

Factors Contributing to Attendance Type of Domestic Undergraduate students

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Structure of the Presentation

- **Background and Purpose**
- **Analytical Framework**
- **Data and Method of Analysis**
- **Results**
- **Conclusions and Policy implications**



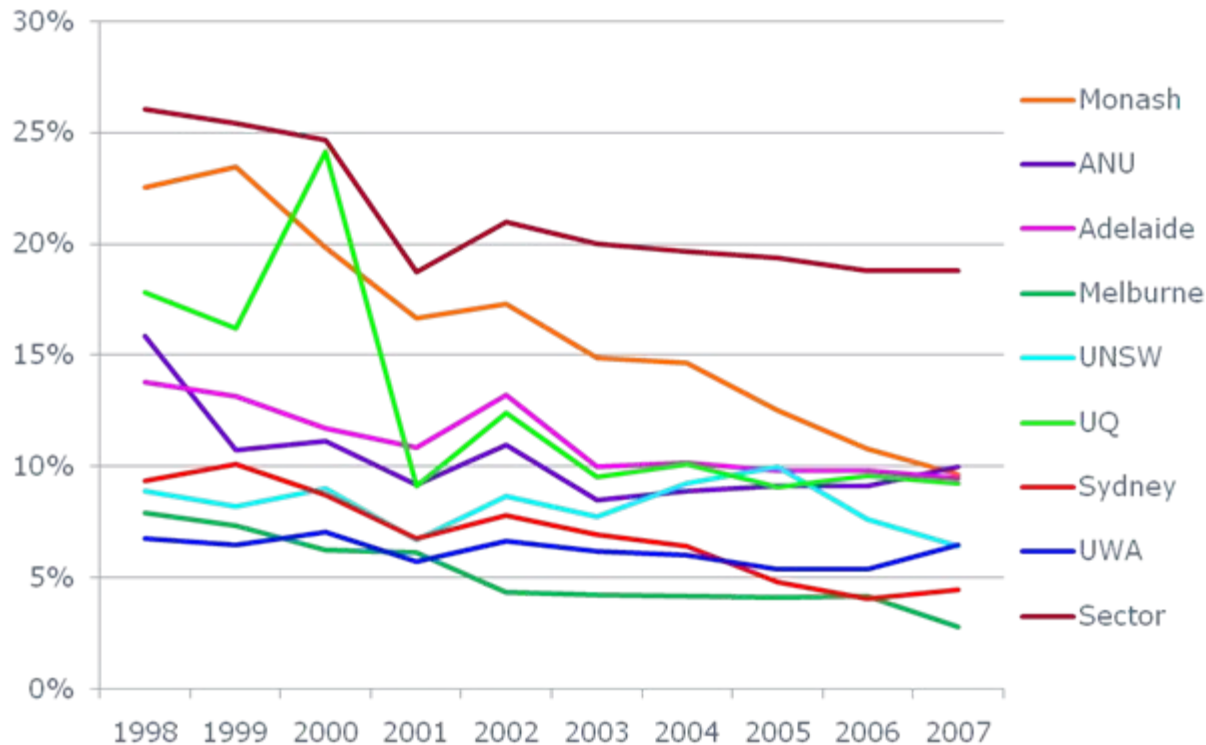
Part Time Attendance Rate of Commencing Undergraduates for G08 and Sector

Institution Name	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Monash	23	23	20	17	17	15	15	13	11	10
ANU	16	11	11	9	11	8	9	9	9	10
Adelaide	14	13	12	11	13	10	10	10	10	10
Melbourne	8	7	6	6	4	4	4	4	4	3
UNSW	9	8	9	7	9	8	9	10	8	6
UQ	18	16	24	9	12	10	10	9	10	9
Sydney	9	10	9	7	8	7	6	5	4	4
UWA	7	7	7	6	7	6	6	5	5	6
Sector	26	25	25	19	21	20	20	19	19	19

Source: DEEWR



Part Time Attendance Rate of Commencing Undergraduates for G08 and Sector



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Purpose

- The purpose of this paper is to understand the factors that influence domestic undergraduate students' choices of attendance type.
- The paper attempts to explain, to what extent attendance type is determined by socio-economic factors and other study related factors



Study of Hypothesis

- Hypothesis 1: Students choosing part time options are from disadvantaged groups: low socio economic status (SES) or Non-English Speaking Background (NESB) or people with disabilities that prevent them from following the more traditional full time options of higher education.
- Hypothesis 2: Students choosing part time options are mature aged or female that is unable to access the traditional option of full time studies due to family commitments that could include caring for their children and working.
- Hypothesis 3: Students choosing part time options are those who have modest academic ability and achievements and opt to select part time options and programs with less academic demands.



Variables Considered

- **Personal Information**
 - Age
 - Gender
 - Mode of attendance
 - Home location
 - Socio-economic status
 - Language spoken at home
 - Disability status
- **Study Related Factors**
 - Basis of admission
 - Field of education
 - Tertiary Entrance Rank (TER)



Data

- The study utilised all domestic commencing undergraduate student enrolment records at the University of Adelaide between 1998 and 2008 reported to DEEWR based on annual student data collection. Much of the information for the analysis was extracted from enrolments and load/liability files. Only Domestic students who had commenced Bachelor Pass programs during this period were included in the analysis



Commencing Undergraduate Enrolments by Attendance Type and Year

Year	Full Time	Part Time	Total
1998	2438	401	2839
1999	2352	383	2735
2000	2337	324	2661
2001	2932	386	3318
2002	2857	334	3191
2003	2847	319	3166
2004	2663	295	2958
2005	2612	289	2901
2006	2773	295	3068
2007	3014	308	3322
2008	3055	328	3383



Method of Analysis

- In addition to preliminary investigation of descriptive statistics, the analysis was mainly carried out using binary logistic regression. Logistic regression was the obvious choice of data analysis technique as it was well suited for the analysis of categorical variables.



Definition of part time attendance

- If the student load aggregated for all the courses being undertaken by the student in the collection year was less than 0.75 EFTSL it was defined as part time and a course load of 0.75 EFTSL or more was defined as full time.



Measurements of Variables Included in the Logistic Registration Model

Variable	Categorical Measurement	Variable	Categorical Measurement
Attendance Type (Dependent)	Part Time=1	Entry Type	Year 12 Qualification=1
	Full time=0		Other=0
Age			
Gender	Female=1	FOE Broad Field by Faculty	Humanities=0
	Male= 0		Sciences=1
Mode of Attendance	Other=1		Profession=2
	Internal=0		Health=3
Home State	Other Areas=1	Language Spoken at Home	Engineering=4
	SA Metro=0		Non-English=1
Australian Socio/Econmic Status	High=3	Disability	English=0
	Medium=2		With Disability=1
State Socio/Econmic Status	Low=1	TER (Tertiary Rank Score)	Without Disability=0



The Regression Model

Logit (p) = β_0 + β_1 (Age) + β_2 (Gender) + β_3 (Mode of Attendance) + β_4 (Home Region) + β_5 (AUS SES status) + β_6 (State SES status) + β_7 (Entry Type) + β_8 (Broad Study Fields) + β_9 (Disability) + β_{10} (TER)

Where p denotes the probability of student attending part time. β_0 is the constant and β_1 β_{10} are estimated parameters corresponding to predictor variables included in the model.



Descriptive Statistics of Study Population

Variable	Full Time	Part Time	Variable	Full Time	Part Time
Mean Age			SES Status*		
Male	19	27	High%	89	11
Female	19	28	Low%	90	10
			Medium%	89	11
Gender***			Mode Of Attendance***		
Female %	87	13	Internal%	89	11
Male %	91	9	External%	36	64
			Multi modal%	78	22
Entry Type***			Language Spoken at Home*		
Special Entry%	81	19	English Speaking%	88	12
TAFE%	61	39	Non English Speaking%	91	9
Tertiary Level%	71	29			
Year 12%	94	6			
			TER (Mean Score)	85	82
Disability Level***			Broad Study Area***		
With Disability%	80	20	Humanities%	83	17
Without Disability%	87	13	Sciences%	90	10
			Profession%	92	8
Unknown%	91	9	Health%	96	4
Home Region*			Engineering%	96	4
Interstate%	94	6	All Students%	89	11
SA Metro%	88	12			
SA Rural%	93	7			

*** p<=.001 **p<=.01 *p<=.05

Note: Level of significance for association with attendance type based on chi squared test is indicated against each categorical variable



Logistic Regression predicting part time attendance

Predictor	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Pooled Data
Female	-0.38**		-0.35*		-0.81***	-0.50**			-0.37*			-0.27***
Age	0.09***	0.20***	0.12***	0.17***	0.19***	0.14***	0.17***	0.17***	0.16***	0.17***	0.17***	0.15***
Broad Field of Study												
Sciences	0.72**		1.64***	0.59*	0.92*	0.65*	1.01**		0.34	0.38	0.80***	0.56***
Professions	0.42		1.07**	-0.39	0.65	0.29	0.86*		-0.14	-0.03	0.79**	0.33***
Health	0.56*		0.83*	-0.10	0.74	0.63	0.42		0.07	-0.27	0.77**	0.22*
Engineering	-0.27		0.51	-1.99	-0.58	-0.57	0.06		-1.28	-0.86*	-0.45	-0.67***
Basis of Admission												
Non Year 12 qualification	-1.21***					-0.48**		-0.54*		-0.46*		-0.54***
Disability Level												
With Disability				-1.29*					-0.69*		-0.59*	
TER					-0.012*	-0.012*		-0.001*				
Home Region												
Non SA Metro Area						-0.59*	-1.03**		-0.74*	-0.59*	-0.57*	-0.53***
Attendance Mode												
External							-2.22***	-1.78**	-3.35***	-2.81***		-1.43**
Constant	-3.6***	-6.56***	-5.61***	-4.70***	-5.73***	-4.19***	-4.40***	-3.56***	-1.74	-2.89**	-5.77***	-3.72***
N	2798	1847	2661	2089	2857	2917	2684	2613	2756	3018	3106	26686
Overall Percentage	87.1	93.9	89.1	89.1	92.8	92.0	92.3	92.3	92.9	93.5	92.3	92.3
-2 Log likelihood	1794.1	753.7	1574.1	804.7	1271.0	1354.9	1196.2	1232.0	1225.5	1241.7	1434.0	12489
Cox & Snell R Square	0.17	0.05	0.14	0.05	0.11	0.10	0.11	0.09	0.10	0.09	0.09	0.10
Nagelkerke R Square	0.30	0.05	0.27	0.14	0.25	0.23	0.25	0.21	0.23	0.23	0.21	0.22

*** p<=.001 **p<=.01 *p<=.05

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Logistic Regression Method of Analysis

Predictor	B	Wald χ^2	p	Odds
Age	.147	1060.293	< .001	1.159
Female	-.268	26.725	< .001	.765
<i>Home Region</i>				
Non SA Metro Area	-.526	37.269	< .001	.591
<i>Attendance Mode</i>				
External	-1.434	34.066	< .001	.238
<i>Program Field</i>				
Sciences	.557	36.823	< .001	1.745
Professions	.326	11.071	< .001	1.385
Health	.218	4.600	.032	1.244
Engineering	-.666	20.117	< .001	.514
<i>Entry Type</i>				
Non Year 12 qualification	-.538	82.622	< .001	.584
Constant	-3.724	163.780	< .001	.024
N	26686			
Overall Percentage	92.3			
-2 Log likelihood	12489			
Cox & Snell R Square	0.10			
Nagelkerke R Square	0.22			



Conclusions

- The available evidence does not support the first hypothesis that students choosing part time options are those who represent disadvantaged socio-economic groups and primarily come from low SES and Non-English Speaking backgrounds.
- There was strong evidence to support hypothesis 2 that students choosing part time options were mature aged. Age was the most significant variable, selected for the model, with a positive relationship to part time attendance.
- There was no strong evidence to support the hypothesis that those who have modest academic ability and achievements opt to select part time options.



Further Improvements

- Need primary data than secondary data used in the current analysis.
- Information that particularly references educational aspirations, plans and expectations of individuals as well as more personal information including other economic and social commitments.
- More realistic data on socio economic status of individuals as well as their academic abilities.
- part time enrolments considered in this analysis were domestic commencing undergraduates and only represent a cross section of the undergraduate student population. Many students change their status, switching between part time and full time status during the course of their studies. Students such as these should also be included for further exploration of factors contributing to attendance types in future research.



Policy Implications

- Part time enrolments are likely to continue and grow as demographic changes are putting pressure on institutions to rely less on school leavers and more on mature age and non-traditional students in the future.
- The analysis of the attendance pattern of current student population would help Universities to develop appropriate marketing strategies to increase recruitment and target new student cohorts as well as providing a basis for more accurate enrolment projections for future planning. The current attendance type by program may also help to schedule classes, develop time tables and structure program offerings more appropriately.
- University admission staff needs to consider student behavioural patterns in allocation of program quotas for different admission categories.
- Institutional planners also need to consider the extent of part time attendance in a given program when making forecasts for completion rates as part time attendance usually lengthen the time taken to graduate.

