SUBJECTIVE WELL-BEING, WORK AND ACADEMIC SUCCESS: EVIDENCE FROM POST-GRADUATE INTERNATIONAL STUDENTS IN NEW ZEALAND

Muhammad Akhtaruzzaman\(^1\), W. Ahmad\(^2\) and S.K. Kurup\(^3\)

\(^1\) Business Lecturer, Faculty of Business Management and Legal Studies, Toi Ohomai Institute of Technology, Rotorua 3046, New Zealand
\(^2\) Computing Lecturer, Business Computing and Communications, Toi Ohomai Institute of Technology, Rotorua 3046, New Zealand
\(^3\) Health Tutor, New Zealand Management Academics, New Zealand.

ABSTRACT: This study investigates the relationship between academic performance, subjective well-being (happiness) and part-time work of 299 international students studying at postgraduate level in a tertiary institute in New Zealand. A quantitative approach is used and a robust set of demographic factors and explanatory variables is controlled for to identify the relationship between academic performance, happiness and part-time work of international students. The Oxford Happiness Questionnaire (OHQ) is used for measuring the happiness of the research participants. The findings of this study suggest that 91 percent of the students participated in the research are happy; however, happiness has no statistically significant effects on academic performance of the students. A significant relationship exists between happiness and academic performance if different cut-off levels of happiness are used to divide the full sample of observation. Happiness affects the academic performance negatively when the students’ happiness level is above the median level. A large number of international students are engaged in part-time work. This study also finds that engaging in part-time work of full-time students have adverse effects on the academic performance.

KEYWORDS: Happiness, Academic Performance, Part-Time Work

INTRODUCTION
Numerous studies are conducted examining the relationship between happiness (subjective well-being, SWB) and academic performance and yielded inconsistent conclusions on this relationship. Happiness is a person’s overall positive subjective well-being and their frequent optimistic thoughts and positive experience (Barber, 2010). Easterlin (2004) explained happiness using the Set Point Theory that states each individual has a fixed set point of happiness or life satisfaction through genetics and personality and the level of happiness remains relatively constant throughout the life. On the contrary, economic theory of happiness asserts that more money gives more happiness. Easterlin (2004) also suggests that the majority of the people could increase their happiness by spending less time acquiring income and more time achieving goals, such as family, life satisfaction, and good health.

Academic performance is measured by the grades (GPA: grade point average) of a student in the courses completed in a program and is used as an indicator of academic achievement (Ng, Huebner, & Hills, 2015). Academic performance is affected not only by structures of knowledge and information processing but it also is affected by the factors such as attitudes, belief, and values (Bessant, 1995). Literature argues that student with higher subjective well-being earns higher GPA. Quinn and Duckworth (2007) suggest that individuals with higher subjective well-being are predicted to have higher grades even after controlled for IQ and...
previous academic grades. Langevin (2013) also finds a significant positive relationship between happiness and GPA of undergraduate students. In contrast, Barber (2010) conducts a study in a community college in the USA and concludes that students are happy with their existing coping skills but happiness is not a contributing factor to high grade or low grade. Diener and Seligman (2002) suggest that happiness might improve other aspects of a student and find that students who were very happy showed fewer signs of depression and in turn those students show better academic performance. According to Lyubomirsky and King (2005), happiness, experiencing happiness, positive joyous feelings are the important factors that bring meaningfulness to life and could bring greater academic success. The literature on the relationship between academic grade and happiness is therefore inconclusive.

According to Education New Zealand (2015), the total numbers of international students enrolled in tertiary institutes in 2015 are 104, 418, which is an increase of 13% compared to 2014. Ministry of Education in New Zealand reported that total earnings from international education in 2012/13 was $2.6 billion and by 2025 New Zealand targets a total of $4.8-$6.2 billion of earning from exporting education (Education New Zealand, 2016). Currently, China and India are the two major source countries with the highest percentage of international students enrolling to studying in the tertiary institutes in New Zealand. A survey conducted on overall satisfaction level, by looking into living experiences, of the international students in the tertiary institutes in New Zealand and found 88% are happy (Education New Zealand, 2015). More importantly, this report found a decrease in satisfaction report compared to 2013.

Happiness of international students is an important determinant of whether New Zealand would be able to meet the set target by 2025. Around 25% of tertiary students in New Zealand do not continue their qualification or complete their course successfully also suggesting that personal well-being is also a factor in academic success (Ross, Bathurst & Jarden, 2012). It is important to learn whether international students studying in New Zealand’s tertiary institutes are happy and then to investigate whether a significant relationship exists between happiness and academic performance. In regards to the relationship between academic performance and part-time work of full time students, Richardson et al. (2013) studied the relationship between academic achievement and employment of a university student in New Zealand and found that students employed in part-time job have higher grade than those are not employed at all; however, the relationship is not linear and found that increased number of working hours has negative impact on academic performance.

Despite the evidences in empirical literature in other countries, it is surprising to observe that a few studies (e.g., Ross et al. 2012; Richardson et al., 2013) on the issues conducted among tertiary international students in New Zealand. New Zealand is a globally recognized education provider and ensures excellent study opportunities and pastoral care services for international students. Moreover, the increased number of enrolments of international students in different tertiary institutions in New Zealand ascertains a need to investigate whether the international students are happy and if there a relationship exists between happiness and academic performance.

This research fills the gap and asks following research questions: how happy are international students studying at the tertiary institutions in New Zealand? Does a significant relationship exist between academic performance and happiness? Does part-time job affect academic performance of international students? The rest of the paper is organized as follows: Section 2 discusses detailed literature review on this relationship. A theoretical framework and
methodologies discussed in Sections 3 and 4, respectively. Section 5 analyses and discusses empirical findings and Section 6 presents conclusion of this research.

**RELEVANT LITERATURE**

The literature suggests that the people who are happy are successful in their life, such as in relationship, employment, performance, which suggest a connection between success and happiness. Happiness plays a major role in the motivation of students for hard working. Such happiness is effective in reducing the depression and stress of students as well as in increasing their interest in school and improves study habits along with self-confidence, safety and life satisfaction (Hassanzadeh & Mahdinejad, 2013). Christiana (2009) suggests that motivating students academically also improves academic success. The idea of motivation is a common factor that is used in education and psychology which include attention, needs, goals and interests which stimulate individual learner by raising her interest and attention towards engaging in an action or behaviour and help accomplishment of such actions or goals.

In contrast, Malik et al. (2013) conducted an explorative study with 137 students and find that there is no relationship between life satisfaction and academic performance. Rather, the desire to get good grade in order to achieve career goal and meet the family expectations helps to secure academic achievement. Tuntiwarodom and Potipiti (2008) argue that the variables that impact the student academic performance are IQ and income. Happiness increases with income and number of academic years, hence concluding that there appears to be no positive relationship between happiness and academic performance. Barber (2010) finds that there is no positive significant relationship between happiness in regards to coping strategies and GPA of the students.

Other studies consider many other factors (e.g., part-time job) as influencing this relationship and impacting students’ academic performance. The studies that included part-time job as a determinant of academic performance argue that time and energy are the finite resources; jobs would distract studies and negatively affect student’s GPA. A large number of students work part time when they are studying full-time for many reasons e.g., the lack of the financial support from their families (Wang, Kong, Shan & Vong, 2011) or lack of sufficient funding from government. Part-time work does provide practical skill and can substitute for academic knowledge. However, part-time work decrease the time available for study and can have negative impact on academic achievement. The negative effects of part-time job on academic achievement results due to spending less time on studying, attending classes at late, absenteeism, lack of attention, and feeling fatigue, making less use of school facilities and services (Tessema et al., 2014). Beffy et al. (2010) conducted a research with a sample size of 1,603 students and found that working part-time during studies reduces the chances of passing final year university exam.

**Analytical Framework**

The analytical framework presented in Figure 1 suggests the main variable of interest is happiness is used to explain the relationship between academic performance and happiness. We argue, in line with the existing literature, that academic performance is difficult to explain solely by happiness. This relationship cannot be isolated from other potential explanatory variables. The inclusion of other explanatory variables (e.g., age, gender, ethnicity, part-time job) would help us better understanding whether the relationship is robust to the inclusions...
of other characteristics of the participants and which of the characteristics significantly affects this relationship. Based on the literature discussion, we added part-time work in addition to other commonly used demographic characteristics of the participants in the model, such as age, ethnicity, and gender.

**Figure 1: Analytical Framework**

**Methodology and Data**

Quantitative approach was employed on a novel data set collected from international postgraduate students of a tertiary institute in NZ to examine whether happiness and part-time work have statistically significant effects on academic performance. The tools used to collect happiness data in this study are OHQ (Oxford Happiness Questionnaire). Oxford happiness questionnaire (OHQ) consists of 29 items to measure the level of happiness of an individual. Hills and Argyle (1998), argue that the OHQ is a convenient instrument for measuring the personal happiness of students and hence is used in various researches as a preferred tool to find the level of subjective well-being of research participants.

In this study, a tailored version of OHQ was used for measuring the personal happiness. The study included a sample of 299 international students of a tertiary institution in NZ, which was a sufficiently large representative sample of international students. The participants were selected using convenient sampling method. We used academic grade average of the last two semesters of the participants and divided the sample into two categories: Low performers (if grade average score is <60) and High performers (if grade average score is >=60). The Happiness data collapsed into two categories (Happy and Unhappy) from the OHQ and the cut-off value is 64. Based on the theoretical range of happiness index is from 16 to 96, if the happiness score of OHQ<=64 then the respondent is considered as unhappy and if the OHQ>64, then the respondent is happy. The Cronbach's Alpha of OHQ 0.87 confirms internal validity and reliability of the adapted OHQ used in this analysis.

Logistic regression model is applied to investigate the relationship of student happiness, part-time job and their academic performance. Logistic regression is well suited to describe and test hypotheses about relationships between a categorical outcome variable and one or more categorical or continuous predictor variables (Peng & So, 2002). In contrast, linear regression is based on central tendency, and requires a continuous dependent variable. The main variable of interest is happiness and the data are collected on Likert scale are not continuous, which doesn’t fit well with central tendency. The dependent variable (academic score or grade) is not naturally dichotomous; however, we converted academic score into a binary variable (1
for high performer and 0 for low performer) so that we can compare the relationship more accurately with the main variable of interest (happiness) which was also converted into dichotomous variable (1 for happy and 0 for unhappy). The other independent variable is also categorical: employed and not employed in part-time job. Moreover, other independent variables are also categorical e.g., gender, ethnicity. On these grounds, this study prefers to use maximum likelihood estimation approach and looks for an estimate of the parameters to model actual data. In addition to the logit model analysis, this study also conducts a linear regression analysis and compares the results with the logit model analysis.

**FINDINGS AND ANALYSIS**

**Descriptive Statistics**

Out of total 299 students, 170 from South Asia (mainly from India), 96 from East Asia (mainly from Philippines) and 33 from other regions of the world. The sample is a good mixture of students from different parts of the world. Ages of the participants included: 208 participants (70%) age between 20-29, 79 participants (25%) age between 30-39, 15 participants (5%) age 40+. The information shows that most participants of the study are between the age group of 20-29. Female participants in the sample is predominantly high is 80% compared to 20% of their male counterpart. A total of students engaged in part-time works were 231 compared to 65 students who reported that they are not engaged in any job and 3 students didn’t mention about their job status. This part-time job engagement is a common scenario for international student who actively search and engage in part-time job while they are studying in New Zealand.

Among the 299 students participated in the survey, 91 percent of the students are happy whereas only 9 percent are unhappy. In regards to academic performance, 54 percent of the students are high performers and their GPA are above 60 percent (B-average) and 46 percent of the students’ academic performance was below 60 percent, suggesting a good mixture of high performers and low performers existed in the cohort examined in this study.

**Figure 2: Histogram plot of academic grade and happiness**

![Figure 2: Histogram plot of academic grade and happiness](image)
The histogram plots (in Figure 2) of the variables of interest (happiness and academic performance) are approximately normally distributed suggesting that data mapping is supporting the central tendency and implications based on these data are representative and can be utilized for regression analysis.

**Figure 3: Box Plots: Academic grade against happiness and part-time job**

In Figure 3, the Box Plots support the histogram plots in which the lines in the boxplots (the medians) are not in the middle of the box. More specifically, high performers group (1) shows more normal distribution than the low performers group (0). Similarly, the students who are employed (2) in part-time job show more normal distribution than the group of students who are not employed (1) in any job. In Figure 4, the Scatter Plot 1 suggests there is a weak negative association between academic performance and happiness. In contrast, information in cross-tabulation (Table 1) suggests that a higher number of students are happier and are high performers (146 students are happy and high performers). However, a higher number of students are low-performers if they are employed in part time job (122 students are employed and are low-performers). However, from this cross-tabulation or from the scatter plot, the relationship between academic performance, happiness and part-time employment are not clear and are conclusive. To explore this relationship further, we first employed a logit model analysis and the results are presented in Table 2 and then we employed a linear regression
analysis and the results are presented in Table 3. Table 1 shows a cross-tabulation between happiness, part-time job and academic grade.

### Table 1: Cross Tabulation: Grade, Happiness, Part-time job

<table>
<thead>
<tr>
<th>Grade</th>
<th>Happiness</th>
<th>Part-time job</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unhappy</td>
<td>Happy</td>
</tr>
<tr>
<td>Low performer</td>
<td>13</td>
<td>125</td>
</tr>
<tr>
<td>High performer</td>
<td>15</td>
<td>146</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>271</td>
</tr>
</tbody>
</table>

Note: 3 students didn’t provide information about their employment status

### Logistic regression and linear regression

#### Table 2: Logistic Regression Analysis: Dependent Variable: Academic Performance (Grade)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>-0.146</td>
</tr>
<tr>
<td></td>
<td>(0.424)</td>
</tr>
<tr>
<td>Part-time job</td>
<td>-1.343***</td>
</tr>
<tr>
<td></td>
<td>(0.328)</td>
</tr>
<tr>
<td>Age</td>
<td>0.527**</td>
</tr>
<tr>
<td></td>
<td>(0.224)</td>
</tr>
<tr>
<td>Gender</td>
<td>0.823**</td>
</tr>
<tr>
<td></td>
<td>(0.321)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.319</td>
</tr>
<tr>
<td></td>
<td>(0.825)</td>
</tr>
</tbody>
</table>

Observations 294

Note: Academic performance (grade score) is converted to a binary variable: high performer: 1 if grade≥60 and low performer: 0 if grade<60. Standard errors are in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. Dependent Variable is used as categorical variable: 0 for low performer (<60) and 1 for high performer (≥60)

Table 2 presents logit model results that do not support that a statistically significant relationship exists between academic performances. This finding is in contrast to the findings in the existing literature (e.g., Langevin, 2013; Diener and Seligman, 2002) and does not support that a higher level of happiness increases students’ academic performance. Interestingly, we found a statistically significant negative relationship between students’ academic performance and employment in part-time job. In other words, part-time job is negatively affecting students’ academic performance. This finding supports the evidences in existing literature (e.g., Tessema et al., 2014; Rochford et al., 2009; Salamonson et al., 2006) that suggest part-time employment negatively affects students’ academic performance and in
contrast to the findings of the studies (e.g., Beffy et al., 2010) that suggest that part-time employment enhances academic performance. The studies that found positive link argue that part-time job provides an opportunity to students to gain skills and experiences that are required for a full-time job after graduation. A potential explanation in support of the negative relationship between part-time job and academic grade in our study can be that the students are either employed with a job irrelevant to their existing skills and future job pathways or students are over-stressed with the workload from study and part-time job. Students working part-time are more likely not get sufficient time to study or to utilise library and other supporting facilities (e.g., learners support). The negative relationship between academic performance and part-time job likely to be acute when the students are engaged in low-skilled and jobs irrelevant to their future pathways that could generate further disappointment and frustration about future possibility of skilled jobs what eventually adversely affecting their academic performances. However, particular information around these issues are out of scope of this research project. Future research is required to explore further information on the number of hours worked, types of work students are employed in and the relationship between academic performance and part-time job. The logit model result further supports the view that relatively older students perform better academically. This finding implies that more mature students are better performers. Gender makes a difference in academic performance and suggests that female students’ academic performances are better than their male counterparts.

We also examined if there is a reciprocal relationship between academic performance and happiness. The results (not reported here) remained the same in terms of relationship of the variables of interests. When happiness is used as a dependent variable in the logit model, the result suggests that happiness doesn’t affect academic performance significantly and decreases with age, as found in the existing literature (e.g., Csikszentmihalyi and Hunter, 2003).

In addition to the logistic regression, a linear regression analysis is applied in order to see how academic performance varies across different level of happiness thresholds. Table 3 presents the results where different cut-off levels of happiness are analysed. Model 1 utilizes full sample available observation and find no significant relationship between happiness and academic performance. Model 2 shows students who are unhappy (happiness score is 50 or less and is around 5th percentile) perform better academically. However, this finding is based on a very small sample of observations. We increase happiness score from 50 to 60 in Model 3 and find there is no statistically significant relationship between academic performance and happiness. Model 4 shows the same relationship of the variables of interests as found in Model 3 where we examine a sample with happiness score of 70 or less. Model 5 examines the relationship between happiness and academic performance of the sample whose happiness score is on or above the mean score (happiness>=79). Interestingly, this sample of observation suggests happier students are relatively poor academic performers. Moreover, part-time job has a negative and statistically significant effects on academic performance, a finding consistent to logit model result. It is worthwhile to note that, this finding is based on a sufficiently large sample of observations (of 151) although the goodness of fit of the model is low (3.4%) suggesting the model’s explanatory power is low. Happiness and academic performance are adversely related for the sample whose happiness score is above 90th percentile (Model 6) and who are not employed in part-time job. This inverse relationship suggests if students are too happy, happiness adversely affects academic performance. The
goodness of fit of Model 6 is relatively high (38.3%) but is based on a small sample of observation.

Table 3: Linear regression results: Dependent variable: Academic performance

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>-0.022</td>
<td>0.425***</td>
<td>0.056</td>
<td>0.026</td>
<td>-0.208**</td>
<td>-1.807**</td>
</tr>
<tr>
<td></td>
<td>(0.022)</td>
<td>(0.107)</td>
<td>(0.059)</td>
<td>(0.074)</td>
<td>(0.100)</td>
<td>(0.789)</td>
</tr>
<tr>
<td>Part-time job</td>
<td>0.617</td>
<td>1.540</td>
<td>1.357</td>
<td>-2.767***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.272)</td>
<td>(1.108)</td>
<td>(1.809)</td>
<td>(0.604)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1.380</td>
<td>-1.864</td>
<td>-0.493</td>
<td>-0.072</td>
<td>0.382</td>
<td>8.373**</td>
</tr>
<tr>
<td></td>
<td>(0.970)</td>
<td>(1.394)</td>
<td>(0.782)</td>
<td>(1.008)</td>
<td>(1.139)</td>
<td>(3.604)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.006</td>
<td>-1.334</td>
<td>4.362***</td>
<td>4.071***</td>
<td>-0.077</td>
<td>-1.417</td>
</tr>
<tr>
<td></td>
<td>(1.260)</td>
<td>(1.799)</td>
<td>(1.388)</td>
<td>(1.364)</td>
<td>(1.776)</td>
<td>(1.733)</td>
</tr>
<tr>
<td>Constant</td>
<td>58.218**</td>
<td>48.553**</td>
<td>52.203**</td>
<td>53.502**</td>
<td>82.909**</td>
<td>215.935**</td>
</tr>
</tbody>
</table>

Observations 242
R-squared 0.009

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Note: Model 1 includes full-sample, Models 2-6 use different cut-off levels of happiness. Model 2 uses sample if happiness score <=50, Model 3 uses sample if happiness score <=60, Model 4 uses sample if happiness score <=70, Model 5 uses sample if happiness score is above sample mean (>79), Model 6 uses sample if happiness score is too high >=90. Model observations are different from total sample (299), a reason for this discrepancy is missing response in regards to the variables and due to different cut-off levels of happiness were used. For example, in Model 2, the students who’s happiness are <=60 are not working part-time.

CONCLUSION

This study examines relationship between happiness, part-time employment of international students and their academic performance. Overall happiness of the students surveyed in this study is quite high and 91 percent of the students are happy. It also finds that female participants are happier than male. In contrast to commonly observed findings in the literature, we find there is no evidence that a higher level of happiness has significant positive impact on academic performance of the students. It further suggests that part-time job employment deters students’ academic grade significantly. The negative relationship between academic performance and part-time work could potentially explained by many other reasons, such as employment in low to no skilled job, stress resulting from working longer house, which are not investigate in this study. Adverse effects of part-time job on academic grade suggests that international students need further consideration in engaging part-time job when studying full-time when the completion of academic qualifications should.
be their first priority. The findings have significant implications for the education providers and for the policymakers in New Zealand. A regular assessment of the well-being of international students is required to understand the dynamics of students’ overall satisfaction, need to increase support for the students who are engaged in part-time jobs, continue and enhance the support services so that international students can successfully accomplish their qualifications. A happy and enjoyable experience of current students can help achieve the future goal in education exports of New Zealand and can increase the appeal of the country as an attractive destination for international students.

REFERENCES


