were encoded to the free website of Felder and Soloman for LSP identification. The results provided were then sorted out and recorded accordingly. This served as a reference for identifying the students' cognitive LSP's.

The sequential and global learners in the sections BEED 3A and BEED 3B were classified. Inductive method was utilized in teaching both types of learners in BEED 3A, while Deductive Method was used in BEED 3B.

At the end of experiment, the researcher conducted again the reading comprehension skills exam as the posttest after the experiment.

After evaluating the results of the pretest and posttest scores of the students, the researcher then assessed the group of learners that has significantly improved their reading comprehension skills level with the teaching style used in their class.
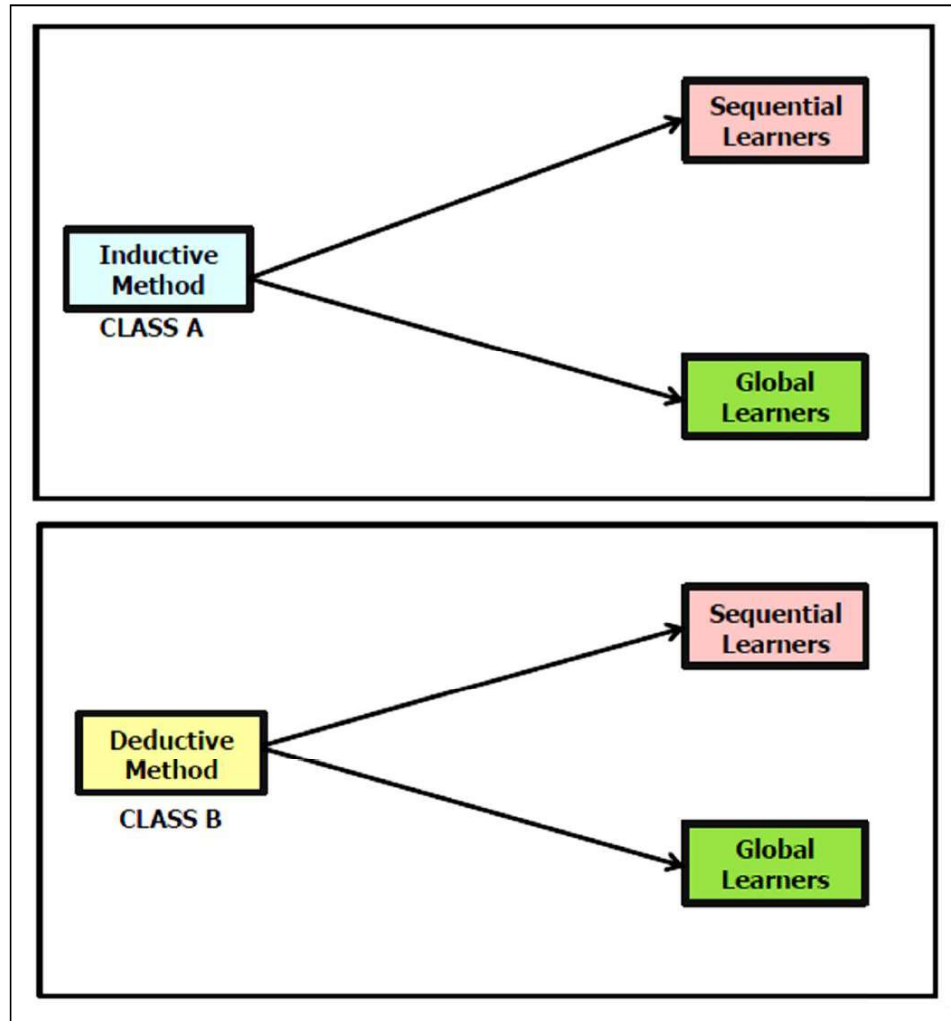
FIGURE 2. ILLUSTRATION OF THE EXPERIMENT IMPLEMENTATION PROCESS

Statistical Treatment of the Data

The data were collected and organized in order to be statistically presentable. For problems of testing the hypotheses, the Mean Whitney U-test and Wilcoxon Signed-rank test were used in the study. These statistical tools are available using the SPSS (Statistical Package for Social Sciences) as statistical software for appropriate treatments of the gathered data.

Presentation, Analysis and Interpretation of Data

The findings presented provide the answers to the problems in tabular and textual form. In particular, these findings present the pretest and posttest scores of students with different Learning Style Preferences (Sequential and Global Learners) identified in each of the two sections where the instructor applies different set of Teaching Styles (Inductive and Deductive Methods). Also, this provides analyses regarding the improvement in the Reading Comprehension Skills of the students with different LSPs coexisting in a room exposed to a particular Teaching Style. With this, a positive match of a particular LSP and Teaching Style and the LSP that elicits a more improved set of Reading Comprehension Skills in Literature 2 is identified.

This study sets 50% level of performance to indicate proficiency in Reading Comprehension Skills for the Literature 2 course. This means that in a 100-item test, the student should get 50 correct answers. This is based on the grading system used in CTU for courses with board examination.

The Learning Style Preferences of Education Students

Fig. 3 shows the number of Sequential and Global Learners present in two of the sample classes, particularly the Inductive and Deductive Class.

FIGURE 3. THE LEARNING STYLE PREFERENCE OF EDUCATION
STUDENTS IN THE INDUCTIVE AND DEDUCTIVE CLASSES

The first group of students in the Inductive Class has 13 Sequential Learners and 17 Global Learners, while the second group of students in the Deductive Class has an equal number of 15 for both Sequential and Global Learners. In total, there are 28 Sequential Learners and 32 Global Learners, which shows that there are more GL's than SL's in this particular education program of the university.

The data presented indicates that the 21st century learners have established a strong preference on the global learning style. This learning style prefers instant presentation of information and integration into real-life situations as stated by Felder and Henriques (Felder & Henriques, 1995). The data showing more GL's in the university contradicts Kimmell's statement that only an estimate of 30% of the schools' population are GL's (Ciaccio, 2004). However, the result confirms the Elayyan's study which determined that most of the students in the experiment strongly prefer a global learning style than a sequential one (Elayyan, 2016). The differing statements and result demonstrate that at present, there is a change in the trend of Cognitive Personality LSP among learners in universities, which could have been influenced by the high technology trend of the 21st century. Considering the idea that the 21st century technology has influenced the students' cognitive personality LSP, this insinuates the idea that this domain of learning style preference is not totally permanent as experts suggest. It was argued that cognitive personality learning styles are permanent learning styles and is not subject to environment's influence. The study of Stronck (1980) in psychology indicated, that each human brain has a unique permanent structure. However, the result suggests otherwise, since changes in the environment influenced how learners prefer to take in information. Yet, it is still possible that the cognitive personality LSP is partly permanent in the sense that technology is now accessible to very young children, influencing Cognitive Personality LSP at the young age, and once established, the shift to the other LSP could be extremely difficult or impossible.

The Pretest Reading Performance of the SL's and GL's in Inductive and Deductive Classes

Table 1 displays the Pretest Reading Performance of Sequential and Global Learners, who at the time of conducting this exam, are yet to be exposed to different Teaching Styles. The Pretest evaluates the current status of Reading Comprehension

Skills of the students in Literature, particularly in poetry and short story.

TABLE 1. THE PRETEST READING PERFORMANCE OF THE SEQUENTIAL AND
GLOBAL LEARNERS IN INDUCTIVE AND DEDUCTIVE CLASSES

Class	Learning Style Preferences	Total Number of items	50% Passing Criterion	Average Scores	Computed t-value	P-value	Description
Inductive Class	Sequential	40	20	12.923	-7.785	0.000	Below average
	Global	40	20	12.765	-9.977	0.000	Below average
Deductive Class	Sequential	40	20	13.333	-10.000	0.000	Below average
	Global	40	20	14.267	-6.901	0.000	Below average

$a = 0.05$

As shown in the description column of the table, the P-values of both sequential and global learners in each of the Inductive and Deductive classes only ranged from 0.000-0.001; all are significantly different from the passing criterion set and are rated as Below Average.

The result of the pretest for the Literature 2 course clearly shows the equal and comparable performances of all the learners regardless of their learning style preference. The learning style preference of the learners did not affect their level of performance in the Pretest exam, despite the fact that these learners went through a sequential structure of educational system, where sequential learners alone are expected to excel. This implies the idea that all the learners have inadequate reading comprehension skills needed to engage in the Literature 2 course. In spite of the fact that these learners have been introduced to basic reading comprehension skills in their Literature 1, they are still in the process of developing these skills and are inept of the more complex skills included in the Literature 2. Skills are acquired through experience, as supported by the concept of Behaviorism, and the lack of exposure or practice on these set of skills influenced much the result of the exam. This disproves the idea that sequential learners tend to excel in schools because of the fact that classroom instruction and exams are basically done in a sequential manner Ciaccio, 2004).

C. The Posttest Reading Performance of the SL's and GL's in Inductive and Deductive Classes

Table 2 displays the Posttest Reading Comprehension Performance of Sequential and Global Learners who are exposed to different Teaching Styles within the series of 18 lessons. The Posttest evaluates the Reading Comprehension Skills acquired by the students in Literature 2 after the experiment. The test is still the same assessment given in the start of the experiment, which evaluates the Reading Comprehension Skills of these learners in both poetry and short story.

TABLE 2. THE POSTTEST READING PERFORMANCE OF THE SEQUENTIAL AND GLOBAL LEARNERS IN INDUCTIVE AND DEDUCTIVE CLASSES

Class	Learning Style Preferences	Total Number of items	50% Passing Criterion	Average Scores	Computed t-value	P-value	Description
Inductive Class	Sequential	40	20	18.769	-2.363	0.036	Below average
	Global	40	20	19.059	-1.423	0.174	Average
Deductive Class	Sequential	40	20	18.867	-1.151	0.269	Average
	Global	40	20	17.133	-3.208	0.006	Below average

a = 0.05

As shown in the last column, the Sequential Learners in the Inductive Class and Global Learners in the Deductive Class only attained a Below Average level in the posttest reading performance. This means that these learners failed to develop their full potential and to acquire proficiency in the different reading comprehension skills required in the Literature 2 course. Contrastingly, the Global Learners in the Inductive Class and the Sequential Learners in the Deductive Class achieved an Average level in the posttest. This shows that these learners have successfully acquired the set level of proficiency in the different reading comprehension skills of the course.

The result shows that in the Inductive Class, the Global Learners performed better in the Posttest compared to the Sequential Learners who are supposedly assumed as the positive

match to the teaching style used. As suggested by Felder and Henriques, sequential learners prefer learning information from the tiny bits of details up to the formulation of the big idea (Felder & Henriques, 1995) . Considering this description of sequential learners and the structure of the inductive method of teaching, it can be inferred that they are the positive match; this is the same argument of Sharon Kimmell (Ciaccio, 2004). However, the result of the study states otherwise. The factor that obviously influenced the result are the global learners' particular characteristics: (1) they can tolerate seemingly unorganized or unrelated information, then point out the big idea; and (2) they prefer relating information to real life experiences or examples, providing them an opportunity to compare these different contexts and find similarities (Felder & Henriques, 1995). These characteristics are also the strengths of the procedure used in the Inductive Class, which could have contributed to the global learners' better performance despite these variables' opposing manner of taking in and presenting information. Global Learners are more concerned with the big picture of the lesson, which could have held their interest or attention up to the generalization part of the lesson. Throughout the process, they get a chance to observe similarities between the literature taken up and the real life experiences provided as examples in the Inductive class. Meanwhile, the sequential learners exposed to inductive class seem to be less motivated because they are more interested about the details and can even function without total understanding of a course material (Felder, 2007). This means that these learners oftentimes overlook the big picture of literatures as they focus on specifics and fail to hold their interest up to the generalization part of the procedure used in the Inductive class. With it, the skill on getting the main idea of the context is ignored, which is a disadvantage to this group of sequential learners compared to those sequential learners exposed in the deductive class who get the total package of the skills taught.

On the other hand, in the Deductive Class, the Sequential Learners have performed better than the Global Learners who are presumed as the positive match to this type of Teaching Style. Global learners prefer to take in information by understanding first the big idea of literatures before going through the details of the context (Felder, 2002). Noting the preference of Global learners in taking information and the structure of the procedure used in the Deductive Class, it can be concluded that these two are a perfect match for a positive approach in teaching, which will eventually lead to the optimum performance of the learners. However, the result of the experiment laid out a different result. The sequential learners seem to find the

method used in the deductive class more attractive, considering the fact that they still get to practice the skills intended to be learned in the verification part of the deductive teaching procedure. These learners learn linearly and aim to understand the details before they get the big picture (Felder & Henriques, 1995). When they are presented with the general idea after the preparation part of the deductive class, they feel the need to fill in the missing parts that make up the general idea. These learners then become motivated to pay attention to the later parts of the lesson, enhancing their skills in the process. Meanwhile, the Global Learners in the Deductive Class develop their skill of identifying the main idea of the literature at the earlier part of the story, guided with the questions about real life, to which they can compare ideas with. With the general idea grasped in the early part of the procedure, the global learners' interests are instantly withdrawn from further engaging in analyzing the complex details of the context. This contributed to the poor development of other reading comprehension skills focused on the analysis of details.

The conflicting results of the study from what is presumed about the positive match of Teaching Styles and LSP's is supported by an earlier statement of Thornburry in 1999, though it only specifically points out to language learning (Paradowski, 2009): "It is suggested that inductive approach may cater and be more effective for holistic learners, who learn best by exposure to language in meaningful contexts, but not analytic ones, who form and test hypotheses and extract rules from examples. The deductive approach is particularly appropriate for adult learners whose learning style and expectations predispose them to a more analytical and reflective approach to language learning." Another simple idea laid out by this result supports Newton's second law of motion in science and life, where opposite poles really do attract and create a positive match.

The Total Pretest and Posttest Difference in the Reading Comprehension Skills of Education Students

Table 3 presents the progress in the Reading Comprehension skills of Education students based on the difference in the Pretest and Posttest Performance of each LSP group in both Inductive and Deductive Classes. The results will ascertain whether a specific teaching style will enhance a particular learning style preference while harming the other.

TABLE 3.   THE TOTAL PRETEST AND POSTTEST DIFFERENCE IN THE READING

COMPREHENSION SKILLS OF EDUCATION STUDENTS

Class	Learning Style Preferences	Test	Mean Score	Computed t-value	P-value	Remark
Inductive Class	Sequential Learners	Pretest	12.923	4.818	0.000	Significantly improved
		Posttest	18.769			
	Global Learners	Pretest	12.765	6.346	0.000	Significantly improved
		Posttest	19.059			
Deductive Class	Sequential Learners	Pretest	13.333	3.981	0.001	Significantly improved
		Posttest	18.867			
	Global Learners	Pretest	14.267	2.910	0.011	Significantly improved
		Posttest	17.133			

a = 0.05

The performance of the sequential learners exposed to inductive and deductive classes shows significant improvement based on the group's pretest and posttest difference. The same is observed on the performance of the group of GL's. This means that after being exposed to a particular teaching style, the learners have acquired and enhanced the required reading comprehension skills: for poetry – (1) identifying the figures of speech, (2) identifying the speaker in the poem, (3) drawing out the meaning of poems, (4) describing tone and mood of the poem, (5) describing the form and characteristics of a poem, and (6) interpreting images in a poem; and for short story – (1) explaining values in a story, (2) identifying the point of view used, (3) interpreting symbols in short stories, (4) interpreting imageries in short stories, (5) evaluating characters, (6) evaluating the conflicts/issues illustrated, and (7) Foreshadowing events in the short story. The learners have developed well though not exceptionally in the proces.

The result shows that both the SL's and GL's can learn well regardless of the teaching style to which they are exposed. In both Inductive and Deductive Classes, the groups of learners representing the two different Cognitive Personality LSP's have successfully coped and acquired the complex reading comprehension skills despite the inconveniences brought about by the instruction procedure used. This contradicts the idea about the need to mesh teaching style and LSP, (also known as positive approach),

to effectively enhance the academic performance of the learners (Fenton & Watkins, 2012). The result refutes the need of a positive approach to achieve the desired improved performance of the students. Aside from the teaching style used, one factor that could have strongly influenced the students' performance result is their cultural background. Filipinos see education as a means of uplifting their family from poverty. Given this, Filipino students asserts the significance of education that they are driven to perform at their best in class, regardless of the challenges presented in the classroom setting.

The Mean Gain Difference in the Reading Comprehension Skills of the BEED Students in the Inductive and Deductive Classes

Table 4 displays the mean gain difference in the Reading Comprehension Skills between the 2 groups of SL's and the 2 groups of GL's in the Inductive and Deductive Classes. It elaborates the performance of the SL's and GL's exposed to the different teaching styles based on the groups' Pretest and Posttest scores in Literature 2.

TABLE 4. The Mean Gain Difference in the Reading Comprehension Skills of the Education Students in the Inductive and Deductive Classes

Class	Tests	SEQUENTIAL LEARNERS				GLOBAL LEARNERS			
		Mean Score	Mean Difference	Computed t-value	P-value	Mean Score	Mean Difference	Computed t-value	P-value
Inductive Class	Pretest	12.923	5.846	0.170	0.867 Not Significantly Different	12.765	6.294	2.452	0.020 Significantly Different
	Posttest	18.769				19.059			
Deductive Class	Pretest	13.333	5.533			14.267	2.867		
	Posttest	18.867				17.133			

a = 0.05

As shown in the table above, the mean gain difference between the groups of SL's in the Inductive and Deductive Classes is not significantly different; it means that the group SL's from the different classes has equally performed well in achieving the enhanced and standard level of performance in reading comprehension. However, the mean gain difference between the groups of GL's from the Inductive and Deductive Classes presents the opposite result. This shows that the GL's in the Deductive class have failed to reach the level of enhanced performance achieved by the Global learners in the Inductive class. The teaching style applied

in the Deductive class inflicted a negative effect on the Global learners and affected the improvement of their reading comprehension at the set standard of performance.

To further elaborate, the result shows that the SL's from the Deductive Class have performed comparably well with the SL's assigned in the Inductive Class. On the other hand, the performance of the group of GL's in the Inductive class have surprisingly performed better compared to the group of GL's in the Deductive Class. The GL's in the Deductive class have performed poorly and failed to achieve the set standard level of reading comprehension.

The mean difference of the sequential and global learners assigned to the Inductive Class shows that both groups have performed well compared to their counterparts assigned in the Deductive Class. It therefore shows that the Inductive method works better on both learners compared to Deductive method, and that it is a superior teaching method which works well on all types of learners in improving their reading comprehension skills. This confirms the argument that inductive method is considered a superior method that works to both sequential and global learners when it comes to teaching receptive skills such as listening and reading (Paradowski, 2009). Aside from that, it is also evident that Sequential Learners perform equally well in both Inductive and Deductive Classes which shows that SL's are in fact supreme learners with their ability to excel in any teaching instruction used compared to the GL's in the Inductive and Deductive Classes whose mean differences show a significant gap in their performances. The global learners' performace shows that they cannot easily adjust to any teaching instruction. Also, this data shows that the Deductive method is only limited to enhancing one particular group of learners – the Sequential learners alone.

The Students' Positive Comments about the Teacher's Teaching Style

Table 5 presents the general comments of the SL's and GL's about the Teaching Style to which they are exposed. The responses generally point out the aspects of the teaching style which each learner considers helpful in supporting the learning of the reading comprehension skills necessary for the Literature 2 course.

As displayed in Table 5, the groups of SL's in the Inductive and Deductive Classes indicated how stimulation engaged them effectively in class discussion. Also, the learners preferred the tasks related to examining and analyzing details during classes. Distinctly, the SL's exposed in the Inductive Class acknowledge the

significance of the organization of the lesson to better understand the literature discussed. Unlike the group exposed to inductive method, the SL's exposed to deductive method recognize the technique of asking questions as an influential factor to learning the skills, as each question regarding the elements of literature build up the verification of the main idea.

Similar to SL's, the GL's exposed in the Inductive and Deductive Classes point out the role of stimulation in effectively engaging them to every discussion. Also, both groups of GL's significantly identified the identifying of the main idea as their favorite part, especially that they are challenged to formulate it. Differently, the GL's in the Deductive Class emphasized the importance of having an opportunity to practice the skill objectives. Lastly, both groups considered the positive effect of the the visual aids used.

TABLE 5. The Students' Positive Comments about the Teacher's Teaching Style

INDUCTIVE CLASS			
Sequential Learners		**Global Learners**	
Comments	No. of students	Comments	No. of Students
Stimulation: The students emphasized their preference for the motivation that is related to the literature to be discussed.	2	**Stimulation:** The students expressed their preference on the strategy used, where the motivation is very much related from their experiences.	8
Organization: The learners preferred the manner of unlocking first the difficult terms before having the discussion of the story; they also like the way that the teacher asks questions as they unlock the meanings of the story's important elements bit by bit; lastly, they prefer it when the lesson is discussed thoroughly and generalization is formulated afterwards.	2	**Tasks:** The learners liked the parts of the lesson where they get to formulate the general idea and when they get to apply or practice the skills learned in the lesson; they also liked it when the teacher challenges them to state the main idea after the discussion.	6
Tasks: The learners liked the abstraction part of the lesson where they get to analyze the elements of the poems and short stories; they also preferred it when the lesson is first discussed thoroughly and generalization is formulated after.	9	**Instructional Materials:** The students liked the use of background pictures in the PowerPoint presentation which somehow give them clues about the general idea of the lesson.	3

DEDUCTIVE CLASS			
Sequential Learners		**Global Learners**	
Comments	No. of students	Comments	No. of students
Stimulation: The students expressed their preference on the strategy used where the motivation is very much related to the topic.	4	**Stimulation:** The students liked the motivation part where the questions are very much related to the topic, giving them clues for the formulation of main idea.	7
Technique: The learners liked the way of asking them some questions as they unlock the meaning of the different symbols.	2	**Tasks:** The learners liked the part where they get to practice the skills they learned; they also liked the discussion of the main idea which gives them the entire picture of the literature.	4
Tasks: The students preferred the discussion of the short story elements right after reading the literature; they also liked the part where they try to find and interpret the symbols; lastly, they liked the part of analyzing the elements of the literature.	9	**Instructional Materials:** The learners liked the use of visual aid which is used to present the guide questions for the formulation of the main idea.	4

The comments of the separate group of SL's in the inductive and deductive classes significantly indicates their desire to learn if given a task that focuses on the details of the literary contexts discussed. This affirms that SL's preferably learn concepts by understanding first bits of information (Felder & Henriqes, 1995). Also, the consolidated comments of the SL's in the Inductive Class support the concept that they learn best when engaged in a systematic manner of teaching (Ciaccio, 2004). In addition, the SL's in the Deductive Class appreciate the teacher's technique of asking questions, engaging them to examine details in order to understand the lesson.

On the other hand, the separate groups of GL's in both Classes point out the significance of the learning tasks provided in understanding better every literature discussed. The groups liked to formulate the main idea of the literary pieces. In addition, the GL's in the Deductive Class appreciate the part where they get to perform and practice the skills themselves. These comments support the idea that GL's perform better when first presented with the big picture (Felder and Henriques, 1995) and the idea that these learners get interested when given opportunities to practice or demonstrate (Ciaccio, 2004). Aside from these, it confirms that GL's learn best when exposed to visual materials (Felder & Henriques, 1995).

Conclusion

The students belonging to different cognitive personality LSP's, specifically the SL's and SL's, have coping abilities for learning when exposed to varying teaching styles. Although they have teaching style preferences, they show coping abilities in the interest of learning. Thus, in teaching students with diverse LSP's, teachers are encouraged to use differentiated instruction tailored not according to the learners' LSP's, but on how the content can be best taught. With it, students's coping abilities is further enhanced, producing more competent and independent learners. Aside from this, instructors could also focus on the following basic aspects of teaching instruction to ensure better performance:

> **Stimulating activities.** Regardless of the LSP's of the students, each becomes interested in the class discussion once effectively motivated; it is a preparation stage which encourages the learners to engage and take part in the teaching-learning process.

Learning Tasks. Sequential and global learners perform equally well in varied teaching methods as long as learners are provided with opportunities to practice the skills and take part in the formulation of ideas, involving everyone in the process

Instructional and Visual Materials. Both sequential and global learners' performances are effectively reinforced when exposed to instructional materials that satisfy and aids vision.

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