This study was undertaken to identify subject matter difficulties besetting students in acquiring the specific learning competencies prescribed by the SEDP-DECS through the application of mathematics laws, rules, steps, theorems, and corollaries found in four major textbooks currently in use at 18 centrally situated high schools in Laoag City and Ilocos Norte. It also sought to determine the extent the teachers utilized the drill and review either singly or together in helping their students through their difficulties; and ascertaining how effective these remedial techniques are in enhancing the learning process.

More specifically, the study strived to find any significant differences in the perception of the teachers grouped according to their sex, age, civil status, type of school where they teach, highest educational attainment, major field of specialization, total teaching experience, mathematics teaching experience, and number of training/seminars attended, on: (1) the extent of subject matter difficulties met by students particularly in applying laws, rules, steps, theorems and corollaries; (2) extent the drill and review were utilized either separately or synergistically by the teachers to help their students out of the difficulties; (3) extent of effectiveness of the drill/review in the teaching-learning of third year high school mathematics. This research also aimed to find any significant relationship between: (1) the effectiveness of the drill/review and the personal and academic attributes of the teachers; (2) extent of subject matter difficulty of lessons to students and effectiveness of the drill/review as remedial measures.

This research gathered data and information using a questionnaire accomplished by 30 teachers of third year high school mathematics in seven public schools and 11 private schools all situated in business centers of Laoag City and Ilocos Norte. One-hundred thirty-two items of the questionnaire were formulated by the researcher by thoroughly going through the
specific learning competencies prescribed by the SEDP-DECS and four most popularly used textbooks in the province and subsequently constructing items under each of 10 learning units.

The obtained data were tabulated and computerized using the Microstat computer package. Although the ordinal scale was used in the instrument, the statistical treatment of data was based on the assumption that the respondents were reacting to the instrument as if it were an interval scale. Dichotomized classification of variables was adopted for sex (male, female), civil status (single, married), type of school (public, private), major field of specialization (mathematics, non-mathematics), and highest educational attainment (AB/BSE, BSE with MA units/MA). Other variables like age, number of trainings/seminars attended, mathematics teaching experience, and total teaching experience not subject to dichotomized classification were arbitrarily grouped according to a determined scheme.

The men was precomputed to determine the numerical and descriptive ratings given to: (1) extent to which the lessons post difficulty among students in applying laws, rules, steps, theorems, and corollaries along 132 specific learning tasks; (2) extent to which the drill and review were utilized by the teachers to help their students through the subject matter; and (3) perceived effectiveness of such remedial measures in the teaching-learning process.

The Analysis of Variance (ANOVA) was performed by the computer to test the significance of differences between means of ratings made by the teachers on extent of lesson difficulty, extent of drill/review utilization, and effectiveness of drill/review, as relative to variables—age, teaching experience, mathematics teaching experience, and number of trainings/seminars attended by teachers. It was likewise used to determine if there exists a linear relationship between: (1) extent of difficulty of lessons and extent of drill/review utilization; (2) extent of drill/review utilization and their effectiveness; and (3) extent of lesson difficulty and effectiveness of the drill/review techniques.

The Point-Biserial correlation coefficient was also computed to correlate the effectiveness of the drill/review with each of the variables—sex, civil status, type of school, major field of specialization, and highest educational attainment of the teachers.

The t-test for the significance of the coefficient of correlation, r, was used to test the significance of the Pearson r and Point-
Biserial correlation coefficients. The probability level used throughout in rejecting the null hypotheses is 0.05 or 5 percent.

The subject matter posed moderate difficulty among students in learning how to apply laws, rules, steps, theorems. And corollaries throughout 10 units of the third year high school mathematics curriculum must be moderate. This indicates that the curriculum must be moderately difficult, that the students did not find much difficulty in learning their mathematics lessons, and that the teachers must correspondingly have met moderate difficulty in teaching them.

The teachers used the drill and review either separately or jointly to a high degree in helping the students through their learning difficulties in the units on variation, radical expressions, radicals, products and factors, exponents, quadratic relation, sequence, and quadratic equations; and moderately in the units on similarity, and fractiles and percentile. The over-all utilization of the drill/review is high. It is still possible to heighten the use of the drill/review to a very high extent throughout the course to effect an expected improvement of their effectiveness from high to a very high level.

The teachers utilized the drill/review in overcoming the lesson difficulties of their students through the 10 units of the curriculum to a high degree of effectiveness. The techniques were perceived most effective in teaching the unit on exponents, rational expressions, products and factors, quadratic equation, and variation. The outcome of teaching should ideally be to a very high extent. The fact that the teachers could not push the effectiveness of the drill/review to the optimum implies there is still something missing in the educational practice of teachers.

Surprisingly, the research disclosed the absence of any statistically significant difference in the perception of the teachers grouped according to their sex, age, civil status, type of school where they teach, highest educational attainment, major field of specialization, total teaching experience, mathematics teaching experience, and number of trainings/seminars attended, on (1) the extent of subject matter difficulty particularly on the application of laws, rules, steps, theorems and corollaries; (2) extent the drill and review were utilized either separately or synergistically by the teachers to help their students out of difficult learning tasks; and (3) extent of effectiveness of the drill/review in the teaching-learning of third year high school mathematics.

The statistical insignificance of the mean differences of the teachers’ perceptions implies that any random sample irrespective of the personal and academic attributes of the
samples would yield essentially similar perceptions as those gathered in the present study. The teachers, regardless of their studied personal and academic attributes, are likely competent in evaluating the extent of subject matter difficulties, the extent of drill/review utilization, and the extent of effectiveness of such remedial teaching techniques.

This research also discloses the absence of a significant colinearity or relation between: (1) the effectiveness of the drill/review and the personal and academic attributes of the teachers; (2) extent of difficulty of lessons to students and extent of drill/review utilization by teachers; and (3) extent of difficulty of lessons to students and effectiveness of the drill/review as remedial measures. There is a significant positive relationship at the 0.05 probability level between extent of drill/review and extent of their effectiveness. It is inferred that in view of this significant positive relation, a very high utilization of the drill/review by the teachers would correspond to a very high degree of effectiveness in teaching third year high school mathematics.

In view of the findings, conclusions and implications of this study, the following recommendations are advanced: (1) the teachers should enhance the utilization of the drill/review from a high to a very high extent to utilize their full potentialities as teaching remedial measures; (2) the teachers should devote more time helping the students through their learning difficulties in lessons that are apparently difficult as disclosed by this study; (3) the teachers should prudently and judiciously apportion time among the ten units of the curriculum by devoting more attention to units that pose difficulty; (4) further research is suggested to be undertaken along high school mathematics teaching perhaps on finding causes and other remedial measures to offset lesson difficulties and teaching hindrances alike; and finally (5) all school administrators especially the top and middle level executives should ideally be reoriented to pay more attention to the problems of mathematics education not only in the schools studied, but in other schools as well.

Tender loving care, concern, sympathy and attention to all concerns of mathematics education may yet uplift the enthusiasm of teachers to strive for academic excellence. With this idealized scenario, the present researcher closes this study with obsessive enthusiasm.