

Abstracts of Researches on Basic Education

COGNITIVE ACADEMIC LANGUAGE PROFICIENCY THRESHOLD LEVEL SKILLS IN WRITTEN FILIPINO AND CROSS-LINGUAL TRANSFER

(A Doctoral Dissertation)

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The main purpose of this investigation was to determine the academic language functions that constitute threshold level proficiency in written Filipino among Grades 4, 5, and 6 public school students. At the same time, it tried to determine at which grade levels the students differ in their academic language abilities. Lastly, it looked into the relationship between acquisition of the first language (L1) Cognitive Academic Language Proficiency (CALP) threshold level skills and cross-lingual transfer.

A total of 60 nine-to-13-year old Grade 4, 5, and 6 students from two average performing public schools in Quezon City served as subjects of the study. Each grade level was represented by a mix of twenty heterogeneously grouped boys and girls whose first language was Filipino.

Research data were obtained through a two-part researcher-made CALP writing test in Filipino and English. The quantitative analysis of the written samples was done using an adopted marking scheme that facilitated the identification of the compositions that reached the set threshold level proficiency cut-off scores. On the other hand, the qualitative analysis that determines the academic language skills constituting threshold levels was done through a researcher-devised checklist. The Pearson Product-Moment Coefficient of Correlation was to test the relationship between L1 and L2 academic language proficiency.

The data analysis revealed that while all the three grade level demonstrated some degree of ability to express cause and effect relations, compare, contrast, and classify, they encountered difficulties in defining and describing as well as following rules of basic grammar, syntax, lexicon, and mechanics.

Findings also showed that expressing cause and effect relations and comparing and contrasting are the academic language functions that constitute threshold level skills in academic Filipino. Reaching the desired level of proficiency also meant ability to achieve text unity through the statement of main and support ideas and text cohesion through the use of appropriate and indirect links such as keywords, synonyms, and pronouns.

In addition, the study indicated that CALP threshold level in written Filipino is approximately reached at the initial phase of grade 6 or five years after

students have undergone four months schooling. Finally, significant correlation between L1 CALP and cross-lingual transfer of skills was established by the study.

On the basis of its findings and conclusions, the study proposed a review, and if warranted, a re-structuring of the desired learning competencies as well as the scope and sequence for Filipino and English. Corollary to this, the production of learning materials and developing language proficiency and higher order thinking skills were deemed necessary. With the current stress being put into the teaching and development of lifetime higher order thinking skills, the re-thinking of both pre-service and in-service training for language teachers was recommended. Lastly, the study also suggested the validation of the current study by explaining its scope through the inclusion of Cebuano and Ilocano to complement the study on the use of the vernacular in teaching initial literary skills as well as other variables that may have an impact on an individual's linguistic development.

DEVELOPMENT OF A PROBLEM SOLVING ABILITY TEST IN HIGH SCHOOL CHEMISTRY

(A Master's Thesis)

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This study aimed to develop a test that would measure the problem solving ability of high school chemistry students. The reliability of the instrument was determined and the construct validity of the Chemistry Problem Solving Ability Test (CPSAT) was established in terms of the five factors of chemistry problem solving ability under study, namely, problem comprehension, understanding associated chemical concepts, understanding relationships among chemical concepts, applying specific problem solving strategies, and using required mathematics.

The study combined quantitative and qualitative approaches to research by using a descriptive, correctional design. The following null hypotheses were tested at .05 level of significance: there is no relationship between student CPSAT and GALT score, and the student CPSAT score is not a significant predictor of the final grade in chemistry.

The Group Assessment of Logical Thinking Test (GALT), developed by Roadrangka, Yeany and Padilla, was used as criterion in determining the concurrent validity of the CPSAT. Both tests were administered to third year sections comprising 118 students in Marikina High School.

The student score in the CPSAT was related to the chemistry final grade by using linear regression to determine the predictive validity of the problem solving ability test.

