

## **Selected Psychological Temperaments Relating to Self-Assessment on Research Capability of Undergraduate Students, Faculty of Education, Maharakham University**

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### **Abstract**

The quality of learning includes the ability of the learners to develop within themselves a capability for self-assessment: to revise, reflect and improve performance for life-long learning. The purpose of the research is to examine the relationship between self-concept, achievement motive, self-regulation, anxiety and self-assessment on research capability of undergraduate students, Faculty of Education, Maharakham University. The samples of the research were 182 third year students who enrolled on the classroom action research course in the academic year 2009. They were selected by stratified random sampling.

The instruments consisted of: questionnaire and assessment form. The questionnaire had four parts: self-concept, achievement motive, self-regulation and anxiety. The assessment form was self-assessment on research capability by rubrics score criterion. The Pearson product moment correlation and multiple regressions were the statistics used for data analysis. Findings from the study revealed that there was significant relationship between self-concept, achievement motive, self-regulation and self-assessment on research capability of undergraduate students at 0.01 level. The achievement motive could predict student self-assessment.

**Keywords** : self-assessment, self-concept, achievement motive, self-regulation, anxiety

### **Introduction**

From past experience we know that educators encounter problems as they assess learning in their personal development. The National Education Act 1999 is an important instrument aimed at helping education reform. Section 22 Chapter 4 of the Act provides guidelines stating that education must be learner-centered and learners must be able to develop themselves naturally and to their full potential (The Royal Government Gazette, 1999). The quality of learning includes the ability of the learner to develop within oneself a capacity for self-assessment: to revise, reflect and improve performance of each person. Another reason for focusing on self-assessment is that this skill is important for life-long learning

Maharakham University is an institution of higher education in Thailand. It has now become a comprehensive university, offering undergraduate and graduate degree programs. This paper is to examine the relationship between self-concept, achievement motive, self-regulation, anxiety and self-assessment on research capability of undergraduate students, Faculty of Education, Maharakham University. It is the first phrase of Selected Psychological Temperaments Relating to Self-Assessment on Research Capability of Undergraduate Students, Faculty of Education, Maharakham University.

## **Self-assessment**

If students are to learn, they also need to be able to critically assess their knowledge. This skill is vital in order to identify topics that need attention, to assess the difficulty of the current problem, and to decide whether the problem is to be changed or to keep working towards a solution.

The defining characteristic of self assessment in relation to this paper is: identifying standards and/or criteria to apply to their work and making judgements about the extent to which they have met these criteria and standards. (Boud, 1995)

Self-assessment is a key issue in autonomous learning as it enables learners to set goals and to monitor and evaluate their own learning. Self-assessment requires students to think critically about what they are learning, to identify appropriate standards of performance and to apply them to their own work. Self-assessment encourages students to look to themselves and to other sources to determine what criteria should be used in judging their work rather than being dependent solely on their teachers or other authorities. The development of skills in self assessment lies at the core of higher education, and as teachers we should be finding whatever opportunities we can to promote self assessment in the courses we teach. Self-assessment is a term which describes a very wide range of practices some of which are more defensible as a part of higher education than others (Boud, 1995, Boud & Falchikov, 1989).

Self assessment is commonly a supplement to teacher assessment of students, although in some cases student self-assessment may replace that of the academic assessment. Teacher has an important part to play in students assessment; however, if they see themselves as the only assessors, they can limit the achievement of many of the central goals of higher education.

## **Rubrics Score Criterion as Student Self-Assessment Tools**

Rubrics can be a powerful self-assessment tool if teachers disconnect them from grades and give students time and support to revise their work. A rubric is a document that lists criteria and describes varying levels of quality, from excellent to poor. A good rubric can orient learners to the concept of quality as defined by experts in a field. Rubrics can be informative as well as evaluative. The process of rubric-referenced self-assessment involves three basic steps: Setting Clear Expectations, Conducting Self-Assessment and Revising. The process of student self-assessment through rubrics can be enhanced with peer assessment and teacher feedback. Self-assessment can be useful in any subject. If students produce it, they can assess it; and if they can assess it, they can improve it. (Andrade, 2007)

In this study we gave students an evaluate form to complete a self-assessment on research capability by rubrics score criterion.

## **Dimensions which might be considered**

There are a number of ways in which self assessment practices can be differentiated and variations can be expected on all of the following dimensions: (Boud and Brew, 1995: 130-135)

- Subject matter domain and specific learning goals. Self assessment is used in many different subject areas from the highly technical or skills based to the discursive or expressive.
- Domains of learning such as knowledge and understanding, skills and capability, and competency and learning outcomes.
- Students' prior experience of tasks of the kind being assessed, level of study, or students' stage of learning.

- Cognitive complexity of the task and the kinds of knowledge schema required.
- Student self-confidence or self-efficacy. While these influence how students respond to any given self assessment activity, they also influence what self assessment demands it is realistic to make on students.
- Students' experience of self assessment processes, in particular of the specific type being used.
- Degree of involvement of other parties. This might include feedback from peers, input from staff or the use of members of a profession.
- Whether the outcomes of self assessment are to be used solely for learning or whether they are associated with grading and the formal accreditation of learning.

## **Methods**

### **Samples**

The data were collected from 182 third year Mahasarakham University undergraduate students who enrolled on the classroom action research course in academic year 2009. They were selected by stratified random sampling from 4 majors: 56 English, 55 Science, 35 Early childhood and 36 Social.

### **Instruments**

The instruments consisted of two kinds: questionnaire and assessment form. The questionnaire had four parts: self-concept, achievement motive, self-regulation and anxiety and in addition to the student self-assessment on research capability form.

The four questionnaires were five rating scale as follows:

Self-concept had 30 items of two parts: academic self-concept and nonacademic self-concept. There were discriminating powers ranging .23 to .59 and a reliability of .87.

Achievement motive had 30 items of moderate risk-tasking, energetic, individual responsibility, knowledge of result of decision, anticipation of future possibilities and organization skill. There were discriminating powers ranging .43 to .69 and a reliability of .94.

Self-regulation had 30 items of self-observation, judgment process and self-reaction. There were discriminating powers ranging .46 to .74 and a reliability of .95.

Anxiety had 30 items of trait anxiety and state anxiety. There were discriminating powers ranging .45 to .76 and a reliability of .96.

The student self-assessment on research capability form had twenty items by rubrics score criterion of four scales. There were discriminating powers ranging .37 to .70 and a reliability of .91.

## **Results**

For the samples (N=182), the mean and standard deviation of each variable was as follows: self-concept rating of mean was 3.68 (S=.32), achievement motive of mean was 3.94 (S=.46), self-regulation rating of mean was 3.56 (S=.54), anxiety rating of mean was 2.92 (S=.72) and self-assessment by rubrics of mean was 3.37 (S=.45). There were high levels on 3 aspects: self-concept, achievement motive and self-regulation. There was a high level on self-assessment too.

Table 1 Means and Standard Deviations of Each Variable

Variable	$\bar{X}$	S
Self-concept	3.68	.32
Achievement motive	3.94	.46
Self-regulation	3.56	.54
Anxiety	2.92	.72
Self-assessment by rubrics	3.37	.45

Results for the correlation between self-concept, achievement motive, self-regulation, anxiety and self-assessment on research capability of undergraduate students are presented in Table 2. There was a significant relationship between self-concept, achievement motive, self-regulation and self-assessment on research capability of undergraduate students at 0.01 level. But there was not significant relationship between anxiety and self-assessment.

Table 2 Correlations between self-concept, achievement motive, self-regulation, anxiety and self-assessment on research capability of undergraduate students

Variable	Self-concept	Achievement motive	Self-regulation	Anxiety	Self-assessment
Self-concept	-	.655**	.567**	.130	.240**
Achievement motive		-	.792**	.086	.299**
Self-regulation			-	.104	.232**
Anxiety				-	-.013

\*\*p ≤ 0.01, two-tailed.

Results for the multiple regressions with stepwise are presented in Table 3-4. The achievement motive could predict student self-assessment. There has a correlation coefficient of .299 at the 0.01 level of significance with a predictive power at 8.90 percent. The predictive equation of student self-assessment was able to construct in the raw score form and standard form as below:

Formulated in the raw score

$$Y' = 44.241 + .196mov$$

Formulated in the standard

$$Z_{y'} = .299Z_{mov}$$

Table 3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.299 <sup>a</sup>	.089	.084	8.57087

Table 4 Coefficients of Multiple Regressions

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	44.241	5.533		7.996	.000
	mov	.196	.047	.299	4.205	.000

### Discussion

The focus of this article is to examine the relationship between self-concept, achievement motive, self-regulation, anxiety and self-assessment and formulate a multiple regression equation. The finding revealed that there was significant relationship between self-concept, achievement motive, self-regulation and self-assessment by rubrics on research capability of undergraduate students at .01 level. The achievement motive could predict student self-assessment. These students hadn't been assessed by self-assessment by rubrics before, it is the first time for them on the classroom action research course. According to McClelland (David McClelland's Achievement Motivation, Manifest Need Theory, <http://kalyan-city.blogspot.com/2010/06/david-mcclelland-achievement-motivation.html>), every person has an achievement motive to some extent. However, some are constantly more achievement-oriented than others. Most people will put more effort into work if they are challenged to do better. However, the achievement-motivated person is likely to outstrip all others in his zeal to improve performance when he is challenged. He makes more efforts and accomplishes more. Ratzburg, H. (<http://jam3e.tripod.com/id8.html>: 07/2010) notes that high achievement motivation is predicted to contribute to effective entrepreneurship and effective leadership of small task-oriented groups and positively related to the leadership of small task-oriented groups. This finding is important that self-assessment through rubrics on research capability of students can be useful, foster students' ability to make these connections; provides a mechanism to enhance learning in a meaningful, rather than rote, manner and results in greater motivation and confidence (McMillan, H. and Hearn, Jassica. 2008: 40-41). Self-assessment led students to think critically about what they are learning, revise, reflect and improve performance for life-long learning.

### Conclusion

There was the relationship between self-concept, achievement motive, self-regulation and self-assessment on research capability. The achievement motive could predict student self-assessment. This may be suggested that achievement motive was used to help strengthen students' self-assessment.

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