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Does Academic Self-concept Moderate Academic Achievement and Career Adaptability? A Study of Indonesian Junior High Students

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ABSTRACT

This study aims to reveal the moderating effects of academic self-concept on the relationship between academic achievement and career adaptability among junior high school students in Depok City, West Java, Indonesia. With a sample of 662 students, career adaptability was measured using the modified Career Adapt-Abilities Scale, academic achievement with students' average fifth-semester grades, and academic self-concept using the modified Academic Self-Concept for Adolescence Scale. The results showed no significant moderating effect of academic self-concept on academic achievement and career adaptability. It means the strength of the relationship between academic achievement and career adaptability was not affected by student's academic self-concept either positive or not. Based on this study, regardless of their academic achievement and academic self-concept, junior high school students need the optimal available career development preparation to develop their career adaptability.

Keywords: Academic achievement, academic self-concept, career adaptability, career preparation, junior high school

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INTRODUCTION

Career preparation is a major developmental task in adolescence (Skorikov, 2007), and as a process, career preparation can determine adults' subsequent career success. Roenkae and Pulkkinen (1995) explained that a lack of career preparation could have indirect effects on adjustment, either by causing vocational problems or in facilitating a

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successful career, which all contributed to an adult's social functioning. The ability to adjust is also known as "adaptivity," and in career developmental theory, the adaptivity concept is usually used in terms of career adaptability (Savickas & Porfeli, 2012).

Career adaptability was defined by Savickas (1976) as the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions. Additionally, career adaptability consists of four dimensions called the 4 Cs (Hirschi, 2009; Savickas, 2005; Savickas & Porfeli, 2012): (1) concern - thinking about one's career throughout life; (2) control - taking responsibility for one's chosen career; (3) curiosity - being inquisitive about work and seeking work availability information; and (4) confidence - self-efficacy beliefs about one's ability to choose a career. Career adaptability determines individual success when facing critical phases in career development, including career transition. In the educational setting, the first career transition usually occurs when students must choose a type of school and a major.

In Indonesia, students must choose their schools and their majors before they enroll in high school, based on Indonesian Government Rules in *Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia No. 69 Tahun 2013* (Departemen Pendidikan dan Kebudayaan Republik Indonesia, 2013) which states that tenth-grade students must already have chosen their type of high school and their major (e.g., social, science, language, vocational). This new government rule has changed Indonesian schools' system of majors. Previously, students were asked to choose a major when they were in the eleventh grade. This rule means, of course, that the career transition phase now comes earlier, and, in turn, the career preparation process must also come earlier.

To determine whether the preparation process is actually occurring earlier, this study interviewed 12 ninth grade students in Jakarta and Depok City, Indonesia about this process. Their responses indicated that students had, indeed, not yet undergone the maximum career preparation process, for example they did not choose their next study program by evaluating their own strengths and weaknesses. They reported that they had never received career development advice.

Therefore, this study was conducted to discover any moderating role of academic self-concept in the relationship between academic achievement and career adaptability. Basically, this study advances research by Negru-Subtirica and Pop (2016), who found that academic achievement had a positive and significant correlation with career adaptability. Academic achievement describes individual academic performance in the form of results that indicate how successful an individual student is in specific academic areas. Generally, students' grades reflect their academic achievement (Poropat, 2009)

In fact, academic achievement can validate personal competencies, strengthen pre-existing career goals, and guide planning

of new vocational paths (Negru-Subtirica & Pop, 2016). Students with positive academic achievement find it easier to know their strengths in specific areas, and by knowing their strengths, they find it easier to choose a future career. They also tend to become more involved in career preparation activities, which, indirectly, improve students' awareness about the importance of preparing for a future career (career concern), encourage self-regulation toward a career goal (career control), and heighten curiosity about a career (career curiosity).

However, preliminary studies have found that some students with high academic achievement have not subsequently maximized their career preparation. Moreover, the existing literature has revealed that, in real life, students with good levels of academic achievement in middle school have poor levels of academic achievement in high school. This situation is usually associated with students' failure when choosing a school major, and such failure affects students' ability to adapt to the new educational environment. This raises the question of whether any variable impacts the relationship between academic achievement and students' ability to adapt to an academic area. Thus, discovering whether academic self-concept moderates the relationship between academic achievement and career adaptability is important.

Achievement experiences predispose individuals' perception of their ability, that is, their self-concept (Bong & Skaalvik, 2003). In academic areas, students' self-concept involves their perception and evaluation of their academic abilities (Marsh & Craven, 2002). Students with a positive academic self-concept have confidence about their academic competencies (Bong & Skaalvik, 2003), and they can develop and execute strategies to overcome obstacles (Gonzales-Pineda et al. as cited in Ordaz-Villegas et al., 2013). In junior high school students, the ability to develop strategies facilitates their academic performance, and with high academic performance, students can confirm and reinforce their academic self-concept.

More specifically, a student's academic self-concept consists of four factors (Ordaz-Villegas et al., 2013): (1) self-regulation - a positive attitude toward the acquisition of knowledge and the learning process; (2) general intellectual abilities - the ability to process and use information effectively in a specific situation; (3) motivation - attraction to a particular task or objective, that encourages a strategy search and the analysis required to satisfy that attraction within an established program; and (4) creativity - a process that generates a sensibility toward problems and difficulties in knowledge, finds solutions, and makes strategic decisions. Additionally, a student's academic self-concept is developed based on individual interaction with the wider social environment (Kelley, 1973). Thus, adolescents tend to build their academic self-concept through comparing their academic capability to that of their peers. The more capable a student perceives herself or himself to be, the more easily a person can plan and gain confidence in her/his career.

In this study, researchers assumed that, in adolescence, academic self-concept moderates academic achievement and career adaptability. When adolescents have a higher level of positive academic self-concept, their academic achievement will strengthen career adaptability to help them face a form of career transition, such as choosing a high school major that leads to a career. In fact, academic achievement has been shown to correlate positively with career adaptability (Havenga, 2011; Negru-Subtirica & Pop, 2016), but in fact, the preliminary study indicates that not all adolescents with good academic achievement have high career adaptability. So this study hypothesized that academic self-concept has a moderated effect on academic achievement and career adaptability.

MATERIALS AND METHODS

Participants

To discover factors that impact the relationship between academic achievement and career adaptability, this study used a nonprobability sampling technique by deploying convenience sampling to recruit ninth grade students as participants. A total of 662 participants who joined in the study belonged to two public junior high schools (SMPN 3 and SMPN 8) located in Depok City, West Java, Indonesia. All participants were in ninth grade, aged between 13 and 16 years old and in general, the participants had good academic achievement (M = 79.68, from minimum score = 20 and maximum score = 100). The profiles of the two public schools (SMPN 3 and SMPN 8), informed us that they did not have any careers program, nor indeed a careers guidance teacher.

Instruments and Measurement

Career adaptability. In this study, career adaptability was measured using the adapted form of the Career Adapt-Abilities Scale (CAAS) (Savickas & Porfeli, 2012), which identifies levels of career adaptability. CAAS consists of 24 items that measure four dimensions of career adaptability through the 4Cs—concern, control, curiosity, and confidence—with 5-point Likert-type responses, ranging from 1 (highly disagree) to 5 (highly agree). On the basis of researchers' reliability and validity tests, CAAS showed a reliability coefficient of 0.899 and the r^{it} ranging from 0.194 to 0.756, with no negative correlation.

Academic achievement. Academic achievement was measured by participants' fifth-semester average grades. The researchers classified grades into 10 ranges on the basis of the grade conversion standard *by Peraturan Bersama Direktorat Jenderal Pendidikan Dasar dan Direktorat Jenderal Pendidikan Menengah Kementerian Pendidikan dan Kebudayaan No. 5496/C/KR/2014 and 7915/D/KP/2014* (Departemen Pendidikan dan Kebudayaan Republik Indonesia, 2014). Then, the researchers scored grade ranges from 100 (Curriculum 2006: 9.63–100 / Curriculum 2013: 3.85–4.00) to 10 (Curriculum 2006: 2.50–2.94 / Curriculum 2013: 1.00–1.17).

Academic self-concept. Academic self-concept was measured using the adapted form of the Academic Self-Concept for Adolescents Scale (ASCA) (Ordaz-Villegas et al., 2013), which consists of 16 items from the four factors of academic self-concept—self-regulation, general intellectual abilities, motivation, and creativity—with 5-point Likert-type responses, ranging from 1 (Never) to 5 (Always). The scale measures the self-concept of adolescents (14–18 years.) on a positive–negative range. This scale's reliability coefficient was 0.861, and the r^{it} ranged from 0.244–0.685.

Procedure

After preparations and pilot study, questionnaires were distributed to students during their classes. Prior to this, students were provided with information about the study and consent form. Once they had indicated that they understood the study and had consented to participate, instructions were provided, and each participant completed a set of questionnaires in three parts. The first was asked for demographic information including a question on academic achievement (grades), the second was the CAAS, and third was the ASCA. An instructor stayed behind with each class to distribute, supervise, crosscheck, and collect questionnaires. The average time taken by participants to complete the questionnaires was 45 minutes.

RESULTS

The Hayes' regression process was used to test this study's hypothesis. Based on statistical testing, the researchers found no significant interaction between academic achievement and academic self-concept toward students' career adaptability (p = 0.250, sig = 0.05). Furthermore, academic self-concept had no moderating role between academic achievement and career adaptability among junior high students in Depok City. Table 1 shows the result.

Table 1

Summary of regression analysis for career adaptability (N = 662)

Variables	koef	*se*	*t*	*Sig. (p)*	*LLCI*	*ULCI*
constant	11.53	25.30	0.46	0.65	−38.15	61.21
Academic self-concept	1.38	0.46	2.98	0.003	0.47	2.28
Academic achievement	0.43	0.32	1.34	0.18	−0.20	1.05
Interaction	−0.01	0.01	−1.15	0.25	−0.02	0.004
Gender	−1.32	0.60	−2.22	0.03	−2.49	−0.15

Note. R-sq = 0.42

The regression analysis also revealed no positive significance between academic achievement and career adaptability (p = 0.18, sig = 0.05), suggesting that academic achievement did not significantly affect participants' career adaptability. It means that changed academic achievement is not followed by changed career adaptability. The three variables have significant correlation to each other but they do not have an interaction effect. Table 2 shows the result.

Table 2

Standard deviation and correlation between variables

Variables	M	SD	1	2	3
1. Academic Achievement	79.68	7.30	-		
2. Academic Self-Concept	54.97	7.51	0.19**	-	
3. Career Adaptability	90.04	10.04	0.16**	0.65**	-

DISCUSSION

This study shows that academic achievement does not significantly affect career adaptability. The result contradicts the study by Negru-Subtirica and Pop (2016), who found a positive significant correlation between academic achievement and career adaptability. According to our study, students with high academic achievement did not necessarily have strong career adaptability. Academic achievement was found to have no direct effect on students' career adaptability.

From this study, researchers also found that academic self-concept did not moderate the relationship between academic achievement and career adaptability. Academic self-concept was described as individual self-perceptions about academic competencies (Marsh & Craven, 2002). Adolescents usually form this perception when they compare themselves with their peers (Kelley, 1973), thus forming a frame of reference for defining their level of academic competency. The extent to which such a frame of reference is formed determines students' achievement in their social environment, and how well the frame of reference is formed also affects individuals' academic self-concept.

Academic self-concept depends on four factors (Ordaz-Villegas et al., 2013). One factor is general intellectual ability, also known as intelligence. Previous studies have claimed that intelligence has a strong relationship with academic achievement (Soares et al., 2015). That being said, students with high intelligence usually have higher academic achievement, compared to those with average or low intelligence. An analysis conducted in 26 countries found that students in selective schools with high average achievement tended to have lower academic self-concept than students in non-

selective schools (Marsh & Hau, 2003). However, researchers found that people with high IQ scores do not automatically perform well in academic settings because the actualization of individual intelligence is relative. Thus, it is certainly not easy to predict students' academic self-concept, as several facets of self-concept contribute to a general individual's self-concept (Ireson & Hallam, 2009). This situation may explain why the effect of interaction between academic self-concept and academic achievement on career adaptability was not significant. However, based on this study, regardless of their academic achievement and academic self-concept, junior high school students need the maximum career development process to develop their career adaptability.

Additionally, this study has several possible limitations. First, academic self-concept does not impact on the strength of the relationship between academic achievement and career adaptability, because it is only part of a general self-concept (Byrne & Shavelson, 1986; Ireson & Hallam, 2009; Marsh et al., 1988). Together with social, emotional, and physical self-concepts, the academic self-concept comprises students' general self-concept. Other research involving the general self-concept may produce a different result from the interactions examined here.

This study involved participants in an early stage of adolescence. In this developmental stage, adolescents are still developing their academic self-concept, based on environmental feedback (Sebastian et al., 2008). In other words, their academic self-concept is not yet stable. If future research involves participants in a later developmental stage, with a more stable academic self-concept, results from the interaction between variables may be quite different.

Furthermore, failure to find a moderating effect of academic self-concept on the relationship between academic achievement and career adaptability might have occurred because the academic achievement variable was measured using fifth-semester average grades, grouped into several range options. Students' average grades in the fifth-semester may not reflect their actual academic achievement, possibly due to the authenticity of grade information self-reported by students or fallibility in grade coding.

This research's data collection was conducted simultaneously with two other studies in the same school. Each participant was asked to participate in all studies at the same time. Unfortunately, this study's questionnaires were administered at the end of the session. This situation may have overly tasked participants, so that their physical and psychological conditions negatively affected the quality of information they provided, and thus, the study's results.

For ease of accessibility, this study was conducted only within Depok City, West Java. However, from the school profiles, none of the public school have any career development program, or even a careers guidance teacher, and the study area's limitations may have affected research

results. In addition, the study accessed only public schools, a condition that might also have limited the results' veracity

CONCLUSIONS

The results from this study showed that academic achievement had no significant effect on career adaptability, contradicting the previous study of Negru-Subtirica and Pop (2016). Additionally, this study failed to show that academic self-concept had a significant effect on the relationship between academic achievement and career adaptability. Further research is needed to find other variables that may affect the relationship between academic achievement and career adaptability, and to test the same hypothesis with more mature participants or with a broader geographical scope. In the future, more demographic data as control variables will enrich research results.

In future studies, academic achievement variables should be measured by actual grades, not ranges of grades, to minimize measurement error. The future studies should also be conducted independently of other studies, to avoid over-tasking participants and causing any resultant errors. Finally, this study indicates that, regardless of their academic achievement and academic self-concept, junior high school students need the maximum available career development preparation to develop their career adaptability. The preparations include exploring students' strengths and weaknesses, create better plans to set and reach the goals, and finally learn to make decisions about their career.

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