
Career Adaptation in Relation to Selected Student Personal Characteristics: A Canonical Correlation Analysis

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ABSTRACT: Career adaptability is important for someone, especially in relation to changes, job transitions, career preparations, and challenges in the world of works. People who have high career adaptability can get a greater chance to be successful in their work. This study aimed to examine the relationship between two complex variates such as career optimism and proactive personality with career adaptability. Quantitative research method was used. Data were obtained by questionnaire from a sample of 305 students at a vocational school in east Java. Canonical correlation was utilized in order to pursue the research objective. Findings discovered that significant positive correlation between the two canonical variates as big as 0.665 or 44.2%. Negative loadings found in all parts of composite variables inside the clusters or variates, however, positive across the groups due to the negative against negative loading directions. Gaining optimism as a part of career optimism failed to have valid load so that the conclusions were not significant neither contribution as expressed by the canonical weight.

KEYWORDS: Career adaptability, Career optimism, Proactive personality, Secondary vocational students

I. INTRODUCTION

The world is currently filled with changes that are happening so dynamically and everyone is required to be able to adapt to these circumstances. Indonesia is predicted to be at the peak of the demographic bonus, which means that the number of Indonesians of productive age will dominate various segments of the world of work. This demographic bonus will be a positive thing if it can be used properly, but on the contrary, if it is not used properly, it can become a big problem (Sholikah & Muhyadi, 2021; Suyanto & Ariadi, 2015). One of the efforts made by the government to be ready to face these conditions is to further develop the educational process in every Vocational High School (SMK/*Sekolah Menengah Kejuruan*). Data from the District Central Statistics Bureau (Paramita, 2023) reveals that there are still many SMK students who are unemployed after their graduation. The results of initial interviews with teachers at a vocational school indicated that most students still lack career adaptability.

Career adaptability of Indonesian youths, only a handful information found in the national research arena. Even though career adaptability is the essence of preparation and career development among adolescents (Savickas, 2005; Super, 1980). Savickas and Porfeli (2011) provide a definition of career adaptability as the strength or self-regulation capacity that a person uses to solve unusual, complex, and unclear problems that arise in a vocational development task, job transition, and work trauma. Career adaptability is critical factor for teenagers, especially those who attend vocational schools. Hirschi (2009) explained that a number of longitudinal studies found adolescents with high career adaptability have the ability to make decisions, plan, explore, and have confidence that they can achieve success when going through transitions to their careers.

Career adaptability itself is a central concept of Career Construction Theory. Savickas (2005) developed a Career Construction Model that explains the dynamics occurring adaptive readiness, adaptability resources, adapting responses, and adaptation results. The model shows the range of adaptive readiness, adaptability resources, adapting responses, and adaptation results are related to one another. Some of them support career optimism and proactive variables as two main personal features which are included in the concept of adaptivity (adaptive readiness). The career construction model of adaptation explains that it will predict the formation of career adaptability. Apart from being influenced by optimism and personality, Mondo et al. (2021) explain several things, namely gender, age, family, education, socioeconomic status, and work experience. Such information is still not revealed clearly by research in Indonesia.

Tolentino et al. (2014) put the evidence that there is a positive relationship between career optimism and adaptability. Career optimism itself is a person's tendency to expect results from a future career (Rottinghaus et al., 2005). In relation to vocational students, this factor is of course very decisive for individuals because by having high career optimism, they will have positive attitudes about their careers in the future. Research conducted by Cai et al. (2015) showed that proactive personality is one of the

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factors predicting the formation of career adaptability. Bateman and Crant (1993) explain individuals who have such kind of personality as people with relatively unrestricted by situational forces and those who influence environmental change. In relation to Indonesian vocational students, there is still limited evidences on whether proactive personality is needed to be developed so that in the end career adaptability will be formed within them.

Seeing that career adaptability and several important factors must be possessed by vocational high school students, we want to examine further the relationship between career adaptability on the one hand and career optimism and personality on the other. Career adaptability covers aspects of career control and career concern. This study will focus on looking at the relationship between both variates. Based on the explanation above, this study formulates a hypothesis that there is positive relationship between the variate of career optimism and proactive personality with the variate of career adaptability.

II. METHOD

This study used a quantitative approach. The researcher revealed the canonical relationship between career adaptability as the first canonical variate which consisted of career control and career concern, while proactive personality and career optimism as the second variate, each of which had two constructs. After obtaining the data, then processing them statistically to determine the relationship between the constructs about career optimism and proactive personality on career adaptability. Data was collected for two days, namely November 4-5, 2021.

A. Participants

The sample in this study was 305 vocational school students got randomly. The details consisted of 201 girls or 65.9% and 104 boys or 34.1%. In terms of demographics, parental education, parental occupation, and parental income were as follows. Most of the father's last education was at the junior high school level, namely 78 people, while the mother's last education varied, but most were at the junior high school level, as many as 92 people. The majority of students' fathers were factory workers, namely 62 people, while the majority of mothers did not work or were housewives, namely 149 people. The income of parents, the majority of fathers in the range of less than Rp. 1,000,000 per month as many as 101 people, while the income of mothers was even lower because there were 149 people who did not work.

B. Instrument

The instrument used was a questionnaire consisting of several parts. The first part was introduction and informed consent, the second part was an open questions about the identity and background of the research subject and the third part was the career adaptability scale from the theory of Savickas and Profeli [6] the fourth part was the proactive personality scale from the theory of Bateman and Crant [13], the fifth part was career optimism scale from the theory of Rottinghaus et al. [11].

In addition, we conducted the validity of each construct by testing the validity and reliability. The reliability test criteria used Cronbach's Alpha value. The alpha coefficient criterion > 0.6 was said to be reliable [14]. The results of the reliability test are presented in Table 1. Cronbach's alphas showed that the two constructs of career adaptability have values above 0.6 while the two proactive personalities have reliability of 0.768 and 0.647, while both career optimism are 0.816 and 0.716. All constructs are reliable because of having alphas ranging from 0.647 to 0.886, above the established criteria.

Table 1. Description and Construct Reliabilities

Construct	Average	Standard Deviation	Cronbach's alpha	Note
<i>Career adaptability:</i>				
career control	3.1832	0.36394	0.778	Reliable
career concern	3.3044	0.35866	0.886	Reliable
<i>Personality:</i>				
proactive	3.2787	0.38560	0.768	Reliable
career confidence	2.8765	0.44473	0.647	Reliable
<i>Career Optimism:</i>				
gain optimism	2.6570	0.57103	0.816	Reliable
identity optimism	3.2639	0.37146	0.716	Reliable

C. Analysis

Testing the validity of the measuring instrument was carried out through expert judgment to check the feasibility of all items in the questionnaire which were translated into Indonesian. The result of the expert judgment net was that the proactive personality variable item did not have to revise any statement because it was already good. Then for career adaptability and career optimism items, there were input revisions. In addition, a statistical test was carried out with the Corrected Item Total Correlation Item to strengthen the test analysis of the measuring instrument used in this study. In the career adaptability and proactive personality variables, all items were declared valid because all items have a Corrected Item-Total Correlation value above 0.3.

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III. RESULTS

Data analysis commenced with a description of the characteristics of each variable. In Table 1, the description of each construct on average and deviation ranged between 2.66 to 3.30 and .359 to 0.445 expressing variations in each to be regarded as a variable. The average of the career optimism variable appeared to be the lowest and the deviation was the largest, followed by career optimism.

Table 2. Partial Correlation Matrix

	career control	career concern	proactive	career confidence	gain optimism	identity optimism
career control	1.000	0.598*	0.480*	0.381*	0.036	0.446*
career concern		1.000	0.596*	0.444*	0.086	0.516*
Proactive			1.000	0.522*	0.191*	0.600*
career confidence				1.000	0.156*	0.557*
gain optimism					1.000	0.220*
identity optimism						1.000

Note: *. Correlation is significant at the 0.01 level (2-tailed).

The intercorrelation of constructs, presented in Table 2, explained the bivariate correlations of the six ones before being grouped them in two parts for producing the canonical coefficients. The group of the response variables consisted of proactive personality and career optimism; while in other side as explained variables position called career adaptability. All bivariate coefficients appeared to be positively correlated but not all were significant ($p < 0.05$). Among the other four variables, coefficients were still not significant and tend to be low related to 'gain optimism'. Combining the coefficients in one group to be correlated would be misleading because those with higher values may dominate or ignore the other variable inside the group. In addition, the classic basic assumptions of linearity, normality, homoscedacity, and non-multicollinearity found satisfying results for the next analyses.

Table 3. Significance of Testing Canonical Model

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	0.44625	21.54073	8.00	600.00	0.000
Hotellings	0.79681	29.68123	8.00	596.00	0.000
Wilks	0.55554	25.53881	8.00	598.00	0.000
Roys	0.44219				

Table 3 presented the results of the Wilks, Pillais, Hotellings, and Roys tests, all of which were significant, meaning that the canonical correlation met the requirements to move on to the next step of canonical analysis.

Table 4. Eigenvalues and Canonical Correlation

Roots	Eigenvalue	Can.Cor.	Sq. Cor.	Wilks \square	F	Sig. of F
1	0.793	0.665	0.44219	0.556	25.539	0.000
2	0.004	0.064	0.00406	0.996	0.407	0.748

In Table 4, of the two canonical functions, there were two roots/functions. The first one had a canonical correlation of 0.66498 (significant, $p = 0.000$) while the second only 0.06370 (not significant, $p = 0.748$). The Wilks \square indicated that the unexplained variance was lower for the first function. Of the two canonical functions, the first one had a correlation of 44.22% (r-square) so that the other function would be ignored in the next results.

Table 5. Coefficients on Weight and Loading

Construct	Weight	Loading	Cross-loading
career concern (Y1)	-0.354	-0.801	-0.533
career control (Y2)	-0.747	-0.959	-0.638
proactive (X1)	-0.631	-0.925	-0.615
career confidence (X2)	-0.188	-0.701	-0.466
gain optimism (X3)	-0.113	-0.116	-0.077
identity optimism (X4)	-0.363	-0.821	-0.546

Results illustrated in Table 5 summarized the last parts of the analysis. On canonical weight, career control and proactive characteristics appeared to have the valid contribution in each covariate. Career concern and identity optimism seemed to be valid (>0.3) but not too high as the previous ones. On covariate structures, career concern and control have valid loadings in the first group, however in the second group gain optimism failed to be valid (<0.3). Meanwhile, between personality and the two aspects

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of career adaptability, it turned out that there were higher and significant correlations. In terms of weight career confidence and gain optimism did not have a significant contribution. But in terms of loading, only the gain for optimism was not valid. The cross-loading coefficients between the cross-variate constructs were all positive because the negative direction was opposite the negative and also valid. The correlation of each construct and the other covariate, again career concern and identity appear to the highest coefficients. Figure 1 presented a visual illustration of the overall findings such as loadings and correlation. As aforementioned, the canonical relationship between the two variables was positive and significant ($r = 0.665$) with proportions of variance explained as high as 0.781 for the first set and 0.509 for the second one.

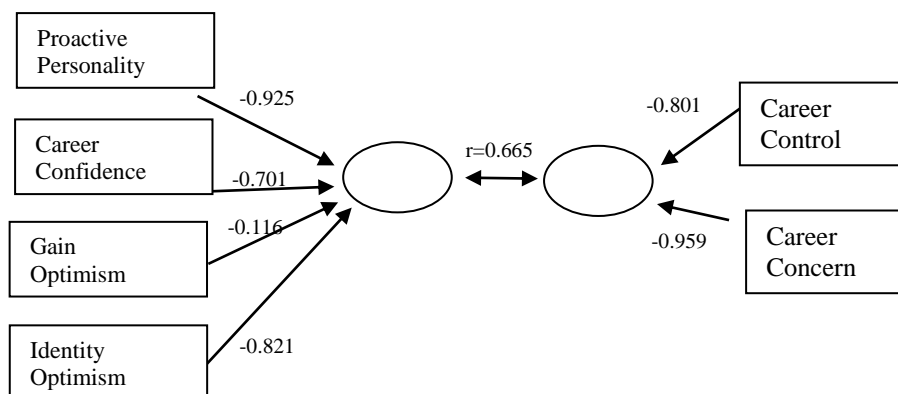


Figure 1. Summary of Canonical Relationship

IV. DISCUSSION

Bear in mind, this study aimed to examine the relationship between career optimism and proactive personality with career adaptability in vocational students. The results of the canonical correlation analysis were significant relationship between career optimism and proactive personality predicting the level of career adaptability among vocational students

This study also looked at the partial influence of the explanatory variables on the response variable. Partially, the results showed that proactive personality had significant contribution in predicting career adaptability. The results of this study were in line with research conducted by Cai et al. (2015) who explained that proactive personality was one of the factors that predicted the formation of career adaptability in a person. Bateman and Crant (1993) described the characteristics of people who had proactive personalities such as identifying opportunities and acting on them, showing initiative, taking action for being survive and making meaningful changes. This proactive personality seeking information about careers on the internet.

Apart from that, partially, the results of this study indicated that career optimism, especially gain optimism, did not contribute significantly to career adaptability. Career optimism itself referred to someone's tendency to expect the best results in careers as well as positive results in aspects of future career development (Rottinghaus et al., 2005). This was probably caused by several things. Vocational High School students were in the late teenage stage. Judging from the stages of career development, the teenager students were in the career exploration step. At this stage, adolescents began to think about various alternative jobs that they were interested in but did not yet have a career choice that bound them in the form of a salary gain. In the process of this undergoing stage, students were still in a typical adolescent situation. Several characteristics of adolescence, namely having unstable emotions, changes in values due to vary in mindset, changes in interests and roles expected by social groups, behavior patterns, and ambivalence. When associated with career development tasks, these things often make students confused about the alternative careers they should take, unsure of their decisions and hopes, and having doubts about their future. In addition, work is not a demand for teenagers. Maybe the participants of this study tended to still not expect the best results in the aspect of career development. This made gain optimism failed to predict career adaptability in students.

The results of this study were not fully in line with previous studies. Tolentino et al. (2014) proved that there was a positive relationship between career optimism and career adaptability. Career optimism itself referred to a person's tendency to expect the best results in a career as well as positive results in aspects of future career development (Rottinghaus et al., 2005; Choirudin et al., 2022). Those who had high optimistic identities tended to see career obstacles as temporary, and be able to survive in the face of career setbacks (Duffy, 2015). In this study, a significant relationship was obtained between gain optimism and concern and control of students' career adaptability.

There were also research findings showing that a positive correlation between proactive personality and career adaptability in students. In this study, a correlation value was obtained between career adaptability and proactive personality. In line with Cai et al. (2015) explained that proactive personality was one of the factors that predicts the formation of career adaptability in a person. People with high level of proactive personalities were seen in several characteristics being able to identify opportunities and act on them, show initiative, and persist until individuals could make meaningful changes (Bateman et al., 1993; Haratsis et al., 2016;

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Nor et al., 2023). It was revealed through the comments that students had taken the initiative to do a number of things such as choosing majors at SMK according to their interests, developing their strengths, looking for career opportunities through career information on the internet, discussing career plans with parents, and sharing career plans with teachers.

The result's that career optimism and proactive personality made asignificant contribution to the individual career adaptability. There could be influenced by other factors of family support (Johnston, 2016; Maree, 2017; Santilli, 2017; Saputro, 2023). In relation to the points that had been discussed, feasible recommendations will be provided in the following section.

V. CONCLUSIONS

The statement of research gaps since the beginning of this study triggered a problem which was finally solved that career optimism and proactive personality simultaneously contribute to predicting the level of career adaptability in a person. Partially, career optimism does not significantly influence the formation of all aspects of career adaptability. The proactive personality factor predicts the formation of a person's career adaptability variable.

Findings of this study discovered a positive correlation between two phenomena as formulated from the beginning. The statement of research gaps since the beginning of this study triggered a problem which was finally solved that career optimism and proactive personality simultaneously contribute to predicting the level of career adaptability in a person. Partially, career optimism does not significantly influence the formation of all aspects of career adaptability. The proactive personality factor predicts the formation of a person's career adaptability variable.

VI. RECOMMENDATION

The next development step, the researcher provides the following four suggestions. First, for students, it is advisable to increase their proactive personality by actively seeking information about developments and career choices that suit their abilities and interests. Second, for parents, creating situations that build and develop a proactive personality in their children. Third, for schools, it is recommended to align students' career desires through the provision of facilities and training to improve aspects of career concern and career control in students. Fourth, for the purposes of further research, it is suggested to use more up-to-date research methods such as hierarchical modeling, covariance structure analysis, and mixed-methods while adding, for example, family factors, socio-economic status, culture, gender, and using a wider scope than various levels of education and social structure.

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