

## MSU-Test: A Tool for Measuring Students' Achievement

### TEST-MSU: UN OUTIL POUR MESURER LA REUSSITE DES ELEVES

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#### Abstract

The study aims to employ MSU-test as a tool to measure Maharakham student in secondary and high school levels to achieve their learning potential. The importance of this study will help university understanding school potential and provide information to increase students' score. Two thousand and seven hundred eight nine students participated in the study. The results of this study provide way to set and improve MSU-test in the future.

**Key words:** MSU-test; Testing procedure; Maharakham; Student's achievement

#### Résumé

L'étude vise à employer des MSU-test comme un outil pour mesurer les niveaux d'étudiants Maharakham collégiens et lycéens à réaliser leur potentiel d'apprentissage. L'importance de cette étude aideront les potentiels University School compréhension et fournir des informations aux étudiants augmentation du score. Deux mille sept cents huit neuf étudiants ont participé à l'étude. Les résultats de cette étude fournissent moyen de définir et d'améliorer la MSU-test dans l'avenir.

**Mots clés:** MSU-test; Procédure de test; Maharakham; Le rendement des élèves de

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#### INTRODUCTION

Test at all stages of education has been considered as an important thing and powerful tool for decision making in many ways especially, it can be used to plan of development in competitive society. This era in which we live is a test-conscious age in which the lives of many people are not only greatly influenced, but are also determined by their test performance (Zoller and Ben-Chaim, 1990). Students need to achieve themselves through testing procedure based on educational institutions for different purposes i.e. university entrance, academic improvement level, comprehensive ranking, and so on. Also, the testing result will be predicted in different ways in which cognitive processes is assessed in terms of measuring how students build their learning capacity (Gottfredson and Saklofske, 2009).

As we known, education is transforming to lead our children have facing the changing world. Also, students are facing the challenge to improve their achievement. They required adapting learning proficiency in learning standards. The way to achieve students learning should met the curriculum requirement as Educational Act proposed.

Maharakham schools have responsibility to provide a positive learning in which necessary for increasing student achievement in an academic climate (Smith, 2006). For educational service, Maharakham university located in Maharakham province with the knowledge power and potential to push students learning achievement

in provincial service may be able to understand the influence of culture on measurable outcomes, which is important for increasing student achievement. In this case, Mahasarakham university tries to set MSU-test measuring how students in Mahasarakham province success their learning potential. The result of the testing will be used for answering level of what student achieve them.

The study aim to employ MSU-test as a tool to measure learning potential of ninth grade students in Mahasarakham province and to promote teaching and learning skills for lower secondary schools in Mahasarakham province. The importance of this study will help university understanding school potential and provide information to increase students' score.

## 1. MEASURING STRATEGY

Office of the General Education, Mahasarakham University took action in measuring students' potential learning based on assumption, students can do learning learner by providing high potential of learning as well. MSU-Test was first launched in academic year 2009, also in academic year 2010 the testing procedure was followed based on problem analysis and recommendations about measuring process in lower secondary level. The participated students in the potential measuring to achieve learning score were studying in Mahasarakham's school location. The testing procedure was allowed ninth grade students to measure their learning potentials through 8 measuring school centers - Sarakhampittayakom, Borabuwittayakarn, Payakkabhummwittayakarn, Wapeepatum, Nachukpittayasarn, Kosumwittayasarn, Chiangyuenpittayakom, and Mahasarakham university.

**Table 2**  
**Ninth Grade Score by Subject Categories**

School	Subject	Full score	First test			Second test		
			Min	Max	Mean	Min	Max	Mean
Demonstration	Thai and Mathematics	200	33	62	43.32	9.99	92	55.38
	Health education and Career and work	300	85	145	84.68	72.50	217.50	177.04
	Social studies	200	27	64	44.00	12	85	50.13
	English	100	20	29	21.87	12.50	97.50	53.11
Non-demonstration	Thai and Mathematics	200	10	126	69.17	0	89.91	47.34
	Health education and Career and work	300	45	230	155.84	47.50	225	146.30
	Social studies	200	20	124	72.75	7.50	82.50	34.55
	English	100	0	77	33.04	2.50	77.50	29.57

The data showed that non-demonstration schools group had mean score in four subject areas higher than those demonstration school in the 1<sup>st</sup> round of test. But, the 2nd round of test had mean score seem to be different. Demonstration school had mean score in four subjects higher than those first test, and also non-demonstration school score had lower mean score in all subject. Moreover, mean score between first and second test pointed that mean score of all subject in demonstration

Two thousand and seven hundred eighty nine students had registered and participated in their potential measuring (Table 1).

**Table 1**  
**Students' Categories in 2<sup>nd</sup> MSU-Test**

Measuring school center	Number of participated school	students
Mahasarakham University	11	453
Sarakhampittayakom	11	502
Borabuwittayakarn	9	436
Wapeepatum	8	534
Payakkabhummwittayakarn	3	139
Nachukpittayasarn	5	369
Kosumwittayasarn	5	64
Chiangyuenpittayakom	4	292
Total		2,789

Fifty six schools allowed their students to participate in process to measure learning potentials through 8 measuring school centers. Wapeepatum and Sarakhampittayakom schools were the highest number of students. While Kosumwittayasarn school had 64 students participated, it was less participated students in all measuring school centers.

### 1.1 Measured Score of Ninth Grade Students

The score of 9<sup>th</sup> grade students were measured and reported by subject category: Thai and mathematics, health education and career and work, social studies, and English. Also, that is, school can be divided into two groups for analyzing result of teaching and learning processes in terms of differences between demonstration school and non-demonstration school. Score was compared and be shown in both first and second test (Table 2).

school tend to be increased, but non-demonstration school seem to be decreased.

### 1.2 Measured Score of Twelfth Grade Students

The score of 12th grade students were measured and reported by subject category: social studies, mathematics, English, Thai, science, and health education, physical education, and art education. Score was compared and be shown in both first and second test (Table 3 and 4).

**Table 3**  
**Twelfth Grade Score by Subject Categories in Various Kinds of Schools in Mahasarakham Province**

Subject	Full score	1 <sup>st</sup> test			2 <sup>nd</sup> test		
		Max	Min	Mean	Max	Min	Mean
Social studies (science)	100	61	15	22.56	61	14	28.37
Social studies (non-science)	100	56	15	19.64	44	16	22.69
Mathematics (science)	100	75	11	18.67	75	5	27.36
Mathematics (non-science)	100	48	15	1.85	50	10	31.51
English (science)	100	81	14	17.35	70	15	33.99
English (non-science)	100	35	16	21.45	54	13	25.64
Thai (science)	100	69	18	25.17	85	18	54.38
Thai (non-science)	100	53	22	19.20	66	20	40.11
Science (science)	100	75	13	29.08	75	11.25	28.35
Health education, physical education, and art education (science)	300	-	-	-	212.50	65	144.75
Health education, physical education, and art education (non-science)	300	168	58	115.74	185	62.50	129.05
Science (non-science)	100	631	16	23.67	82.50	22.50	34.96

**Table 4**  
**Twelfth Grade Score by Subject Categories in Various Kinds of Schools in Demonstration School**

Subject	Full score	1 <sup>st</sup> test			2 <sup>nd</sup> test		
		Max	Min	Mean	Max	Min	Mean
Social studies (science)	100	75	36	54.71	52	30	40.83
Social studies (non-science)	100	56	41	48.33	48	33	39.25
Mathematics (science)	100	83	23	53.02	65	15	35.65
Mathematics (non-science)	100	-	-	-	32.50	25	28.75
English (science)	100	81	26	41.98	70	23	47.15
English (non-science)	100	-	-	-	95	28	65.43
Thai (science)	100	85	45	60.14	78	37	62.04
Thai (non-science)	100	-	-	-	70	51	64.67
Science (science)	100	85	26	21.92	71.25	21.25	44.67
Health education, physical education, and art education (science)	300	203	625	170.53	210	147.50	176.32
Health education, physical education, and art education (non-science)	300	-	-	-	202.50	155	171.43
Science (non-science)	100	-	-	-	57.50	40	48.21

The data showed that non-demonstration schools group had mean score in four subject areas higher than those demonstration school in the 1st round of test. But, the 2nd round of test had mean score seem to be different. Demonstration school had mean score in four subjects higher than those first test, and also non-demonstration school score had lower mean score in all subject. Moreover, mean score between first and second test pointed that mean score of all subject in demonstration school tend to be increased, but non-demonstration school seem to be decreased.

## DISCUSSION

Most students in our study have not yet completed their program of study in each school. It is important to continue and extend our analysis throughout the program as it is relevant to the motivational achievement for university admission. Further, we have only reported on overall score in knowledge and understanding of subject in which measured, and have not explored correlation between university admission score and individual competent of assessment such as process skills, reading skills and so on. This study is important to lift up learning achievement of all students' Mahasarakham province

and will be done. Long-term follow-up into gaining teachers' competency and students' learning abilities are considered.

The findings of this study can be analyzed and proposed to organization that relevant to educational management how students achieve their learning competency. Also, testing should be considered in process of university admission and selection to continue study of their university program. Further research is needed to determine whether Mahasarakham university is predictive of performance during time of school testing, school exit examination, and school practices.

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