A Study on Exploring the Academic Dropout of College Students (Centering Around D College)

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Abstract

This study analyzed the status and causes for the dropouts of college based on the survey conducted among 14,210 freshmen attending D College, other than the supernumerary special selection, from 2001 through 2005.

A significant difference was shown in all items of general characteristics. The dropout rate of women, generally selected and general high school graduated were higher than for men, specially selected and special high school graduated, respectively. The most dropouts were due to Not Return (40.16%), followed by Unenrolled (32.98%), Voluntary Leave (26.05%) and Expelled (0.81%) in order.

In the distribution of the central tendency values measured from the entire subjects, the high school records and the days of absence showed a positive skewness, while the college records showed a negative skewness with the data mostly around a higher grade. The standard deviation indicating that the dropouts got the scores higher than those of the continuing students demonstrated that there was relatively insignificant difference in scores between two groups.

1. Introduction

The number of students entering the college is expected to decrease, as young people greatly decrease due to the declining birthrate in recent years. According to the data from the National Statistical Office, the number of the high school graduates is expected to mildly increase between 2008 and 2013, with a return to decrease since then. At the peak of 680,000 in 2008, now the outlook is a serious decrease from 2013, and subsequently to 493,000 by 2020, 421,000 by 2030 and 311,000 by 2050. Increasing numbers of local colleges have already seen 70% or below of the enrollment rate. The decreased number of new students may cause a vicious circle to decrease the undergraduate, and compromise the quality of education, and in turn adversely affect the employment after the graduation. Managing the undergraduates, as well as securing the number of new students, is one of the important factors to enhance the competitiveness of the college, and improve the quality of education. The improvement of the quality of education is closely associated with the efforts to prevent the dropouts so as to keep the students remaining in the college.

While the dropouts of a high school or under have tended to decrease from 2.7% for a middle school and 3.7% for a high school in 1970 to 0.8% and 1.3%, respectively, the dropout of a college to increase annually, showing the dropout rate of the junior colleges was higher than that of the universities.

This study used the current enrollment status of the students entering the college from 2001 through 2005 as of December 2007 to analyze the correlation between the dropouts and causes, compared with the continuing students.

2. Study and Analysis Method

2.1 Subjects and Period

This study was based on the survey conducted among 15,838 freshmen entering from 2001 through 2005, in cooperation with the office of academic affairs in D college. The current enrollment status of 14,210 students, excluding the students specially selected (the industrial consignment, the college graduates, the special rural selection, and the foreign students), as of December 2007 were used as a statistical data.

The analysis items included the gender, the admission selection, the department, the high school background, the native place, the course of study and the entrance status. The admission selection was identified into the general selection and the special selection; the department into the public health, the science of nursing, the social practices and the arts and sports, based on the classification of the departments in D College; the high school background into a general high school and a special high school; the native place into Daegu, Kyeongsangbuk-do, Kyeongsangnam-do and other areas, based on the locations of a high school

background; and the entrance status into the entrance immediately after a high school and the entrance after a repeated application.

Table 1 showed the general characteristics of subjects. Among 14,210 students, women (56.90%) was slightly more than men (43.10%); more students fell into the categories, including the general selection (70.10%), the public health (69.98%) and the Daegu natives (68.88%) because of the nature of the College; the course of study did not show any significant difference between two-year (52.34%) and three-year (47.66%); and the entrance immediately after a high school (81.96%) was more than the entrance after a repeated application (18.04%).

Table 1. General Characteristics of Respondents

Item	Description	Number of Respondent (%)
Gender	Men	6,124(43.10)
	Women	8,086(56.90)
Admission Selection	General Selection	9,972(70.18)
	Special Selection	4,238(29.82)
Department	Public Health	9,944(69.98)
	Science of Nursing	400(2.81)
	Engineering	1,394(9.81)
	Social Practices	1,350(9.50)
	Arts and Sports	1,122(7.90)
High School Background	General High School	10,063(70.82)
	Special High School	4,147(29.18)
Native Place	Daegu	9,788(68.88)
	Kyeongsangbuk-do	2,410(16.96)
	Kyeongsangnam-do (Incl. Busan and Ulsan)	1,242(8.72)
	Other Areas	770(5.42)
Course of Study	Two-year	7,438(52.34)
	Three-year	6,772(47.66)
Entrance Status	Immediately after Graduating a High School	11,646(81.96)
	Repeater	2,564(18.04)
Total		14,210(100)

2.2 Data Analysis

For the frequency analysis and the cross tabulation, the gender, the admission selection, the department, the high school background, the native place, the course of study and the entrance status were used as an independent variable, while the continuing student and the dropout as a dependent variable.

The continuing students included undergraduates, graduates and the students on leave of absence, while the dropouts included the students unenrolled, not returned, expelled and voluntarily left.

Two dependent variables, including the continuing student and the dropout, and three categories of independent variables, including the high school records and the days of absence in high school, the college records, and the general characteristics aforesaid, were used in the factor analysis of dropouts (see Table 2).

Table 2. Variables of the Factor Analysis
1) Dependent Variable

Continuing Students	Undergraduate, Graduate, and Student on Leave of Absence
Dropouts	Unenrolled, Not Return, Expelled, and Voluntary Leave

2) Independent Variable

College Records	Scores of the First Term in the Freshmen Year	GPA (Full Marks: 4.5)	
	Credits of the First Term in the Freshmen Year		
	Scores of the Second Term in the Freshmen Year	GPA (Full Marks: 4.5)	
	Credits of the Second Term in the Freshmen Year		
	Average Scores of the Freshmen Year	GPA (Full Marks: 4.5)	
General Characteristics	Gender	Man and Women	
	Admission Selection	General Selection and Special Selection	
	Department	Public Health, Science of Nursing, Engineering, Social Practices, and Arts and Sports	
	High School Background	General High School and Special High School	
	Native Place	Daegu, Kyeongbuk, Kyeongnam (incl. Busan and Ulsan), and Other Areas	
	Course of Study	Two-Year and Three-Year	
	Entrance Status	Immediately after Graduating a High School and Repeater	

The college records were defined as the scores and credits of the freshmen year, and the scores and

credits of each term in the freshmen year were used as a sub-variable for further detailed analysis. The college records stated in GPA (Grade Point Average), while the high school records in the percentage of ranking for all subjects in whole school years. In contrast to D college that classified the percentage of ranking for all subjects into 1-15 grades, this study used the percentage of ranking by subject. The percentage of ranking by subject was calculated in (Ranking by Subject ÷ Number of Students by School Year) x 100. The lower the calculated value was, the better the grade was. In order to maintain the defined relation with other variables, the high school records were converted into (100 - Percentage of Ranking for All Subjects). The higher the calculated value was, the better the grade was.

A statistics package program SAS (Statistics Software) was used for the data analysis to obtain the descriptive statistics, which in turn were used to analyze the distribution characteristics of the data. The significance was tested in the cross tabulation by item. χ^2-test was used to verify the significance at $p < 0.05$. In addition, the logistic regression was used for the factor analysis of dropouts.

3. Results and Discussion

3.1. Frequency Analysis of the Continuing Students and Dropouts

The frequency analysis was based on the general characteristics and reasons of the dropouts.

1) Status of the Continuing Students and the Dropouts
The frequency analysis based on the general characteristics demonstrated that the dropout rate was relatively high, accounting for 13.91% of total 14,210 students entering from 2001 through 2005. Nevertheless, the causes and measures for the dropouts of college have not been studied sufficiently.

All items, including the gender, the admission selection, the department, the high school background, the native place, the course of study, and the entrance status, suggested a significant difference between the continuing students and the dropouts at p < 0.001.

The dropout rate was relatively high in men than women, the special selection than the general selection, a special high school than a general high school, Daegu natives, the two-year course, the repeater, and the arts and sports department (29.14%).

2) Status of the Dropouts by Reason

The results of analyzing the dropouts by reason indicated that there was a significant difference in all general characteristics (gender at p < 0.001, admission selection at p < 0.01, department at p < 0.001, high school background at p < 0.001, native place at p < 0.01, course of study at p < 0.001, and entrance status at p < 0.05.

The most dropouts were due to Not Return (40.1%), followed by Unenrolled (32.98%), Voluntary Leave (26.05%) and Expelled (0.81%) in order.

Not Return was the most reasons for dropout in man (45.42%), the public health department (38.03%), the engineering department (48.77%), and the arts and sports department (45.87%), while Unenrolled was the most reasons for dropout in women (40.07%), and the social practices department (45.64%). Exceptionally, Voluntary Leave was the most reasons for dropout in the science of nursing department (41.38%).

The most dropouts were due to Voluntary Leave in the native place farther away from D College (43.68%), and the three-year course (38.39%), while Unenrolled in repeaters (37.98%), and Not Return in new students entering immediately after graduating a high school (41.69%).

3.2 Descriptive Statistics Analysis of the Continuing Students and the Dropouts

1) Descriptive Statistics of the Continuing Students and the Dropouts
A. The Distribution Characteristics of the High School Records and the College Records
The distribution of the high school records and the college records was analyzed to determine the measures of central tendency (the point at which the distribution was in balance) and the variation (the extent to which the data varied).

In the distribution of the central tendency values measured from the entire subjects, the high school records and the days of absence showed a positive skewness with the data mostly around a lower grade. For the dropouts, the college scores and credits of the first term in the freshmen year and the average scores of the freshmen year showed a negative skewness with the data mostly around a higher grade. For the continuing students, the entire college records showed a negative skewness. The standard deviation indicating that the dropouts got the scores higher than those of the continuing students demonstrated that there was relatively insignificant difference in scores between two groups.

2) Descriptive Statistics of the Dropouts by Reason
In the distribution of the central tendency values measured from the entire subjects, the high school records and the days of absence showed a positive skewness, while the sub-variables related to the

college records showed a negative skewness. The standard deviation demonstrated that there was insignificant difference in college records among reasons, excepting for the Expelled, which was relatively low.

4. Conclusion

This study analyzed the status and causes for the dropouts of college based on the survey conducted among 14,210 freshmen attending D College, other than the supernumerary special selection, from 2001 through 2005. The correlation analysis based on the general characteristics reached the following conclusions:

1) The dropout rate was relatively high, accounting for 13.91% of total 14,210 students.
2) A significant difference was shown in all items of general characteristics. The dropout rate of women, generally selected and general high school graduated were higher than for men, specially selected and special high school graduated, respectively.
3) The dropout rate was relatively higher in the Daegu natives, the two-year course, the repeaters, and the arts and sports department (29.14%).
4) The most dropouts were due to Not Return (40.16%), followed by Unenrolled (32.98%), Voluntary Leave (26.05%) and Expelled (0.81%) in order.

In the distribution of the central tendency values measured from the entire subjects, the high school records and the days of absence showed a positive skewness, while the college records showed a negative skewness with the data mostly around a higher grade. The standard deviation indicating that the dropouts got the scores higher than those of the continuing students demonstrated that there was relatively insignificant difference in scores between two groups.

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