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## **IQ and Academic Performance of Grade III Pupils: Input to the Development of Strategic Intervention Materials**

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### **ABSTRACT:**

*This research examines if a relationship exists between intelligence and academic achievement of 51 grade three pupils of Don Mariano Marcos Memorial State University- South La Union Campus- Elementary Laboratory School and if there exists underachievers. Descriptive research design was used to gauge their IQ scores and their performance in the different academic subjects. The study indicated that aspects of intelligence were strongly related to academic achievement through the processing using Pearson-Moment Correlation. The findings further reveal that there exists underachiever on the respondents. Furthermore, Strategic Intervention Materials (SIMs) were developed to enhance the level of competence of the grade three pupils and for addressing the underachievers of the class.*

**Keywords:** *intelligence quotient, academic performance, underachievers, strategic intervention materials, elementary grades*

### **INTRODUCTION**

Education plays an important role in the progress and development of any nation. It is a vital weapon for life. Taking into account the gigantic role of education, the institutions of learning must be able to raise the intellectual climate of the country because quality of education will predetermine the quality of life of the general society

Luistro (2010) cited that Philippine education is in a chronic illness because the problems that beset the system now have been in existence for closer to a century. Official statistics of the Department Education on the access of education, for school years, 2003-2004 to 2007-2008, revealed that net participation rate at the elementary level averaged 85% while that of the secondary level had the average net participation rate of 60%. Thus, despite free public basic education at this level, more than one out of 10 elementary youth remain out of school. The Philippines is one of the ten countries that has regressed with respect to achieving 95% net enrolment in primary education and one of four countries that has regressed with respect to having children who enter grade 1 completing the level of elementary school.

Furthermore, Luistro (2010) added that the problem of quality education is mirrored by a number of indicators, including the earlier dismal cohort survival rate, lack of preparedness of students to undertake formal or the next level of schooling, the deficient qualifications of teachers, and the imprecision and glaring mistakes in instructional materials and textbooks. He also attributed the low achievement scores in the achievement tests of students to the quality of teachers.

However, the Philippine educational system is also sensitive to the aspiration of attaining a better quality of life for all Filipinos. To help attain this dream, the system needs to provide excellence in the various fields of discipline in terms of skills and knowledge necessary to make an individual become productive so he can propel the country's self-sustaining economy into a level of competition with its neighbors. The world offers great opportunities for advancement. It requires a relevant, dynamic education, a large pool of scientific and mathematical expertise and functional literacy in English (Meinardus, 2003).

In a world of turbulent changes, there is a need for a new vision and paradigm of higher education calling for major changes in policies, practices, deliverables and affinity with neighboring and international institutions. To envision these, it is imperative to re-engineer curricula using more focused and appropriate methods so as to go beyond rote memorization of courses and relate innovative instructive and didactical method.

The 21st-century educational institutions stand in dire need of a paradigm shift calling for a revolutionary and fresh approach. The paradigm shift requires fundamental changes in 3Ps: persons, process, and products. The persons (i.e. teachers) must adapt to the new age, adjusting the processes of education, in order to create the Products (i.e. new human resources (Ricafort, 2010).

In the Philippines, Elementary education provides basic education to pupils aged 7-12. The elementary course comprises six years.

Generally, the mission of basic education is to facilitate pupils to gain a basic preparation for a productive citizenry. The foremost goals of basic education are: (1) to provide knowledge and develop skills, attitudes and values essential to the children's personal growth and essential for existing in and contributing to a mounting and varying milieu; (2) to provide learning experiences aimed at increasing the children's consciousness of and receptiveness to the demands of the world, and to prepare them for constructive and effective involvement; (3) to support and strengthen the children's familiarity of, recognition with, and love for the country and the populace to which they fit in; (4) to promote work experiences aimed at increasing and enhancing the children's direction to the world of vocation and ingenuity, and to put them in order for an honest and gainful work. (Bilbao, 2006)

Grade three pupils, being the transition grade in the elementary are also pressured to meet the desired expectation from the program implementers. In the Elementary Laboratory School of the College of Education of Don Mariano Marcos Memorial State University, South La Union Campus, Agoo, La Union Grade 3 pupils are trained to be developed in their totality as learners. However, it cannot be denied that there are still some non-performing pupils due to a heterogeneous group of Grade 3 with two sections.

In the measures of proficiency, the National Achievement Test serves as a national assessment of the competencies of students in the elementary and high school level. The NAT, however, had been posting disappointing results over the last six years in Math, Science, and English (Department of Education, 2008). These findings do not only hold true to public elementary and high schools but to the laboratory schools all over the country as well. Such problem is also a concern of the laboratory schools since many of their pupils especially the slow ones show difficulty mastering the learning competencies in a grade level. With such, intelligence has been considered as the most important cognitive factor that explains variations in achievement scores.

According to Deary, et. al. (2007), the principal end of evaluating the predictive validity of intelligence is an educational achievement. The focus of research along with the gestation of intelligence was the assessment of intelligence for over a hundred years. However, it cannot push through assessment if there is no precision about the meaning of intelligence. According to Sternberg (2003), Spearman and Thurstone define intelligence as what intelligence tests measure. Therefore, there are almost as many measures of intelligence as there are definitions. Furthermore, according to Urbina (2011), there is switching of terms like IQ tests and intelligence tests in which are dissimilar.

One of the best predictors of life outcomes like job performance, academic success, and training is on standardized intelligence tests based on g (Jensen, 1998; Snow & Yalow, 1982; Rolfhus & Ackerman, 1999). This statement is supported by the study of Gottfredson (2005) that strong predictor of achievement is general intelligence factor, g.

Realizing the adverse effect of this, hence, the researchers have come to pursue this study. This will present a detail on underachievers- students who exhibit a severe discrepancy (inconsistency) between expected achievement (measured by standardized achievement scores) and actual achievement (measured by class grades and teachers evaluation), in grade 3. With this research, it will help in the promotion and enhancement of the underachievers, this research will fill in the gap of underachievers to those with good standing pupils in grade 3.

## **OBJECTIVES**

The study aimed to determine the relationship between IQ and academic performance of Grade III Pupils, as the basis in developing strategic intervention materials (SIM) for underachievers.

Specifically, it sought to give data on the following objectives:

1. Determine the profile of the Grade III pupils as to:
  - a. IQ; and
  - b. academic performance
2. Determine the significant relationship between the IQ and academic performance of the pupils; and
3. Develop Strategic Intervention Materials (SIM) based on the results of the study for the underachievers.

## **METHODOLOGY**

This study made use of the descriptive research design to grade three students of the Elementary Laboratory School of Don Mariano Marcos Memorial State University- South La Union Campus as the respondents. There is 51 grade three students enrolled where 25 are boys and 26 are girls during the Academic Year 2016-2017. Total enumeration is employed.

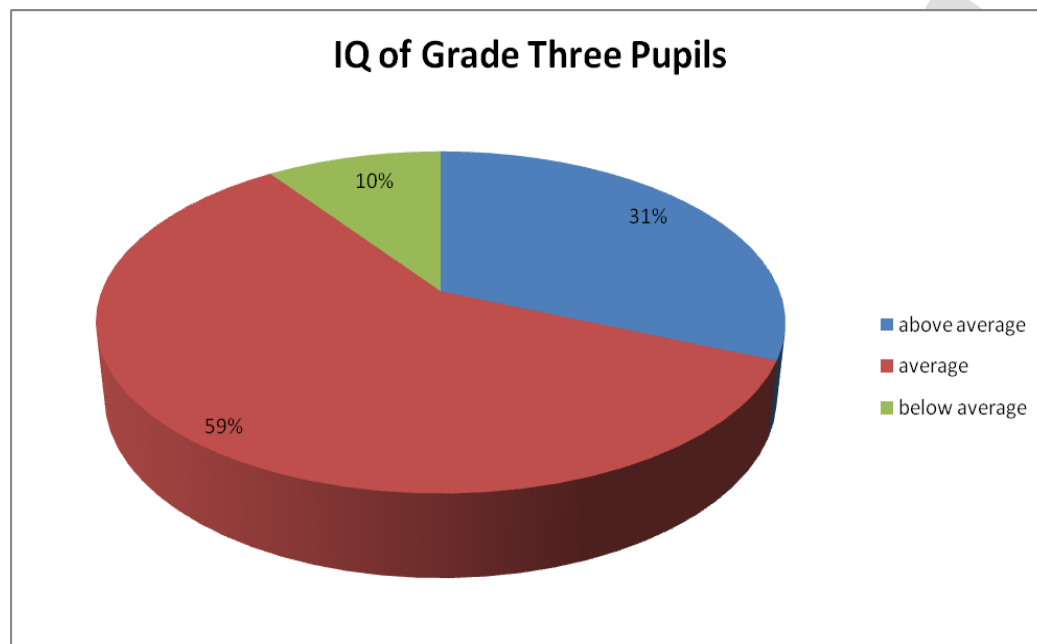
The instruments used to gather pertinent data in the study are the assessment instrument on IQ which was conducted by the authorized psychometrician of the Guidance Office of the University; and the grades of the pupils from the different academic subjects accessed from

the Form 138 from the advisers. Frequency count, percent, and mean were used as common statistical tools.

The Pearson r-moment of correlation was employed to determine the significant relationship in the IQ of the pupils and their academic performance using Statistical Package for Social Sciences (SPSS) version 20.

## RESULTS AND DISCUSSION

Figure 1. Profile of the Respondents in Terms of their IQ



**SD= 26.95**

**Mean= 62.36**

Legend: 77 and above - Above Average  
23–76.99 - Average  
22.99 and below- Below Average

Source: DMMMSU-SLUC Guidance Office

Figure 1 summarizes the profile of the respondents in terms of their Intelligence Quotient. It can be seen that majority of the pupils has an average IQ, 31 % of them has above average IQ while 10 % of the respondents are below average with their IQ. A possible explanation for this result is because these pupils passed the entrance test conducted by the ELS for incoming Grade one pupils where IQ test is a factor in determining the qualifiers for Grade one. While the mean indicates average IQ with 62.36, the standard deviation (26.95) of their IQ signifies that they have dispersed categories of their IQ because of high standard deviation. It means that there were also few pupils who were below average.

Table 1. Profile of the Respondents in Terms of their First Grading Grades in the Different Subjects

| Subjects                   | Weighted Mean | Descriptive Rating |
|----------------------------|---------------|--------------------|
| Mother Tongue              | 82.73         | Satisfactory       |
| Filipino                   | 88.31         | Very Satisfactory  |
| English                    | 84.49         | Satisfactory       |
| Science                    | 84.45         | Satisfactory       |
| Math                       | 86.80         | Very Satisfactory  |
| Araling Panlipunan         | 87.24         | Very Satisfactory  |
| Edukasyon sa Pagpapakatao  | 89.49         | Very Satisfactory  |
| Music, Arts, PE and Health | 85.14         | Very Satisfactory  |

Legend: 90-100 - Outstanding 75-79 - Fairly Satisfactory  
85-89 - Very Satisfactory Below 75 - Did Not Meet Expectations  
80-84 - Satisfactory

Source: DepEd Order 8 series 2015

It can be seen in Table 1 that Mother Tongue, English and Science have "Satisfactory" descriptive rating with the mean of 82.73, 84.49, and 84.45, respectively. Moreover, subjects like Filipino, Math, AralingPalipunan, Edukasyonsa Pagpapakatao, and MAPEH (Music, Arts, PE, and Health) have "Very Satisfactory" rating with weighted means of 88.31, 86.80, 87.24, 89.49, and 85.14, respectively. These figures imply that the pupils have a good grasp of the topics on the different subjects and have good performances on those subjects. According to Asuncion (2016), this performance implies that the respondents had full understanding and skills on the topic and exceeded the required standard. However, it is still to be noted that the academic performance of the respondents has not achieved its maximum potentials as regard to "Outstanding" as the highest standard descriptive rating.

Table 2. Relationship of IQ and Academic Performance of the Respondents

| Subjects                   | r-value | Sig. (2-tailed) |
|----------------------------|---------|-----------------|
| Mother Tongue              | .543**  | .001            |
| Filipino                   | .651**  | .000            |
| English                    | .517**  | .001            |
| Science                    | .548**  | .000            |
| Math                       | .756**  | .000            |
| Araling Panlipunan         | .681**  | .000            |
| Edukasyon sa Pagpapakatao  | .667**  | .000            |
| Music, Arts, PE and Health | .557**  | .000            |

\*\*Significant at 0.01level(2-tailed)

Table 2 presents the relationship of IQ and Academic Performance of the Respondents. It shows that all of the subjects have strong relationship at.01 level of significance. The following subjects Mother Tongue, Filipino, English, Science, Math, Araling Panlipunan,

Edukasyon sa Pagpapakatao, Music, Arts, PE and Health (MAPEH) have the computed Pearson-r values of .543; .651; .517; .548; .756; .681; .667; and .557\* ( $p < .01$ ) respectively which mean that the significant relationship exists. This data implies that the higher the IQ of the respondents, the better would be the academic performance. In contrast, the lower the IQ of the respondents, the lower is the performance on the different academic subjects. In this case, those respondents who have low IQ are possibly those who become underachievers who need interventions. The relationship between IQ and academic performance doesn't mean causal of both variables. This result is congruent to the study of Jensen, 1998; Snow & Yalow, 1982; Rolfhus & Ackerman, 1999 that standardized intelligence tests based on g are considered to best predict life outcomes such as job performance, academic success, and training. General intelligence factor, g, is a strong predictor of achievement measured standardized tests (Gottfredson, 2005) and g represents various types of intelligent behavior well (Jensen, 1980; Neisser et al., 1996).

## CONCLUSION

Based on the findings of the study, the following conclusions were derived:

1. There is a variation of IQ levels of the grade three pupils in which majority are Average and the academic performance of the respondents are mostly Very Satisfactory. This implies that they can tackle activities intended for their level and could be given more activities which are within their abilities and structured to make learning fun and attractive. Hence, diagnosis of students' skills should be the starting point before any intervention is done to improve student learning. This will ensure that students will be more motivated to do the tasks because these are fun and easy to do. Teachers regardless of their specialization should consider competencies of pupils especially in developing other instructional materials needed by the slow learners and underachievers. The faculty should make remedial measures to address the weaknesses of the students in developing self- confidence and skills in the different academic subjects.
2. Based on the result, Strategic Intervention Materials are proposed and made in enhancing the level of competence of the grade three pupils and for addressing the underachievers of the class.

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