NARRATIVE INQUIRY TO UNDERSTAND THE NATIONAL ACHIEVEMENT TEST OF PRIMARY AND SECONDARY SCHOOL STUDENTS IN MISAMIS ORIENTAL, PHILIPPINES

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***ABSTRACT:** The results of national and international academic assessments for basic education students in SY 2017-2018 revealed that the Philippines is lagging behind other countries. This study, therefore, aims to explore the lived experiences of school administrators and teachers regarding their perceived factors that may have shaped the National Achievement Test (NAT) performance of primary and secondary school students in the four Department of Education divisions in Misamis Oriental, Philippines. This study employed a narrative inquiry research design. Personal interviews were conducted with 28 purposively selected participants. The conventional content analysis approach to analyze the data revealed that poverty, academic unpreparedness, familial and environmental issues, student motivation, insufficient instructional materials, and perceived DepEd policies inform NAT results. Discussion and recommendations for policy-making and curriculum enhancement are also presented in this study.*

Keywords: Department of Education (DepEd), Misamis Oriental Philippines, NAT, Narrative Inquiry, Social Sciences

INTRODUCTION

In the Philippine Education System, in line with the implementation of the Enhanced Basic Education Act of 2013 (Republic Act No. 10533), the Department of Education is implementing several policy guidelines to ensure access to quality basic education. DO 8, S. 2015 *(Policy guidelines on classroom assessment for the K to 12 Basic Education Program)* and DO 55, s. 2016 *(Policy guidelines on the National Assessment of student learning for the k to 12 basic Education Program)* are being enforced to measure learners' progress and academic performance. The system assessment under K to 12 curricula, uses both national and international large-scale assessments to determine the education system's effectiveness and efficiency. National Achievement Test (NAT) is one of the large-scale assessments implemented by the Department of Education through the Bureau of Educational Assessment (BEA). NAT is administered for Grade 6, Grade 10 and Grade 12 students. It aims to monitor the Philippine education system and schools for public accountability; assess the effectiveness and efficiency of the delivery of education services, provide information that will guide decisions on instructional practices; determine if learners are meeting the learning standards of the curriculum; measure students' aptitude and occupational interest for career guidance; and assess prior learning for placement, accreditation, and equivalency [1].

The performance of Grade 6 students in the NAT has been steadily declining in the last three years, placing them at the "low mastery" descriptive level of the Department of Education (DepEd) [1]. Moreover, the Philippines join the Programme for International Student Assessment (PISA) in 2018. The result showed the Philippines ranked at the bottom for performance in reading, and second lowest for both Mathematics and Science among the 79 members and partner countries.

The children are the hope of tomorrow [2]. However, based on the reported declining NAT performance of the Basic Education learners in the last three years, it seems that young learners could no longer sustain the hope of the future. Hence, it is imperative to explore the factors that shaped the learners' NAT performance. In so doing, this study will be able to help curriculum designers, implementers, and policymakers to address this gap in knowledge and practice. Moreover, the results of national and international assessments could be a basis for policy-making and curriculum review to provide quality basic education: to critically, improve teaching facilities and equipment, upskill and reskill teachers, and get support from all sectors and communities [3]. For this reason, this study aims to identify the root factor that shapes the NAT performance of primary and secondary school students in Misamis Oriental in the SY 2017-2018 as the basis for future policy planning and development, especially in the curriculum design.

REVIEW OF RELATED LITERATURE

Factors that Affect Standardized Tests

Socio-cultural factors that affect achievement in standardized tests

In a comprehensive meta-analysis done on Latinos, African-Americans, and American students, results revealed that religion yielded the highest effect size as a tool to reduce achievement gaps [4]. It was believed that religious commitment influences academic achievement by providing a religious work ethic, providing an internal locus of control, and discouraging students to perform undisciplined and harmful behaviors [4–6]. Similarly, the effect of religion was also examined in Brazil in terms of their performance on standardized university exams. They found out that Catholics and Protestants scored lower compared to Jewish, Afro-religion, or others [7]. On the contrary, atheists scored higher compared to those who declared to have some kind of religious beliefs.

Other than religion, ethnicity or race has also been examined in terms of its effects on students' academic achievement in standardized tests. In many countries, students from ethnic minority groups often have lower academic achievement than those from ethnic majority groups [8]–[10]. In one study, they found out that the teacher's positive implicit prejudice towards the ethnicity of students favors their academic achievement. [10]. More so, Black and Hispanic students were also noted to have lower academic achievement in science compared to their White counterparts since they have lesser access to school resources [11]. In addition, the effect of race in students' achievement in science was found to be more in Grade 3 and then reduces when the student reaches

Grade 8 for Black-White, Hispanic-White, and Asian-White paired comparisons [12].

Geographical location factors that affect performance in standardized tests

The variables to study academic performance can be taken on multiple fronts, and in an ever-growing population; communities are created at various levels and contexts. These social settings are mostly categorized as urban, rural or suburban. Urban communities refer to the city or being located in the city where economy and politics converge and strive, while rural is exactly the opposite of the former. Rural communities refer to the countryside wherein almost everything is far lax and simple. And a suburban is a spot surrounding the city or just adjacent to it. Usually, it's in the suburbs where most of the working class live. In this chapter, we shall focus on the dichotomy and the deconstructed aspects of Urban and Rural variables in relation to the academic performance of learners.

The issue of disproportionate allotment of basic education systems is a vital area to explore given that its impact on academic performance is arbitrary. This is with special emphasis on access to basic education with the hopes of addressing the comparison between the trajectory of academic performance in basic education and the causes of the students lagging academic performance [13].

Educational research on rural/urban differences in achievement and success in higher and basic education has been cautiously explored [13]–[16] In fact, educational outcomes of rural students are found to be worse than those of urban students [17], [18] since apparently rural educators are less academically prepared than city schoolteachers [19] evident this is of inequity of basic education [20] compounded by the lack of resources and weak policies [21].

A Barcelona-based Research Institute of Applied Economics (2012) compared the 2006 and 2009 Programme for International Student Assessment (PISA) of Columbia that yielded most of the differential in urban and rural academic performance is attributable to family characteristics as opposed to those of the school. In 2018, the Department of Education of the Republic of the Philippines conducted a similar study, although the latter is much more comprehensive such that the comparison of academic performance by the community is but one of the many variables they considered, the DepEd report revealed that the mean Mathematical Literacy score of students in urban areas (365 points) was significantly higher than that of students in rural areas (329 points), while the average performance of students in urban areas for Scientific Literacy was 370 points, which was significantly greater than the average performance of those in rural areas (333 points), whereas the mean Reading Literacy score of students residing in urban communities (355 points) was significantly higher than the mean score of those living in rural communities (313 points). As can be inferred, all contexts (Reading, Math, and Science) covered by the PISA showed the dominance of urban learners over rural ones. Striking may the difference is as both have different sets of indicators, yet still, both studies support actions in addressing challenges of low academic achievement at the basic education level [13], rural and urban, specifically the improvement of the learning environment such as size and teacher/student ratio [17], [19]. Further, in the Philippines, according to Zamora and Dorado (2015), the main contributor to educational inequalities at the national level is the Urban-Rural Gap, while in the province the case is more of intra-provincial factors or inequalities within the rural areas itself.

Socio-economic factors that affect performance in standardized tests

The cognitive ability of students is not the only explanatory variable considered for student performance [22]. The other prominent explanatory variable emphasizes on the importance of socioeconomic status (SES) or the non-cognitive ability of an individual. Moreover, socioeconomic status and racial factors have been noted to hinder the improvement effect of school interventions in standardized tests across elementary to high school [23].

The family background of students has been long established to be strongly correlated to students' academic achievement. In the report of Walker et al., it was found that students who come from higher socioeconomic status families possess higher academic achievement even after adjusting for genetic factors.. This was believed to be true since families with more financial resources are capable of providing more educational materials to create a richer learning environment [25]. Similarly, rich families have more social or cultural capital that allows them to provide their children with opportunities to be acquainted with friends and relatives who possess sufficient skills and resources [26]. Furthermore, the SES of families during adolescence was found to have more potential to alter academic trajectories, and the 9th-grade socioeconomic status had a stronger predictive power towards achievement in mathematics compared to other grade levels [27]. Meanwhile, poor student performance has been understood as due to socioeconomic and demographic status as they are often strongly associated. However, the literature is not yet final on this. In an analysis of cognitive and non-cognitive influences, socioeconomic status had only a moderate effect while the early childhood cognitive ability and prior achievement of students had the most dominant influence on student achievement [22]. This implies that SES may or may not have an influence on student achievement. In addition, the effects of the socioeconomic status of families on the academic achievement of students tend to differ in terms of country and subject [28].

One of this socioeconomic statuses that possess a substantial effect on student achievement is family income during childhood [29]. The potential underlying reason for this is the relationship between family income and student attendance. When children miss a class, they fail to benefit from the interaction they have with teachers, and peers and miss out on important learning activities designed to improve learning. Similarly, absences from school have been noted to be an important factor in later academic success [30]. Although student achievement is highly impacted by student attendance, family income fails to be associated with student achievement and class attendance. This implies that family income is not the sole determiner of student attendance and achievement [31]. On the contrary, students who come from wealthier families have better performance than those who come from poor families due to available opportunities of attending private education and additional tutoring classes [7].

Parents' occupational status was also studied in terms of its effects on the achievement of students in standardized exams.

Both parents' (mother and father) educational status possess the same statistical correlation with the student's performance. On the other hand, the father's occupational status has an influence on the student's performance. It was found that fathers who have worked have better-performing children compared to those with unemployed fathers [7].

However, it is worth noting that middle-ground research between the urban and rural contexts has been set aside entirely as there is a dearth of such research. To explore the challenges met in a suburban setting is an interesting context to consider that both highly rural and highly urban areas perform similarly, but less well, in terms of educational achievement than students from moderate areas- the suburb [32].

In summary, studies have been conducted determining the different factors that affect students' performance on national standardized exams. Religion, ethnicity, race, socio-economic status, family background, geographic location, and nutritional status of students were found to have both positive and negative effects on their performance on standardized exams. This existing divide in the literature prompts the conduct of this research to further examine the factors that affect students' performance in a nationally standardized test in the Philippines.

RESEARCH METHODOLOGY
Research Design
In approaching this study, the narrative inquiry research design was employed. This research design is employed when the aim of the study is to reveal the relevant perspectives and deeper understanding of a situation in the study [1]. This approach to investigation involved personal interviews with NAT coordinators and school administrators from the identified schools. The participants in the interviews were purposely selected based on identified inclusion and exclusion criteria, namely: (a) must be a regular DepEd employee for at least two years prior to SY 2017-2018 to have a grasp of the NAT; (b) either a school administrator or a NAT coordinator; and (c) willing to take part in the personal interviews.

Data Collection
Before the interviews were conducted, permission was sought from the Schools Division Superintends of the four DepEd divisions in Misamis Oriental, Philippines. A letter of permission duly sought by the Research Office of the University of Science and Technology and authorized by NEDA was used as a supporting document. The interview protocol used in this study was developed by the researchers based on the objectives of the study and was subjected to a content validity test by three experts in the field of quantitative research [33]. The interview was conducted through mobile phone calls with the identified participants. Twenty-eight school administrators and teachers participated in the interview. The demographic profile of the participants is presented in Table 1.

Data Analysis
The secondary data which was collected from the students' 2017-208 NAT results were analyzed using both descriptive and inferential statistical techniques. The first research question in this study was analyzed through descriptive statistics. For the second question, the data were analyzed using two-way ANOVA to examine the influence of two divisions and school size on the NAT scores of the students. For the third research question, the qualitative data were analyzed using the conventional content analysis approach. This approach to qualitative data analysis Conventional content analysis is generally used with a study design whose aim is to describe a phenomenon, in this case, the NAT [34].

Table 1. Demographic profile of the interview participants

Code Name	Sex	Years in Teaching	Designation	School Size
A01_Elem	F	17	Teacher	Big
A02_Elem	F	20	Teacher	Big
A03_Elem	F	9	NAT Coordinator	Small
A04_Eem	F	12	Teacher	Big
A05_HS	M	10	Teacher	Medium
A06_HS	F	9	NAT Coordinator	Medium
A07_HS	F	17	Teacher	Small
A08_HS	F	20	Teacher	Small
A09_HS	F	17	School Head	Mega
A10_HS	F	13	Teacher	Medium
A11_HS	F	30	Teacher	Medium
A12_HS	M	10	Coordinator	Mega
A13_HS	F	15	Teacher	Medium
J01_Elem	F	10	NAT Coordinator	Medium
J02_Elem	M	6	Teacher	Medium
J03_Elem	F	13	Teacher	Big
J04_HS	F	14	Teacher	Big
J05_HS	F	6	Teacher	Big
J06_HS	M	7	NAT Coordinator	Medium
N01_Elem	M	17	NAT Coordinator	Big
N02_Elem	F		Teacher	Medium
N01_HS	F	4	Teacher	Medium
N02_HS	M	14	School Head	Medium
N03_HS	F	8	Teacher	Medium
N04_HS	F	7	Teacher	Small
N05_HS	F	12	Teacher	Big
N06_HS	F	17	School Head	Medium
N07_HS	F	8	Teacher	Medium

Ethical Considerations
In this study, the researchers observed the ethical principles and considerations all throughout the span of the study as stated in the university code of ethical practice. All data gathered were treated and remained confidential in adherence to the Data Privacy Act of 2012. Works of other researchers used in this study are properly cited and acknowledged, honestly gathered the data, results and did not misrepresent any methods and procedure of the conduct, favor to no bias in interpreting and analyzing data and other aspects of research, consistent in thoughts and action, examine the work of the peers critically to not acquire any negligence and careless errors, openly acknowledge any new ideas and criticisms during sharing of data, results, resources and tools, and, aim to promote social good through advocacy, public education and research. Furthermore, this study does not use offensive, discriminatory, or other unacceptable language in any of its research materials such as survey questionnaires or consent forms. Finally, the researchers demonstrated and recognized the responsibility to protect all participants from any harm and promote collaborative, open-minded, and respectful relationships among the participants, researchers, and partners.

RESULTS AND DISCUSSION

Employing the conventional content analysis, there emerged six themes that described the factors that inform the NAT performance of the students in the SY 2017-2018. The eight themes are (a) poverty, (b) academic unpreparedness, (c) parental and familial issues, (d) student motivation, (e) insufficient school resources, and (f) perceived DepEd policies.

Poverty

Poverty is the most reported reason that has an influence on the NAT performance of the students. Poverty is defined as "a condition that results in an absence of the freedom to choose to arise from a lack of what he refers to as the capability to function effectively in society" and is closely linked with "a lack of sufficient financial resources" (Servaas van der Berg, 2013, p. 1).

According to Teacher A01, students have no time for studies as they are bound to perform household chores when they are home. When both parents are out for work, children are left to do the household chores, hence doing school assignments are often neglected. In addition, many of the students are *balik-eskwela* (school returnees). According to Teacher A08, these students are working students, juggling both work and studies at the same time. Because of these circumstances, Teacher A08 observed that students have no focus at work. They prioritize their employment as it generates the income needed to buy food for the family. Teacher N02 also shared that due to financial handicaps, students cannot buy necessary learning materials

Egunsola (2014) reported in his study that the economic status of the parents has a moderate correlation with their children's academic performance. Ferguson et al., (2007, p. 701) also reported that the economic status of the parents "influence a child's educational attainment." These findings emphasized the ability of the parents to provide the academic materials and facilities needed by their children for school. Egunsola emphasized further that poverty, if not appropriately addressed in educational policies, will continue as an essential blunder in attaining the goal of narrowing the academic achievement gaps among students.

Academic unpreparedness

Most of the interview participants from all four divisions shared that the students are academically unprepared. Academically unpreparedness is operationally defined in this study as the students' difficulty in reading comprehension and numerical skills which are required competencies in the NAT.

Teachers A01, A02, and A03 shared that many students have poor retention. Similarly, Teachers A01, A05, A05, A11, and N03 mentioned that a number of students have poor reading comprehension. In the same way, Teachers A07, A11, and No3 reported that students have poor numeral skills. These teachers concluded that the students have poor or no focus at all in their studies, or that they are not ready for academic competencies due to low cognitive retention. Previous studies report that students are more academically knowledgeable when they are mentally and cognitively prepared for the tasks required of them (Ewing-Cooper & Perker, 2013; NAGB, n.d.).

Familial and environmental issues

The familial and environmental issues as a theme are defined in this study as the situations within the family and the immediate community that contribute significant influence towards the students. According to Teacher J01, it has been observed that the students lack support from their parents. The parents do not care about the academic activities and requirements of their children. Teacher J03 supported this by saying that the parents do not make any follow-up with their children's progress at school, and the students do not have support from the parents. Situations such as these, in addition to the experienced poverty, led the students to be involved in relationships with the opposite sex. The relationship is another factor that leads the students away from focusing on their academic responsibilities.

Parental involvement in students' academic performance is of utmost importance. According to Bunujevac and Durisic (2017), it is essential that parents should forge a partnership and mutual responsibility with the school in addressing the student's academic welfare. It is confirmed that when parents are actively involved in their child's academics, students have strong and successful academic results and they perform better in school [40].

Student motivation

Another theme that emerged during the data analysis is student motivation. According to Teachers A03, A04, A07, A10, and A12, students have poor or no study habits at all, resulting from low motivation for their academic thrusts. One reason for this low motivation, according to J04, is that circle of influence of the students is out-of-school youths. The poverty that the students experienced also contributed to their low motivation. The poverty that the students experienced also contributed to their low motivation. The students are already earning, though at a very minimum wage, from the factories within the community, in the desire to contribute to their family's income according to Teacher N05.

Based on the reports from the participants of the study, it can be deduced that the home location of the students shaped the students' motivation toward their academics. Egunsola (2014) reported that the locality where the home students are located influences their academic performance. Hence, there is an interaction effect of the home location with motivation towards its influence on academic performance. According to Na et al. (2020, p. 182), the role of motivation is highly essential as it impacts the way students learn. Moreover, motivation determines the students' persistence toward their academics thus influencing their performance and level of engagement. There, they concluded that the "motivation element cannot be neglected."

Insufficient Instructional Resources

According to Mwili Ruth Kimeu and Tanui Edward (2015, p. 70), "Instructional resources are important factors during the implementation of the curriculum. They help the implementers to realize their goals and give guidance to the teaching-learning process which leads to the realization of good students' academic performance." In this study, teacher-participants reported that there are no sufficient review materials for the students to use in preparation for the NAT. According to Teacher J05, 'review materials are not enough" as there is only one book for several students to share. Teacher N02 also shared that the review materials/ resources for the students to use during review sessions is insufficient.

Meanwhile, N01 mentioned that there is an "Insufficient number of Math teachers." Several Math teachers are out-of-field ones. This means that the teacher could be an English or Science major but due to the scarcity of teachers in Math, they are assigned to teach Mathematics subjects. Cases such as these, according to Teacher N06 lead to less preparation for the NAT.

It was reported in the study of Mwili Ruth Kimeu and Tanui Edward (2015) that students' academic performance depended on the availability of teachers' resources such as reference books and guides, students and teachers' textbooks, and laboratory apparatus as teaching and learning materials. It was concluded in their study that "instructional resources are important factors during the implementation of the curriculum" which subsequently "leads to the realization of good students' academic performance.

Perceived DepEd policies

Every educational institution has its own set of educational policies to deliver and implement high-quality education as well as increase reform [43]. Policies serve as "the basis for every official action of an organization" (Okoroma, 2006, p. 245). Such educational policies shape the experience of each individual learner [45].

As observed by Teacher J03 within 13 years of teaching in a big secondary school, there is a curriculum mismatch between the competencies taught in school and the competencies tested in the NAT. Teacher J05 explains this by saying that there is a mismatch in the coverage of the NAT Exam to the competencies in the curriculum guide. Teacher J05 further mentioned that there are too many competencies covered in the NAT, however, due to many constraints in the classes, not all lessons are covered during classroom instruction. Teacher N03 also shared that there are too many competencies required in the NAT. They cannot fully cover these competencies during classroom instruction because there are too many extra-curricular activities at school. Teacher A10 mentioned that local and city activities where students need to participate cause class disruptions.

Another educational policy that the teacher-participants shared is the implementation of the *Edukalidad*, "no student left behind," and Balik-eskwela policies. Edukalidad is a combined Filipino terms *edukasyon* (education) and *kalidad* (quality); Balik—eskwela is another combined Filipino terms from *balik* which means return, and *eskwela* means school. According to Teachers N02 and N04, there is a "wrong interpretation" of these policies. Educational supervisors and school administrators "push" the teachers to promote students even if they are not yet ready to be promoted in adherence to the "no student left behind" policy. In the same way, schools are prompted to "accept students even if they are not ready," according to Teacher A07. Another policy that teacher-participants observed as a hindrance to the achievement of NAT, according to Teachers A10, J05, and N02.

CONCLUSIONS

In conclusion, the factors that shaped the NAT performance of basic education learners are viewed from two perspectives: familial and DepEd. The familial factors included poverty which subsequently rippled down to academic unpreparedness, familial and environmental issues, and student motivation. On the other vein, the factors from the DepEd's end included insufficient instructional resources and

the misconception of DepEd policies. Based on these findings, it is recommended that these issues be addressed by government policymakers and DepEd's curriculum designers. More resources may be provided to schools to boost NAT Performance.

Okoroma emphasized that while a policy defines the area in which decisions are to be made, the policy does not make the decision. It only serves by providing a general guide that facilitates decision-making, a direction for educational activities. He concluded that if we do not consider how educational policies complement or conflict with policies related to family welfare, work, poverty, housing, and neighborhood conditions, then we will continue to face significant obstacles in attaining the goal of narrowing the achievement gaps [36].

POTENTIAL UTILIZATION AND IMPACT OF THE RESEARCH OUTPUT

The results of this proposed study will benefit the policymakers and curriculum reviewers as well as the DepEd administrators in revisiting the primary and secondary education curriculum. Likewise, it is also hoped that appropriate professional development seminars and workshops may also be arranged for the upgradation of the school teachers to help improve the NAT performance of students.

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