

COMPETENCIES OF GRADE 9 STUDENTS IN GEOMETRY

**COMPETENCIES OF GRADE 9 STUDENTS IN GEOMETRY  
IN AGUSAN DEL SUR NATIONAL HIGH SCHOOL:  
BASIS FOR AN INTERVENTION PROGRAM**

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MASTER OF ARTS IN EDUCATION  
With Specialization in Mathematics Education**

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COMPETENCIES OF GRADE 9 STUDENTS IN GEOMETRY

**CERTIFICATE OF APPROVAL**

The thesis attached hereto, titled **COMPETENCIES OF GRADE 9 STUDENTS IN GEOMETRY IN AGUSAN DEL SUR NATIONAL HIGH SCHOOL: BASIS FOR AN INTERVENTION PROGRAM**, prepared and submitted by RANDY L. ROBLES in partial fulfillment of the requirements for the degree of **MASTER OF ARTS IN EDUCATION with specialization in Mathematics Education**, is hereby recommended for oral examination.

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**Abstract**

**Title** : COMPETENCIES OF GRADE 9 STUDENTS IN GEOMETRY  
IN AGUSAN DEL SUR NATIONAL HIGH SCHOOL:  
BASIS FOR AN INTERVENTION PROGRAM

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**Keywords** : Competency, Geometry, Intervention Program

This study aimed to determine the competencies in Geometry of Grade 9 students in Agusan del Sur National High School as basis for an intervention program. An achievement test on Grade 7 Geometry (Angle Properties and Parallel Lines, Basic Properties of Simple Shapes) and Grade 8 Geometry (Reasoning, Triangle Congruence, Inequalities in Triangles, Parallelism and Perpendicularity) was administered to 316 respondents. Frequency and percentage were used to describe their profile— sex, ethnicity, and program enrolled in; mean percentage score (MPS) to determine their least learned competencies. In determining the influence of their profile in the least learned competencies, z-test for independent samples was utilized for the sex and Analysis of Variance (ANOVA) for ethnicity and program enrolled in. Majority of the students are females; most are Cebuano enrolled in the General Curriculum Heterogeneous Sections. Angle Properties and Parallel Lines, Inequalities in Triangles, and Parallelism and

Perpendicularity are the least learned competencies. There is no significant difference in the mean scores of the sexes for Angle Properties and Parallel Lines, and in Inequalities in Triangles. Their mean scores significantly differ in Parallelism and Perpendicularity with females scoring higher. This implies differences in the least learned competencies of the respondents when grouped to sex. Surigaonon and Butuanon scored significantly higher in Angle Properties and Parallel Lines than other groups such as Maranao, Mandaya, Tagalog, and Waray showing a P-value of 0.053. Similarly, Surigaonon scored better than Ilocano. There is no significant difference among the mean scores of the ethnic groups in Inequalities in Triangles and in Parallelism and Perpendicularity which registered P-values of 0.168 and 0.087, respectively. This imply that ethnicity affect the least learned competencies of the students. Significant difference exists among the mean scores of the different programs with P-value of 0.000 for both Angle Properties and Parallel Lines, and Parallelism and Perpendicularity; STE outperforming STVEP, SPA, SPS, Crack Sections, and Heterogeneous Sections. In Inequalities in Triangles, there exists no significant difference among the mean scores of the different programs with P-value=0.538. This means that the programs enrolled in affect the least learned competencies. Intervention program designed to address the least learned competencies of the students must consider the sex, ethnicity, and program the students are taking up.

**Abstrak**

<b>Pamagat</b>	:	COMPETENCIES OF GRADE 9 STUDENTS IN GEOMETRY IN AGUSAN DEL SUR NATIONAL HIGH SCHOOL: BASIS FOR AN INTERVENTION PROGRAM
<b>Pangalan</b>	:	RANDY L. ROBLES
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Ang pag-aaral na ito ay naglalayong matukoy ang mga kasanayan o *competencies* sa Geometry ng mga mag-aaral sa ikasiyam na baitang sa Pambansang Mataas na Paaralan ng Agusan del Sur upang magiging batayan para sa isang programang pang-interbensyon. Isang pagsusulit ukol sa mga paksa ng pampitong baitang (Angle Properties and Parallel Lines, Basic Properties of Simple Shapes) at pangwalong baitang na Geometry (Reasoning, Triangle Congruence, Inequalities in Triangles, Parallelism and Perpendicularity) ang pinangasiwaan sa 316 na mga katugong-mag-aaral. Ginamit ang prikvensya at porsyento upang ilarawan ang kanilang profayl- kasarian, etnisidad, at programang kinabibilangan habang *mean percentage score (MPS)* naman upang matukoy ang kanilang mga pinakakinahihirapang kasanayan o *least learned competencies*. Sa pagsusuri kung mayroon bang naging impluwensiya ang kanilang profayl sa *least learned competencies*, ang z-test para sa *independent samples* ay ginamit para sa kasarian at

Analysis of Variance (ANOVA) naman para sa etnisidad at programang kanilang kinabibilangan. Karamihan ng mga mag-aaral ay mga babae; pinakamarami ay mga Cebuano at nakatala sa General Curriculum Heterogeneous Sections. Ang Angle Properties and Parallel Lines, Inequalities in Triangles, at Parallelism and Perpendicularity ay ang mga *least learned competencies*. Walang makahulugang pagkakaiba o *significant difference* sa mga *mean score* ng mga kasarian para sa Angle Properties and Parallel Lines, at sa Inequalities in Triangles. May *significant difference* naman ang kanilang mga *mean score* sa Parallelism and Perpendicularity kung saan higit na mas mataas ang markang nakuha nga mga babae. Ito ay nagpapahiwatig ng pagkakaiba sa mga *least learned competencies* ng mga respondent kung sila ay pagpapangkat-pangkatin batay sa kasarian. Ang mga Surigaonon at mga Butuanon ay nakapuntos ng higit na mas mataas sa Angle Properties and Parallel Lines kaysa sa ibang mga pangkat tulad ng Maranao, Mandaya, Tagalog, at Waray na nagtala ng P-value na 0 .053. Ang mga Surigaonon din ay nakapuntos ng mas mahusay kaysa sa mga Ilocano. Walang *significant difference* sa pagitan ng mga *mean score* ng mga pangkat-etniko sa Inequalities in Triangles at sa Parallelism and Perpendicularity na nagrehistro ng P-value na 0.168 at 0.087, ayon sa pagkakabanggit. Ito ay nangangahulugan na ang etnisidad ay nakakaapekto sa mga *least learned competencies* ng mga mag-aaral. May *significant difference* na umiiral sa pagitan ng mga *mean score* ng iba't ibang mga programa kung saan napapabilang ang mga respondent na may P-value na 0 .000 para sa Angle Properties and Parallel Lines at sa Parallelism and Perpendicularity. Higit na mas mataas ang mean score ng STE kaysa STVEP, SPA, SPS,

Crack Sections, at Heterogeneous Sections. Sa Inequalities in Triangles, napag-alamang walang *significant difference* sa pagitan ng mga mean score ng iba't ibang mga programa na may P-value na 0.538. Ito ay nangangahulugan na ang mga programa kung saan napapabilang ang mga mag-aaral ay nakakaapekto sa mga *least learned competencies*. Dapat isaalang-alang ang kasarian, etnisidad, at programang kinabibilangan ng mga mag-aaral sa pagdesinyo ng programang pang-interbensyon na nauukol sa mga *least learned competencies*.

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**this thesis is FOR you...**

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