Exploring the Mindsets and Well-Being of Rural Secondary School Students in Perak, Malaysia

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1 Introduction

Two of Perak Amanjaya 7 key thrusts:
a. Skilled, ethical and knowledgeable society: equip each citizen with the right capabilities to participate effectively and sustainably in economic activities with high growth potential.
b. Participative youth and social harmony: to safeguard the well-being of youth and the society irrespective of race and religion through making quality opportunities available for active participation in socio-economic activities that will lead to social unity.

Assumptions:
a. The two key thrusts advocate the inclusivity of all community members in Perak ranging from school children to adults.
b. Youth represents the most critical human capital to be developed. Such capability development often starts from schools.
c. The inclination of youth to be academic or non-academic is often affected by a number of factors including mindsets and psychological well-being.
d. Youth should be guided to be productive participants in the community as they are the successors of the current and aging generations.

Gap
a. Up to January 2013, about 80 per cent of school leavers in Perak have opted not to pursue their education at tertiary level (IDR, 2013). Yet with the lack of interest in pursuing tertiary education among school leavers suggests that these school leavers are likely forced into the labor market as young as 18 years olds. However, not all of them are equally equipped the necessary skills. This scenario calls for non-academic programs should be available to these school leavers.
b. Perak has a number of universities such as
    i. Universiti Perguruan Sultan Idris (UPSI) in Tanjung Malim,
    ii. Universiti Teknologi MARA (UiTM) in Seri Iskandar,
    iii. Universiti Teknologi PETRONAS (UTP) in Tronoh,
    iv. UNIKL in Manjung,
    v. UiTM in Tapah,
    vi. UTAR in Kampar.
    These universities are located in the two districts or regions, namely, Batang Padang and Perak Tengah with 40 secondary schools in the vicinity.

Research Objectives

With the assumption that not all school leavers be able to participate productively in the communities on their own especially the low achievers, the research aims

  a. To identify the mindsets and psychological well-being of low achievers at secondary school students in the rural areas of Perak.
  b. To unravel the psychological needs of these low achievers to be participative youth in the community.
  c. To provide strategic direction in leveraging current mindsets and psychological conditions of low achievers at rural areas to be participative youth in the community.

Studies on Mindsets and Well-Being

Mindsets (M) refer to a set of assumptions, methods, or notations held by one or more people or groups of people that is so established that it creates a powerful incentive within these people or groups to continue to adopt or accept prior behaviours, choices, or tools. A similar set of assumptions also exist about individuals' basic qualities (i.e. intelligent, personality and characters). Individuals with fixed mindset believe their qualities are carved in stone and have the urgency to prove themselves over and over whilst those with growth mindset believe their basic qualities are things they can cultivate through their efforts and are open to accurate information about own current abilities, even if it's unflattering (Dweck, 2006).

According to Dweck (2012), individuals who believe their success is based on innate ability, have a "fixed" theory of intelligence (fixed mindset). They dread failure because it is a negative statement on their basic abilities. Others, who believe their success is based on hard work, learning, training and tenacity, have a "growth" or an "incremental" theory of intelligence (growth mindset). They improve their performance and learn from failures. Dweck (2012) argues that the growth mindset will allow a person to live a less stressful and more successful life. Students with fixed mindset believe their basic abilities, their intelligence, their talents, are just fixed traits. They pursue the goal of being look smart all the time and never look dumb. Students with growth mindset understand that their talents and abilities can be developed through effort, good teaching and persistence. They believe everyone can get smarter if they work at it.

A study on mindsets among returning-to-school adults revealed that striving for competence improvement had a positive impact on learning activities and outcomes, whilst striving to demonstrate competence or had a negative influence on learning and achievement (Dupeyrat and Mariné, 2005).

Well-being (WeB) refers to the condition of an individual or group in five typical domains, namely, physical (medical), social, economic, psychological, and spiritual. High well-

being is associated with positive experiences of individuals, whilst low well-being is associated with negative happenings.

This research focuses on Ryff and Keyes' (1995) sub-domain of the psychological WeB, that is, personal growth. The research explores the critical factors that may have significant influence to the psychological condition (personal growth) of low achievers rural areas in Perak.. The psychological condition of individuals represents the mental condition in which the qualities of a state are relatively constant even though the state itself may be dynamic. Such a mental condition is reflected in individuals' preferences which over time often develop into mindsets.

In psychology, **preference (P)** refers to an individual's attitude towards a set of objects, typically reflected in an explicit decision-making process (Lichtenstein & Slovic, 2006). The process often involves two main psychological functions: judging and perceiving (Jung, 1920). Each main function has two sub-functions. The sub-functions of judging (J) are thinking (T) and feeling (F) and the sub-functions of perceiving (P) are sensation (S) and intuition (N). Keirsey (1988) posited that individuals have preferences in applying these functions. Such preferences are manifested through how individuals communicate (abstract versus concrete words) and how they accomplish their goals (cooperative versus utilitarian tools). Abstract individuals are analogical, fictional, schematic, theoretical, general, categorical, symbolic, and figurative, whilst concrete personalities are indicative, factual, detailed, empirical specific, elemental, signal, and literal. Cooperative people get where they want to go by getting along with others, whilst utilitarian persons go after what they want in the most effective ways possible.

As illustrated in Figure 1, individual preference over words and tools can be associated with Myers' (1962) personality types known as Myers-Briggs Type Indicator (MBTI). Instead of leaving the personality types as four combinations of psychological sub-functions, Keirsey (1998) labeled the personality types (i.e. the configurations of inclination and habit) as artisan, guardian, idealist, and rational.

		Words (ways of expressing thoughts)	
		Abstract	Concrete
Tools (ways of pursuing goals)	Cooperative	Idealist (NF)	Guardian (SJ)
	Utilitarian	Rational (NT)	Artisan (SP)

Figure 1: Keirsey's (1988) Four Personality Types

Each personality type can be differentiated based on seven factors namely language, intellect, interest, orientation, self-image, value, and social roles. The configuration of these factors in any individuals is called intelligence, that is, how well individuals act in

given roles, namely, tactical, logistical, strategic, and diplomatic intelligence as summarized in Table 1.

Table 1: Four Intelligence

Intelligence	Description
tactical	being able to make smart moves that better one's position
logistical	being smart in handling goods and services
diplomatic	ability to work well with people
strategic	ability to figure out complex ways and means to accomplish well-defined goals

In the order of high to low preference (see Figures 2a and 2b), Keirsey (1998) theorized that idealists prefer being diplomatic, strategic, logistical, and tactical, whilst artisans tend to be tactical, logistical, strategic and diplomatic. Similarly, rational individuals are strategic, diplomatic, tactical and logistical, but guardians are likely being logistical, tactical, diplomatic and strategic. High preference of a particular intelligence over the other types of intelligence indicates an individual's dominant temperament which has been highly developed at a particular development stage. The dominant temperament is often related to a mindset.
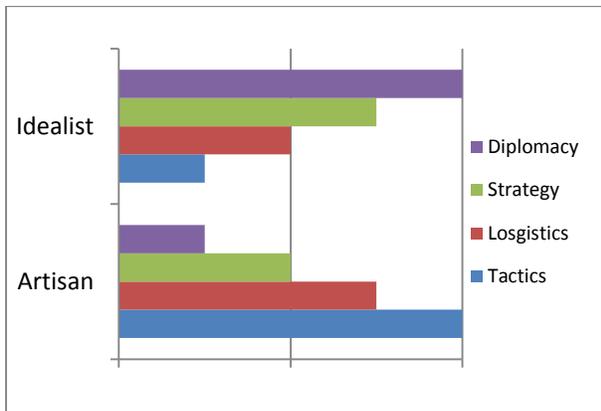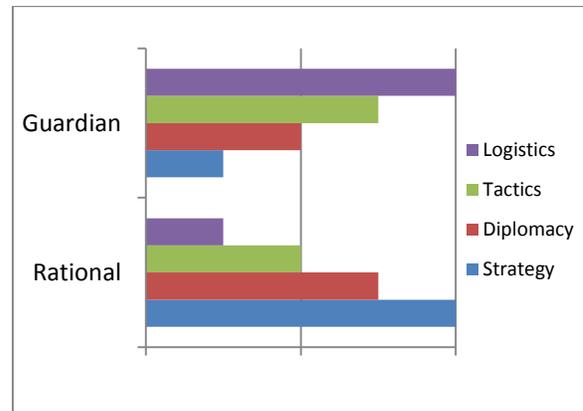
Figure 2a: Intelligence of NF & SP

Figure 2b: Intelligence of SJ & NT

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2   Methodology

The data collection involved a close-ended survey and a purposive sampling method.

The survey represented the self-administering paper-based questionnaires (37 items) divided into three sections: participant profile (11 items), personality types (16 items) and mindsets (16 items). The items of the personality types were adopted from the simplified version of Keirsey's (1998) Temperament Sorter (KTS) and of the mindsets were adapted from Dweck's (2006) Online Mindset Test. The items which were originally in English were translated in Malay by two independent persons and the meanings were cross- checked against the original items twice by the researchers.

The long version of KTS has been reported as having the internal reliability adequate for research purposes (Dodd and Bayne, 2007; Waskel, 1995). The KTS has also been validated to measure similar dimensions of the Myers-Briggs Type Indicator (MBTI) which was commonly used in the US (Tucker and Gillespie, 1993; Quinn et al., 1992) and with non-clinical populations (Myers and McCauley, 1985; Myers, 1987).

The internal reliability of the Mindset Test was tested. The Cronbach alpha coefficient for the eight-item fixed mindsets has the Cronbach alpha coefficient reported of .65 while the Cronbach alpha coefficient for the eight-item growth mindset was .79. The coefficients were acceptable.

Procedures Permissions to conduct the research were granted between July to October 2013 from the relevant entities/departments namely, Ministry of Education (Kementerian Pendidikan Malaysia), Perak Education Department (Jabatan Pendidikan Perak) and two District Education Departments (Pejabat Pendidikan Daerah Batang Padang and Perak Tengah). The actual data collections started in the mid of October until the early of November 2013.

About 900 sets of questionnaires were distributed among form four students at 28 daily secondary schools (Sekolah Menengah Kebangsaan) in two regions (Perak Tengah = 11; Batang Padang = 17) as illustrated in Table 2.

Table 2: Secondary Schools in Two Regions of Perak

No	Perak Tengah Schools & Locations	No	Batang Padang Schools & Locations
1	SMK Seri Iskandar , Seri Iskandar	1	SMK Sri Tapah, Tapah
2	SMK Dato' Abdul Rahman Yaakub, Bota Kanan	2	SMK Tapah, Tapah
3	SMK Layang-Layang Kiri,	3	SMK Buyong Adil, Tapah
4	SMK Changkat Lada , Kg. Gajah	4	SMK Hamid Khan, Tapah
5	SMK Sungai Ranggam, Teluk Intan	5	SMK Chenderiang , Temoh, Tapah
6	SMK Iskandar Shah, Parit	6	SMK Dato' Panglima Perang Kiri, Tapah Rd
7	SMK Sultan Muhammad Shah , Parit	7	SMK Khir Johari, Tg. Malim
8	SMK Sultan Muzafar Shah 1, Lambor Kanan	8	SMK Bandar Behrang 2020 , Tg. Malim
9	SMK Lambor Kiri, Lambor Kanan	9	SMK Slim, Slim River
10	SMK Dato' Seri Maharaja Lela, Kg. Gajah	10	SMK Dato' Zulkifli Muhammad, Slim River
11	SMK Sultan Abdul Jalil Shah , Kg. Gajah	11	SMK Bidor , Bidor
		12	SMK Syeikh Abdul Ghani, Bidor
		13	SMK Air Kuning, Kampar
		14	SMK Sungkai, Sungkai
		15	SMK Sungai Keruit , Sungkai
		16	SMK Trolak Selatan, Sungkai
		17	SMK (Felda) Besout, Sungkai

The two regions represent the rural areas in Perak. These two regions have the presence of at least two institutions of higher education in vicinity. For examples, Perak Tengah has two universities—Universiti Teknologi MARA (UiTM) Seri Iskandar and Universiti Teknologi PETRONAS (UTP), Tronoh—and Batang Padang has three universities— Universiti Perguruan Sultan Idris (UPSI), Tanjung Malim, UiTM, Tapah, and Universiti Tuanu Abdul Rahman (UTAR), Kampar.The participating students represent the students with below average academic performance. They are perceived as less likely to further academic endeavor after finishing secondary education than the average students.

Definitions used in the current study
This study defines the concepts used as follows:

Fixed mindset: one believes her/his qualities (i.e. intelligent, personality and characters) are carved in stone and has the urgency to prove her/himself over and over

Growth Mindset: one believes her/his basic qualities are things s/he can cultivate through her/his efforts and is open to accurate information about own current abilities, even if it's unflattering

Personality types represent the configurations of inclination (i.e. temperament) and of habits (i.e. character)

Low achievers (LA) represents a group of secondary students who has below average academic performance.

4   Findings/Results

Of 922 questionnaires collected, only 858 were usable. The findings are presented based on profiles, mindsets and personality types of the low achievers.

4.1   Profiles

Tables 3 to 5 show the summary of respondents' profiles. The majority of the respondents were female (61%), Malay (89%), Muslims (83%) with the maximum household income of RM3000 and dual parentage (90%) with either parent has completed, at least, the secondary education (77%)

Table 3: Gender, Race and Religion of the Low Achievers

Gender	%	#	Race	%	#	Religion	%	#
Male	36	331	Malay	89	702	Muslim	83	709
Female	61	527	Chinese	2	34	Buddhist	3.7	32
			Indian	6	57	Christian	4	35
			Others	3	65	Hindu	6	52
						Others	3	27
						Unknown	0.3	3
Total		858			858			858

Table 4: Household Income and Parentage of the Low Achievers

Household Income	%	#	Parentage	%	#
≤ RM1000	46	398	Single	5	45
RM1001 –to RM2000	30	257	Dual	90	768
RM2001 to RM3000	10	87	Guardian	4	35
RM3001 to RM4000	4	37	Unknown	1	10
> RM4000	8	63			
Unknown	2	16			
		858			858

Table 5: Parents' or Guardians' Highest Education

Parents'/Guardians' Highest Education								
	Single		Dual		Guardian		Total	
	%	#	%	#	%	#	%	#
≥ Diploma	< 1	4	14	50 (+72)	< 1	2	15	128
Certificate	< 1	4	13	73 (+42)	< 1	3	14	122
Secondary	3	24	50	334 (+93)	< 1	8	53	459
Primary	< 1	8	7	45 (+12)	1	9	9	74
Unknown	< 1	5	7	57	2	13	9	75
		45	91	778		35		858

4.2   Mindsets

The mindsets of the low achievers at rural secondary schools are showed in Table 6 below.

Table 6: Mindsets of the Low Achievers at Rural Secondary Schools

		Male	Female	Total
Fixed	Count	170	288	458
(proving basic qualities over and over)	%	20	33	53
Growth	Count	145	196	341
(cultivating basic qualities through efforts)	%	17	23	40
Neutral/Balance	Count	16	43	59
	%	2	5	7
Total	Count	331	527	858
	%	39	61	100

Among the low achievers in rural schools of Batang Padang and Perak Tengah, the results suggest the following:

- The number of low achievers with the fixed mindset is higher than of those with the growth mindsets
- Within each of the two mindset categories, female low achievers represent a higher number compared to male low achievers.
- Less than 10 percent of the low achievers appear to have a neutral or balance mindset

4.3   Personality Types

The personality types of the respondents are displayed in Table 7.

Table 7: Personality Types of the Low Achievers

	Types	Male		Female		Total		Interpretation: Intelligence (ability)
		%	#	%	#	%	#	
1	Artisan (A)	11	98	14	115	25	213	Tactical (working with equipment: Operators who promote & craft; Entertainers who perform & compose)
2	Idealist (I)	9	77	21	179	30	256	Diplomatic (Working with personnel: Mentor who teach & counsel; Advocates who champion & heal)
3	Guardian (G)	7	60	10	88	17	148	Logistical (working with material: Administrators who supervise & inspect; Conservator who provide & protect)
4	Rational (R)	8	67	12	101	20	168	Strategic (working with systems: Coordinators who arrange & conceive; Engineers who invent & architect)
5	A + either I or G or R	1	12	3	22	4	34	Tactical plus diplomatic, logistical or strategic
6	I + either G or R	1	12	2	14	3	26	Diplomatic plus logistic or strategic
7	G + R	< 1	4	< 1	5	1	9	Logistic and strategic
8	A + R + either I or G	0	0	< 1	2	< 1	2	Tactical and strategic plus diplomatic or logistical
9	I + G + R	< 1	1	< 1	1	< 1	2	Diplomatic, logistical and strategic
	Total		331		527		858	

Among the low achievers in rural schools of Batang Padang and Perak Tengah, the results suggest the following:

- About 91 % (785) of the low achievers fall into one of the four personality types (Artisan = 213, Idealist = 256, Guardian = 148, Rational= 168) with one dominant intelligence (i.e. tactical, diplomatic, logistical , strategic), respectively
- Less than 10 % (73) of the low achievers appears to possess multiple intelligence, that is, they are not limited to having one personality type

5   Conclusions and Recommendations

Among the low achievers in rural schools of Batang Padang and Perak Tengah, the results also suggest the following:

- About 39 % (335) of the low achievers with fixed mindset have the three personality types (i.e. Artisan, Idealist, Rational with one dominant intelligence (i.e. tactical, logistical, strategic), respectively. With the fixed mindsets, they likely prefer brushing up their existing intelligence, instead of developing other intelligence. For example, Artisans are likely interested in working with equipment and prefer to prove such skills over and over again; Idealists are likely to work well with people; Rationals are interested proving their skills working with systems.
- About 22% (183) of the low achievers with growth mindset have two personality types (i.e. Artisan and Idealist). With the growth mindset, they have the potential to develop the next stage of Artisan and Idealist intelligences (see Figure 2a), namely, diplomatic intelligence (i.e. working with personnel) and strategic intelligence (i.e. working with systems).

Way Forward
a. To explore the ways of transforming low achievers' fixed mindset into growth mindsets.
b. To identify programs that propel the intelligence of the low achievers with growth mindset.

Acknowledgement

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Notes:
1. Perak has 10 regions; the list obtained indicates that only 9 regions have daily secondary schools. *Next step: To extend the study into 7 other regions in the future*
2. Six of the 28 daily secondary schools in the rural areas have been reclassified as urban schools in 2011 based Jabatan Pendidikan Perak website. This current study did not discriminate the schools according such classifications since the study focused on gazetted districts. *Next step: To do a comparative analysis*