

Student Ethnicity and Academic Performance: First-Year University Accounting Education

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Abstract

This study investigates the effect of ethnicity on student performance in first-year university accounting education at the University of the South Pacific (USP). Results suggest that ethnic Indian students outperform ethnic Fijian students in first-year university accounting. More interestingly, results indicate that ethnic Fijian students who complete first-year university accounting through the extension mode (distance mode) outperform ethnic Fijian students who complete the same on-campus (face-to-face) courses, while ethnic Indian students show no difference in either mode of study. Both Indo-Fijian and Ethnic-Fijian students who completed Fiji Seventh Form Examination did better than Indo-Fijian and Ethnic-Fijian students who complete the Foundation program at the USP.

Introduction

For many years there have been concerns shown about an 'education gap' between the academic performance of Ethnic-Fijian and Indo-Fijian students (Fiji Times, 21 August, 2003, Fiji Government press release, 7 Jan, 2002). Recently, Fiji's Minister of Education raised serious concerns about Ethnic-Fijian academic performance in secondary schools. However, no empirical research has so far been conducted to investigate the reasons for the supposed gaps.

The education system in Fiji is based on the British system. Students complete eight-years of primary education and five-years of secondary education, with English as the medium of instruction. There are predomi-

nantly two major races that make up the approximately 800,000 population of Fiji. Ethnic Fijians comprise 48 percent and Indo-Fijians comprise 44 percent of Fiji's population.

Most of the pre-tertiary schooling in Fiji is administered by religious or social organizations. For example, in 1993, of the 144 secondary schools, 132 were non-government operated (Ministry of Education, 1994). Christian missions and Indian religious sects have been involved in operating a majority of the secondary schools (Naidu, 1995). While racial segregation of schools was evident in the past (Narayan, 1984; Naidu, 1995), there has been a gradual and increasing trend towards a more racially balanced student composition. For example, Suva's Indian College had almost 100% Indo-Fijian student composition ten years ago but currently records a composition of 50% Ethnic-Fijian students, 40% Indo-Fijian students and 10% of students from other racial groupings (Daily Post, 19 August, 2003). Attempts have also been made to employ racial balance in teaching faculties.

While there have been improvements in racial balance in both faculty members and student composition in many schools, disparities in academic performance have been a long lasting concern (Ministry of Education, 1994; Burns, 1963). There have been attempts on many occasions to reduce the disparity in the academic performance of Ethnic-Fijian students compared in Indo-Fijian students at all levels of studies. There are special scholarships set aside from the national budget for Ethnic-Fijian students (Fiji Government, 2003). However, the strategies that have been implemented or suggested to overcome the disparity in ethnic academic performance have had no empirical basis

The objective of this study is to empirically investigate the effect of ethnicity on student's performance in the first-year first-semester university introduction to accounting course (AF101) at the University of the South Pacific (USP).

Knowledge on how students of various ethnic groups perform in commerce based subjects like accounting, is important for policy decisions that address the issues of economic disparity amongst racial groups. Accounting knowledge is an important component for commercial success especially in small family owned enterprises that cannot afford a full-time qualified accountant or financial manager. Factors that affect accounting education are also important for educators in designing policies and procedures that could lead to improvement in performance of accounting students. Students can also make informed decisions about the choice of how to obtain accounting education (Patel and Patel, 2003).

Ethnicity and Academic Performance

Ethnic differentials in educational performance can be comprehended by various methods. One approach links academic performance to ethnic labels (Fordham and Ogbu, 1986; Matute-Bianchi, 1986; Ogbu, 1991; Gibson and Ogbu, 1991). Matute-Bianchi (1986) discovered that in a California school, Japanese-American identity was compatible with academic success, but that being a good student was less consistent with being Mexican. Further, some minority students who succeeded in schools were criticized by their peers as 'trying to act white', so that a positive identification with black peers may include not doing well in school. Ogbu also finds that in the US, blacks identify largely in opposition to whites; so if success in school is labelled as a 'white' activity, this may discourage blacks from pursuing academic goals (Clark, 1983; Ogbu, 1991).

Further research on education in the US by Ogbu's (1991) shows that although black parents value schooling, they warn their children that American society does not reward blacks and whites equally for such credentials. On the basis of their concrete experiences, black parents offer their children ambivalent and perhaps contradictory values toward education (Ogbu, 1991). Although Asian-Americans also receive returns for education unequal to those of whites (Barringer et. al., 1990), their higher levels of education partly compensates for this inequity. Asian parents may be promoting higher levels of educational attainment for their children to compensate for anticipated discrimination in the job market. Nonetheless, it is interesting that the experience of discrimination, according to different scholars, accounts for the relative failure of blacks and the success of Asians in educational achievement (Sue and Okazaki, 1990; Schneider and Lee, 1990; Ogbu, 1991).

Another form of explanation for differential academic performance rests on culture. Schneider and Lee (1990) claim that the cultural components that benefit East Asian children's school performances in the US include their cultural tradition, which gives prominent value to education for self-improvement, self-esteem, and family honour, and the determination by some East Asian families to overcome occupational discrimination by investing in education. However, their research does not provide direct evidence that East Asians value education more than whites, blacks, Hispanics, or other Asian groups.

Schneider and Lee (1990) conducted thorough and detailed interviews to illustrate how academic achievement is inextricably linked to

children's perception of what makes their parents happy. Their insights suggest a working hypothesis, namely, that white parents, on average, express satisfaction with their children if they are successful in one of the many realms of youths' lives (school, sports, music, or other hobbies), but Asian parents express satisfaction only when their children have near perfect academic performance (i.e., straight A's). This difference comes not only from differential expectations, but also from differences in the expressiveness of Asian and White parents (Stevenson and Stigler, 1992).

Sue and Okazaki (1990) made an attempt to identify the parental behaviours of Asian and white parents that elucidate the differences found in school achievement of their children. They argue against cultural explanations of Asian achievement and instead propose market discrimination as the critical factor. Aware of the problems of discrimination in the labour market, Asian parents and children learn to value education more, which is related to but not entirely synonymous with career success. Their review of research also revealed difficulties in linking the average behaviour of Asian parents to their children's performance. As a group, Asian parents were more likely to insist on unquestioned obedience to parents and to believe in minimal parental involvement, and they were less likely to have expectations for mature behaviour and to encourage two-way communication between their children and themselves compared to the average behaviour of white parents. The average behaviour of Asian parents would have predicted low academic achievement for the sample as a whole, yet the mean grade point average of Asian children was the highest of any group (Dornbusch, 1989; Sue and Okazaki, 1990).

These results suggest that systematic group difference in parental behaviour exists between Asians and whites. It may be that, on average, Asian parents may not only have higher expectations of their children, but also are unwilling to negotiate these terms. Children understand this message and are obligated to their parents to do well in school. For the children who are able to attain academic success, their parents' high expectations may further their own educational aspirations, but for those who cannot, the effects of such pressure are potentially harmful.

Cultural Identity

Culture based societal values directly influence the degree of importance any particular ethnic group places on formal education. Hofstede's (1984) culture-based social model identifies four important dimensions:

- ? Individualism versus Collectivism: Individualism is concerned with a preference for a loosely knit social framework whereas col-

lectivism is concerned with a preference for a tightly knit social framework.

- ? Large versus Small Power Distance: People in Large Power Distance societies accept a hierarchical order in which everybody has a place which needs no further justification. People in Small Power distance societies strive for power equalization and demand justification for power inequalities.
- ? Strong versus Weak Uncertainty Avoidance: This relates to the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The Strong Uncertainty Avoidance societies exist where rigid codes of belief and behaviour are maintained and members are intolerant towards deviant persons and ideas, whereas Weak Uncertainty Avoidance societies have a more relaxed atmosphere where practice overrides principles and deviance is more easily tolerated.
- ? Masculinity versus Femininity: This indicates a society that allocates social roles to the genders (Gray, 1980). Masculinity societies show preference for heroism and material success; femininity shows preference for relationships and caring for the weak.

Hofstede's (1984) classification will clearly place Ethnic-Fijians as a communal society where Ethnic-Fijians are obedient to their chiefs. Ethnic-Fijians have a communal culture, which is described as more flexible, adaptable and accommodating. They encourage personal development and ambition within the framework of serving the extended family community, both of which allow flexibility in their membership. They tend to encourage and place greater importance on communal work at the expense of time on academic efforts. They also encourage and express great satisfaction with their children if they are successful in community-based affairs and especially in sports. They also do not suffer from capital insecurity and face positive discrimination in the labour market.

Many of the Indo-Fijians, on the other hand, are third or older generations of East Asians from the Indian sub-continent and in many ways display similar cultural traits as those in other ethnic Asians (Gillion, 1962; Jayawardena, 1975; Kelly, 1988). Indo-Fijians tend to place high value on education, self-esteem and family honour and thus tend to encourage and invest in education. It can also be argued that Indo-Fijians suffer from lack of capital security as ownership of land is almost impossible (Norton, 1981). They, thus, tend to invest in human capital. Labour market discrimination can also lead to similar positive investment in human capi-

tal (Sue and Okazaki, 1990). Ali (1976) provides interesting statistics of employment in the Fiji Public Service that indicates that more Ethnic-Fijians were favoured for senior positions.

Despite the more than 100 years of living together there remains a wide social distance between Ethnic-Fijian and Indo-Fijian cultures (Thomas, 1969). Both the major ethnic groups in Fiji have to a large extent kept their cultural identities intact. Ethnic inter-marriages are at best statistically insignificant. Religious groupings remain segregated on ethnic lines. Hence, cultural integration remains insignificant.

In light of the foregoing, the following hypothesis is stated:

H1: In USP's first-year, first-semester degree level accounting course (AF101), Indo-Fijian students outperform Ethnic-Fijian students.

Method: Data collection

A total of 973 (453 on-campus and 520 external) students set for AF101 examination at the University of the South Pacific for the Year 2002. In 2003 629 students sat for on-campus examination. AF101 was selected as a sample from other accounting courses because AF101 has a high drop out rate.¹ The AF101 result data was obtained from the University academic office.

Table 1 presents grade distribution of all students in AF101 for 2002 and 2003. A total of 177 students for 2002 and 74 students for 2003 were dropped from the analysis because these students either repeated the course and/or were awarded a grade showing non-attendance of the final examination (EX). Students repeating AF101 had received more training than first timers. EX grades do not provide a true reflection of performance. Inclusion of student's who receive a zero mark will bias statistical results of students who actually complete the course. Finally, all students where pre-degree performance data was not available were dropped.

Method: Variables

This study uses five independent variables. These are: accounting pre-degree final exam scores (ACCRES); the mode through which pre-degree accounting knowledge was obtained (FORM) with 1 indicating

¹ This is a first in the series of longitudinal studies on student performance at USP which has been conducted. Further analyses were conducted on first-year university on-campus Computing Studies (CS122), Economics (EC102) and Mathematics for social science students (MA101) for 2003.

Foundation studies and 7 indicating Fiji Seventh Form Examination (FSFE) study; the way in which students study AF101 (MODE), 1 being on-campus and 2 being through the external mode; a measure of general academic ability (OVERRES), which is the pre-degree overall final-year performance arrived at by adding the marks in English, Maths, Accounting and one other best subject; and the ethnic group the student comes from (ETHNICITY), 1 being Ethnic-Fijian and 2 being Indo-Fijian.

The dependent variable is the performance of the students in their AF101 course (RESULT) and is the raw score of final exam marks.

Table 1: Grade Distribution Frequency in AF101 for 2002 and 2003

Grade	Mark Range	2002						2003					
		Ethnic Fijian		Indo Fijian		Others		Total	Ethnic Fijian (On-Cam)		Indo Fijian (On-Cam)		Total
		On-Cam	Ext	On-Cam	Ext	On-Cam	Ext						
A+	80+				1			1	2	6			8
A	75-79		1	4	5	2		12	1	8			9
B+	70-74		2	4	5		1	12	1	15			16
B	65-69	1	1	24	12	1	4	43	1	31		1	33
C+	60-64	4	4	51	26	2	4	91	4	47		2	53
C	50-59	27	22	149	80	19	16	313	32	172		30	234
D	40-49	13	11	39	57	11	20	151	37	63		15	115
E	0-39	42	35	15	66	33	41	232	51	34		28	113
EX	Failed to sit exam	2	30	8	48	2	28	118	11	29		5	45
Total		89	106	294	300	70	114	973	140	405		81	626
%		9.1	10.9	30.2	30.8	7.2	11.7	100	22.4	64.7		12.9	100

Methodology: Research Design

The research design to test H1 was based on previous research studies in education literature for prediction of academic performance. Predictor variables reflect general academic ability and specific abilities in similar subjects (Keef, 1990). Previous studies show that general academic abilities and specific accounting subject abilities are predictors for student's performance in first-year university accounting studies (Keef 1988, 1992; Chan and Leung 1990; Auyeung and Sands, 1992; Narsey, 1995; Rohde and Kavanagh, 1996). To test H1, a univariate analysis was conducted with the RESULT being the dependent variable and ETHNICITY and MODE as the independent variables. ACCRES and

OVERRES, which measure specific pre-degree accounting knowledge and pre-degree general academic ability, respectively, are included in the model as control variables (covariates). Model 1 is as follows:

$$RESULT = \beta_0 + \beta_1 ACCRES + \beta_2 OVERRES + \beta_3 MODE + \beta_4 ETHNICITY + e_1$$

(where, RESULT is the performance of the students in their AF101 course; ACCRES is the accounting pre-degree final exam scores; OVERRES is a measure of general academic ability, MODE is the way in which students study AF101; ETHNICITY is the ethnicity of the students).

Table 2 presents descriptive statistics and Tables 3 and 4 present the Univariate Anova analysis for 2002 and 2003 respectively.

Table 2: Descriptive Statistics, 2002 and 2003: Dependent variable RESULT

Study Mode	Ethnicity	Year 2002			Year 2003		
		Mean	Standard Deviation	N	Mean	Standard Deviation	N
On-campus	Indo-Fijian	54.3465	8.12441	254	47.0814	11.21681	86
	Ethnic-Fijian	41.9070	12.19644	43	55.7353	10.29142	306
	Total	52.5455	9.83610	297	53.8367	11.08276	392
Extension	Indo-Fijian	48.0904	12.61725	188			
	Ethnic-Fijian	44.0357	11.60933	28			
	Total	47.5648	12.54000	216			
	Indo-Fijian	51.6855	10.72193	442			
	Ethnic-Fijian	42.7465	11.93042	71			
Total	Total	50.4483	11.31482	513	53.8367	11.08276	392

Note that for year 2003 only on-campus data was collected and hence the variable MODE is dropped from the analysis. The results of Model 1 shows support for H1, that is Indo-Fijian Students significantly outperform Ethnic Fijian students in AF101.² More interestingly, for 2002, the results show an interaction effect between ethnicity and mode of study. While Indo-Fijian students show no significant difference in the way they study AF101 (on-campus or extension), Ethnic-Fijian students who studied AF101 through extension mode significantly outperformed Ethnic-Fijian students who studied AF101 on-campus.

² Model 1 was also tested using all students who received “EX” grade. The results obtained did not change.

Table 3: Univariate Analysis: Effects of Ethnicity and Study Mode on Dependent Variable RESULT for 2002

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	20198.245(*)	5	4039.649	45.161	.000
Intercept	2126.423	1	2126.423	23.772	.000
ACC	7481.112	1	7481.112	83.636	.000*
OVPERPRA	1123.838	1	1123.838	12.564	.000*
MODE	556.845	1	556.845	6.225	.013*
ETHNICITY	2966.823	1	2966.823	33.168	.000*
MODE * ETHNICITY	495.984	1	495.984	5.545	.019*
Error	45350.636	507	89.449		
Total	1371152.000	513			
Corrected Total	65548.881	512			

* R Squared = .308 (Adjusted R Squared = .301)

Table 4: Univariate Analysis: Effects of Ethnicity on the Dependent Variable RESULT for 2003

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	21628.419(*)	3	7209.473	105.969	.000
Intercept	392.769	1	392.769	5.773	.017
ACC	781.595	1	781.595	11.488	.001*
OVERRES	3987.533	1	3987.533	58.611	.000*
ETHNICITY	2044.748	1	2044.748	30.055	.000*
Error	26397.132	388	68.034		
Total	1184196.000	392			
Corrected Total	48025.551	391			

* R Squared = .450 (Adjusted R Squared = .446)

Further analysis indicates that Ethnic-Fijian students who obtained their pre-degree accounting education through the Fiji Seventh Form Examination (FSFE) significantly outperformed Ethnic-Fijian students who completed the USP's Foundation augmented program.

In Fiji students have two options of completing their final-year of pre-degree qualifications. Students can either complete their final-year through FSFE or study in the foundation augmented program at the Uni-

versity of the South Pacific.³ Ministry of Education administers secondary school exams in Fiji. Students must obtain a total of 250 marks in the best four subjects plus a pass in English in sixth form to gain entry into the FSFE. Classes are conducted as normally done in secondary schools. That is, students study with 38 contact hours per week, with a trimester year of 14 weeks each. The final performances are almost all weighted on the final three-hour exam in each subject at the end of the year. Students are required to select at least four subjects including English and Maths. Students need to gain 250 marks in the best four subjects including a pass in English and Maths in FSFE to obtain entry into the accounting degree program at USP.

Foundation augmented students, on the other hand, have a completely different method of study. The USP administers the foundation program. The assessment responsibilities lay with the individual academic departments for each course. The courses are administered on a bi-semester basis with individual courses offered as a one-semester module. Students must obtain a total of 250 marks in the best four subjects plus a pass in English in sixth form to gain entry into the foundation program. Each foundation student must complete and pass at least 7 modules (C or better grade) including 2 of maths and 2 of English to gain entry into the degree accounting program at USP. Table 5 presents the success rate of students who enrolled in AF101 through Foundation and FSFE for 2002 and 2003.

Table 5: Success Rate of AF101 Students Enrolled Through Different Modes

Ethnicity		Ethnic-Fijian		Indo-Fijian	
		Foundation	FSFE	Foundation	FSFE
Mode of Pre-degree studies					
Year 2002	Number Passed	3	44	4	338
	Number Enrolled	36	89	19	491
Year 2003	Number Passed	23	16	9	255
	Number Enrolled	71	35	32	314

For the Year 2002, out of the 36 Ethnic-Fijian students who enrolled in AF101 through the Foundation augmented program at USP, 33 students failed, and out of the 89 Ethnic-Fijian students who enrolled in AF101 through the FSFE only 45 students failed. Similarly, for Year 2003, of the 71 Ethnic-Fijian students who enrolled in AF101 through the Foundation augmented program at USP, 48 students failed, and out of 35

³ From 2005, a third option was available to students by the establishment of the University of Fiji in Lautoka, which offers pre-degree and degree programs.

Ethnic-Fijian students who enrolled through the FSFE, 14 students failed.

For the Year 2002, out of the 19 Indo-Fijian students who enrolled in AF101 through the Foundation augmented program at USP, 15 students failed, and out of the 491 Indo-Fijian students who enrolled in AF101 through the FSFE, only 153 students failed. Similarly, for Year 2003, out of the 32 Indo-Fijian students who enrolled in AF101 through the Foundation augmented program at USP, 23 students failed, and out of 314 Indo-Fijian students who enrolled through the FSFE, 59 students failed. Table 6 present the descriptive statistic and Table 7 and 8 presents Univariate ANOVA analysis respectively.

Table 6: Descriptive Statistics: Dependent Variable RESULT with the Independent Variable FORM for Ethnic-Fijian students

FORM	Year 2002			Year 2003		
	Mean	Std. Deviation	N	Mean	Std. Deviation	N
Foundation	34.0476	9.99738	21	46.2203	11.37309	59
FSFE	46.4000	10.79304	50	48.9630	10.83613	27
Total	42.7465	11.93042	71	47.0814	11.21681	86

Table 7: Univariate Analysis: Effects of the Way Pre-degree Accounting Education is Obtained and Dependent Variable RESULT for Ethnic-Fijian students for 2003

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4381.966(*)	3	1460.655	17.534	.000
Intercept	7.484	1	7.484	.090	.765
ACC	3.246	1	3.246	.039	.844
OVERRES	835.264	1	835.264	10.027	.002*
FORM	2345.447	1	2345.447	28.155	.000*
Error	5581.471	67	83.306		
Total	139699.000	71			
Corrected Total	9963.437	70			

* R Squared = .440 (Adjusted R Squared = .415)

Limitations

There are several limitations of this study. This study was conducted only for the University of the South Pacific. Results could only be generalized in a limited manner. Second, this study only analyses the results of one academic discipline. Formal research needs to be conducted for other academic disciplines as well. Third, the paper analysed only one course

for a limited period of time. Finally, the study employed a simple model to capture only some variables of interest across the two major ethnic groups in Fiji; a more complex model with extensive data is needed to explore the effects of other important variables that may impact on first-year first-semester introductory accounting education.

Table 8: Univariate Analysis: Effects of the Way Pre-degree Accounting Education is Obtained and Dependent Variable RESULT for Ethnic-Fijian students, 2004

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4955.628(a)	3	1651.876	23.603	.000
Intercept	151.141	1	151.141	2.160	.146
ACC	135.479	1	135.479	1.936	.168
OVERRES	973.853	1	973.853	13.915	.000*
FORM	320.229	1	320.229	4.576	.035*
Error	5738.803	82	69.985		
Total	201327.000	86			
Corrected Total	10694.430	85			

R Squared = .463 (Adjusted R Squared = .444)

Conclusion

This study shows that ethnicity is an important factor affecting first-year university accounting students' performance. Indo-Fijian students outperformed Ethnic-Fijian students for the courses analysed. However, Ethnic-Fijian students did better through extension studies compared to Ethnic Fijian students who studied on-campus. These effects could be due to other factors like maturity as DFL students tend to be relatively older compared to on-campus students (Patel and Patel, 2003), and the relatively high degree of private fee paying student enrolments in DFL courses compared to on-campus courses. Further research is needed on factors which contribute to better performance.

However, from the results of the courses analysed in this paper, one factor which emerges as important is the mode in which Ethnic-Fijian students obtained their pre-degree education. Ethnic-Fijian students who completed the FSFE did better than students who completed the USP Foundation program. The reasons for this variation need to be examined further.

Several studies indicate that unique behaviour patterns impact upon

academic performance. Family background, which includes ethnicity, residential location (urban or rural), parents education and family income, family structure (number of siblings, age ranking of siblings, headship structure), home educational resources, student characteristics, etc., impact student academic performance. Further research needs to be done to consider the many factors that affect Ethnic-Fijian student academic performance at the tertiary level.

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