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SCHOOLS DIVISION OFFICE OF RIZAL

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MEMORIAL NATIONAL HIGH SCHOOL

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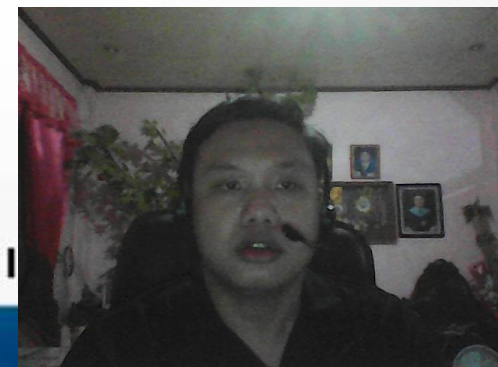DEPARTMENT OF EDUCATION

Context and Rationale

- Ucar and Kumtepe (2019) discovered that students who used more motivational strategies obtained higher motivation, better performance, and more course interest in their English subject.

- Arthur et. al (2022) found a direct positive effect of motivation on performance in mathematics. Student learning interest partially mediates the relationship between math performance with math motivation and quality of teaching.

Research Questions

1. What is the level of math performance of students in blended learning?

2. What is the level of math motivation of students in blended learning?

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Research Questions

3. Is math motivation significantly related to math performance in blended learning?

4. Does math motivation significantly predict math performance in blended learning?

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Methodology

Participants:

- The participants are 180 grade 8 students from five (5) sections with the same math teacher and under the same learning modality.

Instrument:

- The researcher modified the Inventory of School Motivation (ISM) to assess students' math motivation levels. The 34-item scale covers eight subconstructs: task, effort, affiliation, social concern, competition, social power, praise, and token.

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Methodology

Instrument:

- The researcher administered a 30-item math test that covers topics on linear equations.

Statistical Treatment:

- Mean scores were computed from the results of the motivation scale and math test.
- Correlational analysis using Pearson r values verified the relationship between math motivation and performance.
- Simple linear regression was implemented to test the predictiv math motivation over math performance.

Results

Table 3

Descriptive Statistics for Math Performance and Math Motivation in Blended Learning

	Mean	Standard Deviation
Math Performance	10.77	3.60
Motivation	3.63	.48
Task	4.09	.71
Effort	3.86	.62
Competition	3.27	.74
Social Power	2.76	.89
Affiliation	3.77	.82
Social Concern	3.88	.69
Praise	3.75	.82
Token	3.76	.92

Legend: 4.50-5.00 = Very High, 3.50-4.49 = High, 2.50-3.49 = Moderate

1.0-1.49 = Very Low

Results

Table 4

Correlation between Math Motivation and Mathematics Performance in Blended Learning

	Academic Performance
Motivation	.17*
Task	.21*
Effort	.22*
Competition	-.11
Social Power	-.04
Affiliation	.16*
Social Concern	.16*
Praise	.19*
Token	.11

*$p < .05$

Results

Table 5

Predictive Power of Math Motivation over Mathematics Performance in Blended Learning

	F (1.178)	p-level	Adjusted R²
Motivation	5.264	.023*	.023
Task	8.470	.004*	.040
Effort	8.721	.004*	.041
Competition	2.372	.125	.008
Social Power	.324	.570	.000
Affiliation	4.857	.029*	.021
Social Concern	4.770	.030*	.021
Praise	6.721	.010*	.031
Token	2.317	.130	.007

*p < .05

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Recommendations

1. Math teachers should implement holistic math intervention programs that cover not only the cognitive aspect of learning but also the affective and metacognitive aspects.

2. The focus should be directed toward making learning tasks appealing to the interest of students and monitoring the efforts that students exert in their schoolwork.

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Recommendations

3. Future researchers can integrate qualitative methods to explore the predictive power of motivation and its subconstructs in depth.

4. Future researchers can implement a similar study in the context of other subject areas and use a different indicator of performance.

THANK YOU!