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Augustina Sulastrí

Predicting Success of Indonesian Graduates :

Determinants of Academic Performance and Getting A Job



Predicting Success of Indonesian Graduates: Determinants of Academic Performance and Getting A Job

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aan de Radboud Universiteit Nijmegen
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Augustina Sulastri. Predicting Success of Indonesian Graduates:
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Doctoral Thesis to obtain the degree of doctor from the Radboud University Nijmegen on the authority of the Rector Magnificus prof. dr. Th.L.M. Engelen, according to the decision of the Council of Deans to be defended in public on Tuesday, December 16, 2014 at 14.00 hours

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Chapter 1

Introduction

Chapter 1

Introduction

“... searching for a new job is a long-term, uncertain coping activity that requires the use of complex strategies, substantial self-control, and self-regulation skill, all of it punctuated by discouragement and setbacks that present major motivational challenges of their own...”

(Price & Vinokur, 1995, p. 192)

The transition of young people’s lives from adolescence to adulthood is characterized by a number of life-events. Of these, the most important event is presumably young people’s task to find a job and become economically independent (Dayton, 1981). At the end of their university study, students not only have to strive finishing their studies, but also have to start looking for information to get a job or may choose to continue their further studies (Boswell, Zimmerman, & Swider, 2012). For those who decide to seek a job at the end of their studies, this search for information might be the first task formally seeking a full-time job (Kanfer, Wanberg, & Kantrowitz, 2001).

Looking for and finding a job is, unfortunately, often not an easy task for many individuals, even when the economy is healthy. Some barriers might be faced by young job seekers in particular and might impede their ability to obtain a job (Wanberg, Kanfer, & Rotundo, 1999). Failure in finding a job is most likely precipitated by the gap

between job-seekers' skills and work qualifications required (Dayton, 1981). These include knowledge, skills, abilities, and other personal characteristics necessary for a worker to do a job successfully (Berry & Houston, 1993; Ployhart, 2012; Voskuijl, 2005). Another possible pitfall might stem from perceived job search barriers, such as low self-confidence during the interview sessions with employers (Tay, Ang, & Van Dyne, 2006). Brown, Cober, Kane, Levy & Shalhoop (2006) noted that finding a job is particularly problematic for recent college graduates and thus they are often at risk to be unemployed.

Some studies have demonstrated that unemployment tends to be a detrimental and stressful life event, as it is often leading to financial difficulties, depression, anxiety, and physical deterioration (e.g. Brown et al., 2006; Wanberg et al., 1999). Other studies also have shown the adverse impact of being jobless that may cause mental health problems such as increased anxiety and depression (e.g. McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Vuori, Silvonen, Vinokur, & Price, 2002; Vuori & Silvonen, 2005) and suicidal behavior (Mascaro, Arnette, Santana, & Kaslow, 2007; Wanberg, 2012). Over three decades ago, Dayton (1981) had noted that unemployment among youth might evoke a large economic and social cost for the community, for example financial strains that can lead to the increase of crimes. Unemployment, unfortunately, remains predominant as one of the major social problems either in well-developed or in developing countries (Creed, King, Hood,

& McKenzie, 2009; Wanberg, Hough, & Song, 2002).

In the Indonesian context, the unemployment problem has been one of the extant features of its socio-economic condition. The unemployment problem among young job-seekers is indicated by the rate of unemployed university graduates in Indonesia that remains relatively high over the years. This is clear from data of the Indonesia Central Bureau of Statistics. Table 1.1. shows the number of unemployed university graduates in Indonesia.

Table 1.1. Number of Unemployed University Graduates in Indonesia

Year	The Rate of Unemployed University Graduates	Percentages from the total unemployed population
2013	769,680	10,69% of 7,2 million of unemployed people
2012	872,640	12,12% of 7,2 million of unemployed people
2011	1,168,860	15,18% of 7,7 million of unemployed people
2010	1,233,216	14,24% of 8,59 million of unemployed people
2009	1,198,244	12,94% of 9,26 million of unemployed people
2008	1,182,201	12,59% of 9,39 million of unemployed people

Source: Official Report of BPS (Central Bureau of Statistics) published in May 2008, May 2009, May 2010, November 2011, November 2012, and May 2013 (www.bps.go.id)

Education is often seen as an indicator of someone's economic or social status. It is believed that education promotes the opportunity to get respectable employment (Afemikhe, 1999; Berry, Gruys, & Sackett, 2006; Ojeda & Flores, 2008). There has been an increased aspiration

to follow higher education (e.g. Boudarbat & Chernoff, 2009; Lau & Pang, 1995) because individuals with a higher educational level may expect more about their chances to get a job (McKee-Ryan et al., 2005). Nevertheless, as we can see from Table 1.1, the reality is obviously not in line with this expectation for a large number of university graduates, particularly in Indonesia. The heart-breaking fact over the years was that many of them failed to find jobs.

Each year, there are millions of university graduates who engage in their first formal job search (new entrants) following the accomplishment of their study. There might be other millions of people who seek for a (new) job as a result of job loss or of a desire to pursue a new career (Boswell et al., 2012; Wanberg, 2012). Furthermore, many countries have experienced the worst economic recession for several years and produced the worst unemployment rates the world has encountered since the Great Depression (Briscoe, Henagan, Burton, & Murphy, 2012; Wanberg, 2012). These situations may augment the impediment of the job acquisition among newly-minted college graduates looking for their first job. It is thus very obvious that young job seekers might be at a higher risk of failing to get a job (Brown et al., 2006; Dayton, 1981). Hence, it is timely and compelling to investigate factors attributable to job finding success particularly among recent university graduates.

The objectives of the present study and the outline of the dissertation

In personnel selection practices, individual's past performance is often found as one of the predictors of his/her future job performance (Brown & Campion, 1994; Rynes, Orlitzky, & Bretz, 1997). However, there is very little information about past performance of recent college graduates other than their academic performance (Cole, Rubin, Feild, & Giles, 2007; McKinney & Miles, 2009; Roth & Bobko, 2000). Therefore, academic performance, specifically college grade point average (GPA), is frequently used by employers and college recruiters as one aspect of the pre-employment screening and/or hiring decisions because GPA reflects college graduates' cognitive ability, motivation, knowledge and skills necessary for the graduates to do their job successfully (Cole et al., 2007; Roth & Bobko, 2000).

It is noted, however, that prior studies examining psychological factors contributing to university students' academic performance (e.g. Cheng & Ickes, 2009; Harackiewicz, Barron, Tauer, & Elliot, 2002; Komarraju, Karau, & Schmeck, 2009; Nofle & Robbins, 2007; Poropat, 2009; Ziegler, Knogler, & Buhner, 2009), job searches (Kanfer et al., 2001; Sverko, Galic, Sersic, & Galesic, 2008; Wanberg et al., 2002; Wanberg et al., 1999), and job acquisition success (e.g. Cole et al., 2007; Garcia, Triana, Peters, & Sanchez, 2009; Turban, Stevens, & Lee, 2009) have evolved somewhat separately. The current study addressed the gap in the literature by examining psychological predictors so far examined

somewhat separately in the aforementioned studies that might influence graduated students' success both in academic and job acquisition settings, namely motivation to learn, and individual differences in personality, in growth mindset, and in collectivistic cultural orientation.

Furthermore, the increased aspirations among women to follow higher education have made significant changes in the workforce. Women accounted for the majority of new entrants in the labor market in the last few years (McKinney & Miles, 2009). A degree in psychology contributes to the increased representation of women in the labor market because women tended to outnumber men in the study of this discipline. The current study extended its focus not only by examining psychological factors influencing academic performance and the subsequent impact on job acquisition success in a group that is often perceived as being at a higher risk to be unemployed, recent university graduates, but also focused on differences between male and female graduates in psychology with regard to their academic performance and success in job finding.

The following objectives of the current study were accordingly formulated:

- (1). To explore academic achievement and biographical data commonly presented in graduates' personal resumes in relation to their success in getting a general or a psychology-based job (Chapter 2).
- (2). To examine the relationships between individual differences in

personality, growth mindset, and collectivistic cultural orientation and graduated students' success in academic performance and job finding (Chapter 3, 4, 5).

(3). To investigate whether gender-based differences in academic performance and successful job finding existed among psychology graduated students (Chapter 6).

In personnel selection, particularly at the entry-level positions, graduates' academic performance and biographical data that include information about their extracurricular activities, skills and work experiences are commonly used in pre-employment decisions (Cole et al., 2007). Regarding the choices of a job, psychology graduates, particularly at bachelor degree level, are open to pursue a wide variety of jobs. These may be closely related to their discipline, e.g. as a human resource development staff, or may not be closely related to their discipline, e.g. administration staff. Therefore, chapter 2 aimed to explore the predictive validity of graduates' academic performance, specifically indicated by their final grade point average (GPA), and the biographical data presented in their personal resumes to the success in getting a job in general or a psychology-based job among psychology graduated students.

Regarding individual differences in personality, mindset, and collectivistic cultural orientation, first, Chapter 3 describes the relationships between the Big Five personality traits, motivation to learn, graduates' GPA and their success in job finding. Second, in Chapter 4 we

studied whether the belief in the malleability of intelligence (BMI) and of personality (BMP) relates to graduates' academic performance and their success in job finding. Third, in Chapter 5 we analyzed the relationships between graduates' collectivistic cultural orientation, academic performance and successful job finding.

In Chapter 6, we investigated whether gender-based differences existed in academic performance and job acquisition success among graduated psychology students. Finally, Chapter 7 presents the key findings of the current study, their practical implications and directions for future research.

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Chapter 2

Grade Point Average and Biographical Data in Personal Resumes: Predictors of Finding Employment¹

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Chapter 2

Grade Point Average and Biographical Data in Personal Resumes: Predictors of Finding Employment

Abstract

The current study aimed to examine relationships between graduates' grade point average (GPA), biographical data in their personal resumes and the success in finding a job in general and a psychology-based job in particular. Two hundred and six psychology graduates from seven universities in Indonesia participated in a two-wave longitudinal study. First, graduates' biographical data were assessed: extracurricular activities, computer and foreign language skills, participation in a growth mindset enrichment program and in general enrichment programs (seminar, workshops, and training), and work experiences. Six months later we assessed whether the graduates found a job or not and whether it was a psychology-based job or a job in general. GPA showed a significant relationship with success in finding a psychology-based job. Participation in a growth mindset enrichment program was related to the success in finding a job in general and in finding a psychology-based job. Work experiences predicted the success in finding a job in general. Extracurricular activities, foreign language skill, and participation in general enrichment programs showed significant relationships with the success in finding a psychology based job. Computer skill did not emerge as determinant of finding a job. Practical implications are discussed.

Keywords: Grade Point Average, Biographical Data, Personal Resumes, Job Finding

Introduction

Many people believe that education is a way to enhance the economic and social status of an individual as it promotes the opportunity for people to obtain respectable employment (Afemikhe, 1999).

The underlying assumption is that the higher someone's educational

attainment, the greater the probability to obtain a better job. Given its contribution to one's economic and social status and the enhanced likelihood of employment acquisition (e.g. Afemikhe, 1999; Berry, Gruys, & Sackett, 2006), there has been an increased aspiration to pursue higher education (e.g. Boudarbat & Chernoff, 2009; Lau & Pang, 1995). Individuals with higher education may expect that their chances to find a satisfactory job will be greater than those with lower education (McKee-Ryan, Song, Wanberg, & Kinicki, 2005).

By employers, education is often used as a determining factor in hiring decisions as it indicates the applicants' skill level or productivity (Benson, Finegold, & Mohrman, 2004). The education outcome that is commonly used by many organizations to screen whether an applicant will be in or out of a recruitment process is college grade point average (Born & Scholarios, 2005; Roth & Bobko, 2000). Besides grade point average, biographical data in applicants' personal resumes (e.g. extracurricular activities, skills and work experiences) are also commonly used in personnel selection (Cole, Rubin, Feild, & Giles, 2007). Despite the frequent use of education outcomes in recruitment, however, there has been a lack of agreement among personnel recruiters which hiring criteria are most important when making employment decisions (Peppas, 2002).

Because of the lack of agreement among college recruiters of which criteria should be used as the basis of a hiring decision, many

entry-position jobs in companies are filled with graduates with a variety of educational background. Boudarbat and Chernoff (2009) reported that in Canada one graduate out of three gets a job that is not closely related to his or her educational background. This result may indicate an education-job match problem. Education may strongly relate to a job, e.g. health-education (doctor, nurse). On the other hand, other disciplines are open to a wide variety of jobs, psychology being one of them. Graduates of psychology at bachelor degree level are open to pursue a career which may be closely related to their discipline, e.g. human resource development, or may choose a career which is not closely related to their discipline. The purpose of the current study was to assess whether college grade point average and graduates' biographical data presented in personal resumes predict the success in finding a job in general and a psychology-based job in particular among recent graduated psychology students.

The work-related constructs of college GPA

Personnel selection tests may take the form of direct measures such as cognitive ability and personality tests (Born & Scholarios, 2005; Roth & Bobko, 2000). Scores obtained on these measures generally predict future performance of individuals and, therefore, may determine whether one is hired and the position at which one is placed in the organization. Furthermore, in personnel selection context where past

performance is perceived as the best predictor of future performance, there is obviously very little information about graduated students other than their academic performance. College grade point average (GPA) is one of the salient indicators of student's achievement in education. College GPA is often used in personnel selection because it reflects the important work-related constructs of cognitive ability and motivation (Roth & Bobko, 2000). Higher GPAs are often associated with cognitive ability and personality characteristics that college recruiters consider important for the prediction of applicants' future job performance (Cole et al., 2007). Therefore, it is a common practice that employers require a certain GPA score (e.g., a GPA of 3.00 or higher) as the basis for subsequent selection processes, e.g. invitation to an interview or for employment testing. Recruiters and employers believe that college GPA, in part, reflects the salient work-requisite qualities of cognitive ability and personal achievement motivation (Brown & Campion, 1994).

Based on the work-related construct theory of GPA, two hypotheses were formulated about the prediction of GPA to success in finding a job in general and a psychology-based job in particular.

Hypothesis 1: Graduates with higher GPA scores have a greater probability to find a job than those with lower scores.

Hypothesis 2: Graduates with higher GPA have a greater probability to find a psychology-based job than those with lower scores.

The work-related constructs of biographical data in personal resumes

Aside from GPA, many organizations screen and select applicants on the basis of information provided in their personal resumes (e.g. Berry et al., 2006; Roth & Bobko, 2000). College recruiters believe that applicants' involvement in non-academic activities such as extracurricular activities (e.g. in campus organizations, student's clubs) and part-time work partially capture their communication skills, leadership ability and ability to work in groups (Peppas, 2002). Cole et al. (2007) investigated academic qualifications, work experiences and extracurricular activities as predictors of recent graduates' employability. They found that academic qualifications and extracurricular activities were positively related to recruiters' perception of applicants' employability.

Given its widely used function in the selection process, however, it is surprising that only few studies were conducted to examine the influence of biographical data in applicants' personal resume (Cole et al., 2007) on the success of finding a job. The present study examined the influence of graduated students' GPA and biographical data presented in their personal resumes on their success in job acquisition.

Hypothesis 3: Graduates with a high amount of extracurricular activities, computer and foreign language skills, participation in a growth mindset enrichment program and in general enrichment

programs, and work experiences have a greater probability of finding a job than those with a less amount.

Hypothesis 4: Graduates with a high amount of extracurricular activities, computer and foreign language skills, participation in a growth mindset enrichment program and in general enrichment programs, and work experiences have a greater probability to obtain a psychology-based job than those with a less amount.

Method

Sample and Procedure

Participants in this study were graduated students of bachelor degree from seven psychology faculties in the cities of Semarang, Kudus, and Salatiga in Central Java, Indonesia. Data about these students were obtained from the students' bureau of each university. The graduated students were contacted directly after their graduation in February, April, June, August, October, and December 2010 to get their consent to participate in this study.

From the 350 graduating students, 250 (71%) agreed to participate in this study at Time 1. Of the 250 participants, 197 (79%) were women. The participants who participated at Time 1 were rewarded fifty thousand rupiahs (equals to five US dollars). Six months after their graduation, the participants were again contacted to participate at Time 2. At Time 2, the participants were 240 (96%) of the 250 graduates who

participated at Time 1. At Time 2, 189 (79%) were women. Since the objective of this study was to assess factors contributing to the success of job finding among graduates, the data of 34 participants who were continuing their study at a post-graduate level were excluded. Data of 206 participants (86% of the participants who participated at both Time 1 and Time 2 of this study) were analyzed for the present study.

Measures

GPA and demographic data. Data of students' final *GPA* were obtained from the universities' records at Time 1. The *GPA* ranged from 2.06 to 3.90 ($N = 206$, $M = 3.07$, $SD = .33$). Participants' age ranged from 21 to 35 years old ($M = 23.70$, $SD = 1.78$). Of the 206 participants, 164 (80%) were women.

Biographical Data in Personal Resumes. At Time 1, the participants were asked to fill out a form containing questions about the biographical data in their personal resumes. The biographical data of the graduates' personal resumes consisted of extracurricular activities, computer and foreign language skills, participation in a growth mindset enrichment program and in general enrichment programs (seminar, workshop, and training), and work experiences. *Extracurricular activities* are any kind of activities students were involved in during their study such as campus clubs (e.g. sport, religious-activities) and campus organizations. The *extracurricular activities variable* was scored 0 (no

involvement in any extracurricular activities), 1 (one extracurricular activity reported), 2 (two extracurricular activities reported), or 3 (three or more extracurricular activities reported). The *computer skill variable* was scored 0 (no skill at all), 1 (having the ability to operate one computer software program), or 2 (having the ability to operate two or more software programs on computer). *Foreign language* is the ability to use another language than Bahasa Indonesia, either oral or written, e.g. English, Japanese, or French. The participants' ethnic language was not included in this measure. *The foreign language variable* was scored 0 (no ability at all) or 1 (had the ability to use one or more foreign languages). The *enrichment program variable* is divided into two categories: *growth mindset* and *general enrichment programs*. A *growth mindset enrichment program* is any kind of seminar, workshop, or training that pertained to enhance motivation through changing the belief of the malleability of one's ability (Dweck, 2006). *The growth mindset enrichment program variable* was scored 0 (no attendance in a growth mindset enrichment program) or 1 (at least one experience in attending a growth mindset enrichment program). *General enrichment programs* refer to any kind of seminars, workshops, or training not included in the first category. *The general enrichment programs variable* was scored 0 (no participation in any general enrichment programs), 1 (participated in one general enrichment program), 2 (participated in two general enrichment programs), or 3 (participated in three or more general

enrichment programs). *Work experience* is students' experience in any paid work, either part-time or full-time, during their university career. *The work experience variable* was scored 0 (none), 1 (having one work experience), 2 (having two work experiences), or 3 (having three or more work experiences).

After six-months' status. At Time 2, the participants were contacted again via e-mail or by phone. The participants were asked whether they had obtained a job within six months after their graduation. The participants who had been employed were further asked about the date (month) in which they obtained their first job to identify whether they got a job within 6 months after graduation date or not, the nature of their first job, as well as the position in the company. The nature and position of the participants' first job were then differentiated into two categories: (1) *psychology-based jobs* (e.g. human resource staff, therapist); (2) *non psychology-based jobs* (e.g. marketing staff, bank teller, administration officer). The differentiation between psychology-based jobs and non-psychology based jobs was based on the Indonesian Standard Qualification of Occupations (Badan Pusat Statistik, 2002).

Results

Of 206 graduates, 166(81%) succeeded in finding a job. Of the 166 employed graduates, 84 graduates (51%) obtained a psychology-based job. The GPA mean score obtained by women was 3.12 ($SD = .32$)

and by men 2.86($SD = .31$). With regard to extracurricular activities, 58 (28%) graduates had three or more extracurricular activities, 38 (18%) had two, 81 (39%) had one, and 29 (14%) had no involvement in any extracurricular activity during their study at university. Regarding computer skills, 136 (66%) had the ability to operate two or more computer software programs, 64 (31%) had only one, and 6 (3%) reported no skill in any computer program. With respect to foreign language skills, 131 (64%) reported that they had the ability to use other foreign languages, and 73 (36%) had no ability to use any other foreign languages. Regarding participation in a growth mindset enrichment program, 157(77%) participated in a program pertained to enhance their growth mindset, while 48 (23%) reported no participation in such program. With regard to participation in general enrichment programs (seminar, workshop, and training), 107 (52%) had attended three or more enrichment programs, 37 (18%) two, 43 (21%) one program, and 19 (9%) reported that they had never attended such a program. Regarding work experiences, 88 (43%) had three or more work experiences, 43 (21%) had two, 49 (24%) had one, and 26 (13%) reported no work experience.

*Results of Hypotheses Testing*The results are presented in three parts. First, we analyzed using *t-tests* whether graduates' GPA predicted success in finding a job in general and/or finding a psychology-based job in particular. Second, we analyzed using *Chi-square tests* whether biographical data in graduates' personal resumes were related to the

success in finding a job in general and/or finding a psychology-based job in particular. Finally, we present the results of *logistic regression analyses*, in which we analyzed which predictors have significant influence on the success in finding a job in general and a psychology-based job in particular when all predictors were considered together.

Grade point average (GPA) and the success in finding a job in general and finding a psychology-based job in particular To examine whether higher scores of GPA predicted a higher probability on finding a job than lower scores of GPA, an *independent t-test* was performed. On average, the GPA scores of graduates who succeeded to obtain a job within six-months after graduation ($M = 3.06, SD = .33$) were relatively similar to the GPA scores of graduates who did not obtain a job ($M = 3.08, SD = .34$). Statistically, there was no significant difference in GPA between graduates who obtained a job and who did not, $t(204) = .39, p > .05$, 95% *CI* [- 0.09, 0.14], and the effect size was very small ($d = .01$).

An *independent t-test* was also conducted to examine *hypothesis 2*, whether higher scores of GPA predicted a higher probability on finding a psychology-based job. The mean GPA score of graduates who succeeded to obtain a psychology-based job ($M = 3.02, SD = .28$) was higher than the mean GPA score of graduates who did not succeed ($M = 2.93, SD = .32$). The difference was statistically significant $t(164) = 5.84, p < .001$, 95% *CI* [0.18, 0.36], and the effect size was large ($d = .90$).

Biographical data in personal resumes and the success in finding a job in general and a psychology-based job in particular

With regard to the prediction of biographical data in graduates' personal resumes to the success in finding a job in general and finding a psychology-based job in particular, *Chi-square analyses* were performed (see Table 2.1. for results).

From Table 2.1. we can see that we found a statistically significant association between finding a job and participation in a growth mindset enrichment program ($\chi^2(1) = 4.19, p < .05$). This result suggests that graduates who had attended any kind of seminar, workshop, or training aiming to promote their belief in the malleability of their ability (growth mindset) were more likely to find a job than graduates who did not attend any of these activities. Graduates who had more work experiences also had a higher probability to obtain a job ($\chi^2(3) = 15.78, p < .001$) than graduates who had less experiences. Students' involvement in extracurricular activities, computer and foreign language skills, and participation in any kind of general enrichment programs (seminars, workshops, or training) were not significantly associated with the success to find a job in general.

Table 2.1.

Relations between Information in Graduates' Personal Resumes and Success in Finding a Job

Predictors	N	% Get-Job	χ^2 results
Extracurricular Activities			
0	29	76%	$\chi^2 = 3.62$
1	81	76%	
2	38	84%	
≥ 3	58	88%	
Computer skills			
No	6	50%	$\chi^2 = 5.74$
1 program	64	88%	
≥ 1 program	136	79%	
Foreign Language skills			
No	73	77%	$\chi^2 = 1.28$
Yes	131	83%	
Growth Mindset Enrichment Program			
No	48	71%	$\chi^2 = 4.19 *$
Yes	157	84%	
Enrichment Programs			
0	19	79%	$\chi^2 = 0.27$
1	43	81%	
2	37	84%	
≥ 3	107	84%	
Work Experiences			
0	26	58%	$\chi^2 = 15.78 **$
1	49	80%	
2	43	74%	
≥ 3	88	91%	

Note. $N = 206$

* $p < .05$

** $p < .01$

Almost all biographical data in personal resumes were significantly associated with a higher probability of obtaining a psychology-based job, except computer skills and work experiences (see Table 2.2.). The higher amount of involvement in campus clubs, organizations or other activities (extracurricular activities), ability in

foreign language skill, participation in a growth mindset enrichment program, and the amount of participation in general enrichment programs were all associated with a higher probability of obtaining a psychology-based job.

Table 2.2.
Relations between Information in Personal Resumes and Success in Finding a Psychology-based Job

Predictors	N	% Psy-Job	χ^2 results
Extracurricular Activities			
0	22	30%	$\chi^2 = 8.10^*$
1	61	53%	
2	32	41%	
≥ 3	51	63%	
Computer Skills			
No	3	33%	$\chi^2 = 0.36$
1 program	55	51%	
≥ 1 program	108	51%	
Foreign Language Skills			
No	56	38%	$\chi^2 = 5.56^*$
Yes	108	57%	
Growth Mindset Enrichment Program			
No	33	21%	$\chi^2 = 13.65^{**}$
Yes	133	57%	
Enrichment Programs			
0	14	14%	$\chi^2 = 14.83^*$
1	36	39%	
2	31	45%	
≥ 3	86	63%	
Work Experiences			
0	15	27%	$\chi^2 = 7.70$
1	39	41%	
2	32	50%	
≥ 3	80	60%	

Note. $N = 166$

* $p < .05$

** $p < .01$

GPA, biographical data in graduates' personal resumes, and the success in finding a job and finding a psychology-based job

The present study also aimed to test how well the total set of predictors used in this study (*GPA, extracurricular activities, computer skills, foreign language skills, growth mindset enrichment, general enrichment programs, and work experiences*) could explain the success in finding a job in general and in finding a psychology-based job in particular as dependent variables. Therefore, *logistic regression analyses* were performed.

Table 2.3.

Prediction of Success in Finding a Job in general using Logistic Regression

Variable	<i>B</i>	<i>SE</i>	<i>p</i>
GPA	-.23	.66	.725
Extracurricular Activities	.21	.19	.276
Computer Skill	-.24	.36	.500
Foreign Language Skill	.18	.40	.646
Growth Mindset Enrichment	.98	.49	.047 *
Enrichment Programs	-.34	.23	.137
Work Experiences	.51	.18	.005 *
Constant	1.21	1.91	.526

Note. $N = 206$

* $p < .05$

It appeared that when all seven predictor variables were considered together, these predictors significantly predicted which

graduates found or did not find a job ($\chi^2= 18.07$, $df= 7$, $N = 203$, $p < .05$). Table 2.3. presents the odds ratios which suggest that the probability of finding a job in general are increasingly greater when graduates have ever participated in a *growth mindset enrichment program* and when graduates had more *work experiences* (see positive and significant *B*'s).

Table 2.4. shows the result of a *logistic regression analysis* testing whether the seven predictors significantly predicted whether or not graduates succeeded to obtain a psychology-based job. When all seven predictor variables were considered together, they significantly predicted whether graduates found or did not find a psychology-based job ($\chi^2 = 41.90$, $df= 7$, $N = 163$, $p < .001$). The odds ratio results suggested that the probability of graduates to obtain a psychology-based job raised only when the GPA-score increased (*B* is +2.66). Data of personal resumes did not add to explain variance in finding a psychology-based job.

Table 2.4.
Prediction of Success in Finding a Psychology-based Job using Logistic Regression

Variable	<i>B</i>	<i>SE</i>	<i>p</i>
GPA	2.66	.69	.000 **
Extracurricular Activities	.10	.18	.594
Computer Skill	- .49	.37	.185
Foreign Language Skill	.51	.40	.202
Growth Mindset Enrichment	.99	.57	.083
Enrichment Programs	.03	.23	.913
Work Experiences	.28	.18	.129
Constant	-9.305	2.11	.000

NOTE. $N = 166$

** $P < .01$

Discussion

Results of the present study give strong support to previous studies investigating relationships between GPA and information in graduates' personal resumes on the one hand and success in finding a job at the other (e.g. Berry et al., 2006; Cole et al., 2007; Roth & Bobko, 2000). As expected, GPA had a significantly positive association with success in finding a psychology-based job. *Hypothesis 2* of this present study was confirmed. When all predictors were considered together conducting a logistic regression analysis, GPA emerged as the most robust determinant of finding a psychology-based job. This result suggests that the academic performance as indicated by the score of GPA indeed helped psychology graduates to find a job that is in line with their study discipline. This result also reflects the practice in many organizations that higher scores of GPA are commonly used in the prescreening process of applicants (Roth & Bobko, 2000) and that GPA is a hiring criterion most commonly used in personnel selection processes as it reflects, in part, salient work-related capability (Brown & Campion, 1994).

The expectation that GPA was a predictor for success in finding a job in general did not receive support. This means that *hypothesis 1* was not supported. This result indicates that college recruiters rely on other hiring criteria instead of GPA, when making hiring decisions about a

multi-entry job position. This result confirmed what Peppas (2002) had noted that there is no settled consensus among recruiters about the hiring criteria when making a hiring decision, particularly in a multi discipline job position.

The present study also aimed to examine whether or not the information in graduates' personal resumes predicted the success of psychology graduates to obtain a job in general and/or a psychology-based job in particular. The results provided a variety of associations among the predictors and the dependent variables. First, when predicting success in finding a job in general and a psychology-based job, it is worthy to note that participation in a growth mindset enrichment program showed consistent significant results. The influence of participation in a growth mindset enrichment program on the success of job acquisition either in a multi entry job position or in a psychology-based job, might be the result of the enhanced belief in the malleability of one's capability. As suggested by Dweck (2006), with a growth mindset one might hold a positive belief about the possibility of ability improvement. The positive belief following the participation in a growth mindset enrichment program appears to enhance the graduated students' confidence during their job search which leads to the success in obtaining a job in general or a psychology-based job.

Work experiences also emerged as a predictor that is significantly

associated with the success in finding a job in general. Work experiences, together with participation in a growth mindset enrichment program, outperformed the effect of GPA and other predictors in predicting the success of finding a multi entry job position among psychology graduates. It appears that work experiences are valued higher as hiring criteria than other biographical data commonly presented in graduates' personal resumes. This result appears to support previous findings that more experiences in any (part-time) work during study create a higher value to recruiters or employers than less experience (e.g. Rynes, Orlytzky, & Bretz, 1997).

Another interesting finding in this study was that there were only 84 (51%) out of 166 employed graduates who obtained a psychology-based job. This result clearly corroborates Bourdarbat and Chernoff's (2009) finding of an education-job match problem found among university graduates in Canada. Our result showed that in Indonesia one out two psychology graduates did not find a job that was in line with their academic background. This might be due to the fact that new entrants are more likely to accept the first job offered than to continue their searches to get a more desired job (Boswell, Zimmerman, & Swider, 2012; Saks, 2006).

Recent graduates looking for their first employment rely highly on attainments obtained during their study as indicators of their employability value (Boswell et al., 2012; Cole et al., 2007). The present

study highlights the importance of graduates' academic performance and biographical data in their personal resumes for the success in finding a job in general and a psychology-based job in particular. Two implications can be drawn from the findings of the present study. First, the finding about the predictive validity of predictors of successful job finding as GPA, extracurricular activities, computer and foreign language skills, participation in a growth mindset program and in general enrichment programs, and work experiences, may help educational practitioners or career advisers to give practical job-seeking guidance to their graduating students with regard to the qualifications graduates should present in their personal resumes. Second, higher education practitioners and career advisers may help their graduating students realize that work-related qualifications may enhance their employability. In this way, the graduating students may generate job opportunities which may lead to more success in obtaining suitable employment.

Despite of some valuable findings, we acknowledge limitations of the current study. The first is that only psychology graduates were involved in this study. Results may not be representative for graduates of other disciplines. We encourage future research involving broader samples to reach more representativeness of new entrants' populations. Another limitation concerns the judgment of the employability value of biographical data presented in students' personal resumes. We acknowledge that the use of actual-experienced recruiters as suggested

by Cole et al. (2007) could have been enhanced the ecological validity of the study. Therefore, future studies should take into account the inclusion of experienced recruiters to assess applicants' employability modalities, i.e. academic performance and biographical data presented in actual job applications and personal resumes.

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Chapter 3

Big Five, Academic Performance, and Job Finding: A Longitudinal Study among Psychology Graduates²

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Chapter 3

Big Five, Academic Performance, and Job Finding: A Longitudinal Study among Psychology Graduates

Abstract

Relationships between the Big Five personality traits, motivation to learn, academic performance, biographical data presented in personal resumes, and job finding success were examined in a two-wave longitudinal study using a sample ($N=206$) of graduated psychology students. Correlation analyses showed that nearly all personality traits (except Neuroticism) were related to motivation to learn. Conscientiousness revealed to be the only predictor significantly related to academic performance, while Openness to Experience emerged as the only trait significantly related to two biographical data presented in students' personal resumes, namely participation in a growth mindset enrichment program and work experiences. In job finding setting, Openness to Experience showed a significant relationship with job finding success. Implications of the Big Five measures to the prediction of academic performance and job finding success among graduated students are discussed.

Keywords: Big Five; Motivation to learn; Academic performance; Personal Resumes; Job Finding

Introduction

Academic performance has been frequently associated with cognitive ability and motivation. A voluminous number of studies had confirmed that cognitive ability and motivation are robust predictors of academic performance (e.g. Cheng & Ickes, 2009; Komarraju, Karau, & Schmeck, 2009; Leeson, Ciarrochi, & Heaven, 2008; Ziegler, Knogler, & Buhner, 2009). However, there are many other factors that might contribute to academic performance apart from cognitive ability. A recent meta-analysis

suggested that individual differences in personality can also be used to explain individual variance in academic performance (Poropat, 2009). Individual differences in personality may influence academic performance through directing individuals' choices and level of persistence to engage in intellectually stimulating activities (Chamorro-Premuzic & Furnham, 2003), such as the willingness to manage time to study, the eagerness to attend classes, and the ability to cope with stress during exams.

Individual differences in personality have also been frequently investigated to tap their contribution to several important life outcomes (John & Srivastava, 1999), not only in academic but also in work settings. Meta-analyses suggested that personality traits are related to job search effort, intensity, and success (Kanfer, Wanberg, & Kantrowitz, 2001), and work performance (Barrick & Mount, 1991). A study by Turban, Stevens, and Lee (2009) provided support for the relationship between two personality traits, conscientiousness and extraversion, and job search success among new entrants. All these studies mirror the predictive validity of personality traits to the success in job finding and work performance.

Although studies have been widely investigated relationships between personality traits, motivation, academic performance, and work performance, it is noted that none has examined relationships between personality traits, motivation, and academic performance and successful job finding in one study. The present study addressed the call for research that may enhance the understanding how personality traits relate to motivation to

learn and subsequently influence graduates' academic performance and their success in finding a job.

With respect to academic success, the current study attempted to replicate previous findings on tapping relations between personality traits, motivation to learn, academic performance, and students' involvement in nonacademic activities. These latter activities are commonly presented as biographical data, or biodata (Breugh, 2009; Brown & Campion, 1994), in graduates' personal resumes. In this study, academic performance was indicated by students' grade point average (GPA), while biographical data assessed in this study were students' involvement in nonacademic activities, such as extracurricular activities, computer and foreign language skill, participation in a growth mindset enrichment program and participation in general enrichment programs (seminar, workshop, and training), and work experiences (Cole, Rubin, Feild, & Giles, 2007; Oswald, Schmitt, Kim, Ramsay, & Gillespie, 2004). With respect to job finding success, the current study attempted to examine the predictive validity of personality traits to graduated students' successful job finding.

Relations between Personality Traits, Motivation to learn, Academic Performance, Personal Resumes, and Successful Job Finding

The five factor model of personality, also known as the Big Five, is perhaps one of the most widely accepted models of personality (John & Srivastava, 1999; Major, Turner, & Fletcher, 2006). Many

psychologists are now convinced that the best representation of trait structure is provided by abstractions of the five factor model (McCrae & Costa, 1997). The emergence of the Big Five personality traits had influential implications for the field of educational psychology (Poropat, 2009), as well as for personnel psychology (Barrick & Mount, 1991). The Big Five provides a meaningful taxonomy or a lexical hypothesis (John & Srivastava, 1999; Poropat, 2009) for studying individual differences in a variety of settings. In the present study, we investigated the predictive validity of the Big Five personality traits to the success of graduated psychology students in academic and labor market settings.

Relations of the Big Five Personality Traits in Academic Setting

Personality traits are viewed as basic tendencies that refer to the abstract underlying potentials of individuals (McCrae & Costa, 1996). There are five broad dimensions of personality that can be summarized by the concepts of Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (John & Srivastava, 1999). Openness to Experience reflects broad-mindedness, imaginativeness, and a resourceful character; Conscientiousness reflects a hardworking, ambitious, and confident character; Extraversion reflects an active and sociable character; Agreeableness reflects likeability and friendliness; and Neuroticism implies the tendency to experience negative affect such as fear, anxiety, anger, and guilt. There are several personality traits

that have shown relatively stable relations with academic performance (Openness to Experience, Conscientiousness, and Neuroticism), whereas some other (Agreeableness and Extraversion) remain unclear (Chamorro-Premuzic & Furnham, 2003; Farsides & Woodfield, 2003).

Openness to Experience. Individuals high in Openness to Experience tend to have an active imagination, intellectual curiosity, and are open-minded to try something new. In their meta-analysis, Barrick and Mount (1991) found that traits representing curiosity, broad-mindedness, and intelligence were valid predictors of learning outcomes. Komarraju et al. (2009) also found evidence for a significantly positive relationship between Openness to Experience and academic performance. These findings suggest that students who are intellectually curious, broad-minded are more likely to be interested in learning (Major et al., 2006) and thus are likely to obtain better academic performance. With regard to the involvement in nonacademic activities, we expected that individuals with higher Openness to Experience are also likely to be more engaged in nonacademic activities than those with a lower level of Openness to Experience due to their open-mindedness to try something new.

H1.a. Openness to Experience is positively related to motivation to learn.

H1.b. Openness to Experience is positively related to academic performance.

H1.c. Openness to Experience is positively related to involvement in nonacademic activities.

Conscientiousness. Traits representing prudence, self-control, and perfectionism, as well as academic discipline and commitment to study are significant predictors of academic performance. Conscientious individuals tend to be more disciplined and achievement oriented, and therefore, this trait would be positively related to motivation and academic performance (Noftle & Robbins, 2007), or learning outcomes (Colquitt & Simmering, 1998). Conscientiousness has also been linked to “the will” to achieve (Barrick & Mount, 1991). Students with high conscientiousness should achieve good academic performance because they tend to be hard-working, persevering, and achievement oriented (Cheng & Ickes, 2009). This trait is also associated with the ability of time management, sustained effort, and goal setting. We hypothesized that conscientious individuals are more engaged in academic activities than in nonacademic activities due to their tendency of being ambitious and achievement-oriented with regard to their academic performances.

H2.a. Conscientiousness is positively related to motivation to learn.

H2.b. Conscientiousness is positively related to academic performance.

H2.c. Conscientiousness is not related to involvement in nonacademic activities.

Extraversion. Extraversion is frequently associated with sociable, active, and talkative behavior. In academic setting, Extraversion may be counterproductive to academic performance as this trait is associated with a lower level of focus to study due to the tendency of being active and talkative. Chamorro-Premuzic and Furnham's study (2003) confirmed that extraverts underperformed in academic setting because of their tendency of distractibility and impulsiveness. Nevertheless, extraverted individuals may benefit more from being sociable and active in their social activities. Hence, we expected that high energy levels and a positive attitude in social life of extraverted individuals may relate positively to their involvement in nonacademic activities.

H3.a. Extraversion is negatively related to motivation to learn.

H3.b. Extraversion is negatively related to academic performance.

H3.c. Extraversion is positively related to involvement in nonacademic activities.

Agreeableness. Agreeableness is characterized by a tendency to be cooperative and trusting (Major et al., 2006), and is also associated with a tendency of compliance to others. Previous studies have shown that agreeableness was not associated with academic performance among undergraduates (De Fruyt & Mervielde, 1996), nor with academic outcomes among psychology students (Busato, Prins, Elshout, & Hamaker, 2000), nor with graduates' GPA (Rothstein, Paunonen, Rush, & King, 1994). Consistent with these findings we expected that

agreeableness is not related to academic performance. However, with regard to motivation to learn and interest in nonacademic activities we expected that agreeable students may have a higher motivation to learn as well as are more interested in nonacademic activities because they have the tendency to cooperate with others and to follow teachers' instructions which enable them to have a focus on learning tasks (Poropat, 2009).

H4.a. Agreeableness is positively related to motivation to learn.

H4.b. Agreeableness is not related to academic performance.

H4.c. Agreeableness is positively related to involvement in nonacademic activities.

Neuroticism. Common traits associated with Neuroticism include anxiety, depression, worriedness, and insecurity (Barrick & Mount, 1991). Neuroticism has also been linked to focus more on a negative emotional state. Such focus may interfere with attention to academic tasks and confidence in examinations, and thereby may reduce academic performance. Individuals with high levels of anxiety are not expected to actively seek out new learning opportunities, and, therefore, are engaged in a relatively lower level of motivation (Major et al., 2006). With regard to the involvement in nonacademic activities, we hypothesized that neurotic individuals are less involved in nonacademic activities due to their neurotic characteristics, such as worriedness and insecurity.

H5.a. Neuroticism is negatively related to motivation to learn.

H5.b. Neuroticism is negatively related to academic performance.

H5.c. Neuroticism is negatively related to involvement in nonacademic activities.

Relations between Personality Traits and Successful Job Finding

The nature of a job finding enterprise is dynamic and highly autonomous. It is, sometimes, a long term struggle within uncertain situations, and, therefore, necessitates a self-regulatory process by which individuals identify, initiate and generate goal-directed activities to obtain a desired job (Kanfer et al., 2001; Wanberg, Glomb, Song, & Sorenson, 2005; Wanberg, 2012). Individuals who look for a job have to engage in a variety of activities and have to use a variety of personal resources (e.g. time, effort) and social resources (e.g. friends and relatives) to obtain a job (Kanfer et al., 2001).

Traits of personality reflecting intellectual curiosity, broad-mindedness, and resourcefulness (Openness to Experience) were hypothesized to be related to motivation to learn, academic performance, and involvement in nonacademic activities. Accordingly, we expected that individuals with a higher level of Openness to Experience will succeed more in finding a job than students with a lower level. Other traits that reflect a hardworking, ambitious, and confident character (Conscientiousness) may also be positively related to motivation to learn and academic performance, and, therefore, we expected that conscientious individuals may be more successful in finding a job than less conscientious individuals.

Traits that reflect an active and sociable character (Extraversion) maybe positively related to the involvement in nonacademic activities, and, therefore, we expected that extraverted individuals may be more successful in finding a job than less extraverted students. Traits reflecting likeability and friendliness (Agreeableness) may be related to motivation to learn and to involvement in nonacademic activities. Therefore, we expected that Agreeableness may be positively related to success in finding a job. Because traits of personality representing the tendency to experience negative affect such as fear, anxiety, anger, and insecurity (Neuroticism) may be negatively related to motivation to learn, academic performance, and involvement in nonacademic activities, accordingly we hypothesized that Neuroticism may also be negatively related to success in finding a job.

H6. Openness to Experience is positively related to success in finding a job.

H7. Conscientiousness is positively related to success in finding a job.

H8. Extraversion is positively related to success in finding a job.

H9. Agreeableness is positively related to success in finding a job

H10. Neuroticism is negatively related to success in finding a job.

Method

Sample and Procedure

Participants in this study were graduated students of bachelor degree from seven psychology faculties in the cities of Semarang, Kudus, and Salatiga in Central Java, Indonesia. The graduated students were contacted directly after their graduation in February, April, June, August, October, and December 2010 to get their consent to participate in this study. There were 250 students (197 women and 53 men) who agreed to participate at Time 1. The participants were rewarded fifty thousand rupiah (equals to five US dollars) after completing the questionnaires at Time 1. The participants' age ranged from 21 to 35 years old ($M = 23.70$, $SD = 1.78$).

Six months after their graduation, the 250 participants were again contacted to participate at Time 2. There were 240 (96% of 250 graduates at Time 1) who participated at Time 2. At Time 2, 189 (79%) were women. Since the objective of this study was to assess factors contributing to the success in finding a job among recent graduates, data of 34 participants who were continuing their study at a post-graduate level were excluded. Data of 206 participants (86% of the participants who participated at both Time 1 and Time 2 of this study) were analyzed for the present study. Of the 206, 164 (80%) were women.

Measures

The Big Five Personality Traits. The participants were asked to complete The Big Five Inventory (John & Srivastava, 1999) that consists of 44 items of short and easy-to-understand phrases (Srivastava, John, Gosling, & Potter, 2003). The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). Sample items are, “*I see myself as someone who is curious about many different things* (Openness to Experience); *does a thorough job* (Conscientiousness); *is talkative* (Extraversion); *is helpful and unselfish with others* (Agreeableness); *is depressed, blue* (Neuroticism).” The BFI was carefully translated and adapted into Indonesian language using the forward-back translation (ABBA) technique. The forward-back translation was conducted by three independent translators in the forward-translation phase and by three other independent translators in the back-translation phase. The Extraversion subscale consists of 8 items, Agreeableness 9 items, Conscientiousness 9 items, Neuroticism 8 items, and Openness to Experience 10 items. We computed sum scores over the items for each subscale. The Cronbach’s alpha reliabilities were .66 for Openness to Experience, .73 for Conscientiousness, .75 for Extraversion, .65 for Agreeableness, and .80 for Neuroticism.

Motivation to Learn. Motivation to learn was measured using a 10-item scale adapted from the Stages of Learning Motivation (SOLMI) developed by Cole, Feild, and Harris (2004). The scale was used to

measure students' engagement in learning activities particularly in the preparation and maintenance phase. The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*I have been working hard to learn the information covered in the course/class.*” The motivation to learn measure was carefully adapted and translated into Indonesian language using the same technique as used for the BFI measure. For each student, a sum score was computed over the 10 items. The Cronbach's alpha reliability was .76.

Grade Point Average (GPA). Data of students' final *GPA* were obtained from the universities' records. The legal consent from the universities' authorities was obtained prior to the procurement of the data. The *GPA* ranged from 2.06 to 3.90 ($M = 3.07$, $SD = .33$).

Biographical Data presented in Personal Resumes. The participants were asked to fill out a form containing questions about the information about their involvement in nonacademic activities commonly presented as biographical data in personal resumes. The information comprised of extracurricular activities, computer and foreign language skills, participation in a growth mindset enrichment program and in general enrichment programs (seminars, workshops, and training), and work experiences. *Extracurricular activities* are any kind of activities students were involved in during their study such as involvement in campus clubs (e.g. sport, religious activities) and campus organizations.

The *extracurricular activities variable* was scored 0 (no involvement in an extracurricular activity), 1 (involved in one extracurricular activity), 2 (involved in two extracurricular activities), or 3 (involved in three or more extracurricular activities). The *computer skill variable* was scored 0 (no computer skill at all), 1 (having the ability to operate one computer software program), or 2 (having the ability to operate two or more software programs). *Foreign language* is the ability to use another language other than Bahasa Indonesia, either oral or written, e.g. English, Japanese, or French. The participants' ethnic language was not included in this measure. The *foreign language variable* was scored 0 (no ability at all) or 1 (had the ability to use one or more foreign languages). The *enrichment program variable* is divided into two categories: *growth mindset enrichment program* and *general enrichment programs*. A *growth mindset enrichment program* is any kind of seminar, workshop, or training that pertained to enhance motivation through changing the belief of the malleability of one's ability (Dweck, 2006). The *growth mindset enrichment program variable* was scored 0 (no participation in a growth mindset enrichment program) or 1 (at least one experience in attending a growth mindset enrichment program). *General enrichment programs* refer to any kind of seminars, workshops, or training not included in the first category. The *general enrichment programs variable* was scored 0 (no participation in a general enrichment program), 1 (participated in one general enrichment program), 2 (participated in two

general enrichment programs), or 3 (participated in three or more general enrichment programs). *Work experiences* refer to students' experiences in any paid-work, either part-time or full-time, during their university study. *The work experience variable* was scored 0 (none), 1 (having one work experience), 2 (having two work experiences), or 3 (having three or more work experiences).

After six-months' status. At Time 2, the participants were contacted again via e-mail or by phone. They were asked whether they succeeded or failed to find a job within six months after their graduation.

Results

Preliminary Results

Of the 206 graduates who participated at both data collections, 166 (81%) succeeded in finding a job. Of the 166 who succeeded to find a job, 131 (79%) were women. Significant gender differences were found for final *GPA* ($t(204) = -4.804, p < .001, 95\% CI [- .37, - .15]$), with women ($M = 3.12, SD = .32$) outperformed men ($M = 2.86, SD = .31$). Significant gender differences in Conscientiousness ($t(204) = -2.07, p < .05, 95\% CI [- 2.93, - .071]$), Neuroticism ($t(204) = -2.37, p < .05, 95\% CI [- 3.73, - .34]$), and Openness to Experience ($t(204) = 3.01, p < .01, 95\% CI [.75, 3.59]$) were also found. Women were found being more conscientious ($M = 33.36, SD = 4.07$) and more neurotic ($M = 22.99, SD = 4.92$) than men ($M = 31.86, SD = 4.66; M = 20.95, SD = 5.17$, respectively),

while men were found being more open ($M= 38.10$, $SD= 4.53$) than women ($M= 35.93$, $SD= 4.07$).

With regard to extracurricular activities, 58 (28%) graduates had three or more extracurricular activities, 38 (18%) had two, 81 (39%) had one, and 29 (14%) had no involvement in any extracurricular activity during their study at university. With regard to computer skills, 136 (66%) had the ability to operate two or more computer software programs, 64 (31%) had only one, and 6 (3%) reported no skill in a computer program. With respect to foreign language skills, 131 (64%) reported that they had the ability to use other foreign languages, and 73 (36%) had no ability to use any other foreign language. Regarding participation in a growth mindset enrichment program, 157 (77%) participated in a program pertained to enhance their growth mindset, while 48 (23%) reported no participation in such a program. With regard to participation in general enrichment programs (seminars, workshops, and training), 107 (52%) had attended three or more enrichment programs, 37 (18%) two programs, 43 (21%) one program, and 19 (9%) reported that they had never attended such a program. Regarding work experiences, 88 (43%) had three or more work experiences, 43 (21%) had two, 49 (24%) had one, and 26 (13%) reported no work experience.

The predictive validity of the Big Five in Academic Setting.

Four personality traits (Openness to Experience, Conscientiousness, Extraversion, and Agreeableness) were positively and significantly

related to motivation to learn (see Table 3.1.), whereas Neuroticism was not. Thus, these results supported hypothesis 1a, 2a, and 4a, but did not support hypothesis 3a and 5a. Conscientiousness revealed to have the highest correlation with motivation to learn as well as emerged as the only personality trait that correlated with academic performance. The latter result confirmed hypothesis 2b of this study, while hypotheses about relationships between other personality traits (Openness to Experience, Extraversion, Agreeableness, and Neuroticism) and academic performance were not supported. In addition, motivation to learn was positively and significantly correlated with GPA ($r = .25, p < .01$).

Table 3.1.

Pearson's Correlations of the Big Five, Motivation to Learn, and GPA

Variable	Motivation to Learn	GPA
Openness to Experience	.26**	-.02
Conscientiousness	.31**	.12*
Agreeableness	.20**	-.05
Extraversion	.23**	-.04
Neuroticism	-.04	.07

Note.

** $p < .01$

* $p < .05$

Independent t-tests and analyses of variance were carried out to test relationships between the Big Five and involvement in nonacademic activities commonly presented as biographical data in students' personal resumes. Of the five personality traits, only Openness to Experience showed significant relations with participation in a growth mindset enrichment program, foreign

language skill and work experiences. Thus, this result partially supported hypothesis 3c of this study. With regard to participation in a growth mindset enrichment program, there was a significant difference in Openness to Experience between students who had participated in a growth mindset enrichment program and those who had not participated ($t(203) = -2.78, p < .05, 95\% CI [-3.26, -.55]$). Students who had participated in a growth mindset enrichment program were more open ($M = 36.78, SD = 4.13$) than students who had not participated ($M = 34.88, SD = 4.26$). With regard to foreign language skill, there was also a significant difference in Openness to Experience between students who had the ability to use a foreign language and those who did not have ($t(202) = -2.38, p < .05, 95\% CI [-2.67, -.25]$). Students who had the ability to use a foreign language were more open ($M = 36.89, SD = 4.50$) than students who did not have ($M = 35.42, SD = 3.62$). With regard to work experiences, there was a significant relationship between Openness to Experience and work experiences ($F(3,202) = 3.61, p < .05$). Result showed that students with three or more work experiences ($M = 37.43, SD = 4.46$) were more open than students with two work experiences ($M = 35.95, SD = 3.25$), with one work experience ($M = 35.55, SD = 4.55$), and with no work experience ($M = 35.00, SD = 3.68$).

The predictive validity of the Big Five on Job Finding

Independent t-tests were performed to tap relationships between the Big Five and the probability of finding a job among graduated students. The

results showed that Openness to Experience emerged as the only predictor significantly associated with job finding success among graduated students. There was a significant difference in Openness to Experience between students who succeeded to find a job and those who did not succeed ($t(204) = -1.78, p < .05, 95\% CI [-2.79, .14]$). Students who succeeded to find a job were more open ($M = 36.63, SD = 4.27$) than students who did not succeed ($M = 35.30, SD = 4.03$). Thus, the results only supported hypothesis 6 of this current study, while hypotheses 7, 8, 9, and 10 were not supported.

Discussion

Results of the current study replicated previous findings on the predictive validity of the Big Five, particularly to students' motivation to learn. Nearly all personality traits, except Neuroticism, were positively and significantly related to motivation to learn. This result is, in part, consistent with Cheng & Ickes (2009) who argued that motivation is part of a personality construct that determines why some people work hard and persistent to achieve their personal goals whereas others do not. Findings of the current study suggest that students with personality traits that reflect intellectual curiosity, imagination, and broad-mindedness (Open to experience); discipline and achievement-orientation (Conscientiousness); as well as cooperation and trust in others (Agreeableness) are more likely to be motivated towards learning. The positive relationship between Extraversion and motivation to learn, and

not finding a negative relationship between Neuroticism and motivation, ran counter our earlier predictions. These results corroborated previous findings showing the inconsistent prediction of Extraversion and Neuroticism to motivation (Komarraju et al., 2009).

We found support for previous studies (e.g. Cheng & Ickes, 2009; Komarraju et al., 2009; Nofle & Robbins, 2007) confirming that conscientiousness emerged as the most robust predictor of motivation to learn as well as revealed the only personality trait correlated positively and significantly with GPA. This result suggests that personality traits that reflect ambition, self-discipline, sustained-effort, and perseverance contribute positively to enhanced motivation towards learning as well as better academic performance.

A meta-analysis by Poropat (2009) provided evidence of a declined trend of correlations between four personality traits (Openness to Experience, Extraversion, Agreeableness, and Neuroticism) and academic performance from the primary, secondary, to the tertiary education level. It appeared that results of the current study regarding the non-significant correlations between these four personality traits and academic performance resembled Poropat's meta-analysis findings. Poropat further argued that the declined trend of correlations between the four personality traits and academic performance among students at tertiary level of education might be due to the increasing variety of learning environments and activities experienced by college and

university students. The enhanced interests in a variety of learning environments and activities, external to academic learning, would tend to reduce the overall correlations between the four personality traits and university students' academic performance.

Studies concerning students' individual differences in personality might be beneficial for educational practitioners (Komarraju et al., 2009), including teachers. Teachers who are more knowledgeable concerning the issue of individual differences in personality may construct learning environments by taking into account their students' individual differences. Teachers may construct learning environments such as creating a structured and disciplined environment that might be suitable for conscientious students, while for open individuals creating new, challenging issues might enhance their curiosity. Thus, creating learning strategies in the light of individual differences in personality may promote higher engagement in learning processes.

With regard to job finding, unexpectedly, results of this study ran counter some of our predictions. We found only Openness to Experience that was significantly related to job finding success, whereas the other four personality traits did not show significant relations. We were surprised that Conscientiousness did not reveal a significant relationship with the success of finding a job as we expected previously that the enhanced motivation towards learning as well as better academic performance of conscientious students may positively contribute to their

success in job finding. Kanfer et al.'s meta-analysis (2001) provided evidence suggesting that Conscientiousness was more strongly related to job search behavior than to employment status. Although our finding is consistent with Kanfer et al.'s study, it was surprising to find that the only trait that was found the most robust predictor of motivation to learn and academic performance did not relate to success in finding a job.

One possible explanation for the latter finding is that conscientious individuals are more likely to pursue better jobs when they enter the labor market due to their ambitious and achievement-oriented character (Saks, 2006). It appeared that conscientious job seekers are less likely to accept the first job offered, rather, to continue their search to find a more desired job. Therefore, within six months after their graduation it might be possible that conscientious individuals were still looking for more desirable, promising jobs, rather than gaining any jobs.

It is perhaps most intriguing to note that Openness to Experience emerged as the only trait related to success in job finding. Openness to Experience also had significant relations with two biographical data presented in students' personal resumes, namely participation in a growth mindset enrichment program and work experiences. Further, participation in a growth mindset enrichment program and work experiences showed significant relations with success in job finding, even outperforming the predictive validity of graduates' grade point average (Sulastrri, Handoko, & Janssens, submitted for publication). Results of the current study

suggested that individuals who have an active imagination, intellectual curiosity, and are open-minded were more likely to participate in a growth enrichment program and had more work experiences. These associations subsequently contribute positively to their success in job finding.

Since the nature of job finding enterprise is dynamic and highly autonomous, it is likely that individuals who endorse more on active imagination, intellectual curiosity, and broad-mindedness are more successful in the pursuit of a job. They may capitalize on their active imagination to struggle within uncertain situations during the job-search and may take advantage of their broad-mindedness to generate goal-directed activities to obtain a job. From a practical standpoint, the influence of participation in a growth mindset enrichment program to the success of job finding might be the result of the enhanced belief in the malleability of one's capability. The positive belief following participation in a growth mindset enrichment program appears to enhance the graduated students' confidence during their job search which leads to success in obtaining a job. With regard to work experiences, it appears that more experiences of graduated students with any (part-time) work during their study create a higher employability value to recruiters than less experiences (Rynes, Orlitzky, & Bretz, 1997).

In conclusion, our study provides strong support for the role of personality traits in explaining graduated psychology students' success in

academic performance and job finding. In academic setting, we provide support to previous studies that highlight Conscientiousness as a central predictor of motivation to learn and academic performance (Cheng & Ickes, 2009; Komarraju et al., 2009; Nofle & Robbins, 2007). In job finding setting, our findings extend the findings of a previous study (Turban et al., 2009). First, we found that Openness to Experience is related to job finding. Secondly, we found evidence for the predictive validity of two biographical data presented in students' personal resumes, participation in a growth mindset enrichment program and work experiences, to job finding success.

We acknowledge, however, that this study has some limitations. The first limitation is the unequal numbers of women and men. The participants involved in this study were graduated psychology students in which more women than men were involved. Another issue concerns our measure of job finding success. We relied on one indicator of success, namely employment status, gathered within six months after students' graduation. This procedure might limit students' outcomes in job finding. We encourage future studies to include also other success outcomes in job-search setting, such as numbers of interviews and job offers received (Saks, 2006; Turban et al., 2009) within a longer time period after graduation.

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Chapter 4

Belief in the Malleability of Intelligence and Personality as Predictor of Graduating Students' Academic Performance and Successful Job Finding³

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Chapter 4

Belief in the Malleability of Intelligence and Personality as Predictor of Graduating Students' Academic Performance and Successful Job Finding

Abstract

In the present study, we examined Dweck's (2006) growth mindset theory in relation with graduating psychology students' academic performance and their success in job finding. Dweck's theory reflects the implicit belief that competence and personality are pliable and amenable to be enhanced or changed. We distinguished between the belief in the malleability of intelligence (BMI) and the belief in the malleability of personality (BMP). We examined whether BMI and BMP as "lower-order traits of personality" (Leeson et al., 2008, p.630) correlated with the broader personality traits of the Big Five. We found that Openness to Experience showed a consistent pattern of correlation with BMI and BMP and Extraversion with BMP. Correlation analysis showed that BMI and BMP had positive relations with motivation to learn. Further, BMI revealed a positive relation to students' success in finding a job but no correlation with academic performance, while BMP did not show any relations with these two outcomes. Theoretical as well as practical implications are discussed.

Keywords: Growth Mindset; Belief in the Malleability of Intelligence; Belief in the Malleability of Personality; Academic Performance; Job Finding

Introduction

Practitioners in education have long been acknowledged that motivational variables may play a key role in predicting students' academic performance. Some studies have shown that motivational variables may compensate cognitive ability in predicting academic

performance (Cheng & Ickes, 2009; Harackiewicz, Barron, Tauer, & Elliot, 2002). Theorists in this field proposed several conceptual frameworks: self-efficacy theory (Bandura, 1977, 1982), hope theory (Snyder, 2002), and mindset theory (Dweck, 2006; Dweck & Molden, 2005), to mention some of the prominent theories about motivation. In general, all of these motivational theories contain of frameworks pertained to positive-thinking about self (Leeson et al., 2008) or to a positive self-concept (Garcia, Triana, Peters, & Sanchez, 2009). Most of these positive self-concepts have been linked to academic performance, although recent studies have been conducted to unravel their relations to various outcomes, such as in leadership training programs in sport (Chase, 2010), neural mechanism in adaptive posterror-adjustments (Moser, Schroder, Heeter, Moran, & Lee, 2011), and inhibited social behavior among college freshmen (Valentiner, Mounts, Durik, & Gier-Lonsway, 2011).

Leeson et al. (2008) argued that motivational variables may function as a “lower-order” of personality (p.630). They investigated three types of lower-order personality traits (self-esteem, attribution style, and hope) and found relations with academic performance. In a similar vein, Dweck (2008) proposed the term “in-between-part” of personality traits (p.391). Much of Dweck’s seminal works had been focusing on developing her implicit theories of ability or attribution theory (Dweck, 1975, 1986, 1999, 2006; Dweck & Legget, 1988; Hong, Chiu, Dweck,

Lin, & Wan, 1999) which later on were referred to as incremental (growth mindset) vs. entity (fixed mindset) self-theories. Dweck and her colleagues investigated the theoretical concept of self-theories in relation to various life outcomes, albeit mostly in academic setting. Recently, there were also some studies aimed at investigating Dweck's incremental self-theory in several contexts, such as in secondary students' academic performance (Ziegler & Stoeger, 2010), human resource managers' performance (Heslin & VandeWalle, 2008), and job performance (Ackerman, Shapiro, & Beier, 2011).

Growth Mindset vs. Fixed Mindset: a Motivational Framework

In this study, we conceptualized our motivational framework in the light of Dweck's mindset theory (Dweck, 2006). This motivational framework posits that the basis of a behavior lies in people's key belief which differentiated into two categories: growth mindset versus fixed mindset. A growth (or incremental) mindset reflects the implicit belief in the malleability of one's competence, suggesting that competence is amenable to being enhanced. This type of mindset implies that changes may occur when the core beliefs or belief systems are changed through interventions or other developmental activities (Dweck, 2006, 2008). While a fixed (or entity) mindset reflects a belief that one's competence is a stable entity. The latter concept suggests that one's competence is

something that is innate, and therefore, is difficult, if not impossible, to be changed.

Dweck's mindset theory provides the underlying mechanism by which people's key belief in the nature of their competence (stable vs. malleable) might be altered (Dweck, 2006). Recently, the basis of Dweck's growth mindset theory had been linked to brain function enhancement (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006). This theory posits that our brain functions like a muscle – the more we use it, the stronger it becomes. Dweck argued that people's belief in the malleability of brain function may have a profound effect on their motivation towards learning which subsequently may affect their performance improvement. Although it has been widely studied in several life outcomes, to the best of our knowledge the current study was the first attempt to investigate Dweck's mindset theory, particularly the belief in the malleability of intelligence and personality, in the prediction of graduating students' success in academic performance and job finding.

Belief in the Malleability of Intelligence

Blackwell et al. (2007) investigated how a growth mindset influenced students' motivation and performance. They conducted an eight-week intervention program in which students in the experimental group were taught about study skills and how they can learn to be smarter by describing how their brain function could be enhanced. A control

group also learned study skills but were not taught Dweck's growth mindset about the malleability of intelligence. Blackwell et al. found that in just two months, students from the experimental group, compared to the control group, showed an increased improvement in grades and study habits. Blackwell et al. argued that by holding a new belief in the intelligence-malleability, students from the experimental group were more motivated towards learning, and accordingly, obtained better school performance, compared to students in the control group.

In this study, we examined whether graduating students' belief in the malleability of intelligence predicted their success in academic performance and job finding. First, we expected that belief in the malleability of intelligence (called as BMI hereafter), will be positively related to motivation to learn as well as to academic performance. Since the belief in malleability of one's competence might imply perseverance and hardworking through exerting efforts (Furnham, Chamorro-Premuzic, & McDougall, 2003), therefore, we expected that BMI should also be helpful to university graduates in their attempt to find a job. We accordingly expected that young job seekers who hold the BMI will succeed in their struggle to find a job than those who do not.

Hypothesis 1: BMI will be positively related to students' motivation to learn.

Hypothesis 2: BMI will be positively related to graduates'

academic performance.

Hypothesis 3: BMI will be positively related to job finding success among the graduating students.

Belief in the Malleability of Personality

Aside from the BMI, Dweck (2008) also asserted that belief systems may determine the way people perceive about their selves, others, and their life-events. Roberts, Wood, and Caspi (2008) defined personality as relatively constant patterns of thoughts, feelings, and behaviors to the environment that distinguish individuals from each other. Because belief systems may organize and shape these patterns in response to self, others, as well as to life-events, belief systems may function as the core of personality (Dweck, 2008). Unlike broader personality traits (Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism), belief in the malleability of personality might be relatively easy to be altered through interventions and other learning activities (Dweck, 2008; Leeson et al., 2008).

The current study aimed to examine graduating students' belief in the malleability of personality (called as BMP hereafter) in relation to students' success in academic performance and job finding. Similar to BMI, BMP might also reflect efforts and perseverance in traits developmental activities (Dweck, 2008). We accordingly also expected

that BMP will be positively related to students' motivation to learn and, subsequently, positively influenced their academic performance. In labor market context, it is also expected that BMP will be positively related to job finding success among graduating students who hold BMP.

Hypothesis 4: BMP will be positively related to students' motivation to learn.

Hypothesis 5: BMP will be positively related to graduates' academic performance.

Hypothesis 6: BMP will be positively related to job finding success among the graduating students.

Relations between the Belief in the Malleability of Intelligence and Personality and the Big Five

In addition, we analyzed whether BMI and BMP are related to broader personality traits. This is consistent with Dweck (2008) and Leeson et al. (2008) who asserted that motivational frameworks may function as the “lower-order” or the “in-between-part” of personality. The Big Five is perhaps one of the most widely accepted models of personality (John & Srivastava, 1999; Major, Turner, & Fletcher, 2006). There are five broad dimensions of personality that can be summarized by the concepts of Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (John & Srivastava, 1999).

Because BMI and BMP are considered as part of personality constructs (Dweck, 2008; Leeson et al., 2008), thus, we expected that the two beliefs will be related to the Big Five personality traits.

Hypothesis 7: BMI will be positively related to Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and will be negatively related to Neuroticism.

Hypothesis 8: BMP will be positively related to Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and will be negatively related to Neuroticism.

Method

Sample and Procedure

Participants in this study were graduating students of bachelor degree from seven psychology faculties in the cities of Semarang, Kudus, and Salatiga in Central Java, Indonesia. The graduating students were contacted directly after their graduation in February, April, June, August, October, and December 2010 to get their consent to participate in this study. There were 250 students (197 women and 53 men) who agreed to participate at Time 1. The participants were rewarded fifty thousand rupiah (equals to five US dollars) after completing the questionnaires at Time 1.

Six months after the graduation period, the 250 participants were again contacted to participate at Time 2. There were 240 (96% of 250 graduates at Time 1) who participated at Time 2. At Time 2, 189 (79%) were women. Since the objective of this study was to assess factors contributing to the success in finding a job among recent graduates, data of 34 participants who were continuing their study at a post-graduate level were excluded. Data of 206 participants (86% of the participants who participated at both Time 1 and Time 2 of this study) were analyzed for the present study. Of the 206, 164 (80%) were women. The participants' age ranged from 21 to 35 years old ($M = 23.70$, $SD = 1.78$).

Measures

BMI. The participants were asked to complete the BMI measure consisting of 4 items (Dweck, 2006). The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*You can always substantially change how intelligent you are.*” The BMI measure was carefully translated and adapted into Indonesian language using the forward-back translation technique. The forward-back translation was conducted by three independent translators in the forward-translation phase and by three other independent translators in the back-translation phase. For each student, a sum score was computed over the 4 items of this scale. The alpha reliability of this measure was .59.

BMP. The participants were asked to complete the BMP measure consisting of 4 items. The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*No matter what kind of person you are, you can always change substantially.*” The BMP measure was carefully adapted and translated into Indonesian language using the same technique as used for the BMI measure. We computed sum scores over the 4 items of this scale. The alpha reliability of this measure was .66.

The Big Five Personality Traits. The participants were asked to complete The Big Five Inventory (John & Srivastava, 1999) that consists of 44 items of short and easy-to-understand phrases (Srivastava, John, Gosling, & Potter, 2003). The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). Sample items are, “*I see myself as someone who is curious about many different things* (Openness to Experience); *does a thorough job* (Conscientiousness); *is talkative* (Extraversion); *is helpful and unselfish with others* (Agreeableness); *is depressed, blue* (Neuroticism).” The BFI measure was carefully adapted and translated into Indonesian language using the same technique as used for the BMI and BMP measure. The Extraversion subscale consists of 8 items, Agreeableness 9 items, Conscientiousness 9 items, Neuroticism 8 items, and Openness to Experience 10 items. We computed sum scores over the items for each subscale. The alpha reliabilities were .66 for Openness to Experience, .73

for Conscientiousness, .75 for Extraversion, .65 for Agreeableness, and .80 for Neuroticism.

Motivation to Learn. Motivation to learn was measured using a 10 item scale adapted from the Stages of Learning Motivation (SOLMI) developed by Cole, Feild, and Harris (2004). The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*I have been working hard to learn the information covered in the course/class.*” The motivation to learn measure was carefully adapted and translated into Indonesian language using the same technique as used for the BMI, BMP, and BFI measure. For each student, a sum score was computed over the 10 items. The alpha reliability of this measure was .76.

Grade Point Average (GPA). Data of students’ final *GPA* were obtained from the universities’ records. The legal consent from the universities’ authorities was obtained prior to the procurement of the data. The *GPA* ranged from 2.06 to 3.90 ($M = 3.07$, $SD = .33$).

After six-months’ status. At Time 2, the participants were contacted again via e-mail or contacted by phone. They were asked whether they succeeded or failed to find a job within six months after their graduation date.

Results

Of the 206 graduates who participated at both data collections, 166 (81%) succeeded in finding a job. Of the 166 who succeeded to find a job, 131 (79%) were women. Significant gender differences were found for final *GPA* ($t(204) = -4.804, p < .001, 95\% CI [-.37, -.15]$), with women ($M = 3.12, SD = .32$) outperformed men ($M = 2.86, SD = .31$). Another significant gender difference was found for *BMI* ($t(204) = 2.090, p < .05, 95\% CI [.04, 1.64]$); men had more belief in the malleability of intelligence ($M = 15.25, SD = 2.36$) than women ($M = 14.40, SD = 2.32$). Gender differences in *BMP* were not found ($t(204) = 1.270, p > .05, 95\% CI [-.31, 1.44]$).

Correlation analyses

Table 4.1. shows that both *BMI* and *BMP* had positive and significant correlations with motivation to learn confirming hypothesis 1 and 4, whereas *BMI* and *BMP* did not show any significant correlations with grade point average, thus disconfirming hypothesis 2 and 5.

Table 4.1.

Pearson Correlations of *BMI*, *BMP*, *Motivation to Learn*, and *GPA*

Variable	Motivation to Learn	GPA
<i>BMI</i>	.17*	-.10 (<i>n.s.</i>)
<i>BMP</i>	.26**	-.09 (<i>n.s.</i>)

Note.

** $p < .01$, * $p < .05$, *n.s.* = non-significant.

BMI is the belief in the malleability of intelligence; *BMP* is the belief in the malleability of personality; *GPA* is grade point average.

T-tests analysis

The present study aimed to examine relations between the *BMI*, *BMP*, and the probability of finding a job among graduating psychology students. *BMI* had a significant relation with job finding outcome ($t(204) = -1.79, p < .05, 95\% CI [-1.55, .08]$). Graduates who succeeded to get a job had more belief in the malleability of intelligence / *BMI* ($M = 14.71, SD = 2.30$) than graduates who did not succeed ($M = 13.98, SD = 2.48$). On the other hand, there was no significant relation between *BMP* and job finding success ($t(204) = -1.12, p > .05, 95\% CI [-1.40, .39]$). Graduates who succeeded to find a job ($M = 12.53, SD = 2.55$) and did not succeed ($M = 12.03, SD = 2.64$) had almost a similar level of belief in the malleability of personality (*BMP*). Thus, results of the current study supported hypothesis 3 and did not support hypothesis 6.

Correlation between BMI, BMP, and the Big Five

Since *BMI* and *BMP* are considered as part of personality constructs (Dweck, 2008; Leeson et al., 2008), this study also examined the relation between *BMI*, *BMP*, and *the Big Five* personality traits. We performed *correlation analyses* to examine whether *BMI* and *BMP* were related to *the Big Five*.

Table 4.2. shows that Openness to Experience had a positive and significant, yet modest, correlation with *BMI* and *BMP*, while Extraversion had a positive and significant correlation only with *BMP*. Thus, these results only partially supported hypothesis 7 and 8.

Table 4.2.

Pearson Correlations of *the Big Five*, *BMI*, and *BMP*

Variable	BMI	BMP
Openness to Experience	.17*	.19**
Conscientiousness	.10	.07
Agreeableness	.11	.11
Extraversion	.09	.18**
Neuroticism	-.09	-.07

Note.

** $p < .01$; * $p < .05$.

BMI is the belief in the malleability of intelligence; *BMP* is the belief in the malleability of personality.

Discussion

The aim of this study was to examine the relationship between two implicit self-concepts (Dweck, 2006, 2008), namely the belief in the malleability of intelligence (BMI) and of personality (BMP), graduating students' academic performance and the success in job finding.

Furthermore, since BMI and BMP are part of personality constructs, this study also examined the relation between BMI, BMP, and the Big Five personality traits. Results of our study support previous studies investigating the predictive validity of positive implicit self-theories in academic (Blackwell et al., 2007; Harackiewicz et al., 2002; Leeson et al., 2008; Snyder et al., 2002) as well as in labor market outcomes (Garcia et al., 2009; Lynd-Stevenson, 1999).

In academic setting, BMI and BMP showed positive and

significant relations with motivation to learn. However, contrary to our expectations, we found no significant relationship between BMI, BMP, and academic performance. The latter result might imply that university students' performance do not depend on their key beliefs whether their intelligence and personality are pliable (Dweck, 2006, 2008; Leeson et al., 2008). In another study, Furnham, et al. (2003) also reported a non-significant relation between the belief about intelligence (BAI) and university students' academic performance, suggesting that a positive belief that intelligence can be enhanced does not contribute to students' academic performance. Interestingly, in another study we found a consistent pattern of significant relations between Conscientiousness, motivation to learn and students' academic performance (Sulastri, Handoko, & Janssens, submitted for publication). Thus, it appeared that students' academic performance seems to depend more on broader personality traits (Furnham et al., 2003; Poropat, 2009), particularly on a trait that represents ambition, perseverance and hard work, than on "lower-order" personality traits (Leeson et al., 2008).

With regard to job acquisition, we found a significant relation between BMI and graduates' job finding outcome, whereas BMP did not show a significant relation with job finding. This result suggests that graduates who hold a key belief that intelligence can be enhanced throughout their life span are more likely to succeed in finding a job. Consistent with our finding, Lynd-Stevenson (1999) also reported that

individuals with higher positive value about selves will persevere in their job applications until a permanent job is found. Students' beliefs in the likelihood that their personality can be changed following certain strategies and learning, however, seem to have no relation with their success in finding a job.

Furthermore, it has been suggested that concepts of implicit self-theories are part of personality (Dweck, 2008; Leeson et al., 2008). Accordingly, we examined relationship between BMI, BMP, and the Big Five personality traits. First, we found a consistent pattern of relationship between Openness to Experience, BMI, and BMP. Openness to Experience reflects divergent and imaginative thinking, broad-mindedness and a high level of curiosity. Thus, graduates with a higher level of intellectual curiosity and broad-mindedness are more likely to hold a belief that their intelligence and personality are pliable and thus are amenable to being cultivated and being changed. Our finding is consistent with a previous study (Furnham et al., 2003) that also reported a significant relation between this trait and the belief about intelligence in a sample of university students. Furthermore, Extraversion revealed a significant relation with BMP, suggesting that graduates with a tendency of being active and sociable are more inclined to hold a belief that their personality are amenable to being changed.

It is noted, however, that results of our study seemed to run

counter some of our expectations, particularly results pertained to the relationship between BMI, BMP, and students' academic performance. One possible explanation is that our study involved graduating students who were not performing tasks related to their role as students. Secondly, previous studies that successfully revealed significant relations between these implicit self-theories and academic performance were conducted in samples of younger students performing tasks related to their roles as students in classes (Blackwell et al., 2007; Ziegler & Stoeger, 2010). These latter studies not only showed that the participants in their study were more susceptible to interventions, but also highlighted the advantage of using experimental design to produce the expected effects instead of using a cross-sectional design as used in the current study. Third, we acknowledge that the low internal reliabilities of BMI and BMP measures may contribute to the non-significant relations among variables investigated. If further research is to be conducted using mindset theory, then continued efforts need to be made in improving the measurement of these concepts.

In reality, people may hold various self-theories or mindsets that span along the continuum-line between incremental belief at one point and entity belief at the other point (Heslin & VandeWalle, 2008). For instance, people may hold an incremental belief in academic, but an entity belief in their competence in sport (Dweck, 2006). These two self-theories should not be interpreted in terms of which of the two mindsets,

fixed vs. growth mindset, is more correct (Heslin & VandeWalle, 2008), rather, which of the two mindsets may contribute more positively to individuals on reaching a particular goal, such as achieving better academic performance (Blackwell et al., 2007) and obtaining a job (Garcia et al., 2009; Lynd-Stevenson, 1999). It has been suggested, however, that holding a malleability belief makes individuals are more inclined to perceive that personal attributes, such as ability, intelligence, and personality, are the product of continues effort and learning (Blackwell et al., 2007; Heslin & VandeWalle, 2008). This might further imply that university lecturers, and perhaps teachers in general, may consistently emphasize the importance of perseverance and hard work (Furnham et al., 2003).

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Chapter 5

The Influence of Collectivistic Cultural Orientation on Graduated Students' Academic Performance and Successful Job Finding⁴

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Chapter 5

The Influence of Collectivistic Cultural Orientation on Graduated Students' Academic Performance and Successful Job Finding

Abstract

Relationships between collectivistic cultural orientation, academic performance, and success in finding a job were examined in a two-wave longitudinal study using a sample ($N= 206$) of graduated psychology students living in a collectivistic country, Indonesia. Correlation analysis showed that students' collectivistic cultural orientation revealed a positive and significant correlation with motivation to learn, but did not correlate with academic performance. In job search context, students' collectivistic cultural orientation showed a significant relation with their success in finding a job; students who were more collectivistic oriented were more successful in getting a job. Parents' collectivistic cultural orientation showed a significant correlation with the collectivistic orientation of the students, but did not relate with students' academic performance and their success in job finding. Practical implications of cultural orientation for academic performance and job finding are discussed.

Keywords: Collectivistic Cultural Orientation; Academic Performance; Job Finding

Introduction

“When a psychologist looks at a non-Western culture through Western glasses, he may fail to notice important aspects of the non-Western culture since the schemata for recognizing them are not provided by his science”
(Azuma, 1984, p.49)

It had been noted that students' personal characteristics may promote or hinder learning processes and subsequently may affect their educational outcomes. Hence, identifying factors contributing to the development of students' personal characteristics is an influential

endeavor to help students not only achieving positive academic outcomes but also other subsequent positive life outcomes such as job search success (Van Hooft & De Jong, 2009) and entrepreneurship success (Thomas & Mueller, 2000; Tiessen, 1997).

Cultural orientation is presumably one of the salient factors that helps explain how cultural differences might affect the development of individuals' personal characteristics and social behaviors across diverse cultures worldwide (Hofstede & McCrae, 2004; Triandis, 2001). Individualistic vs. collectivistic cultural orientation is perhaps the most influential key concept in the study of cultural differences in various contexts. An individualistic cultural orientation refers to an emphasis on self-reliance, independence and self-centered goals (Killen & Wainryb, 2000; Oyserman, Coon, & Kemmelmeier, 2002; Yi & Park, 2003). By contrast, a collectivistic cultural orientation emphasizes interdependence and relatedness to groups, such as friends, relatives, and families (Kagicitbasi, 2005; Mesquita, 2001; Salili, Chiu, & Lai, 2001).

The individualism and collectivism conceptualization has received its popularity since its first appearance in 1980 by Hofstede (Kagicitbasi, 1997). It is posited that the historical background of the individualism perspective has been predominantly rooted in the Western world (Kagicitbasi, 1997; Oyserman et al., 2002), and collectivism has been more prevalent in the Eastern society, in particular among Asian countries (Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004).

Presumably, the variability in cultural-based orientation and related-behaviors across different cultures had evoked a number of studies to better understand the pertinent dynamics of cultural orientations in diverse life outcomes and contexts (e.g. Chirkov, Ryan, Kim, & Kaplan, 2003; Mesquita, 2001; Salili et al., 2001; Sosik & Jung, 2002).

The current study aimed to examine the influence of cultural orientation on academic performance and job finding success among graduated psychology students. The advantage of using the individualistic-collectivistic (called IND-COL hereafter) cultural orientation framework is in its parsimony of the theoretical concepts (Oyserman et al., 2002). The IND-COL theoretical concepts provide a reasonable explanatory tool for understanding the complexities of individuals' behavior in different contexts. Thus, the aim of the current study was to clarify particularly the contribution of collectivistic cultural orientations on academic performance and job finding success among recent graduated students living in a collectivistic context (Hofstede, 1980).

The Predictive Influence of Collectivistic Cultural Orientation in Academic Context

Previous studies have shown that individuals' cultural orientation of IND-COL may influence students' behavior in classrooms that subsequently affect their academic outcomes (e.g. Salili et al., 2001;

VonDras, 2005). VonDras (2005) found that students with a collectivistic cultural orientation typically perceived learning barriers in classrooms and showed low achievement motivation. As consequence, these students were more likely to obtain lower academic performance compared to their individualistic-oriented counterparts. However, Salili et al. (2001) noted that most studies investigating the influence of IND-COL cultural orientation on students' motivation and academic performance have been conducted in Western universities (schools). Salili et al. argued that such samples may not be representative for Eastern students, particularly Asian students, in their own countries or contexts. They further argued that such studies failed to recognize the positive effect of the social dimension in schools, such as the role of teachers and peers, and particularly the involvement of family or parents in students' motivation and academic goal-settings.

Students living in a collectivistic context and engaging in a collectivistic cultural orientation might hold a social value that being a good child of their parents is an important goal (Mesquita, 2001; Salili, 1994; Salili et al., 2001). This value may motivate students to work towards their parents' goal, with their achievements enhancing the prestige of their families. Thus, motivation to learn and higher academic achievement of these collectivistic-oriented students are likely prompted by a sense of responsibility and to make their families proud of them (Mesquita, 2001; Salili et al., 2001). Given that these norms and values

are very important in collectivistic countries, we accordingly formulated the following hypotheses:

Hypothesis 1: Graduated students' collectivistic cultural orientation relates positively to their motivation to learn.

Hypothesis 2: Graduated students' collectivistic cultural orientation relates positively to their academic performance.

The Predictive Influence of Collectivistic Cultural Orientation in Job Finding

Regarding the job finding enterprise, young job seekers often capitalize on informal sources or social networks, such as friends, acquaintances and relatives, during their first job searches (Kanfer, Wanberg, & Kantrowitz, 2001; Van Hove, van Hooft, & Lievens, 2009; Wanberg, Kanfer, & Banas, 2000). This practice is often found to be less costly and more productive in generating job opportunities, which subsequently may lead to a higher probability of job finding success (Weber & Mahringer, 2008). Collectivistic-oriented individuals often emphasize their connectedness to other members of their in-groups (Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006) and see themselves as interdependent with their in-groups that provide them a supportive social environment (Kanfer et al., 2001; Triandis, 2001). Accordingly, it can be assumed that graduated students living in a collectivistic culture

will capitalize on their social sources, i.e. friends and relatives, during their job searches. This strategy may lead to more success in finding a job.

Hypothesis 3: Graduated students' collectivistic cultural orientation will relate positively to their success in finding a job.

The Relation between Parents' and Students' Collectivistic Cultural Orientation, Motivation to Learn, Academic Performance, and Successful Job Finding

People in collectivistic cultures often see themselves as members of one or more in-groups, prioritize the goals of their in-groups, and emphasize their connectedness with their in-group members, such as friends, relatives and families (Jackson et al., 2006; Kagitcibasi, 2005; Triandis, 2001). The core element of collectivism is the assumption that individuals are interdependent (Killen & Wainryb, 2000), and show higher relatedness to their in-groups (Mesquita, 2001; Triandis, 2001). By contrast, the basic element of individualism underlies in its assumption that individuals are independent (Mesquita, 2001; Oyserman et al., 2002), and thus are more likely detached from their community and social order (Killen & Wainryb, 2000).

Families or parents in collectivistic cultures have been considered to promote more the relatedness and interdependence of their children (Kagitcibasi, 2005; Tamis-LeMonda, Way, Hughes, Yoshikawa,

Kalman, & Niwa, 2007), compared with their individualistic-oriented counterparts. In a collectivistic context, a child's achievement is appraised as an event important to the members of his/her in-groups, for example parents (Mesquita, 2001). Salili et al. (2001) found that parents in collectivistic cultures, particularly parents of Chinese students living in Hong Kong, often set high expectations and standards for their children's academic performance. Salili et al. further reported that these parents were more concerned with their children's achievement, and therefore, often spent more time supervising the schoolwork of their children than did American parents.

We, therefore, expected that parents' collectivistic cultural orientation will be positively related to graduating students' motivation to learn, academic performance, and their success of finding a job. In addition, we also hypothesized that parents in collectivistic cultures will have readily transmitted their collectivistic cultural orientation to their children compared with parents in individualistic cultures. Hence, we expected that the collectivistic cultural orientation of parents in collectivistic cultures will be highly correlated with their children's cultural orientation of collectivism.

Hypothesis 4: Parents' collectivistic cultural orientation relates positively to graduated students' motivation to learn.

Hypothesis 5: Parents' collectivistic cultural orientation relates positively to graduated students' academic performance.

Hypothesis 6: Parents' collectivistic cultural orientation relates positively to graduated students' successful job finding.

Hypothesis 7: Parents' collectivistic cultural orientation relates positively to graduated students' collectivistic cultural orientation.

Method

Sample and Procedure

Participants in this study were graduated students of bachelor degree from seven psychology faculties in the cities of Semarang, Kudus, and Salatiga in Central Java, Indonesia. Five universities were located in the capital city of Central Java (Semarang), and two were state universities. The ethnicity of the participants was Javanese (76 %); 12% was Chinese; 12% was multiethnic – mixed between ethnicities. The participants' age ranged from 21 to 35 years old ($M = 23.70$, $SD = 1.78$). Regarding the educational background of the students' parents, 43% of their fathers were university graduates, 42% were high-school graduates, and 15 % were junior high school graduates, while 18% of the mothers graduated from junior high school, 47% were high-school graduates, and 35% were university graduates.

The graduated students were contacted directly after their graduation in February, April, June, August, October, and December 2010 to get their consent to participate in this study. There were 250

students (197 women and 53 men) who agreed to participate at Time 1. The participants were rewarded fifty thousand rupiah (equals to five US dollars) after completing the questionnaires at Time 1. Six months after their graduation, the 250 participants were again contacted to participate at Time 2. There were 240 (96% of 250 graduates at Time 1) who participated at Time 2. At Time 2, 189 (79%) were women. Since the objective of this study was to assess factors contributing to the success in finding a job among recent graduates, data of 34 participants who were continuing their study at a post-graduate level were excluded. Data of 206 participants (86% of the participants who participated at both Time 1 and Time 2 of this study) were analyzed for the present study. Of the 206, 164 (80%) were women.

Measures

Students' Individualism-Collectivism. The participants were asked to complete the Individualism-Collectivism questionnaire consisting of 20 items. This measure was adapted from Triandis' Family of Collectivism Measures (Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006). The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*It is important to me that I respect the decisions made by my group.*” The measure was carefully translated and adapted into Indonesian language using the forward-back translation technique. The

forward-back translation was conducted by three independent translators in the forward-translation phase and by three other independent translators in the back-translation phase. For each student, a sum score was computed over the 20 items of this scale. Higher scores on this measure indicated a higher collectivistic cultural orientation. Cronbach's alpha reliability was .62.

Parents' Individualism-Collectivism. The Parents' Individualism-Collectivism questionnaire was administered to students to measure their Parents' IND-COL cultural orientation as perceived by these students. This measure was adapted from the Vertical Collectivism Measures (Chirkov et al., 2003) and consisted of six items. The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*My parent taught me to do what would please my family, even if one detests the activity.*” The measure was carefully translated and adapted into Indonesian language using the same forward-back translation technique as used for the Individualism-Collectivism measure. For each student, a sum score was computed over the six items of this scale. Higher scores on this measure indicated a higher collectivistic cultural orientation of parents. Cronbach's alpha reliability was .61.

Motivation to Learn. Motivation to learn was measured using a 10 item scale adapted from the Stages of Learning Motivation (SOLMI) developed by Cole, Feild, and Harris(2004). The participants rated their

agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*I have been working hard to learn the information covered in the course/class.*” The motivation to learn measure was carefully adapted and translated into Indonesian language using the same technique as used for students’ Individualism-Collectivism and Parents’ Individualism-Collectivism measures. For each student, a sum score was computed over the 10 items. Cronbach’s alpha reliability was .76.

Grade Point Average (GPA). Data of students’ final *GPA* were obtained from the universities’ records. The legal consent from the universities’ authorities was obtained prior to the procurement of the data. The *GPA* ranged from 2.06 to 3.90 ($M = 3.07$, $SD = .33$).

After six-months’ status. At Time 2, the participants were contacted again via e-mail or by phone. They were asked whether they succeeded or failed to find a job within six months after their graduation.

Results

Of the 206 graduates who participated at both data collections, 166 (81%) succeeded in finding a job. Of the 166 who succeeded to find a job, 131 (79%) were women. Significant gender differences were found for final *GPA* ($t(204) = -4.804$, $p < .001$, 95% *CI* [- .37, - .15]); with women ($M = 3.12$, $SD = .32$) outperformed men ($M = 2.86$, $SD = .31$).

The mean score on individualism-collectivism was 3.44. This mean score was above the mid-point of the measure (2.5), thus indicating that the participants were more collectivistic cultural-oriented. The similar result was also found for their parents (mean score was 3.63), indicating that the students' parents were more collectivistic cultural-oriented.

Correlation analyses

Table 5.1. shows that students' IND-COL cultural orientation revealed a positive and significant correlation with motivation to learn, confirming hypothesis 1. This result suggests that the more collectivistic-oriented students are, the higher their motivation to learn. Students' IND-COL cultural orientation did not reveal a significant correlation with academic performance, thus disconfirming hypothesis 2. Furthermore, parents' IND-COL cultural orientation showed a positive and significant correlation with students' motivation to learn, confirming hypothesis 4. The latter result means that the more collectivistic-oriented parents were the higher motivation the students had to learn. Parents' IND-COL cultural orientation did not show a significant correlation with students' academic performance, and this was disconfirming hypothesis 5. Parents' IND-COL cultural orientation showed a positive and significant correlation with students' IND-COL cultural orientation, confirming hypothesis 7. In addition, students' motivation to learn revealed a positive and significant correlation with their academic performance.

Table 5.1.

Pearson Correlations between Students' IND-COL, Parents' IND-COL, Motivation to Learn, and GPA

Variable	1	2	3	4
1. Students' IND-COL	-			
2. Parents' IND-COL	.21**	-		
3. Motivation to Learn	.28**	.20**	-	
4. GPA	.09	-.07	.25**	-

Note.

** = $p < .01$

GPA: Grade Point Average

T-test Analyses

An independent *t-test* was conducted to examine hypothesis 3, whether students' IND-COL cultural orientation related to their success in finding a job. Students' IND-COL cultural orientation had a significant relation with the success in job finding ($t(204) = .71, p < .05, 95\% CI [-4.02, .26]$), confirming hypothesis 3. Graduated students who succeeded to find a job were more collectivistic oriented ($M = 69.23, SD = 6.14$) than those who did not succeed to find a job ($M = 67.35, SD = 6.29$). The effect size was medium ($d = .30$).

To examine hypothesis 6, an independent *t-test* was performed. Parents' IND-COL cultural orientation did not show a significant relation with students' success in job finding ($t(204) = .45, p > .05; 95\% CI [-.71, 1.45]$). Parents' of the graduates who succeeded to find a job and did not succeed had nearly the same level of IND-COL cultural orientation ($M =$

21.68, $SD= 3.25$; $M= 22.05$, $SD= 2.47$, respectively). Thus, this result did not support hypothesis 6.

Discussion

The present study aimed to investigate the relative contribution of IND-COL cultural orientation among graduated psychology students to their motivation to learn, academic performance and their success in job finding. In addition, we sought out to examine whether parents' IND-COL cultural orientation also correlated with those variables. Results of our study add to the existing literature in particular concerning the unique contribution of a collectivistic cultural orientation among graduated students living in a collectivistic context to their success in academic performance and job finding.

In academic context, results of our study support previous studies suggesting the positive influence of a collectivistic cultural orientation of students living in a collectivistic culture to their motivation to learn (e.g. Salili et al., 2001; Yi & Park, 2003). Seemingly, these findings revealed an opposite pattern compared with a previous study conducted in a Western context (VonDras, 2005), in which VonDras reported the negative influence of a collectivistic cultural orientation on students' motivation to learn. Thus, results of our study seem to suggest that students living in a collectivistic context and engaging more in a

collectivistic cultural orientation might have as high motivation to learn as their counterparts living in an individualistic context. Furthermore, we also found that parents' collectivistic cultural orientation also revealed a positive and significant relation with students' motivation to learn. The latter result supports our initial prediction that parents with a high collectivistic cultural orientation tend to get more involved in their children's academic study compared with parents with a low collectivistic cultural orientation (Kagicitbasi, 2005; Mesquita, 2001; Salili et al., 2001).

However, results concerning relations between students' and parents' cultural orientation and the academic performance of these students ran counter our initial predictions. We did not find significant relations between students' and parents' IND-COL cultural orientation and students' academic performance. Possibly, these results can be explained by the participants' and their parents' educational background. We speculate that the university educational background of the participants and many of their parents may account for the non-significant correlations between their cultural orientations and students' academic performance. As noted by Yi and Park (2003), university students with a collectivistic cultural orientation are apt to assimilate more easily individualistic-characteristics, such as autonomy and self-oriented goals, when they enter the university. This might indicate that these students were likely becoming more self-reliant in obtaining

their academic performance at university level. On the other hand, we speculate that the relatively well-educated parents, although having a relatively high collectivistic-cultural orientation, may probably reduce their tight guidance to their children when their children entered the university. This practice was unlikely when their children were still high-school students (Salili et al., 2001).

As expected, we found a positive and significant correlation between students' cultural orientation and their success in finding a job. One possible cultural-related mechanism that may account for this achievement is that graduated students who rely more on social interdependence and live in a collectivistic context are more likely to succeed in finding a job. This is because they are more likely to capitalize on their social networks to generate job opportunities, such as through referrals from friends and relatives (Weber & Mahringer, 2008). Consistent with the latter finding, Kanfer, Wanberg, and Kantrowitz (2001) also found that social support was related to job search behavior among new entrants.

However, we did not anticipate that parents' IND-COL cultural orientation did not have a significant relation with students' success in job finding. The latter result seems to suggest that the graduated students' achievement in a job finding context is independent from their feeling of an obligation to make their parents feel proud (Freeberg & Stein, 1996).

We speculate that the non-significant relation with parents' collectivistic-cultural orientation may be related to the age of the participants. Success in finding the first job among young job seekers may reflect the starting point of becoming economically independent from their parents (Dayton, 1981). Therefore, these graduated students did not attribute their success in finding a job as a result of their feeling of connectedness and obligation to their parents as their close in-group.

Results of the current study provide some important findings with regard to the positive influence of a collectivistic-cultural orientation on graduating students' outcomes in academic performance and job finding. First, it appeared that our finding challenged a study investigating students' motivation to learn in Western context (VonDras, 2005). Our study showed that collectivistic-oriented students living in a collectivistic context may have as a high motivation to learn as their individualistic-oriented counterparts living in individualistic cultures. As previously suggested by Hess and Azuma (1991) students who have a collectivistic cultural orientation may act differently compared with students who hold an individualistic cultural orientation in learning processes in classes or schools. Hess and Azuma found that collectivistic-oriented students will benefit more on compliance to teachers, suggesting that teachers should give clear instructions and proper explanations to these students. By contrast, individualistic-oriented students will benefit more from a self-initiative learning environment, thus teachers should be less instructive.

Hence, it is imperative for teachers to be aware of and to take into account the unique cultural-related behaviors and learning processes of their students. In that way, learning processes in classes and schools will be more sensible to individual differences attributable to the dispositions of students' cultural orientation. This practice may subsequently lead to higher achievement of students.

Secondly, collectivistic-oriented graduated students living in a collectivistic context seem to have more advantage from their social interdependence and in-groups' reliance with regard to their success in finding a job. If this interdependence and reliance affect collectivistic-oriented graduated students in finding a job, however, it remains unclear which social mechanisms, for example informal sources such as friends, relatives or parents, mediate their success in finding a job. It is, therefore, particularly of interest for future studies to explore the relative contribution of these social sources to the success in finding a job among collectivistic-oriented individuals living in a collectivistic context.

In the present study, individual differences in IND-COL cultural orientation were assessed within a single country, Indonesia. Therefore, we encourage future studies to examine the influence of IND-COL cultural orientation in academic performance and successful job finding among Indonesian students studying in individualistic contexts, such as in European countries and the United States. Such studies may add to the

previous studies that focused more on investigating IND-COL cultural orientation with samples consisting of Chinese and Japanese students in their own countries (collectivistic-oriented) or in individualistic-oriented countries (e.g. Arikawa & Templer, 1998; Hess & Azuma, 1991; Salili et al, 2001; Tamis Le-Monda et al., 2007; Yi & Park, 2003; Zha, Walcyk, Griffith-Rose, Tobacyk, & Walcyk, 2006). In this way, western or eastern psychologists will better understand the influence of different cultures and contexts on students' academic performance and successful job finding.

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Chapter 6

Gender-based Differences in Academic Performance and Job Finding⁵

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Chapter 6

Gender-based Differences in Academic Performance and Job Finding

Abstract

The differences between male and female graduates in psychology with regard to their academic performance and success in job finding were investigated. Two hundred and six psychology graduates from seven universities in Indonesia participated in a two-wave longitudinal study. In academic context, women outperformed men in grades obtained. We also found that motivation to learn partially mediated the relationship between gender and academic performance. In job finding context, first, we found no difference in the success of obtaining a job between male and female graduates. Secondly, we found a nearly significant gender difference ($p < .10$) with regard to success in finding a psychology-based job, with relatively more female graduates succeeding in obtaining a psychology-based job than male graduates. We also found that academic performance revealed a (nearly) perfect mediation for the relationship between gender and finding a psychology-based job. Practical implications regarding gender differences in academic performance and its subsequent impact on job finding are discussed.

Keywords: Gender differences; Motivation to learn; Academic performance; Job finding

Introduction

Each year, there are millions of university graduates engaging in their first job searches following the accomplishment of their study. Besides these young job seekers, there might be other millions of people who are seeking for a (new) job as a result of job loss or a desire to pursue a new career (Boswell, Zimmerman, & Swider, 2012). Rynes, Orlitzky, and Bretz (1997) demonstrated that a number of job positions

that require a college degree were filled with experienced workers. This result suggests that experienced applicants are valued higher than new, less experienced ones. Furthermore, Steinpreis, Anders, and Ritzke's (1999) study revealed evidence that job applicants' reviewers and personnel selection members were more inclined to suggest higher starting salaries and tenure offerings to experienced candidates than to new entrants (individuals who search for their first job following a period of education). These findings might reflect the impediment on getting a job among fresh graduates as new entrants in the labor market (Dayton, 1981; Turban, Stevens, & Lee, 2009). Consequently, some studies revealed evidence that finding a job is particularly problematic for recent college graduates and that this population is often at risk to be unemployed (e.g. Brown, Cober, Kane, Levy, & Shallhoop, 2006; Dayton, 1981; Tay, Ang, & Van Dyne, 2006).

It is also intriguing to note that in personnel selection, gender has been found as an indicator of success in getting a job (Steinpreis et al., 1999). Steinpreis et al. reported that male applicants were more likely to be hired than females. They also found that both male and female job applicants' reviewers were more likely to offer tenures to males than to equally-qualified females. Other studies have shown that women perceived more career-related barriers than did men (Luzzo & McWhirter, 2001; McWhirther, 1997). Women were more likely to expect to have a harder time to get hired than men, to experience more

negative comments, to experience discrimination, and to have difficulties to find a job that allows them to spend sufficient time with their families. It is also noted that recent male graduates earned more than their female counterparts (Joy, 2003). Several studies also amplified previous findings that women and ethnic minorities are groups who often encounter adverse situations in a selection process and/or hiring decision (e.g. Lopez & Ann-Yi, 2006; Mascaro, Arnette, Santana, & Kaslow, 2007; McKinney & Miles, 2009; Peppas, 2002; VanHooft, Born, Taris, & Van der Flier, 2006).

Studies examining factors contributing to university students' academic performance (e.g. Chamorro-Premuzic & Furnham, 2003; Furnham, Chamorro-Premuzic, & McDougall, 2003; Harackiewicz, Barron, Tauer, & Elliot, 2002; Poropat, 2009), job searches (Kanfer, Wanberg, & Kantrowitz, 2001; Wanberg, Kanfer, & Rotundo, 1999), and successful job acquisition (e.g. Cole, Rubin, Feild, & Giles, 2007; Garcia, Triana, Peters, & Sanchez, 2009; Turban et al., 2009) have evolved somewhat separately. The current study offers important contributions unravelling relationships between academic outcome and the success in job finding in a sample of young job seekers who are often at risk to become unemployed, recent university graduates in psychology. Given the increased number of female graduates entering the workforce (McKinney & Miles, 2009; Pema & Mehay, 2010) and, in specific scope, that women account for the majority of psychology graduates, it

is important to investigate whether gender differences exist in academic performance and finding a job. Thus, the first purpose of the current study was to examine the difference between male and female graduated psychology students in their success in academic performance and job finding.

Evidence has also shown that individual differences in personality (Cheng & Ickes, 2009; Komarraju, Karau, & Schmeck, 2009; Nofle & Robbins, 2007; Wanberg, Hough, & Song, 2002) and growth mindset, also known as attribution style and/or positive self-concept (Blackwell, Trzesniewski, & Dweck, 2007; Leeson, Ciarrochi, & Heaven, 2008; Wanberg, Glomb, Song, & Sorenson, 2005) might contribute to students' success in academic performance and getting a job (e.g. Garcia et al., 2009; Poropat, 2009; Turban et al., 2009). Consistent with these findings, the second purpose of this study was to determine whether individual differences in personality and growth mindset between male and female graduated students might account for their differences in academic performance and job acquisition.

Gender-based Differences in Academic Performance

Evidence provides a relatively stringent pattern of gender differences regarding male and female students' differences in academic outcomes. Furnham et al. (2003) found that academic performance was significantly related to gender; females obtained higher grades

than males. Using a three-year longitudinal study, Leeson et al. (2008) found significant gender differences in grades, with girls consistently outperforming boys. In another study, we also found that the mean score of GPAs among female graduates was higher than that of male graduates (Sulastri, Handoko, & Janssens (a), submitted), indicating that female graduates outperform males in grades obtained. It is thus clear that there is a relatively consistent pattern regarding gender-based differences in academic performance; females outperform males in grades obtained.

Studies have shown consistent significant prediction of motivation (Cheng & Ickes, 2009; Harackiewicz et al., 2002; Komarraju et al., 2009) to college students' academic performance. Consistent with prior findings, we also found significant relations between motivation to learn and final GPAs among university graduating students (Sulastri, Handoko, & Janssens (b), submitted). However, it remains unclear which factors account for gender differences in academic achievement.

In this study, first, we examined whether motivation to learn may contribute to gender-based differences in academic performance. Second, we also sought out whether individual differences in personality may account for such differences. A meta-analysis suggested that individual differences in personality may explain individual variance in academic performance (Poropat, 2009).

Personality traits are viewed as basic tendencies that refer to the abstract underlying potentials of individuals (McCrae & Costa, 1996).

In another study we found that women were more conscientious than men (Sulastri et al. (b), submitted). Costa, Terraciano, and McCrae's (2001) meta-analysis also provided evidence that women scored higher on conscientiousness than did men. Conscientiousness reflects a hardworking, ambitious, and confident character. Conscientious individuals tend to be more disciplined and achievement oriented, and therefore, they should have a higher motivation and better academic performance than people with a lower level of conscientiousness (e.g. Cheng & Ickes, 2009; Komarraju et al., 2009; Nofle & Robbins, 2007). We accordingly expected that women obtained better academic performance than did men because women had a higher level of motivation to learn and conscientiousness than did men.

Gender-based Differences in Job Finding

Gender-based differences in a multi-entry job acquisition

Kashima, Yamaguchi, Kim, Choi, Gelfand, and Yuki (1995) argued that a distinction of tasks within a society may potentially create gender differences in people's attempts to obtain a formal job. In traditional view, men's primary task is to obtain the means of sustenance or to act as breadwinners (Sverko, Galic, Sersic, & Galesic, 2008a), whereas women's is to raise the children. Presumably, it was due to this traditional role as breadwinners that men were found to be more persistent in job-seeking processes than women (e.g. Sverko et al.,

2008a, 2008b). Studies have shown that men appeared to have more advantages than did women in job finding context (e.g. Joy, 2003; Luzzo & McWhirter, 2001; McWhirther, 1997; Steinpreis et al., 1999). In line with these findings, Kanfer et al.(2001) found that among new entrants in the labor market, males were found being more persistent in job searches than females. Thus, it appeared that unlike in academic setting where women were found to be more successful in academic achievement than men, men were more likely to be more successful than women in job acquisition. Hence, we expected that gender-based differences in job finding exist in a sample of recent graduated students searching for their first formal employment; men are more likely to succeed than women in getting a multi-entry job, a job that is not necessarily in line with one's major in education.

Besides investigating whether gender differences exist in job finding outcomes, we also attempted to unravel whether individual differences in personality and growth mindset may contribute to such differences. Regarding individual differences in personality, in another study we found significant gender differences in Openness to Experience, with men being more open than women (Sulastri et al. (b), submitted). Openness to Experience reflects broad-mindedness, imaginativeness, and a resourceful character. Since the nature of job finding endeavor is dynamic and highly autonomous (Kanfer et al., 2001), it is likely that individuals who engage more in active imagination, intellectual curiosity,

and broad-mindedness would be more successful in the pursuit of a job. They may capitalize on their active imagination to struggle within uncertain situations during the job-search and may take advantage of their broad-mindedness to generate goal-directed activities to obtain a job. We accordingly speculated that the higher level of Openness to Experience among male graduates might account for the higher likelihood of success in job search acquisition.

With regard to individual differences in mindset, we found gender differences in growth mindset, specifically in the belief in the malleability of intelligence (BMI), with male graduates having more belief in this malleability than women (Sulastri et al. (c), submitted). Belief in the malleability of intelligence implies that intelligence is pliable to be changed and enhanced through intervention and other developmental activities (Dweck, 2006; 2008). Holding a malleability-belief makes individuals more inclined to perceive that personal attributes, such as ability, intelligence, and personality, are the product of continuous effort and learning (Blackwell et al., 2007; Heslin & VandeWalle, 2008). This belief might further imply the importance of perseverance and hard work (Furnham et al., 2003). Wanberg et al.'s (2005) study demonstrated that motivational variables such as positive thinking about one's competence were significantly related to persistence in job search processes. Therefore, we expected that more belief in the malleability of intelligence among male graduates may contribute to gender differences

in job finding in that males were more likely to succeed in finding a job than women. This is because by having more belief in the malleability of intelligence men would be more persevere and persistent in job search processes than women.

Gender-based differences in psychology-based job acquisition

Apart from an attempt to search for their first employment following a period of education, graduates of psychology, particularly at bachelor degree level, are open to pursue a career which is in line with their discipline (e.g. therapist, human resource staff), or may choose a career which is not closely related to their discipline (e.g. bank teller, administration staff). Since the majority of our sample consisted of female psychology students at bachelor degree level, we also examined whether gender-based differences exist in job acquisition, particularly in obtaining a job that is consistent with the major of these graduates. In one of our studies (Sulastri et al. (a), submitted), we found that GPA emerged as the most stringent predictor of getting a psychology-based job. Thus, we suggested that one possible factor accounting for gender-based differences in obtaining a psychology-based job was students' GPA. We accordingly expected that women would be more successful in getting a psychology-based job than men because women obtained higher scores on GPA than did men.

Method

Sample and Procedure

Participants in this study were graduated students with bachelor's degrees from seven psychology faculties in the cities of Semarang, Kudus, and Salatiga in Central Java, Indonesia. The graduated students were contacted directly after their graduation in February, April, June, August, October, and December 2010 to get their consent to participate in this study. There were 250 students (197 women and 53 men) who agreed to participate at Time 1. The participants were rewarded fifty thousand rupiah (equals to five US dollars) after completing the questionnaires at Time 1.

Six months after their graduation, the 250 participants were again contacted to participate at Time 2. There were 240 (96% of 250 graduates at Time 1) who participated at Time 2. At Time 2, 189 (79%) were women. Since one of the objectives of this study was to assess factors contributing to the success in finding a job among recent graduates, data of 34 participants who were continuing their study at a post-graduate level were excluded. Data of 206 participants (86% of the participants who participated at both Time 1 and Time 2 of this study) were analyzed for the present study. Of the 206, 164 (80%) were women. The participants' age ranged from 21 to 35 years old ($M = 23.70$, $SD = 1.78$).

Measures

Motivation to Learn. Motivation to learn was assessed by a 10-item scale adapted from the Stages of Learning Motivation (SOLMI) developed by Cole, Feild, & Harris (2004). The scale was used to measure students' engagement in learning activities particularly in the preparation and maintenance phase. The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*I have been working hard to learn the information covered in the course/class.*” The motivation to learn measure was carefully adapted and translated into Indonesian language using the forward-back translation (ABBA) technique. The forward-back translation was conducted by three independent translators in the forward-translation phase and by three other independent translators in the back-translation phase. For each student, a sum score was computed over the 10 items. Cronbach's alpha reliability was .76.

Academic Performance. Students' final grade point average (GPA) was used as a measure of their academic performance. Students' GPA was obtained from the universities' records. The legal consent from each of the seven universities' authorities was obtained prior to the procurement of the data. The *GPA* ranged from 2.06 to 3.90 ($M = 3.07$, $SD = .33$).

The Big Five Personality Traits. The participants were asked to complete The Big Five Inventory (John & Srivastava, 1999) that

consists of 44 items of short and easy-to-understand phrases (Srivastava, John, Gosling, & Potter, 2003). The participants rated their agreement on a 5-point Likert scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). Sample items are, “*I see myself as someone who is curious about many different things* (Openness to Experience); *does a thorough job* (Conscientiousness); *is talkative* (Extraversion); *is helpful and unselfish with others* (Agreeableness); *is depressed, blue* (Neuroticism).” The Big Five Inventory (BFI) was carefully translated and adapted into Indonesian language using the forward-back translation technique as used for the motivation to learn measure. The Extraversion subscale consists of 8 items, Agreeableness 9 items, Conscientiousness 9 items, Neuroticism 8 items, and Openness to Experience 10 items. We computed sum scores over the items for each subscale. Cronbach’s alpha reliabilities were .66 for Openness to Experience, .73 for Conscientiousness, .75 for Extraversion, .65 for Agreeableness, and .80 for Neuroticism. Since we found in a previous study (Sulastri et al. (b), submitted) that Conscientiousness and Openness to Experience revealed significant correlations with students’ academic performance and success in job finding, respectively, we included only these two traits in the statistical analysis.

Belief in the Malleability of Intelligence (BMI). The participants were asked to complete the BMI measure consisting of four items (Dweck, 2006). The participants rated their agreement on a 5-point Likert

scale, ranging from “*strongly disagree*” (1) to “*strongly agree*” (5). A sample item is, “*You can always substantially change how intelligent you are.*” The BMI measure was carefully translated and adapted into Indonesian language using the forward-back translation technique as used for motivation to learn and BFI measures. For each student, a sum score was computed over the four items of this scale. Cronbach’s alpha reliability was .59.

Results

Of the 206 graduates, 166 (81%) succeeded in obtaining a job. Among these 166, 84 (51%) obtained a psychology-based job.

Gender-based differences in academic performance

The descriptive statistics for the variables studied with respect to students’ academic performance are reported in Table 6.1.

Table 6.1.

Means and Standard Deviations of Motivation to Learn, Conscientiousness, and Academic Performance

	Gender			
	Women		Men	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Motivation to Learn	39.09	3.45	37.36	5.48
Conscientiousness	33.36	4.07	31.86	4.66
Academic Performance	3.12	.32	2.86	.31

Note.

N= 206

To examine whether differences in motivation to learn, conscientiousness, and academic performance existed between male and female graduating students, *t-test* analyses were performed. First, we found a significant difference with regard to students' motivation to learn ($t(204) = -2.53, p < .05, 95\% CI [-3.07, -.38]$); women had a higher motivation to learn than men. The effect size of the difference was medium ($d = .39$; Cohen, 1988). Second, a significant difference in conscientiousness was found ($t(204) = -2.07, p < .05, 95\% CI [-2.93, -.071]$), with women being more conscientious than men. The effect size was medium ($d = .34$). Third, there was a significant difference in academic performance ($t(204) = 3.12, p < .01, 95\% CI [-.37, -.15]$), with women outperformed men in grades obtained. The effect size was medium ($d = .53$).

To test whether motivation to learn and conscientiousness mediated the relationship between gender and academic performance, *regression analyses* were performed. First, the *regression analyses* showed that motivation to learn was a significant partial mediator of the relationship between gender and academic performance (Baron & Kenny, 1986). The relationship between gender and academic performance in terms of beta was significantly reduced from .32 to .28 when motivation to learn was included in the regression analysis, Sobel's test = 1.89, $p < .05$. Second, conscientiousness did not significantly mediate the relationship between gender and academic performance. The regression

of gender on academic performance was only reduced from .32 to .31 when conscientiousness was included in the regression analysis, Sobel's test = 1.04, $p > .05$.

Gender-based differences in job finding

Table 6.2.

Numbers and Percentages of Women and Men with a Multi-entry and a Psychology-based Job

	Job Acquisition			
	Multi-entry Job or Psychology-based Job		Only Psychology-based Job	
	Women	Men	Women	Men
Employment Status Get a Job	131 (80%)	35 (83%)	71 (54%)	13 (37%)

In Table 6.2 (left side), the numbers and percentages of male and female graduates who obtained a job (no matter whether this was multi-entry or a psychology-based job) are reported. At the right side of Table 6.2, we reported how many of the male and female graduates who found a job obtained a psychology-based job. To determine whether gender-based differences existed in the success of finding a job among the graduated psychology students, *chi-square tests* were performed. We found no significant gender difference ($\chi^2 = .26, p = .40$ ($p > .05$)) in finding a job. Because there was no significant gender difference in finding a job, we did not perform *regression analyses* to examine whether Openness to Experience and belief in the malleability of intelligence mediated the relationship between gender and the success in finding a job as proposed.

Second, we found that the difference between female and male graduates in the success of getting a psychology-based job was nearly significant ($\chi^2= 3.20, p=.054$); relatively more women than men succeeded in obtaining a psychology-based job (see right side of Table 6.2.). We also found a significant gender difference in academic performance between male and female graduates who successfully obtained a psychology-based job ($t(164)= -4.52, p< .001, 95\% CI [- .38, - .15]$); the academic performance of female graduates who obtained a psychology-based job was higher ($M= 3.12, SD= .31$) than the performance of male graduates ($M= 2.86, SD= .30$). The effect size was medium ($d= - .44$). To examine whether academic performance mediated the relationship between gender and the success in psychology-based job acquisition, a *regression analysis* was performed. This *regression analysis* indicated that academic performance was a significant and nearly a perfect mediator of the relationship between gender and psychology-based job acquisition. The relationship between gender and psychology-based job acquisition in terms of beta was significantly reduced from $-.14$ to $-.001$ when academic performance was included in the regression analysis, Sobel's test = $-3.49, p< .001$.

Discussion

The extent to which gender may determine academic performance and employment acquisition success has been the focus of several

studies. Prior studies have demonstrated that discrimination in ethnicity, gender, and age continues to occur and thus may limit educational attainment and employment acquisition for individuals in particular groups (e.g. Joy, 2003; Luzzo & McWhirter, 2001; McKinney & Miles, 2009; Pema & Mehay, 2010; Peppas, 2002; Sverko et al., 2008a; Van Hooft et al., 2009). The primary purpose of this study was to examine whether gender-based differences exist in academic performance between male and female graduated psychology students and whether these differences may subsequently affect their employment acquisition success. Another purpose of the current study was to investigate whether motivation to learn, individual differences in personality and belief in the malleability of intelligence may account for the relationships between gender and graduated students' outcomes in academic performance and job acquisition.

Results of the current study support previous findings that gender differences exist in academic performance (Furnham et al., 2003; Leeson et al., 2008), with women consistently outperform men in grades obtained. Results of this study are in line with other studies showing that motivation to learn mediates the relationship between gender and students' academic performance (e.g. Busato, Prins, Elshout, & Hamaker, 1999; Cheng & Ickes, 2009; Ziegler, Knogler, & Buhner, 2009). We found that motivation to learn emerged as a partial significant mediator of the relationship between gender and graduates' academic performance.

This finding implies that a higher level of motivation to learn, defined as a desire to accomplish, compete, and persist in learning (Komarraju & Karau, 2005; Komarraju et al., 2009), explains the relatively higher grades females graduates obtained compared with grades obtained by males. Although conscientiousness was significantly related to graduated students' academic performance and that women were found to be relatively more conscientious than men, conscientiousness did not significantly contribute in explaining the mechanisms why gender-based differences existed in academic performance. It is interesting to note, however, that Cheng and Ickes' (2009) study demonstrated that conscientiousness and motivation may potentially compensate each other in predicting university students' academic performance. This latter finding suggests that students who were either high in motivation or conscientiousness would obtain better academic performance than those who were low in both traits and that the presence of one trait may substitute the absence of the other trait.

Regarding job acquisition success, results of our study provide some interesting findings. First, we found no difference in the success in obtaining a job between male and female graduates. This finding indicates that men and women had relatively equal chances to succeed in obtaining jobs. As women's educational attainment and labor force participation has increased substantially in recent years (McKinney & Miles, 2009; Pema & Mehay, 2010), it appears that college recruiters

and/or employers might have applied the same criteria when assigning work to women and men.

Second, it is perhaps the most intriguing finding of the current study that a significant gender difference was found in psychology-based job acquisition, with relatively more female graduates succeeding in obtaining a psychology-based job than male graduates. Furthermore, the mediation analysis' results are also thought-provoking. Specifically, we found that academic performance emerged as (nearly) a perfect mediator for the relationship between gender and psychology-based job acquisition. This suggests that female graduates due to their better academic performance are more successful in obtaining a psychology-based job than males. Our finding resonates previous studies (Cole et al., 2007; Roth & Bobko, 2000) suggesting that recruiters and/or employers were more inclined to use college grade point average as reported in recent graduates' job application resumes as the basis of their pre-employment and/or hiring decisions. This finding also corroborates McKinney and Miles' (2009) study underlining that women are more likely to have positive impact when academic performance is used in selection decisions, while men tended to have the adverse impact.

While the current study provides some interesting findings regarding gender-based differences in academic performance and its potential impact on job acquisition success among recent college graduates, there are some study limitations. The first limitation in this study is the

unequal numbers of male and female participants. There were more female than male participants involved in this study. This factor limits the generalizability of the findings of the current study. Additional research is needed to determine whether results found in this study might be replicated to different graduates from other disciplines. Second, the data of the employment status in the current study was drawn only at one point in time. It has been suggested that the accuracy of the prediction of job acquisition success would likely be increased by repeated data gathering over time in a time-series design (see Wanberg et al., 2005). Third, there is a broader set of variables that might influence individual's job acquisition success, such as labor market demand, employers' situation, and job seeker's human and social capital (Wanberg, 2012; Wanberg et al., 2002). Future research is needed to scrutinize those predictors that may help to better understand variables relevant particularly to college graduates' success in academic and job search settings. Despite its limitations, our study clearly identified some potential predictors influencing university students' academic achievement, job acquisition success, and the mechanisms by which these two outcomes may differ between female and male graduates. Counselors in higher educational settings may focus on some potential traits, such as motivation to learn, conscientiousness, Openness to Experience, and belief in the malleability of intelligence investigated in the current study, that influence college students' performance and their success in job acquisition.

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Chapter 7

General Discussion

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1. Overview of the study

Looking for a job can sometimes be a highly autonomous activity requiring individuals to self-organize and manage their job searches (Kanfer, Wanberg, & Kantrowitz, 2001). Setbacks, uncertainty, discouragement, frustration, and many other disadvantaged situations may make this activity difficult for some individuals to maintain their effort during their job searches until the desired job has been obtained. Research aimed to investigate job search successes among youth as new entrants, however, has attracted less attention than research on (re)employment success among unemployed adults (e.g. Boswell, Zimmerman, & Swider, 2011; Turban, Stevens, & Lee, 2009; Wanberg, 2012).

It is noted that previous studies aimed at tapping the influence of psychological predictors, namely personality (e.g. Busato, Prins, Elshout, & Hamaker, 2000; Farsides & Woodfield, 2003; Furnham, Chamorro-Premuzic, & McDougall, 2003; Kanfer et al., 2001; Nofle & Robins, 2007; Wanberg, Hough, & Song, 2002), mindset (e.g. Blackwell, Trzesniewski, & Dweck, 2007; Garcia, Triana, Peters, & Sanchez, 2009; Ziegler & Stoeger, 2010), and cultural orientation (e.g. Salili, Chiu, & Lai, 2001; Van Hooft & de Jong, 2009; Yi & Park, 2003) on college students' outcomes in academic setting and their subsequent success in the labor market had been performed somewhat separately. The present study

therefore bears its importance because it serves to synthesize whether the psychological factors contributing to college students' academic outcomes may also subsequently influence employment outcomes among graduated psychology students (new entrants) in Indonesia. Furthermore, the current study extends its investigation tapping gender-based differences in relation to these psychological factors in academic and employment outcomes among these graduated students. Several key findings found in this study are very clear and thus worth considering.

2. Key findings of the study

2.1. Grade point average (GPA), biographical data, general job and psychology-based job acquisition success

In personnel selection, applicants' modalities include age, education, work experiences, skills, occupational knowledge, and cognitive ability (Breugh, 2009; Sverko, Galic, Sersic, & Galesic, 2008a). Among these modalities, cognitive ability was found to be the most stringent predictor of job performance across a variety of jobs. In campus recruitment context, therefore, it has been suggested that university graduates' academic performance can be used as a proxy for cognitive ability tests in personnel selection (Berry, Gruys, & Sackett, 2006; Cole, Rubin, Feild & Giles, 2007; Roth & Bobko, 2000). Beside grade point average (GPA), many organizations screen and select applicants on the basis of information provided in their personal resumes (e.g. Berry et

al., 2006; Cole et al., 2007). College recruiters believe that applicants' involvement in nonacademic activities such as extracurricular activities (e.g. in campus organizations, student's clubs) and part-time work partially capture their communication skills, leadership ability and ability to work in groups (Peppas, 2002).

Consistent with these studies, Chapter 2 of this thesis clearly provides insight into what job application content is most relevant in supporting graduated students' success in job finding. First, when a recent university graduate desires to get a general (multi-entry) job position, a job that is not necessarily in line with one's academic background, he/she should preferably have work experiences and have participated in an enrichment program, particularly in a mindset training program. In this study, these variables were found to have a significant relationship with the success to get a general (multi-entry) job position among graduated psychology students. Secondly, when a recent psychology graduate desires to get a psychology-based job, a job that is line with his/her academic background, he/she should preferably provide more detailed and convincing information in his/her curriculum vitae (CV), including especially a high GPA, records of involvement in extracurricular activities (e.g. campus organizations, students' clubs), participation in both general enrichment programs (seminars, workshops, or trainings) and in a specific enrichment program, particularly a mindset enrichment program, and ability in foreign language skills. In this study, these variables were found

to have a significant relationship with psychology-based job acquisition success among recent psychology graduates.

2.2. Conscientiousness, Openness to Experience, graduated students' academic performance and job acquisition success

Personality traits appear to be part of the set of psychological factors that contribute to academic performance by influencing students' willingness to perform (Komarraju, Karau, & Schmeck, 2009; Poropat, 2009). Apart from academic performance, individual differences in personality may also account for university graduates' employment acquisition success (e.g. Cote, Saks, & Zikic, 2006; Turban et al., 2009). One of the most intriguing results of the current study with regard to individual differences in personality, using the Big Five measures, was the finding that personality traits contributing to students' success in academic performance and job acquisition success are somewhat different (Chapter 3).

Consistent with previous studies (e.g. Cheng & Ickes, 2009; Komarraju et al., 2009; Ziegler, Knogler, & Buhner, 2009), first, our study demonstrated that Conscientiousness showed predictive validity to students' academic performance. This finding implies that hardworking, ambitious, well-organized, and achievement-oriented students achieved a higher academic performance than students with a lower tendency in this trait. Secondly, concerning job finding success, our study demonstrated a different result than previous studies (e.g. Kanfer et al., 2001; Tay, Ang, &

Van Dyne, 2006; Turban et al., 2009). These previous studies showed the predictive validity of Conscientiousness and Extraversion to job search success among new entrants as well as unemployed adults, whereas our study revealed that Openness to Experience was significantly related to job acquisition success among recent university graduates. This latter finding implies that students who are imaginative, intellectually curious, and broad-minded are more likely to succeed in getting a job.

Furthermore, in this study, we also found that Openness to Experience was significantly related to two biographical data presented in students' personal resumes, namely participation in a growth mindset enrichment program and work experiences. Interestingly, these two variables were found to have a significant relationship with graduated students' success in getting a general job, a job that is not necessarily in line with graduates' academic background (Chapter 2). We therefore concluded that recent university graduates who have an active imagination, intellectual curiosity, and are open-minded, as well as had participated in a growth mindset enrichment program and had more work experiences are more successful in job finding than other graduates.

2.3. Students' BMI and BMP, academic performance, and job acquisition success

The growth mindset theory reflects a positive belief that intelligence and personality are malleable and thus can be developed significantly up to some extent (Blackwell et al., 2007; Dweck, 2006). This

kind of belief enables individuals to have a more positive outlook on their competence. Students who hold this belief are more likely to exert effort at their school work and to obtain higher grades. These dynamics may mirror their efforts in finding a job. In this study, we distinguished between the belief in the malleability of intelligence (BMI) and the belief in the malleability of personality (BMP).

Regarding academic performance, in Chapter 4, we found that BMI and BMP did not show a significant relationship with graduates' academic performance. Our finding is consistent with Furnham et al.'s (2003) finding suggesting that a positive belief that intelligence can be enhanced does not necessarily contribute to university students' academic performance. Seemingly, this finding might also imply that university students' academic performance do not depend on a "lower-order of personality" (Leeson, Ciarrochi, & Heaven, 2008), such as the key belief whether their intelligence and personality are pliable (Dweck, 2006, 2008) as assessed in this study (Chapter 4), but on a "broader set of personality", such as the Big Five measures (Chapter 3).

With regard to job acquisition success, first, we found a significant relation between the belief in the malleability of intelligence (BMI) and graduates' job finding success (Chapter 4). Consistent with Garcia et al. (2009) and Lynd-Stevenson (1999), this finding implies that individuals with a positive value about their competence were persevere in their job searches until a desired job is found. Secondly, we also found a significant

relationship between Openness to Experience and students' belief in the malleability of intelligence (BMI). This latter finding might imply that graduates with intellectual curiosity, broad-mindedness and who hold a positive belief about their intelligence were persevere and persistent in their job searches and these characteristics may subsequently lead them to succeed in finding a job.

2.4. Cultural orientation, academic performance, and job acquisition success

Cultural orientation can be seen as one of the factors that helps to explain how cultural differences might affect the development of individuals' personal characteristics and social behaviors across diverse cultures worldwide (Hofstede & McCrae, 2004; Triandis, 2001). Cultural orientation, particularly the individualism and collectivism perspectives, may help tapping the influence of culture on the mind of people living within a particular cultural-context (Oyserman, Kimmelmeier, & Coon, 2002; Oyserman & Lee, 2008). People living in an individualistic-oriented society are more inclined to be self-reliant, independent and hold self-centered goals (Killen & Wainryb, 2000; Oyserman, Coon, & Kimmelmeier, 2002; Yi & Park, 2003). By contrast, people living in a collectivistic-oriented society may emphasize interdependence and relatedness to groups, such as friends, relatives, and family (Kagicitbasi, 2005; Mesquita, 2001; Salili et al., 2001). The current study aimed at particularly tapping the contribution of collectivistic cultural orientations

on academic performance and job finding success among recent graduating students living in a collectivistic context, that is Indonesia (Chapter 5).

Consistent with previous studies (e.g. Salili et al., 2001; Yi & Park, 2003), in academic context, we found a significant relationship between graduating students' collectivistic cultural orientation and their motivation to learn. However, we did not find a significant correlation with their academic performance. In job search context, students' collectivistic cultural orientation showed a significant relationship with their success in finding a job. This latter finding might imply that students with a collectivistic cultural orientation living in a collectivistic-oriented society relied more on their social networks (interdependence) to generate job opportunities, such as through referrals from friends and relatives (Weber & Mahringer, 2008). This finding is also consistent with Franzen and Hangartner's study (2006) demonstrating that the proportion of job seekers finding their jobs through personal contacts was highest in Brazil, Chile, Cyprus, and Philippines (collectivistic countries) and lowest in Finland, Austria, Denmark, and Norway (individualistic countries).

2.5. Gender differences in academic performance and job acquisition success

As having highlighted in the foregoing text, the current study contributed to unravel the predictive validity of psychological factors, namely motivation to learn, personality, mindset, and cultural orientation to academic outcomes and their subsequent impact on the success in job

finding in a sample of young job seekers who are often at risk to become unemployed, recent university graduates in psychology. Furthermore, as the number of female graduates entering the labor market has increased dramatically in recent years (McKinney & Miles, 2009; Pema & Mehay, 2010), the current study thus extended its focus by investigating whether gender differences existed in academic performance as well as in job finding success (Chapter 6).

Consistent with previous studies (e.g. Furnham et al., 2003; Leeson et al., 2008), in academic context, we found that women outperformed men in grades obtained. We also found that motivation to learn partially mediated the relationship between gender and academic performance. This latter finding implies that a desire to accomplish, compete, and persist in learning explained the relatively higher grades female graduates obtained compared with grades obtained by male graduates.

In job finding context, we found some intriguing findings. First, we found no difference in the success in obtaining a job between male and females graduates. This finding indicates that men and women had relatively equal chances to succeed in obtaining a job. Secondly, we found a nearly significant gender difference ($p < .10$) in psychology-based job acquisition success, with relatively more female graduates succeeding in obtaining a psychology-based job than male graduates. Furthermore, we found that academic performance revealed a (nearly) perfect mediation for the relationship between gender and finding a psychology-based job. This

latter finding implies that female graduates had greater success in obtaining a psychology-based job than males because of their better academic performance. This finding corroborates McKinney and Miles' (2009) study demonstrating that women have more chances to get a job than men when academic performance is used as criterion in selection decisions.

3. Practical Implications of the current study

Key findings found in the present study may be useful for teachers at higher education, career advisers, educational practitioners, as well as university students. We, therefore, identify several practical implications in relation to the results of this study.

3.1. Practical implications related to individual differences in motivation to learn and personality

Findings of the current study related to individual differences in motivation to learn and personality may help teachers at higher education, higher educational practitioners, and/or career advisers, first, to identify students who are at risk to underperform and fail in academic setting, that is students who score low on Conscientiousness and who have a lower motivation to learn. Secondly, findings of the current study may also help identify who are at risk to fail as new entrants in the labor market, that is graduates with a a lower score on Openness to Experience.

Stakeholders at higher education accordingly may use these findings as the basis to: (1) construct and promote learning strategies at

classes and/or (2) create intervention programs that can develop some traits relevant to their students' outcomes both in academic performance and job acquisition success. Regarding learning strategies, teachers may construct learning environments at classes such as by creating a structured, well-organized and disciplined environment that might be suitable for less conscientious students, while for other students creating new, challenging issues might enhance their curiosity. Creating learning strategies in the light of individual differences in personality may promote higher engagement in learning processes which may then lead to better achievement as well as may help enhance the chances on getting a job among the graduated students.

Regarding intervention programs that may influence student's personality, stakeholders at higher education may develop programs as proposed by Dweck (2008, p. 394), the so-called "*the self-theories interventions and the expectations-of-acceptance interventions*". These intervention programs basically aimed to change the way people perceive events in their lives and the way they react to them. Furthermore, these intervention programs also aimed to promote positive beliefs about the self which may then affect motivational, self-regulatory, and interpersonal patterns. Dweck further argued that changing these patterns may subsequently change the broad personality traits that are often thought to be relatively stable, Openness to Experience, Conscientiousness, Extraversion, and Agreeableness. In summary, promoting the positive core beliefs

through this kind of intervention programs might be one of the mechanisms by which personality traits' change and development might occur.

3.2. Practical implications related to students' belief in intelligence and cultural orientation

In this study, students who believed in the malleability of their competences, particularly their intelligence, and with a collectivistic orientation were found to have a higher probability to get a job. Related to the first finding, stakeholders at higher education may create intervention programs, such as a mindset training program aiming at promoting students' awareness on the malleability of their competences. Secondly, related to the latter finding, teachers at higher education, career advisers/counselors, and /or higher education practitioners may also develop a learning environment in which students at higher education will have the chances to build their team-work skills as well as networking skills.

3.3. Practical implications related to university students' human capital (GPA and other information/biographical data present in their curriculum vitae/CV)

Students with a higher GPA, and who have involved in extracurricular activities and participated in enrichment programs, as well as have foreign language skills and work experiences are more likely to get a job than other students. Stakeholders at higher education, therefore, should develop programs aimed to support their students to excel in these

domains, such as by: (a) developing training programs in growth mindset (positive beliefs about the self), leadership, creativity, and communication skills; (b) stimulating student's skill in speaking and writing English ; and (c) facilitating internship programs with good guidance to give students real work experiences before they enter the labor market after they finished their studies.

4. Directions for future research

The findings in this thesis relate only to a part of the many factors that might influence graduated students' success in academic and job acquisition. We therefore propose the inclusion of other factors in future research that have not been addressed in the current study.

4.1. Expanding the employment success criteria.

In regard to job search outcomes, the current study focused specifically on a direct measure of employment success, whether or not the recent graduates got a job within a specific duration, six months after their graduation. We acknowledge that this may only account for a small percentage of the variance in this study on employment success' outcomes. We therefore propose to study broader measures of employment success criteria (Boswell et al., 2012; Schaufeli & Van Yperen, 1993; Wanberg et al., 2002) in which the focus is not only on the “*employment status*” (get or not get a job) but also on other criteria of job search success, such as the “*employment quality*” (Saks & Ashforth, 2002) and the “*intermediary*

outcome” (Boswell et al., 2012, p. 153).

The employment quality criterion refers to whether or not the job seekers’ skills and knowledge fit with the jobs having acquired (*person-job fit criterion*), or whether or not the salary or payment obtained satisfy the job seekers’ expectations (high-paid versus under-paid jobs – *job satisfaction criterion*). These kinds of qualities may enhance employee’s commitment to the organization as well as may decrease the number of employee’s turn-over. The “*intermediary outcome*” refers to the amount of job interviews or job offers received during the job searches, and another efficiency indicator, such as the number of job applications that lead to job search outcomes. The latter criterion is particularly important on studying the success on job searches among graduated students as it may indicate the effectiveness of their job searches that lead to job acquisition success.

4.2. *Unravelling the predictive validity of subjective and objective factors influencing job acquisition success*

The findings found in this study demonstrate the importance of considering human capital characteristics (e.g. the graduates’ academic performance and other salient biographical data) and person-attributes (motivation to learn, personality traits, growth mindset, and cultural orientation) with regard to graduated students’ success in the labor market. These are *the subjective factors* (Boswell et al., 2012; Schaufeli & Vanyperen, 1993) that might influence employment success. There might be a broader set of factors that might also influence individuals’

job acquisition success, such as labor market demand, employers' discrimination, and job seeker's social capital (Wanberg, 2012; Wanberg et al., 2002) – or *the objective factors*.

Labor market demand denotes the labor market's need for employees in terms of nationally and regionally demands and/or occupational and industrial specialities. *Job seekers' discrimination* refers to any adverse situation against job seekers on the basis of non-job-related factors, such as age, race, disability, gender, and sexual orientation. *Job seekers' social capital* refers to whether a job seeker has a large and high-status social network of friends, relatives, previous coworkers, and other acquaintances. Future studies may scrutinize these subjective and objective predictors to better understand how these factors are relevant particularly for recent graduates as new entrants in the labor market.

By broadening the scope of investigation, the stakeholders at higher education may have a better understanding on how to best help their students, first, to strengthen their students' human capital and person-attributes that have been proven to influence the success of university graduates in academic performance and job acquisition as assessed in the current study. Secondly, to re-orient their students to any kind of challenges in the future. By doing this, higher education stakeholders are “on the right track” to help their students to find their most desirable job and subsequently to climb up their job ladders in the future.

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SUMMARY

Finding a job is sometimes problematic for recent college graduates and, therefore, they often are at risk to be unemployed. The gap between the graduates' knowledge and skills and the work-related requirements, as well as the lack of self-confidence and scanty experiences on searching a formal job disadvantage conditions that lead to the unemployment problem, particularly among young job seekers. The unemployment problem among young job-seekers remains one of the extant socio-economic problems not only for underdeveloped and developing countries but also for well-developed countries. Furthermore, the impact of being unemployed may result in a wide range of stress-related consequences, such as anxiety, stress, depression, physical diseases (such as stomach ache and headache), and even suicide attempts. Previous studies have focused primarily on investigating factors related to unemployment problems and/or (re)employment success among unemployed individuals. The present study addressed the call for research focusing on factors contributing to academic performance and the subsequent impact on job acquisition success among new entrants in the labor market in Indonesia. We carried out a two-wave longitudinal study among 206 recent college graduates in psychology.

Chapter 2 of this study aimed to examine relationships between graduates' grade point average (GPA), biographical data in their personal

resumes and the success in finding a job in general and a psychology-based job in particular. As expected, GPA had a significantly positive association with success in finding a psychology-based job. When all predictors were considered together using a logistic regression analysis, GPA emerged as the most robust determinant of finding a psychology-based job. This result suggests that academic performance as indicated by the score of GPA indeed helped psychology graduates to find a job that is in line with their study discipline. This result also reflects the practice in many organizations that higher scores of GPA are commonly used in the prescreening process of applicants and that GPA is a hiring criterion most commonly used in personnel selection processes. However, we did not find that GPA was a predictor for success in finding a job in general. This result indicates that college recruiters rely on other hiring criteria instead of GPA, when making hiring decisions about a multi-entry job position.

Furthermore, in Chapter 2 we also found that participation in a growth mindset enrichment program was related to the success in finding a job in general as well as a psychology-based job in particular. It has been suggested that with a growth mindset one might hold a positive belief about the possibility of ability improvement. The positive belief following the participation in a growth mindset enrichment program appears to enhance the graduated students' confidence during their job search which leads to success in obtaining a job in general or a psychology-based job.

Work experiences also emerged as a predictor that is significantly associated with the success in finding a job in general. Work experiences, together with participation in a growth mindset enrichment program, outperformed the effect of GPA and other predictors in predicting the success of finding a multi entry job position among psychology graduates. It appears that work experiences are valued higher as hiring criteria than other biographical data commonly presented in graduates' personal resumes. This result suggests that more experiences in any (part-time) work during study create a higher value to recruiters or employers than less experiences. Extracurricular activities, foreign language skill, and participation in general enrichment programs showed significant relationships with the success in finding a psychology based job, whereas computer skill did not emerge as determinant of finding a job.

Another interesting finding found in Chapter 2 was that there were only 84 (51%) out of 166 employed graduates who obtained a psychology-based job. This result clearly showed an education-job match problem among university graduates in Indonesia that one out of two psychology graduates did not find a job that was in line with their academic background. This might be due to the fact that new entrants are more likely to accept the first job offered than to continue their searches to get a more desired job.

Relationships between the Big Five personality traits, motivation

to learn, academic performance, biographical data presented in personal resumes, and job finding success were presented in Chapter 3. With regard to job finding, we found that only Openness to Experience was significantly related to job finding success, whereas the other four personality traits did not show significant relations. We did not find the expected relationship between Conscientiousness and success of finding a job. It has been suggested that Conscientiousness is more strongly related to job search behavior than to employment status. Another possible explanation for this finding is that conscientious individuals are more likely to pursue better jobs when they enter the labor market due to their ambitious and achievement-oriented character.

Furthermore, Openness to Experience also had significant relations with two biographical data presented in students' personal resumes, namely participation in a growth mindset enrichment program and work experiences. Participation in a growth mindset enrichment program and work experiences showed significant relations with success in job finding, even outperforming the predictive validity of graduates' grade point average. These results suggested that students who have an active imagination, intellectual curiosity, and are open-minded were more likely to participate in a growth enrichment program and had more work experiences. These associations subsequently contribute positively to their success in job finding.

Findings presented in Chapter 3 further suggest that students with personality traits that reflect intellectual curiosity, imagination, and broad-mindedness (Openness to Experience); discipline and achievement-orientation (Conscientiousness); as well as cooperation and trust in others (Agreeableness) are more motivated towards learning. Furthermore, results showing that Conscientiousness emerged as the most robust predictor of motivation to learn as well as revealed the only personality trait correlated positively and significantly with GPA suggest that personality traits that reflect ambition, self-discipline, sustained-effort, and perseverance contribute positively to enhanced motivation towards learning as well as better academic performance.

In Chapter 4 we examined Dweck's mindset theory in relation to graduated psychology students' academic performance and their success in job finding. This motivational framework posits that the basis of behavior lies in people's key belief in their competence. We specifically distinguished between the belief in the malleability of intelligence (BMI) and the belief in the malleability of personality (BMP). We also examined whether BMI and BMP as "lower-order traits of personality" correlated with the broader personality traits of the Big Five.

In academic setting, BMI and BMP showed positive and significant relationships with motivation to learn. However, we found no significant relationship between BMI, BMP, and academic performance.

The latter result might imply that university students' performance do not depend on their key beliefs whether their intelligence and personality are pliable or not. It appeared that students' academic performance depends more on broader personality traits, particularly on a trait that represents ambition, perseverance and hard work, than on "lower-order" personality traits.

With regard to job acquisition, we found a significant relation between BMI and graduates' job finding outcome, whereas BMP did not show a significant relation with job finding. This result suggests that graduates who hold a key belief that their intelligence can be enhanced throughout their life span are more likely to succeed in finding a job.

It has been suggested that concepts of implicit self-theories, such as Dweck's mindset theory, are part of personality. Accordingly, we examined relationship between BMI, BMP, and the Big Five personality traits. First, we found a consistent pattern of relationship between Openness to Experience, BMI, and BMP. Openness to Experience reflects divergent and imaginative thinking, broad-mindedness and a high level of curiosity. Thus, graduates with a higher level of intellectual curiosity and broad-mindedness are more likely to hold a belief that their intelligence and personality are pliable and thus are amenable to being cultivated and being changed. Extraversion revealed a significant relation with BMP, suggesting that graduates with a tendency of being active and sociable

are more inclined to hold a belief that their personality are amenable to being changed.

Chapter 5 of this thesis explored the relationships between collectivistic cultural orientation, academic performance, and success in finding a job among graduated psychology students living in a collectivistic country, Indonesia. We found that students' collectivistic cultural orientation revealed a positive and significant correlation with motivation to learn, but did not correlate with academic performance. Results of our study seem to suggest that students living in a collectivistic context and engaging more in a collectivistic cultural orientation might have as high motivation to learn as their counterparts living in an individualistic context. Furthermore, we also found that parents' collectivistic cultural orientation also revealed a positive and significant relation with students' motivation to learn. The latter result suggests that parents with a high collectivistic cultural orientation tend to get more involved in their children's academic study compared with parents with a low collectivistic cultural orientation.

In job search context, students' collectivistic cultural orientation showed a significant relation with their success in finding a job; students who were more collectivistic oriented were more successful in getting a job. One possible cultural-related mechanism that may account for this achievement is that graduated students rely more on social

interdependence and capitalize more on their social networks to generate job opportunities, such as through referrals from friends and relatives.

Chapter 6 explored the differences between male and female graduates in psychology with regard to their academic performance and success in job finding. In academic context, we found that women outperformed men in grades obtained. Furthermore, we found that motivation to learn partially mediated the relationship between gender and academic performance. This finding implies that a higher level of motivation to learn explains the relatively higher grades females graduates obtained compared with grades obtained by males.

In job finding context, first, we found no difference in the success of obtaining a job between male and females graduates. This finding indicates that men and women had relatively equal chances to succeed in obtaining jobs. As women's educational attainment and labor force participation have increased substantially in recent years, it appears that college recruiters and/or employers might apply the same criteria when assigning work to women and men.

Secondly, we found a nearly significant gender difference ($p < .10$) with regard to success in finding a psychology-based job, with relatively more female graduates succeeding in obtaining a psychology-based job than male graduates. This finding suggests that female graduates due to their better academic performance are more successful

in obtaining a psychology-based job than males. Furthermore, we found that academic performance revealed a (nearly) perfect mediation for the relationship between gender and finding a psychology-based job. This finding suggests that recruiters and/or employers were more inclined to use college grade point average as reported in recent graduates' job application resumes as the basis of their pre-employment and/or hiring decisions.

Finally, Chapter 7 provides a general discussion tapping several key findings found in this study as well as the practical implications and the directions for future research. First, the key findings that are related to individual differences in motivation to learn and personality may help teachers at higher education, higher educational practitioners, and/or career advisers to identify students who are at risk to underperform and fail in academic setting as well as those who are at risk to fail as new entrants in the labor market. Stakeholders at higher education may use these findings as the basis to construct and promote learning strategies at classes and/or create intervention programs that can develop traits relevant to their students' outcomes both in academic performance and job acquisition success.

Secondly, related to the finding that students who believed in the malleability of their competences, and with a collectivistic orientation have a higher probability to get a job, we accordingly propose that stakeholders at higher education should create intervention programs,

such as a mindset training program aiming at promoting students' awareness of the malleability of their competences as well as develop a learning environment in which students will have chances to build their team-work skills as well as networking skills. Third, practical implications relate to the value of graduates' GPA and information presented in their curriculum vitae (CV). Students' GPA and their involvement in extracurricular activities as well as having foreign language skills and work experiences create a higher probability to get a job. We accordingly suggest that stakeholders at higher education should develop programs aimed to support their students to excel in these domains.

We acknowledge that findings in this thesis relate only to a part of the many factors that might influence graduated students' academic success and job acquisition. We therefore propose the inclusion of other factors in future research that have not been addressed in the current study. These include the attempt to expand the employment success criteria and to scrutinize the predictive validity of subjective and objective factors that influence job acquisition success among recent graduated students.

Samenvatting

In deze studie zijn op de eerste plaats de studiemotivatie en studieprestaties onderzocht van 206 afgestudeerde bachelorstudenten psychologie in Indonesië, en hoe deze samenhangen met geslacht, persoonlijkheidskenmerken, mindset en culturele oriëntatie. Op de tweede plaats is onderzocht hoe deze kenmerken en de inhoud van het CV van de studenten samenhangen met het al dan niet vinden van werk binnen zes maanden na afstuderen en of dat werk was waarvoor een bacheloropleiding in de psychologie vereist was of niet.

In Hoofdstuk 2 zijn relaties onderzocht tussen studiemotivatie, studieprestaties, inhoud van het CV en het vinden van werk. Van de 206 afgestudeerde studenten vond 81% een baan binnen zes maanden na afstuderen. Van de 166 studenten die een baan vonden waren er 84 die een baan vonden waarvoor een psychologie-opleiding vereist was en 82 vonden werk waarvoor zo'n opleiding niet vereist was. Studieprestaties hingen positief samen met het vinden van een baan waarvoor een psychologie-opleiding vereist was. De studieprestaties waren beter van degenen die een "growth mindset"-programma hadden gevolgd tijdens hun studie of een ander verrijkingsprogramma, van degenen die veel extracurriculaire activiteiten hadden ondernomen en zich meer bekwaamd hadden in vreemde talen. Zij vonden vaker een baan waarvoor een opleiding psychologie nodig was dan andere studenten. Het vinden van een baan ongeacht of er een psychologie-opleiding voor nodig was

hing alleen samen met de mate van werkervaring en het gevolgd hebben van een “growthmindset”-programma.

In Hoofdstuk 3 zijn relaties onderzocht tussen de Big Five persoonlijkheidskenmerken van studenten, studiemotivatie, studieprestaties, inhoud van het CV en het vinden van werk. Vier van de vijf persoonlijkheidskenmerken (Openheid, Extraversie, Nauwgezetheid en Aangenaamheid) hingen samen met studiemotivatie. Dat gold niet voor de mate van Neuroticisme. Nauwgezetheid was het enige persoonlijkheidskenmerk dat positief samenhang met studieprestaties en Openheid het enige kenmerk dat samenhang met het vinden van werk. Openheid was ook gerelateerd aan het deelgenomen hebben aan een “growthmindset”-programma en het hebben van veel werkervaringen tijdens de studie.

In Hoofdstuk 4 werd de relatie onderzocht tussen concepten uit Dweck’s growthmindset-theorie, studiemotivatie, studieprestaties en het vinden van werk. Growthmindset verwijst naar het vertrouwen dat studenten hebben in hun competentie. Er wordt daarbij een onderscheid gemaakt tussen geloof in de eigen ontwikkeling van intelligentie en geloof in de eigen mogelijkheid de persoonlijkheid te verbeteren. Voor beide vormen is ook nagegaan of ze met de Big Five persoonlijkheidskenmerken samenhangen. Beide vormen van geloof in de ontwikkeling van intelligentie en persoonlijkheid hingen samen met studiemotivatie, maar niet met studieprestaties.

Wat betreft de Big Five persoonlijkheidskenmerken vertoonde Openheid een positieve samenhang met geloof in ontwikkeling van intelligentie en persoonlijkheid. Extraversie hing alleen samen met het geloof in de ontwikkeling van intelligentie. De andere drie persoonlijkheidskenmerken hingen niet samen met geloof in de ontwikkeling van beide competenties.

In Hoofdstuk 5 zijn samenhangen onderzocht tussen de culturele oriëntatie van de afgestudeerde studenten en hun ouders enerzijds en studiemotivatie, studieprestaties en het vinden van werk door de studenten anderzijds. Een collectivistische culturele oriëntatie van studenten en ouders bleek gerelateerd te zijn aan grotere studiemotivatie, maar niet aan betere studieprestaties. Een collectivistische culturele oriëntatie van studenten hing wel positief samen met het vinden van werk binnen zes maanden na afstuderen.

In Hoofdstuk 6 is onderzocht of er verschillen waren tussen mannelijke en vrouwelijke studenten wat betreft studiemotivatie, studieprestaties en het vinden van werk. Vrouwelijke studenten bleken meer gemotiveerd dan mannelijke en hun studieprestaties waren significant beter dan die van mannen. De samenhang tussen geslacht en studieprestaties werd voor een deel gemedieerd door een grotere studiemotivatie van vrouwelijke studenten. Wat betreft het wel of niet vinden van werk in zijn algemeenheid werden geen verschillen tussen mannen en vrouwen gevonden. Wel werd een significant ($p <$

.10) verschil gevonden tussen mannen en vrouwen in het vinden van werk waarvoor een opleiding psychologie noodzakelijk was. Vrouwen verwierven dit soort banen vaker dan mannen. De relatie tussen deze variabelen werd vrijwel geheel gemedieerd door studieprestaties. Omdat vrouwen betere studieprestaties behaalden waren ze beter in staat dan mannen een baan te verwerven waarvoor een psychologie-opleiding nodig was.

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*“When we first begin fighting for our dream,
we have no experience and make many mistakes.
The secret of life, though, is to fall seven times and to get up eight times”
(Paulo Coelho in “The Alchemist”)*

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About the Author

Augustina Sulastri was born on 6th August 1976 in Lampung, Indonesia. She obtained her bachelor degree from Psychology Faculty, Gadjah Mada University, in Jogjakarta, Indonesia, in 2000. After completing the bachelor degree, she continued her study at the same institution, the Faculty of Psychology, Gadjah Mada University, and completed her Psychologist Professional Education in 2002. She has been working as a full-time lecturer at the Faculty of Psychology, Soegijapranata Catholic University (SCU), in Semarang, Indonesia, for 11 years (from 2003 up to now). Her major interest is in Educational Psychology since she joined the department of Educational Psychology at SCU. In 2005 she was appointed as the Head of the Student Training Center of SCU, from which she finally found her passion specifically in higher education development studies. Besides doing her primary work as a full-time lecturer at SCU, she has been working as a psychologist and/or counselor at several institutions and companies, as well as being a speaker and/or a trainer in several seminars and trainings in education context. One of the projects in educational field was the Van Deventer Maas Stichting's (VDMS) project conducted in the eastern part of Indonesia, in Flores, Nusa Tenggara Timur (NTT), aiming at developing the educational quality for high schools as a pilot project (2010-2012). Started from November 2013 she was appointed as the Director of the Education Development and Research Institute at SCU, while finishing her doctoral study.