

# The Effect of Attributional Style on Career Exploration of Vocational School Students: The Mediating Role of Career Decision Self-Efficacy

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## Abstract

The purpose of this research is to examine the career exploration of vocational school students that is affected by attributional style through the mediating role of career decision self-efficacy. A total of 862 vocational school students were involved during the time span of this research. The results supported the mediation model that career decision self-efficacy mediate the effects of attributional style on career exploration of vocational school students. Respondents who applied optimistic attributional style have high career decision self-efficacy that affect their engagement in career exploration. The results also showed that attributional style can directly have an effect on career exploration of vocational school students. The results have theoretical and practical implications for further research, counseling and intervention programme.

**Keywords:** attributional style, career exploration, career decision self-efficacy, vocational school student

## Introduction

Vocational school is a formal institution that prepares students to set themselves straight away into the working life after graduating. In recent decades, many dimensions of working life have changed as a result of globalization and the rapid development of information technology (Sinkkonen, Puhakka, & Merilainen, 2018). The Industry 4.0 also requires students to not only think about how to pursue their goals, but as well as what contributions they can possibly make to benefit their further careers. Working lives and professional careers now appear more unstable (Sullivan, 1999). As consequences, the working life has rapidly changed and employment contracts were unreliable (Arthur & Rousseau, 1996) and the need to reflect upon one's career options and oneself is continuing (Zikic & Klehe, 2006). The World Economic Forum in 2016 emphasized that 65% of today's elementary school students will not be able to meet work expectations that their parents are doing apparently (Ratnasari, 2018). It shows how dynamic job occupancy is because jobs and careers were always changing from time to time. Therefore, students are required to always explore their potential in order to meet the expectations of constantly changing working lives.

Unfortunately, one of the weaknesses vocational school students have especially in Indonesia is that they are less involved in career exploration (Kelana, 2015). The lack of career exploration makes many vocational school students could not have proper jobs or careers after they graduated (Richard, 2018). Moreover, many vocational school students who have further their studies to university or college chose different majors from their vocational school background. Taking different majors forced these vocational school students to master new knowledge that will be put to the test for college entrance examination in a short time through tutoring. These matter of facts showed that many vocational school students are lacking in properly planning their career and making the right career decision that could have been avoided if oneself is involved in career exploration.

Career exploration is a process that occurs through life span (Blustein, 1997; Savickas, 1997). Career exploration is an individual's effort that intentionally and purposefully identifying career goals that are useful for their career development (Blustein, 1992; Zikic & Hall, 2009). Career exploration can help students to learn more about themselves and their environment (Taylor, 1985), to pursue chosen careers (Greenhaus, Hawkins, & Brenner, 1983), to develop the effectiveness of job search skills (Stumpf, Austin, & Hartman, 1984) and to have more comprehensive and substantial job expectations (Stumpf & Hartman, 1984). Super, Savickas, and Super (1996) revealed that individuals must develop an adequate self-understanding related to careers as well as information needed as a basis for making a career decision. Exploration of self and the environment can be influenced by someone's perception of his experiences of success and or failure in life. Perception of the causes of success or failure is known as attributional style (Weiner 1986). According to Weiner, the process of attribution has psychological consequences that affected someone's behavior. One example of psychological consequences is self-efficacy (as cite in Schunk, Pintrich, & Meece, 2010, p. 82–83). Luzzo and Jenkins-Smith (1998, p. 224–225) stated that there are two kinds of attributional style based on Weiner's original theory; which are optimistic and pessimistic attributional styles. Individuals who possess optimistic attributional style have higher confidence in making the right career decisions. Conversely, pessimistic individuals are lacking confident in their ability to make the right career decisions.

Luzzo and Jenkins-Smith (1998) also stated that attributional style is a valid indicator to predict an individual's career decision self-efficacy and career exploration. Optimistic attributional style reflects control over career decision making processes that are predicting career exploration (Layton, 1984; Luzzo & Jenkins-Smith, 1998; see also Marecek & Frasch, 1977; Trice, Haire, & Elliott, 1989), career decisiveness (Fuqua, Blum, & Hartman, 1988; Luzzo & Jenkins-Smith, 1998) and career commitments (Colarelli & Bishop, 1990). These results confirmed by Taylor and Popma's (1990) study in which they

found that the internal attribution was positively related with career decision self-efficacy. As far as we know, there are less studies about the effect of attributional style on career exploration as also stated in some of researches carried out by Kracke (2002), Turan, Celik, and Turan, (2014) (as cited in Jiang, Newman, Le, Presbitero, & Zheng, 2019). Many studies about the effect of attributional style on career exploration also tend to see only one dimension of attributional style which is the internal locus of control or controllability. There are less studies in terms of mediating role of career decision self-efficacy on the effect of attributional style on career exploration. Based on these arguments, this research aims to perceive the effect of attributional style on career exploration mediated by career decision self-efficacy.

## Literature Reviews

### Career exploration

Career exploration is defined as a form of behavior to access new information regarding specific vocational school characteristics as well as information about job and organizational characteristics (Stumpf, Colarelli, & Hartman, 1983). Other definition stated career exploration as an individual's effort that intentionally and purposefully identifying career goals to assist their career development. It involved gathering information about self and environment (Zhang & Huang, 2018; see also Blustein, 1992; Zikic & Hall, 2009). According to Super et al. (1996), career exploration is an important stage of career development. They proposed that an individual must succeed through various challenges in the career exploration to be successful at the next stage. Stumpf et al. (1983) stated that an individual can gather career information from various sources, but the two main sources are self and environment (as cite in Esters & McCulloh, 2008). Self exploration emphasizes the individual's exploration of oneself to determine the alignment of abilities with the intended work, including career goals, interests, needs, skills and values that were considered. Self exploration makes it easier for individuals to evaluate career choices and to have profound understanding of themselves (Zikic & Klehe, 2006; Werbel, 2000). While environment exploration is related to gathering information about various career choices, types of work and the work industry that are useful for making proper career decisions (Zikic & Klehe, 2006).

### Attributional style

Attributional style is the tendency or perception of individuals to find out the cause of what they had achieved (Weiner, 1986. According to Luzzo and Jenkins-Smith (1998), individuals who are pessimistic about their careers will presume that career decisions are controlled by others (uncontrollable), failures was something that could not be changed (stable) and failures occur due to conditions outside of self exploration (extrinsic causality). Conversely, optimistic individuals will see the future of their careers as something that can be controlled (controllable), failures are something that can be changed (unstable) and caused by themselves (intrinsic causality). Individuals with pessimistic attributional style tend to possess negative expectations about their future careers and they display weak performances in each of their careers. Conversely, individuals with optimistic attributional style tend to possess positive expectations about their future careers which triggers them to display the greatest performance in every career decisions they had made that will eventually lead them to be more engaged in performing career exploration.

### Career decision self-efficacy

Career decision self-efficacy an individual's belief and judgement of his ability to successfully complete career-related tasks and display

certain behaviors in making the proper career decision (Betz, Klein, & Taylor, 1996). Blustein (1989) found that career decision self-efficacy plays an important role in establishing career exploration activities (see also Betz & Luzzo, 1996). Low career decision self-efficacy can limit an individual's involvement in career exploration and development (Dawes, Horan, & Hackett, 2000; Blustein, 1989). Various studies have shown a positive relationship between career decision self-efficacy with career exploration in high school students (Chiesa, Massei, & Guglielmi, 2016; Creed, Patton, & Prideaux, 2007; Rogers & Creed, 2011). Students who believe in their abilities to make the right career decisions are more likely to be involved in career exploration than students who are uncertain of their abilities (Rogers & Creed, 2011).

### Research questions and hypotheses

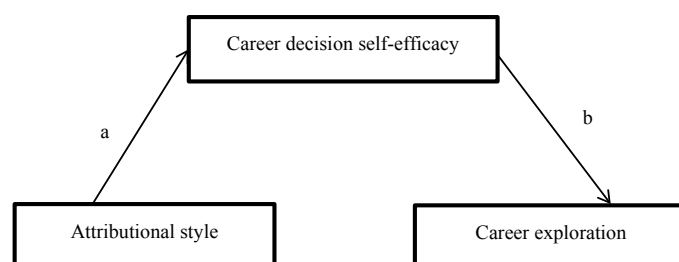
The question of this research is whether career decision self-efficacy mediates the relationship between attributional style and career exploration. Therefore, the purpose of this research is to examine the mediating role of career decision self-efficacy on the effect of attributional style on career exploration. This research hypothetically assumed that students who involved in career exploration, depending on how optimistic they are, are mediated by their self-efficacy in career decisions. The model of these three variables proposed in this research is shown in Figure 1.

### Sample

The sample of this research was the 12<sup>th</sup> grade of vocational school students from several public and private vocational schools in South Jakarta and Depok that was obtained through accidental sampling of non random techniques. The research data was gathered directly at these vocational schools stated. A total of 862 of the 12<sup>th</sup> grade vocational school students were involved in this research. These 862 vocational school students consisted of a 48% of female students (416 students) and a 52% of male students (446 students) with the average age group ranging around 17 years old.

### Measurement instruments

**Career Exploration Behavior:** The career exploration behavior was measured using career exploration survey (CES) from Stumpf, et al. (1983). CES consists of 11 statements of self exploration (5 statements) and environment exploration (6 statements). CES uses scale of 1 to 6 with 1 = never, to 6 = always. Respondents who have scored above the mean showed that they are more involved in exploring self and environment related to their desired careers. Conversely, respondents who have scored under the mean showed that they are less involved in exploring self and environment in order to achieve the desired careers. The confirmatory factor analysis (CFA) with structural equation modeling (SEM) was carried out to see the scale validity for Indonesian sample which confirmed that the model fits with the data that had been obtained (Tabel 1. Confirmatory Factor Analysis).



**Figure 1.** Research model of the mediating role of career decision self-efficacy

**Table 1.** Confirmatory Factor Analysis

Instruments	Criterion			
	RMSEA	SRMR	CFI	Factor Loading
CES	.046	.043	.958	.40 – .78
AACDM				
Controllability	.065	.028	.966	.409 – .689
Stability	.094	.050	.910	.472 – .729
Causality	.141	.041	.950	.341 – .820
CDESES-SF	.051	.052	.789	.305 - .466

**Table 2.** Descriptive Statistics and Correlations for Research Variables

Variables	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3
1. Attributions style	862	4.123	.563	-		
2. Career decision self-efficacy		5	.419	.156**	-	
3. Career exploration		3.304	.563	.252**	.355**	-

\*\* $p < .01$  (2-tailed)

**The Assessment of Attributions for Career Decision Making:** Attributional style was measured using the assessment of attributions for career decision making (AACDM) from Luzzo and Jenkins-Smith (1996). The AACDM scale ranges from 1 to 6 with 1 = strongly disagree, to 6 = strongly agree. Respondents who have scored above the mean indicates the optimistic attributional style in career decision that could be controlled by themselves, derived from their abilities and could change from time to time. Meanwhile, Respondents who have scored under the mean possess pessimistic attributional style regarding the future of their careers. They were convinced that career decisions are uncontrollable, are external and the results would always remain the same from time to time. CFA with SEM also confirmed that the model fits with the data that had been obtained (Table 1. Confirmatory Factor Analysis).

**Career Decision Self-Efficacy Short Form Scale:** The career decision self-efficacy was measured using career decision self-efficacy scale short form (CDESES-SF) from Taylor and Betz (1996). The CDESES-SF scale uses 6 Likert scale ranging from 1 to 6 with 1 = not sure at all, and 6 = very sure. Respondents who have scored above the mean indicates self-efficacy in their ability to make career decisions. Conversely, Respondents who have scored under the mean indicates less self-efficacy in their ability to complete tasks related to the career decision. CFA with SEM also confirmed that the model fits with the data that had been obtained (Table 1. Confirmatory Factor Analysis).

## Procedure

Permission letter from faculty of psychology was first made as a legal document to gather data information from vocational schools that participated in this research. After obtaining school permission letters, the research data were gathered from the 12<sup>th</sup> grade students. There were a total of 862 data that will be proceed further in this research.

## Data analysis

The data analysis was using PROCESS of Hayes from SPSS 21.0 to examine the mediating effect of career decision self-efficacy on the relationship between attributional style and career exploration. Pearson Correlation was used to confirmed the relationship between the three variables. The confirmatory factor analysis with SEM was using RStudio Version 1.1.383 Lavaan Package.

## Results

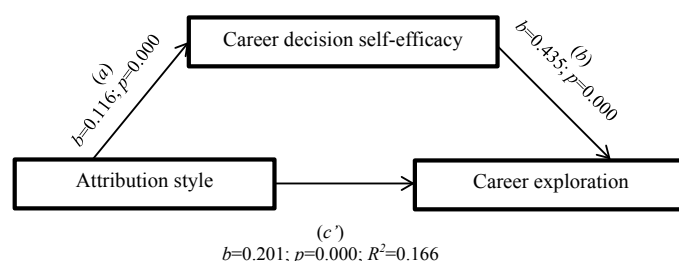
As results are shown in Table 2 of the descriptive statistics and correlations for research variables, the Pearson Correlation indicates

that attributional style, career decision self-efficacy, and career exploration are significantly interrelated. Attributional style and career decision self-efficacy are significantly related ( $r = .156$ ;  $p < .01$ ). It shows that vocational school students who have an optimistic attributional style have higher self-efficacy related to their abilities to complete career-related tasks that will help them making the right decision for their careers. Conversely, vocational school students who have a pessimistic attributional style have low self-efficacy related to their ability to complete career decision tasks. Attributional style is also significantly related with career exploration ( $r = .252$ ;  $p < .01$ ). Vocational school students who have an optimistic attributional style often times do career exploration, both exploration regarding self and exploration that is related to career information provided in the environment. Conversely, vocational school students who have a pessimistic attributional style rarely involved in career exploration. Career decision self-efficacy also significantly related to career exploration ( $r = .355$ ;  $p < .01$ ). Vocational school students who are confident in their abilities to complete career-related tasks will often involved in career exploration. On the other hand, vocational school students who are uncertain of their abilities to complete tasks related to career decisions rarely getting involved in career exploration.

Furthermore, the mediation results as shown in Table 3 regarding the mediation of career decision self-efficacy on the effect of attributional style on career exploration have supported the research hypotheses. Career decision self-efficacy have mediated the effect of attributional style on career exploration ( $b = .201$ ,  $SE = .032$ ,  $p < .05$ ). Vocational school students who have optimistic attributional style will have higher career decisions self-efficacy ( $b = .116$ ,  $SE = .025$ ,  $p < .05$ ) that will make them more involved in their career exploration ( $b = .435$ ,  $SE = .042$ ,  $p < .05$ ). This research also showed that attributional style have a direct effect on career exploration ( $b = .201$ ;  $p = .000$ ). It means that vocational school students who are being optimistic about their career will actively involved in exploring their future careers. These mediating results also shown in Figure 2. Results of the mediating role of career decision self-efficacy.

## Discussion

This research aims to measure the effect of attributional style on career exploration of vocational school students that mediated by career decision self-efficacy. Vocational school was selected as the research sample because it has a curriculum that prepares students to set themselves into working lives as soon as they graduated. In fact, Indonesian vocational school students oftentimes are not the first candidates considered by the companies to be their employees. Other facts showed that many of vocational school graduates that had choose to further their education in university tend to choose major area of focus that is not equivalent with their vocational school background. These problems faced by vocational school students in Indonesia indicates that they are not familiar with their interests, abilities, and



**Figure 2.** Results of the mediating role of career decision self-efficacy

**Table 3.** The Mediation of Career Decision Self-Efficacy (CDSE) on the Effect of Attributional Style on Career Exploration (CE) (N = 862)

		CDSE (M)					CE (Y)			
Antecedent		Coeff.	SE	p	95% CI		Coeff.	SE	p	95% CI
Attributional style (X)	a	.116	.025	.000**	[.067, .166]	c'	.201	.032	.000**	[.139, .263]
CDSE (M)		-	-		-	b	.435	.042	.000**	[.352, .519]
		R <sup>2</sup> = .024 F (1, 860) = 21.552**					R <sup>2</sup> = .166 F (2, 859) = 85.269**			
Direct effect: b= .201; p= .000**; [.139, .263]										
Indirect effect: b= .051; p= .000**; [.025, .077]										

\*\*  $p < .05$

characters or aptitude as known as self-exploration. In addition, the employee from vocational schools in Indonesia is relatively low because vocational school students are not able to meet the expectations of becoming the workforce in their working lives. These show that vocational school students have probably less involved in career exploration regarding career information in their respective environment. It affects their inability to meet the expectations of becoming the workforce in their working lives. According to Vignoli (2015), involvement in career exploration will prevent someone from making the wrong plans, wrong career choices, and career indecisions.

Pearson Correlation indicates that the three variables were interrelated. The students involvement in career exploration was affected by optimism regarding the future of career and self-efficacy in order for them to be able to make the right career decision. These results are in line with Guan, et al. (2015) that also found that there was a relationship between attributional style and career decision self-efficacy. Furthermore, students who are being optimistic about their future career have higher self-efficacy in order for them to be able to complete career-related tasks. These results support previous research from Jian et al. (2019) and Cheung and Jin (2016). The relationship between research variables was also in line with the results of Luzzo and Jenkins-Smith (1998). Luzzo and Jenkins-Smith found that the attributional style was related to one's self-efficacy in making proper career decision. Attributional style also related to the individual's involvement in career exploration. This result was confirmed as well by Taylor and Popma's (1990) study who found that the internal attribution was positively correlated with career decision self-efficacy.

The mediating results support that the career decision self-efficacy has indeed mediate the effect of attributional style on career exploration. Students who have optimistic attributional style (internal, control, unstable) have higher self-efficacy to be able to complete tasks related to career decisions that will help them making the right career decision. Higher career decisions self-efficacy encourages students to be actively involved in exploring their character, ability and to gather information regarding career options provided in the work field. In the other side, students who used to be pessimistic regarding their career (external, stable, uncontrol) have a low career decisions self-efficacy that makes them less involved in doing career exploration. These results are in line with the attribution process proposed by Weiner (1986). Weiner argued that attribution had consequences on someones' behavior through psychological consequences, such as self-efficacy (as cite in Schunk, et al., 2010, p. 82-83). This result also supported Luzzo and Jenkins-Smith (1998) research in terms of the validation of attributional style measurement tools which shows a correlation between career decisions self-efficacy and career exploration.

Students attributional style regarding career decision will affect their career decision self-efficacy and in turn will make them actively involved in career exploration, both in terms of self exploration and environment exploration. Students who actively explore and develop

their abilities, skills and explore career information tend to be optimistic about the future of their career development and confident of being able to make appropriate career decision. Otherwise, students who are being pessimistic about their future career tend to not be able to make appropriate career decision independently and less involved in career exploration.

These results indicate that the three dimensions (controllability, stability, causality) of attributional style have an influence on one's career exploration, not just one or two dimensions as most of research did by far in the past. These results support Weiner's theoretical framework which stated that all three dimensions were needed to affect the individual's beliefs and behavior (as cite in Schunk, et al., 2010, p. 97-101). The role of these three dimensions is in line with the concept of optimistic and pessimistic attributional style stated by Luzzo and Jenkins-Smith (1998). Both stated that people with optimistic attributional style have all of the three dimensions of attribution (internal, unstable, control). As well as people who have pessimistic attributional style also have all of the three dimensions (external, stable, uncontrol). The results of this research which show the effect of the three dimensions support the assumptions of Gordeeva and Osin (2011). Both stated that using the three dimensions of attributional style will give a complete idea of attributional style used by individuals in perceiving the cause of the event being experienced.

This research also found that attributional style can directly affect career exploration. This result probably related to the characteristics of vocational school students who have processed the learning something by doing directly. Bandura (1997, p. 80) stated that the best way to affect self-efficacy is through mastery experience. Career exploration is a behavior process, which explained that the direct effect of attributional style. Vocational school students learn through practice, which is probably concluded the cause of learning experiences that have directly manifested in the form of behavior. It also indicates that there are other variables that probably have strong mediating role in the effect of attributional style in career exploration.

## Conclusion and Limitation

As a conclusion, studies found that a person's involvement in career exploration is affected by optimism regarding his future career and self-efficacy in making the appropriate career decision. Students who are being optimistic about their career tend to have higher self-efficacy in order for them to be able to make the proper career decision when dealing with career-related problems. Furthermore, career decision self-efficacy makes students to be more involved in career exploration, both the exploration of self and the exploration of environment. These results provide an idea that it is important to increase optimistic attributional style and career decision self-efficacy of vocational school students in order for them to be actively involved in finding out about how they can further their career needs, self potentials, and self characters. This research has limitations regarding to external validity,



specifically the generalization of the results. Although the research was conducted at vocational schools in major cities in Indonesia, it can not directly generalize to the other vocational schools in other cities. This is due to the various characteristics of respondents, the teachers educational competencies, learning methods, socioeconomic status, access of information and/or jobs opportunities. Therefore, it is necessary to conduct more research in other cities in order to obtain a complete idea and knowledge of career exploration of vocational school students. Other limitations are related to the distribution of items in the research instruments that had been used during the time span of this research. These could be affecting the strength of mediating effect of career decision self-efficacy. Therefore, further studies and researches will have to consider the same compositions of each dimension of variables.

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The authors have declared that there is no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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