



**THE LEARNING STYLES IN THE FOUR BASIC TOOL
SUBJECTS OF THE INTERMEDIATE PUPILS
IN THE DIVISION OF CAVITE**

**A Dissertation
Presented to
the Faculty of the Graduate School of Education, Arts and
Sciences
De La Salle University – Dasmariñas
Dasmariñas, Cavite**

**In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
Major in Educational Management**

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March 2003

12 JUN 2003



ABSTRACT

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Address: Dasmariñas, Cavite
Title: **The Learning Styles in the Four Basic
Tool Subjects of the Intermediate Pupils
in the Division of Cavite**
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Degree : Doctor of Education
Major : Educational Management
Date Started : June 2002
Date Completed: March 2003

STATEMENT OF THE PROBLEM

This study aimed to determine the learning styles in the four basic tool subjects of the intermediate pupils in the Division of Cavite.

Specifically, it answered the following questions:

1. What is the profile of the intermediate pupils according to grade level, gender, academic performance, and intelligence quotient?
2. What are the learning styles of the intermediate pupils in each learning area when grouped according to grade level, gender, academic performance, and intelligence quotient?



3. Are there significant differences in the learning styles in each learning area when grouped according to grade level, gender, academic performance, and intelligence quotient?

4. What are the learning styles of the intermediate pupils in the four basic tool subjects such as English, Filipino, Science and Health and Mathematics?

5. What appropriate teaching strategies could be suggested for each basic tool subject to address the learning styles?

SCOPE AND COVERAGE

This study involved the public school intermediate pupils in the Division of Cavite. Twenty per cent of the pupils from the selected central schools of the division with the highest enrolment in the four unit areas which are north, east, west and south composed the respondents of the study. There were 1322 grade V and 1268 grade VI pupils involved in the study.

METHODOLOGY

This study applied the descriptive research design supported with documentary analysis. Learning style inventories (LSI) in the four basic tool subjects were prepared by the researcher and validated by knowledgeable persons in each learning area. The LSI were administered to the intermediate pupils in the selected districts of the



division. Documents of pupils as to the grades for the second grading period in each learning area for the school year 2002-2003 and the result of the OLMAT tests were also used. The pupils' learning style profiles were then tabulated, tallied and interpreted. The data were analyzed through the use of frequency distribution, percentage, Chi-square and Cramer's V test of relationship.

MAJOR FINDINGS:

1. Profile of the Intermediate Pupils

There were 1322 grade V and 1268 grade VI pupils or a total of 2590. Out of this total population, 1123 or 43.36 per cent were male and 1467 or 56.64 per cent were female.

As to academic performance, in English, there were 189 or 7.30 per cent who were superior, 778 or 30.04 per cent above average, 1134 or 43.78 per cent average, 466 or 17.99 per cent below average, and 23 or .89 per cent poor. In Filipino, there were 253 or 9.77 per cent who were superior, 969 or 37.41 per cent above average, 1103 or 42.59 per cent average, 247 or 9.54 per cent below average, and 18 or .69 per cent poor. In Science and Health, there were 179 or 6.91 per cent who were superior, 710 or 27.41 per cent above average, 1180 or 45.56 per cent average, 497 or 19.19 per cent below average, and 24 or .93 per cent poor. In Mathematics, there were 220 or 8.49 percent who were



superior, 743 or 28.69 per cent above average, 1036 or 40.00 per cent average, 539 or 20.81 per cent below average, and 52 or 2.01 per cent poor. As to intelligence quotient, there were 224 or 8.65 per cent who were superior, 644 or 24.87 per cent above average, 1486 or 57.37 per cent average, 209 or 8.07 per cent below average, and 27 or 1.04 per cent poor.

2. Learning Styles of the Intermediate Pupils

As to grade level, in English, there were visual (496 or 37.52 per cent), analytic (707 or 53.48 per cent), and introvert (756 or 57.19 per cent) grade V learners. In Filipino, there were auditory (621 or 46.97 per cent), analytic (902 or 68.23 per cent) and introvert (688 or 52.04 per cent) learners. In Science and Health, there were kinesthetic (424 or 32.07 per cent), analytic (905 or 68.46 per cent) and extrovert (755 or 57.11 per cent) learners. In Mathematics, there were visual (387 or 29.27 per cent), analytic (1023 or 77.38 per cent) and extrovert (684 or 51.74 per cent) learners. Among the grade six pupils, there were also visual (426 or 33.60 per cent), analytic (622 or 49.05 per cent), and introvert (665 or 52.45 per cent) learners in English. In Filipino, there were auditory (670 or 52.84 per cent), analytic (799 or 63.01 per cent) and introvert (644 or 50.79 per cent) learners. In Science and Health, there were kinesthetic (405 or 31.94 per cent), analytic (861 or 67.90



per cent) and extrovert (751 or 59.23 per cent) learners. In Mathematics, there were auditory (398 or 31.39 per cent), analytic (976 or 76.97 per cent) and extrovert (606 or 47.79 per cent).

As to gender, in English, male pupils were visual (369 or 32.86 per cent), analytic (587 or 52.27 per cent) and introvert (566 or 50.40 per cent) learners while females were also visual (553 or 37.70 per cent), analytic (734 or 50.03 per cent) and introvert (861 or 58.69 per cent). In Filipino, male pupils were auditory (561 or 49.96 per cent), analytic (758 or 67.50 per cent) and introvert (550 or 48.98 per cent) while the female pupils were also auditory (730 or 49.76 per cent), analytic (956 or 65.16 per cent) and introvert (769 or 52.42 per cent) learners. In Science and Health, male pupils were kinesthetic (337 or 30.00 per cent), analytic (748 or 66.61 per cent) and extrovert (645 or 57.44 per cent) while the female were kinesthetic (492 or 33.54 per cent), analytic (1018 or 69.39 per cent) and extrovert (861 or 58.69 per cent) learners. In Mathematics, male pupils were auditory (350 or 31.17 per cent), analytic (821 or 73.11 per cent) and extrovert (605 or 53.87 per cent) while female pupils were auditory (427 or 29.11 per cent), analytic (1178 or 80.30 per cent) and introvert (720 or 49.08 per cent) learners.



In English, pupils in all levels of academic performance were either visual (922 or 35.60 per cent), analytic (1329 or 51.31 per cent), and introvert (1421 or 54.86 per cent) learners. In Filipino, they were generally auditory (1291 or 49.85 per cent), and analytic (1701 or 65.68 per cent), however as to personality patterns, the superior (135 or 53.36 per cent out of 253) were extrovert and the above average (482 or 49.74 per cent), average (566 or 51.31 per cent), below average (163 or 65.99 per cent), and poor (eight or 44.44 per cent) academic performers were introverts. In Science and Health, they were kinesthetic (829 or 32.01 per cent), analytic (1766 or 68.19 per cent), and extrovert (1506 or 58.15 per cent). However, in Mathematics, the superior (77 or 35.00 per cent), above average (232 or 31.23 per cent), and poor (25 or 48.08 per cent) were tactile learners while the average (331 or 31.95 per cent) and below average (180 or 33.39 per cent) were auditory learners. Nevertheless, pupils in all levels of academic performance were analytic (1999 or 77.18 per cent) and extrovert (1290 or 49.81 per cent) learners.

As to IQ, in English, pupils with different IQ levels were visual learners except the below average (62 or 29.60 per cent out of 209) group who were auditory. They were all analytic except those with poor IQ (14 or 51.85 per cent) who were global. While the superior (123 or



54.91 per cent), above average (363 or 56.37 per cent), and average (827 or 55.65 per cent) were introvert, the below average (100 or 47.85 per cent) and the poor (13 or 48.15 per cent) IQ were extrovert. In Filipino, pupils in all IQ levels were either auditory (1291 or 49.85 per cent out of 2590), or analytic (1701 or 65.68 per cent). However as to personality patterns, the superior (137 or 61.16 per cent), and above average (318 or 49.38 per cent) were extrovert, while the average (815 or 54.85 per cent), below average (114 or 54.65 per cent) and poor (18 or 66.70 per cent) in IQ were introverts. In Science and Health, pupils with different IQ levels were kinesthetic except the poor (10 or 37.04 per cent) who were auditory. They were all analytic learners (1766 or 68.18 per cent) as to information processing. Likewise, they were extrovert learners (1495 or 57.72 per cent) except the poor (13 or 48.15 per cent) who were introverts. In Mathematics, pupils with superior (68 or 30.36 per cent), average (454 or 30.55 per cent) and below average (70 or 33.49 per cent) IQ were auditory; the above average (186 or 28.88 per cent) IQ were visual; and those with poor IQ (nine or 33.43 per cent) were tactile. Pupils in all levels of IQ were analytic (1999 or 77.18 per cent) as to information processing while they were all extroverted as to personality patterns except the above average (308 or 47.83 per cent) who were introverted.



3. Significant Differences of Learning Styles when Grouped as to Grade Level, Gender, Academic Performance and IQ.

When grouped according to grade level, significant differences were noted in Filipino (12.08) and Science and Health (13.69) as to perceptual modalities, since the Chi-square values were higher than the tabular value of 7.815 at the degree of freedom of 3 and alpha 0.05. Significant differences also existed in Filipino (42.48) and Mathematics (23.23) as to information processing and also in Mathematics (15.95) as to personality patterns based on the tabular value of 5.991 at 2 degree of freedom and at alpha 0.05.

When grouped according to gender, significant differences were noted in English (18.88) as to perceptual modalities. This was substantiated by the 7.815 tabular Chi-square value at 3 degree of freedom and 0.05 level of significance. As to information processing, significant differences were noted in Filipino (14.64) and Mathematics (18.87); and as to personality patterns, same finding in English (17.98), Filipino (6.42) and Mathematics (13.24) was noted. These were due to the comparison of the tabular value of 5.991 at 2 degree of freedom and 0.05 level of significance.

Based on academic performance, significant differences as to perceptual modalities were noted in English (42.59), Science and



Health (37.84) and Mathematics (54.55). These were compared to the tabular Chi-square value of 21.206 at 12 degree of freedom and at alpha 0.05. Significant differences of academic performance as to information processing and personality patterns were noted in all the learning areas.

Based on IQ, there were significant differences in three learning areas: English (36.38), Filipino (32.49), and Science and Health (35.73) since the computed Chi-square value exceeded the tabular value of 21.026 at 12 degree of freedom and alpha 0.05. As to information processing, significant differences were noted only in Science and Health (39.64) and Mathematics (29.19); and as to personality patterns, significant differences were noted in all the learning areas; English (18.53), Filipino (42.11), Science and Health (77.65) and Mathematics (80.58). The computed Chi-square values were greater than the tabular Chi-square value of 15.507 at 8 degree of freedom at 0.05 level of significance.

4. Learning Styles in the Four Basic Tool Subjects

In English, the 2590 intermediate pupils were predominantly visual (922 or 32.59 per cent), analytic (1329 or 51.31 per cent), and introvert (1421 or 54.86 per cent) learners. In Filipino, they were auditory (1291 or 49.85 per cent), analytic (1701 or 65.68 per cent), and



introvert (1332 or 51.43 per cent) learners. In Science and Health, generally, pupils were kinesthetic (829 or 32.01 per cent), analytic (1766 or 68.18 per cent), and extrovert (1506 or 58.15 per cent) learners. While in Mathematics, intermediate pupils were generally auditory (777 or 30.00 per cent), analytic (1999 or 77.18 per cent) and extrovert (1290 or 49.81 per cent) learners.

5. Suggested Teaching Strategies to Address the Learning Styles

There were sixteen (16) combinations of learning styles identified in this study. They were the (a) auditory, global, introvert (AGI), (b) auditory, global, extrovert (AGE), (c) auditory, analytic, introvert (AAI), (d) auditory, analytic and extrovert (AAE), (e) visual, global, introvert (VGI), (f) visual, global, extrovert (VGE), (g) visual, analytic, introvert (VAI), (h) visual, analytic, extrovert (VAE), (i) tactile, global, introvert (TGI), (j) tactile, global, extrovert (TGE), (k) tactile, analytic, introvert (TAI), (l) tactile, analytic, extrovert (TAE), (m) kinesthetic, global, introvert (KGI), (n) kinesthetic, global, extrovert (KGE), (o) kinesthetic, analytic, introvert (KAI), and (p) kinesthetic, analytic, extrovert (KAE).

Suggested teaching strategies for each combination of learning styles in each learning area and sample prototype lesson plans were included in this study.



CONCLUSIONS:

1. There were more grade V than grade VI pupils; and female pupils outnumbered the male. Generally, pupils were average in their academic performance in the four learning areas as well as in intelligence quotient.

2. The identified learning styles of the intermediate pupils in each learning area predominated even if grouped according to grade level, gender, academic performance and intelligence quotient. However, slight difference on learning styles occurred in Mathematics.

3. Generally, significant differences existed on the learning styles of the intermediate pupils when grouped as to grade level, gender, academic performance and intelligence quotient.

4. The learning styles of the intermediate pupils when taken as a whole were generally visual, analytic, and introvert (VAI) in English; auditory, analytic and introvert (AAI) in Filipino; kinesthetic, analytic and extrovert learners (KAE) in Science and Health; and auditory, analytic and extrovert (AAE) in Mathematics. Intermediate pupils in the Division of Cavite have varied learning styles in the four basic tool subjects.

Some findings of the study were inconsistent with the results of the previous researches. This might be due to the possibilities that



pupils could not determine their preference because of lack of previous experience in using learning style activities other than the lecture method.

5. Teaching strategies that were considered appropriate to the various learning styles of pupils were utilized. These teaching strategies have been planned and developed based on information from related literature in order to suit the combination of learning styles of particular groups of pupils.

RECOMMENDATIONS:

Based on the findings and conclusions of the study, the following recommendations are hereby proposed:

1. The teachers should always consider the grade level, age, academic performance and intelligence quotient of the pupils when teaching to be able to respond to their diverse learning needs.

2. To achieve better performance, to empower the pupils on learning on how to learn and to be functionally literate, the teachers should consider the learning styles of the pupils in English, Filipino, Science and Health and Mathematics. Students should be introduced to new and difficult lessons with the use of their preferred learning modalities. Teachers should provide choices or varied activities to respond to unique learners.



3. Since significant differences existed among the learning styles when pupils were grouped as to grade level, gender, academic performance, and intelligence quotient, teaching styles should adjust learning styles considering the different variables.

4. Teaching strategies should adapt to the diverse learning styles of the pupils. It is further recommended that more activities appropriate for the visual learners should be emphasized in the teaching of English. In Filipino, more audio aids should be provided. In Science and Health, the teachers should strengthen the application of the Practical Work Approach (PWA). Since the pupils have different learning styles, the teaching of Mathematics should make use of strategies that are appropriate to all groups of learners. The teachers should develop different teaching ways to suit each individual style. It is also recommended that groupings of pupils be based on their learning style and learners be handled appropriately based on their unique characteristics. Further, there is a need to reduce class size to make the delivery of the lessons more effective. Moreover, teachers should be properly trained in handling pupils with varied learning styles.

5. Finally, further studies might be conducted to find out if the suggested teaching strategies would suit identified learning styles of the pupils.