

Demographic Background, Gender and Race: Their Impacts on Students' Academic Success

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ABSTRACT

This study explores factors contributing to academic success of 382 full time diploma students at Faculty of Business Management in a public university in Sarawak. The study lasted eight semesters (four years) from June 2012 until April 2016. The instruments comprised questionnaire, analysis of final examination results and detailed information from student registration database. Pearson bivariate correlational analysis showed that there was a significant relationship between students' CGPA and their fathers' monthly salary ($p < 0.01$) and their mothers' monthly salary ($p < 0.05$). However, there was no significant relationship between students' CGPA and number of siblings in the family. Findings indicated females outperformed their male counterparts in studies. Additionally, there was a significant difference in the mean CGPA among different races of students ($p < 0.01$).

Keywords: Academic success, demographic, races, gender, socioeconomic

INTRODUCTION

Mann (1985) investigated the role of demographic factors in the 17th century such as age, gender, place of origin, ethnicity, marital status, socioeconomic status

(SES), parents' education level, parental profession, language, income and religious affiliations. Using Mann, this study looks at the demographic factors that contributed to the academic success of university students. Farooq, Chaudhry, Shafiq and Berhanu (2011) define the context of demography variables as a way to explore the nature and effects of these factors in the biological and social context.

According to Mann (1985), socioeconomic status is the most important

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factor affecting the student's academic performance. Adams (1996) revealed that students' unfulfilled basic needs due to their parents' poor socioeconomic status contributed to their low academic performance.

Additionally, there are many variables (Crosnoe, Johnson, & Elder, 2004) such as student, family, school and peers. However, very few studies have examined the link between academic performance and the complexity and diversity of Malaysian social environment. Hence, this study shows various crucial factors that indirectly affect students' academic performance. Additionally, the changing values of attributes associated with the different stakeholders have contributed to the complexity of defining and measuring the quality of education (Blevins, 2009; Parri, 2006). Significantly, socioeconomic status has been one of the most debated among educational professionals which would be examined further in this study. Thus, the study aims to achieve the following main objectives:

- 1) To explore the factors of academic success of university students in Malaysia
- 2) To examine the extent to which the factors are related to academic success of university students.

The respondents' age, gender, family background and demographic data were examined. This is to determine the relationship between these variables and

the student's academic success, based on the cumulative grade point average (CGPA). Below are the hypotheses of this study:

- H1: There is a significant relationship between the student's academic success and family background (family income and number of siblings).
- H2: There is a significant difference in the students' academic success between male and female.
- H6: There is a significant difference in the students' academic success among races.

Based on the objectives, the study attempted to answer the following research questions:

Research Question 1:

Is there a significant relationship between the academic success of the university students and family background?

Research Question 2:

Does the university students' academic success differ between male and female students?

Research Question 3:

What effect has race on the academic success of the student?

Ahmad and Khan (2012), and Ngorosho (2011) have studied the association between socioeconomic status and students' academic success. Ahmad and Khan

found a significant relationship between parents' socioeconomic status and academic achievements of their children in secondary school examination. They concluded that majority of the students from higher socioeconomic status performed better in secondary school examinations compared with those from lower SES. Similarly, Ngorosho (2011) found five key variables such as the parents' level of education, house wall material, light source and the number of books for school subjects in the homes.

Additionally, Eitle (2005) noted a significant relationship between gender and academic achievement of the student while Chambers and Schreiber (2004) showed that girls performed better academically compared with boys. McCoy (2005) listed gender, ethnicity and father's occupation as significant contributors to the student's achievement. Parents' involvement in their children's education also contributes positively to their children's academic success (Furstenberg & Hughes, 1995). Capraro and Wiggins (2000) noted the effects of SES on the student's academic achievement.

Hence, it is crucial to investigate the effects of SES in Malaysian education system particularly by exploring the variable of parental income. Mitchell and Collom (2001) revealed positive correlations between the SES and the student's achievement. Parents with high income can provide an effective environment for their children to excel academically.

METHODS

This is a quantitative study that examined the responses of a large group of students on the factors that influenced their academic successes. Demographic data and examination results were examined using a survey method.

This study employed stratified random sampling. The sample consisted of 382 full time diploma students from Faculty of Business Management of a public university in Sarawak, over eight semesters from June 2012 until April 2016.

RESULTS AND DISCUSSION

Table 1 shows the demographic profiles of respondents according to gender and race. There were 104 male students and 278 female students. In terms of ethnicity, there were 164 Malays, 53 Melanaus, 101 Ibans, 31 Bidayuh, 8 Kayans, 9 Muruts, 4 Dusuns and 12 from Kenyah, Suluk, Bisaya, Kedayan, Jawa, Kelabit and Lun Bawang tribal groups

Table 1
Demographic profiles for gender and race

Demographic Profiles	Group	Frequency	Percent
Gender	Male	104	27.2
	Female	278	72.8
Race	Melayu	164	42.9
	Melanau	53	13.9
	Iban	101	26.4
	Bidayuh	31	8.1
	Kayan	8	2.1
	Murut	9	2.4
	Dusun	4	1.0
	Others	12	3.1

Academic Success of University Students and Family Background

The descriptive statistics are presented in Table 2. Mean CGPA score is 2.77; monthly salary of the father and mother is RM2564.60 and RM1564.00 respectively. The mean number of siblings is 4.26.

Table 2
Descriptive statistics for academic success and family background

	Mean	Std. Deviation
CGPA	2.77	.54
Father's monthly salary	2564.6	2598.24
Mother's monthly salary	1564.0	2443.78
Siblings	4.26	1.69

Table 3
Correlations between CGPA and family background

CGPA	Father's monthly salary	Mother's monthly salary	Siblings
Pearson Correlation	.167**	.187*	-.052
Sig. (2-tailed)	.006	.019	.447

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

* . Correlation is significant at the 0.05 level (2-tailed)

Table 4
Statistics of CGPA between male and female students

	gender1	N	Mean	Std. Deviation	Std. Error Mean
CGPA	Male	104	2.5904	.45781	.04489
	Female	278	2.8350	.55639	.03337

Table 3 displays the results of the Pearson bivariate correlational reports. There was a significant relationship between the student's CGPA and his/her father's monthly salary ($p < 0.01$). In addition, there was a significant relationship between the student's CGPA and his/her mother's monthly salary ($p < 0.05$). These findings were consistent with those of Enu, Agyman and Nkum (2015) who argued that an individual's academic success depends largely on the socioeconomic status of their parents. According to Ahawo (2009), parents from low socioeconomic status fail to provide their children with basic requirements for schools. On the other hand, the relationship between the student's CGPA and number of siblings in the family was not statistically significant.

Academic Success between Male and Female Students

Table 4 displays CGPA between male and female students. Mean of CGPA for female students (2.84) is higher than that of male students (2.59).

Table 5
Independent samples test between male and female students

		Levene's Test				t-test for Equality of Means			95% Confidence Interval	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CGPA	Equal variances assumed	2.428	.120	-4.004	380	.000	-.24462	.06109	-.36473	-.12450
	Equal variances not assumed			-4.373	222.96	.000	-.24462	.05594	-.35485	-.13438

According to Table 5, there was a significant difference in the mean CGPA between male and female students ($p < 0.01$). Therefore, findings indicate female students outperformed their male counterparts. Eitle (2005) and McCoy (2005) also reported that there was significant relationship between gender and academic achievement. In relation to this, Chambers and Schreiber (2004) proved that girls recorded better academic performance compared with boys.

Academic Success Across Races

Table 6 displays the statistics of CGPA among different races of students. Mean CGPA for Malays is 2.84, mean CGPA for Melanau is 2.77, mean CGPA for Ibans is 2.65, mean CGPA for Bidayuh is 2.89, mean CGPA for Kayans is 3.10, mean CGPA for Muruts is 2.45, mean CGPA for Dusuns is 3.40, and mean CGPA for others is 2.28.

Table 6
Descriptive statistics of CGPA among different races of students

	N	Mean	Std. Deviation	95% Confidence Interval			Minimum	Maximum
				Std. Error	Lower	Upper		
Melayu	164	2.84	.48	.03769	2.77	2.91	1.86	4.00
Melanau	53	2.77	.58	.07992	2.61	2.93	1.57	3.86
Iban	101	2.65	.47	.04720	2.55	2.74	1.92	4.00
Bidayuh	31	2.89	.56	.09997	2.69	3.10	2.00	3.88
Kayan	8	3.10	.70	.24912	2.51	3.69	1.94	3.94
Murut	9	2.45	.50	.16819	2.06	2.84	1.88	3.57
Dusun	4	3.40	.57	.28590	2.49	4.30	2.82	3.94
Others	12	2.28	.90	.26104	1.71	2.86	.00	3.39
Total	382	2.77	.54	.02772	2.71	2.82	.00	4.00

From Table 7, there was a significant difference in the mean CGPA among different races ($p < 0.01$). This finding was confirmed by a study conducted by National Commission on Children (1991) that

reported poverty, race, living in a single-parent family and low family income are among the factors that contribute to a high failure rate among children in the United States.

Table 7
ANOVA of CGPA and races of students

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.015	7	1.288	4.683	.000
Within Groups	102.853	374	.275		
Total	111.868	381			

Table 8
Tukey HSD Multiple Comparison of CGPA and Races of Students

(I)	(J)	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Melayu	Melanau	.06810	.08286	.992	-.1845	.3207
	Iban	.19344	.06633	.072	-.0088	.3956
	Bidayuh	-.05157	.10270	1.000	-.3646	.2615
	Kayan	-.25838	.18988	.874	-.8372	.3204
	Murut	.39259	.17954	.362	-.1547	.9398
	Dusun	-.55463	.26538	.423	-1.3636	.2543
	Others	.55787*	.15683	.010	.0798	1.0359
Melanau	Melayu	-.06810	.08286	.992	-.3207	.1845
	Iban	.12533	.08895	.853	-.1458	.3965
	Bidayuh	-.11967	.11857	.973	-.4811	.2418
	Kayan	-.32649	.19891	.725	-.9328	.2798
	Murut	.32449	.18906	.677	-.2518	.9008
	Dusun	-.62274	.27192	.302	-1.4516	.2061
	Others	.48976	.16765	.071	-.0213	1.0008
Iban	Melayu	-.19344	.06633	.072	-.3956	.0088
	Melanau	-.12533	.08895	.853	-.3965	.1458
	Bidayuh	-.24500	.10768	.310	-.5732	.0832
	Kayan	-.45182	.19261	.272	-1.0389	.1353
	Murut	.19915	.18243	.958	-.3569	.7552
	Dusun	-.74807	.26735	.099	-1.5630	.0669
	Others	.36443	.16013	.310	-.1237	.8525

Table 8 (continue)

Bidayuh	Melayu	.05157	.10270	1.000	-.2615	.3646
	Melanau	.11967	.11857	.973	-.2418	.4811
	Iban	.24500	.10768	.310	-.0832	.5732
	Kayan	-.20681	.20796	.975	-.8407	.4271
	Murut	.44416	.19856	.332	-.1611	1.0494
	Dusun	-.50306	.27861	.617	-1.3523	.3462
	Others	.60944*	.17829	.016	.0660	1.1529
Kayan	Melayu	.25838	.18988	.874	-.3204	.8372
	Melanau	.32649	.19891	.725	-.2798	.9328
	Iban	.45182	.19261	.272	-.1353	1.0389
	Bidayuh	.20681	.20796	.975	-.4271	.8407
	Murut	.65097	.25482	.176	-.1258	1.4277
	Dusun	-.29625	.32113	.984	-1.2751	.6826
	Others	.81625*	.23936	.016	.0866	1.5459
Murut	Melayu	-.39259	.17954	.362	-.9398	.1547
	Melanau	-.32449	.18906	.677	-.9008	.2518
	Iban	-.19915	.18243	.958	-.7552	.3569
	Bidayuh	-.44416	.19856	.332	-1.0494	.1611
	Kayan	-.65097	.25482	.176	-1.4277	.1258
	Dusun	-.94722	.31513	.056	-1.9078	.0134
	Others	.16528	.23124	.997	-.5396	.8701
Dusun	Melayu	.55463	.26538	.423	-.2543	1.3636
	Melanau	.62274	.27192	.302	-.2061	1.4516
	Iban	.74807	.26735	.099	-.0669	1.5630
	Bidayuh	.50306	.27861	.617	-.3462	1.3523
	Kayan	.29625	.32113	.984	-.6826	1.2751
	Murut	.94722	.31513	.056	-.0134	1.9078
	Others	1.11250*	.30277	.007	.1896	2.0354
Others	Melayu	-.55787*	.15683	.010	-1.0359	-.0798
	Melanau	-.48976	.16765	.071	-1.0008	.0213
	Iban	-.36443	.16013	.310	-.8525	.1237
	Bidayuh	-.60944*	.17829	.016	-1.1529	-.0660
	Kayan	-.81625*	.23936	.016	-1.5459	-.0866
	Murut	-.16528	.23124	.997	-.8701	.5396
	Dusun	-1.11250*	.30277	.007	-2.0354	-.1896

*. The mean difference is significant at the 0.05 level

From Table 8 (Tukey HSD), there was significant difference in mean CGPA between Malays and others ($p < 0.05$). In addition, there was significant difference in mean CGPA between Bidayus and others ($p < 0.05$). There was a significant difference in mean CGPA between Kayans and others ($p < 0.05$). There was significant difference in mean CGPA between the Dusuns and others ($p < 0.05$). On the other hand, there was no significant difference in mean CGPA for the other races.

CONCLUSION

The findings demonstrated that academic success in university was found to be correlated with the student's father's monthly salary and mother's monthly salary. Higher salary was significantly related to higher CGPA score in university. However, the number of siblings in the family did not influence the CGPA score in university. Besides, female students tend to outperform their male counterparts in their academic achievement. This study showed the mean of CGPA for female students was significantly higher than that of their male counterparts. The ANOVA showed a significant difference in the mean CGPA among students of different races ($p < 0.01$).

Due to time and resource constraints, the variables in this study were limited to students' CGPA, family background and gender. There is a need to look into other factors that may explain the academic success of university students from the psychological, educational and environmental perspectives. Future study

should include an investigation of students' personality traits, intelligence, awareness and motivation for success. Integrating these variables with other variables to further explain and predict the academic success of university students is suggested.

The study contributed to the literature by presenting new information since it takes into consideration relevant variables: students' gender, family background, and past academic results. Hence, this study provides significant insights into university students' academic success. Along with that, inexperienced or new established faculty can also benefit from the study. Additionally, the study also examined the often overlooked factors that contribute to the student's academic success. The study provided empirical evidence about the relationship between the factors and the academic success of university students, specifically in Malaysia. Finally, the study also put forward some suggestions, implications, and recommendations that may be useful for future studies related to this topic.

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