Grade point average and biographical data in personal resumes: predictors of finding employment

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This study aimed to examine relationships between graduates’ grade point average (GPA), biographical data and success in finding a job in general and a psychology-based job in particular. Two hundred six psychology graduates participated in a two-wave longitudinal study. Biographical data assessed were extracurricular activities, computer and foreign language skills, participation in a growth mindset enrichment programme and in general enrichment programmes, and work experiences. GPA showed significant relationship with success in finding psychology-based job. Participation in growth mindset enrichment programme 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 programmes showed significant relationships with success in finding psychology-based job. Computer skills did not emerge as determinant of finding a job. Practical implications are discussed.

Keywords: grade point average; biographical data; personal resumes; employment

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) and provides the probability to pursue a global professional work (Friedman, 2005; Kim, 2011). 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; Sellar, Gale, & Parker, 2011). 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).

For 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 organisations to screen whether an applicant will be in or out of a recruitment process is college grade point average (GPA; Born & Scholarios, 2005; Roth & Bobko, 2000). Besides GPA, 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 about 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 that may be closely related to their discipline, e.g. human resource development, or may choose a career that is not closely related to their discipline. The purpose of this study was to assess whether college GPA 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 organisation. 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 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 organisations screen and select applicants on the basis of information provided in their personal resumes (e.g. Berry et al., 2006; Roth & Bobko,
College recruiters believe that applicants’ involvement in non-academic activities such as extracurricular activities (e.g. in campus organisations, 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. This 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 programme and in general enrichment programmes, 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 programme and in general enrichment programmes, 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 to get their consent to participate in this study.

From the 350 graduating students having contacted, 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 50,000 rupiahs (equals to 5 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. Because 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 analysed for this 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 = 0.33). 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 programme and in general enrichment programmes (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 organisations. 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 programme variable is divided into two categories: growth mindset and general enrichment programmes. A growth mindset enrichment programme 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 programme variable was scored 0 (no attendance in a growth mindset enrichment programme) or 1 (at least one experience in attending a growth mindset enrichment programme). General enrichment programmes refer to any kind of seminars, workshops or training not included in the first category. The general enrichment programmes variable was scored 0 (no participation in any general enrichment programmes), 1 (participated in one general enrichment programme), 2 (participated in two general enrichment programmes) or 3 (participated in three or more general enrichment programmes). 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 6-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 6 months after their graduation. The participants who had been employed were further asked about the date (month) in which they obtained their first job, 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 = 0.32) and by men 2.86 (SD = 0.31). 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 programme, 157 (77%) participated in a programme pertained to enhance their growth mindset, whereas 48 (23%) reported no participation in such programme. With regard to participation in general enrichment programmes (seminar, workshop and training), 107 (52%) had attended three or more enrichment programmes, 37 (18%) had attended two, 43 (21%) had attended one programme and 19 (9%) reported that they had never attended such a programme. 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 analysed 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 analysed 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 analysed 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.

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 6 months after graduation ($M = 3.06, SD = 0.33$) were relatively similar to the GPA scores of graduates who did not obtain a job ($M = 3.08, SD = 0.34$). Statistically, there was no significant difference in GPA between graduates who obtained a job and who did not: $t(204) = 0.39, p > 0.05$, 95% CI $[-0.09, 0.14]$, and the effect size was very small ($d = 0.01$).

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 ($M = 3.02, SD = 0.28$) was higher than the mean GPA score of graduates who did not succeed ($M = 2.93, SD = 0.32$). The difference was statistically significant: $t(164) = 5.84, p < 0.001$, 95% CI $[0.18, 0.36]$, and the effect size was large ($d = 0.90$).

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 1 for results).

From Table 1, we can see that we found a statistically significant association between finding a job and participation in a growth mindset enrichment programme ($\chi^2(1) = 4.19, p < 0.05$). 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 ($\chi^2(3) = 15.78, p < 0.001$) than graduates who had less experiences.
Students’ involvement in extracurricular activities, computer and foreign language skills, and participation in any kind of general enrichment programmes (seminars, workshops or training) were not significantly associated with the success to find a job in general. 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). The higher amount of involvement in campus clubs, organisations or other activities (extracurricular activities), ability in foreign language skill, participation in a growth mindset enrichment programme and the amount of participation in general enrichment programmes were all associated with a higher probability of obtaining a psychology-based job.

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

This 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 programmes 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.
It appeared that when all seven predictor variables were considered together, these predictors significantly predicted which graduates found or did not find a job ($\chi^2 = 18.07, \text{df} = 7, N = 203, p < 0.05$). Table 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 programme and when graduates had more work experiences (see positive and significant $B$’s).

Table 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

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>SE</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>-0.23</td>
<td>0.66</td>
<td>0.725</td>
</tr>
<tr>
<td>Extracurricular activities</td>
<td>0.21</td>
<td>0.19</td>
<td>0.276</td>
</tr>
<tr>
<td>Computer skills</td>
<td>-0.24</td>
<td>0.36</td>
<td>0.500</td>
</tr>
<tr>
<td>Foreign language skill</td>
<td>0.18</td>
<td>0.40</td>
<td>0.646</td>
</tr>
<tr>
<td>Growth mindset enrichment</td>
<td>0.98</td>
<td>0.49</td>
<td>0.047*</td>
</tr>
<tr>
<td>Enrichment programmes</td>
<td>-0.34</td>
<td>0.23</td>
<td>0.137</td>
</tr>
<tr>
<td>Work experiences</td>
<td>0.51</td>
<td>0.18</td>
<td>0.005*</td>
</tr>
<tr>
<td>Constant</td>
<td>1.21</td>
<td>1.91</td>
<td>0.526</td>
</tr>
</tbody>
</table>

Notes: $N = 206$; *$p < 0.05$; **$p < 0.01$. 

It appeared that when all seven predictor variables were considered together, these predictors significantly predicted which graduates found or did not find a job ($\chi^2 = 18.07, \text{df} = 7, N = 203, p < 0.05$). Table 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 programme and when graduates had more work experiences (see positive and significant $B$’s).

Table 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, $N = 163$, $p < 0.001$). The odds ratio results suggested that the probability of graduates to obtain a psychology-based job raised only when the GPA-score increased ($B = 2.66$). Data of personal resumes did not add to explain variance in finding a psychology-based job.

**Discussion**

Results of this 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 organisations that higher scores of GPA are commonly used in the pre-screening 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.

This study also aimed to examine whether 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 programme showed consistent significant results. The influence of participation in a growth mindset enrichment programme 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

<table>
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<th>Variable</th>
<th>$B$</th>
<th>SE</th>
<th>$p$</th>
</tr>
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<tbody>
<tr>
<td>GPA</td>
<td>2.66</td>
<td>0.69</td>
<td>0.000**</td>
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<td>Extracurricular activities</td>
<td>0.10</td>
<td>0.18</td>
<td>0.594</td>
</tr>
<tr>
<td>Computer skills</td>
<td>-0.49</td>
<td>0.37</td>
<td>0.185</td>
</tr>
<tr>
<td>Foreign language skill</td>
<td>0.51</td>
<td>0.40</td>
<td>0.202</td>
</tr>
<tr>
<td>Growth mindset enrichment</td>
<td>0.99</td>
<td>0.57</td>
<td>0.083</td>
</tr>
<tr>
<td>Enrichment programmes</td>
<td>0.03</td>
<td>0.23</td>
<td>0.913</td>
</tr>
<tr>
<td>Work experiences</td>
<td>0.28</td>
<td>0.18</td>
<td>0.129</td>
</tr>
<tr>
<td>Constant</td>
<td>-9.305</td>
<td>2.11</td>
<td>0.000</td>
</tr>
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Notes: $N = 166$; **$p < 0.01$.
following the participation in a growth mindset enrichment programme 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 programme, 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%) of 166 employed graduates who obtained a psychology-based job. This result clearly corroborates Boudarbat 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). This 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 programme and in general enrichment programmes, 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 realise 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 judgement 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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