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## Locus of Control and Academic Achievement among *Orang Asli* Students in Malaysia

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### ABSTRACT

This paper is presented to identify the locus of control and its link to academic achievement of *Orang Asli* students. It's also to determine the differences of locus of control according to age and gender. A total of 402 *Orang Asli* students ( $n_{\text{male}} = 39.05\%$ ,  $n_{\text{female}} = 60.95\%$ ;  $n_{\text{age14}} = 57.71\%$ ,  $n_{\text{age16}} = 42.29\%$ ) from ten secondary schools in the states of Perak and Pahang involved in this study. Respondents were selected through multi-stage sampling technique and data were collected using questionnaires. The study found that majority of the respondent (61.94%) tends to have external locus of control. Meanwhile, locus of control showed a significant difference in term of age ( $t = 3.03$ ;  $p < 0.01$ ). Late adolescents tend to have internal locus of control. However, there was no significant difference in term of gender ( $t = -0.60$ ;  $p > 0.05$ ). Furthermore, locus of control showed significant differences according to various level of academic achievement with  $F(2, 399) = 19.58$ ;  $p < 0.01$ . Those students who have higher level of academic achievement tend to have internal locus of control, compared to students with low academic achievement. As a conclusion, with the increased level of internal locus of control among the *Orang Asli* students, it will increase their hold control of effort for academic achievement.

*Keywords:* Locus of control, academic achievement, *Orang Asli* students

### Introduction

Locus of control is a personality characteristic that determines the degree to which an individual believes that he or she is in control of life events. The concept of locus of control has been originally developed by Julian Rotter (1966), and it can be generalized into a basic dichotomy which are internal and external. Individuals with an internal locus of control believe that future outcomes depend primarily on personal actions, whereas individuals with an external locus of control ascribe actions to factors outside of their control, such as fate or chance.

The internal and external locus of control were analysed in relation to other important aspects in daily life of students, such as academic achievement, self-concepts, self-efficacy, achievement motivation, optimism and so on (Sagone & De Caroli, 2014; Ghamsemzadeh & Saadat, 2011; Sheiki Fini & Yousefzadeh, 2011, Nilson-Whitten, Morder & Kapakla, 2007). For example, Sheiki Fini & Yousefzadeh (2011) found significant and positive correlation between achievement motivation, locus of control and educational promotion, observing that students with internal locus of control believe that their educational achievement and grades depend on their effort and their planning. Nilson-Whitten, Morder, and Kapakla (2007) also found significant relationships between locus of control, optimism and academic success of

students. Thus, many psychologists believed that locus of control and academic achievement are related to each other; an increase or decrease in one can cause changes in other.

In Malaysia, the standard of education among *Orang Asli* people is still at a very low level. *Orang Asli* is the indigenous minority peoples in Peninsular Malaysia with the recent total population is nearly 180,000. They are about 18 subgroups of *Orang Asli* and broadly classified under three main groups which are The Senoi, The Proto-Malay, and The Negrito (JAKOA, 2011). Since independence in 1957, various efforts have been implemented by the Malaysian government to develop the *Orang Asli* community especially in economic and social programs (Zainal Abidin, 2008). Hence, the poverty rate for household heads of *Orang Asli* people has decreased from 80% in the 1990s to 32% in 2010 (JAKOA, 2011).

However, the educational level of the *Orang Asli* people is still low. Based on examination performance at the primary and secondary school level, the accomplishment of *Orang Asli* students were still far lagging behind in comparison to students from other ethnic group in Malaysia (Ramli et al., 2013). According to the *Orang Asli* Strategic Development Plan (JAKOA, 2011) the percentage of the *Orang Asli* students who passed the public examination in primary and secondary schools was small. This significantly gives impact that only 880 of the *Orang Asli* students have completed their tertiary education between 1971 and 2010 (Ramli et al., 2013).

There are several factors that relatively influenced the education of *Orang Asli* students. According to previous researcher such as Razaq et al. (2011), Hood (2008), Hasan (1997) and Juli (2006), the most significant problems are the state of poverty, their local culture that is not taking education as a serious matter, geographical areas as they live in the forest settlements, lack of teaching and learning facilities available in school, marriage at a young age, the influence from dropout friends, communication problems, and attitudes.

In addition, other factor that associated with academic achievement and has to be highlighted is the psychological component which is locus of control. The concept of locus of control has been favored by numerous scholars and its orientation plays an important role in the student's perception of responsibility for his own process of learning. Therefore, the present study was aimed to determine the differences of locus of control among *Orang Asli* students according to their academic achievement, age and gender. The researcher predicted that locus of control have significant differences according to age ( $H_{a1}$ ), gender ( $H_{a2}$ ), and academic achievement ( $H_{a3}$ ).

## Methodology

### Sample and Location

The respondents consisted of 402 *Orang Asli* students from ten secondary schools in the state of Pahang and Perak. Respondents were selected through multi-stage sampling technique which involved three stages of sample selection that are states, schools and students. The secondary schools involved in this study were SMK Tapah, SMK Ulu Kinta, SMK Muhibbah, SMK Syeikh Abdul Ghani, SMK Sultan Idris Shah II, SMK Orang Kaya Haji, SMK Felda Sg. Koyan, SMK Kuala Krau, SMK Sultan Ahmad Shah dan SMK Karak.

### Procedure and Instruments

Data were collected using questionnaires through a self-administered procedure with minimum monitoring from researcher. The questionnaire used for this study consisted of two parts: 1) Personal Profiles of Respondents and 2) The Nowicki-Strickland Internal-External Control Scale for Children (CNSIE).

Personal Profiles of Respondents consisted of gender, age, ethnic, parent incomes and academic achievement. Score for academic achievement was calculated based on four

selected subjects which were Malay Language, English, Mathematic and Science in *Ujian Pencapaian Sekolah Rendah* (UPSR) for the Form Two students and *Penilaian Menengah Rendah* (PMR) for the Form Four students.

The CNSIE was used as a measure of generalized expectancies for internal versus external control of reinforcement among children, as defined by Rotter (Lefcourt, 1991). The CNSIE Scale is a 40-items paper-pencil test having a Yes (1) - No (0) response format. The score ranges from 0 (internal) to 40 (external). The higher the score of locus of control showed that the respondents have an external locus of control, otherwise the lower the score tend to internal locus of control. The CNSIE for this study had an alpha value of 0.665.

### Data Analysis

The statistical analyses used were independent sample t-test, Analysis of Variance (ANOVA) and Post-Hoc Tukey HSD test.

## Research Findings

### Personal Profiles of Respondents

A total number of 402 Orang Asli secondary school students from the states of Pahang and Perak were involved in this study. As shown in Table 1, majority respondents are female (60.95%) aged 14 years old (57.72%). As for indigenous background, most of the respondents (63.43%) were from the Semai ethnic. Further, the parent income for this study refers to their total monthly income as reported by respondents. Generally, the respondents came from the relatively low income level family (mean = RM503.35). Majority of their parent (66.05%) have a monthly income less than RM500. According to the Economic Planning Unit (2011), the average poverty line for Peninsular Malaysia in 2009 is RM760, while hardcore poverty is RM460. This means that more than half of the respondents are in hardcore poor households.

For academic achievement, researcher has divided the percentage to a five level based on grades and percentages used by the school (refer to Table 1). The study found that the overall mean score of academic achievement was 44.24 (grade D). The results indicated that the academic achievement performance of Orang Asli students remain weak.

Table 1  
*Personal Profiles of Respondents*

Variables	n	(%)	Variables	n	(%)
1. Gender			4. Parent Income		
Male	157	(39.05)	≤ RM499	214	(66.05)
Female	245	(60.95)	RM500-RM999	59	(18.21)
			RM1000-RM1499	24	(7.41)
2. Age			RM1500-RM1999	11	(3.40)
14 (Form 2)	232	(57.72)	≥ RM2000	16	(4.94)
16 (Form 4)	170	(42.28)	Mean : 503.35		
Mean : 14.85			S.D. : 549.69		
S.D. : 0.989					
3. Ethnic			5. Academic Achievement		
Jakun	2	(0.50)	A (80-100)	10	(2.50)
Semelai	2	(0.50)	B (65-79)	36	(9.00)
Temuan	5	(1.24)	C (50-64)	94	(23.40)
Jahut	30	(7.46)	D (40-49)	102	(25.40)

Variables	n	(%)	Variables	n	(%)
Semai	255	(63.43)	E (20-39)	148	(37.95)
Semoq Beri	1	(0.25)	Mean : 44.24		
Temiar	103	(25.62)	S.D. : 15.87		
Jahai	4	(1.00)			

### Locus of Control among *Orang Asli* Students

Table 2 present results on the two continuums of locus of control among respondents. Data indicates that more than half of the respondents (61.94%) were in the high level of locus of control with a mean value of 15.84 (S.D. = 4.10). The higher the score of locus of control showed that the respondents have an external locus of control, thus perceived their actions are more influenced by external forces such as luck, fate or by powerful others.

This condition probably caused by the factor of parenting styles in *Orang Asli* community. In this community, parents have a great influence in determining their childrens' way of life. Thus, the parents' influence in controlling their child behavior affected their child's external locus of control. Those who have this type of personality tend to attribute their experiences to fate, chance, or luck. They also tend to lack persistence and not have very high level of expectation.

Table 2  
*Locus of Control among Orang Asli Students*

Locus of Control	n	%	Mean	S.D	Min	Max
Internal (Low) score: 5-14	153	38.06	15.84	4.10	5	27
External (High) score: 15-27	249	61.94				

### Differences in Locus of Control among *Orang Asli* Students According to Age, Gender and Academic Achievement

T-test analysis was used to identify the differences in locus of control based on age and gender. This study hypothesized that locus of control have significant differences according to age ( $H_{a1}$ ) and gender ( $H_{a2}$ ). As illustrated in Table 3, locus of control was found to be significantly different by age (Mean<sub>14 years old</sub> = 16.37, S.D.<sub>14 years old</sub> = 4.18; Mean<sub>16 years old</sub> = 15.11, S.D.<sub>16 years old</sub> = 3.90;  $t(400) = 3.09$ ,  $p = 0.00$ ), *Cohen's d* = 0.31 with a moderate magnitude of effect size. Thus, the results support the first hypothesis.

The higher mean score in locus of control of adolescents aged 14 compared to adolescents aged 16 showed that the early adolescents are more prone to external locus of control than the late adolescents. These findings are consistent by prior studies (Shute, Howard, & Steyaert, 1984; Skinner, Melanie & James, 1998) that found the orientation of locus of control during childhood are more likely to external compare to the orientation during adolescence and adulthood are more tend to the internal. Research has shown that as people get older they tend to become more internally orientated (Lefcourt, 1982 in Pennington, 2000).

Table 3  
*Differences in Locus of Control among Orang Asli Students according to Age and Gender*

Locus of control	Mean	S.D.	t(df)	Significant, p
<b>Age</b>				
14 years old	16.37	4.18	3.09(400)	0.00*
16 years old	15.11	3.90		
<b>Gender</b>				
Male	15.68	4.40	-0.60 (400)	0.55
Female	15.93	3.91		

\*p<0.01

Meanwhile, there was no significant different in locus of control according to gender (Mean<sub>male</sub> = 15.68, S.D.<sub>male</sub> = 4.40; Mean<sub>female</sub> = 15.93, S.D.<sub>female</sub> = 3.91; t(400) = -.603, p = .547); *Cohen's d* = -0.06 with a small magnitude of effect size. This study showed that both male and female students of *Orang Asli* have almost similar locus of control which did not differ significantly. Both of them tend to external locus of control. Hence, the results reject the second hypothesis.

This finding is parallel with previous research which states that there was no significant different of locus of control between girls and boys (Yates, 2009; Ghasemzadeh & Saadat, 2011). However, a study by Ghazvini and Khajepour (2011) revealed that girls reported higher level of internal locus of control than boys in Tehran, while Sherman et al. (1997) found that females tended to be more external than males.

Further, this study hypothesized that there is a significant differences in locus of control according to academic achievement (H<sub>a3</sub>), with the assumption that students who reported lower score in locus of control (tend to internal) would have higher level of academic achievement. In this section, the classification of academic achievement into three categories of high, moderate and low level is differ from the classification in personal profile (Table 1). The classification was formulated based on the theoretical mean and standard deviation. Respondents with score above 61 imply that they get higher level of academic achievement. Meanwhile, respondents who scores ranging from 29 to 61 reported their academic achievement is moderate, and respondents with scores less than 29 reported their academic achievement as low.

One-way between-group analysis of variance was conducted to determine the differential between the locus of control of Orang Asli students in different level of academic achievement. As shown in Table 4, there was a statistically significant difference at the p<0.01 level in locus of control scores for the three level of academic achievement groups [F(2,399) = 19.58, p = 0.00]; *partial eta Squared* = 0.08 with a moderate magnitud of effect size.

Table 4  
*ANOVA Analysis of Locus of Control according to Different Level of Academic Achievement*

Source	SS	df	MS	F	Sig.
Between-group	603.79	2	301.90	19.58	0.00*
Within-group	6151.37	399	15.42		
Total	6755.16	401			

\*p<0.01

With the above difference being specified, Post-hoc comparisons using the Tukey HSD test has been tested. The results indicated that there are significant differences between the three groups at the level of 0.01 (Table 5). Overall, average scores of high level group are lower (tend to internal locus of control) than the low and moderate level groups. Similarly, the average score of moderate level group is lower than the low level group. Therefore, the data support the third ( $H_{a3}$ ) hypothesis of the study. These findings imply that adolescents who were more likely to have higher level of academic achievement were also those who have internal locus of control. Thus, the findings of this current study are congruent to the findings of previous studies (Ghasemzadeh & Saadat, 2011; Mooney et al., 1991 in Pennington, 2000) which found that there are positive correlation between internal locus of control and academic achievement. Meanwhile, the external locus of control has negative correlation with academic achievement (Kopera-Frye, 1991).

Table 5

*Post-Hoc Analysis of Locus of Control Differences According to Level of Academic Achievement Groups*

Group (A and B)	Mean Differences (A-B)	Significant Level
High level and Low level	-3.98*	0.00
High level and Moderate level	-2.10*	0.00
Moderate level and low level	-1.89*	0.00

\* $p < 0.01$

### Conclusion

The study found that majority of the respondents come from poor families and have weak academic performance. In terms of locus of control, majority respondents tend to external locus of control. It shows the *Orang Asli* students believe that their actions have a minimal influence on their outcomes. This study also showed the significantly differences in locus of control according to age and level of academic achievement. The younger adolescents tend to external locus of control than the older, while the students who have an internal locus of control have better academic achievement. This indicates that the internal locus of control is significantly associated with good academic performance, on the contrary external locus of control related to low academic performance. However, the study did not show a difference of locus of control based on gender. Overall psychological component such as locus of control is closely related to the academic achievement of *Orang Asli* students. Thus, this study suggest to consider an internal locus of control as a main element in any intervention and prevention programs for *Orang Asli* adolescents. To change the human behavior, we have to change their perception toward themselves and also their worldview. A systematic program such as mind coaching can be implemented to increase their internal locus of control.

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