JTS

The Journal of Transdisciplinary Studies, 6(3): 277-294, 2022
https://doi.org/10.22685/JTS.2022.6.3.277

An Analysis of the Determinants of Participation in the University Employment Support Program

Hyo-Young Lee

Professor, Cha Mirisa liberal arts, Duksung Women's University, Korea (prepare31@naver.com)

ARTICLE INFO

Article history:
Received 21 October 2022
Revised 18 November 2022
Accepted 18 November 2022

Keywords:
University Employment Support Program,
Work Experience Program,
University Graduate Job Mobility Survey,
Participation in Employment Support Program,
University Characteristics

ABSTRACT

The purpose of this study is to analyze the factors that affect the university students' participation in the employment support programs. Towards this end, the Korea Employment Information Service's 'University Graduates Occupational Mobility Survey' related panel data were used, and the variables that affect the participation in the employment support program with 3,916 students in 2-3 year and 4-year universities were analyzed as individual variables, university characteristics, and education, which were analyzed by classifying into the supporting variables and employment preparation factors. For the study, descriptive statistics and frequency analysis were conducted, and cross-tabulation and binomial logistic regression analysis were conducted to analyze the differences in the participation in the employment support program and the influential factors. The main analytical results are as follows. First, as a result of cross-analysis to confirm individual background differences in the employment support program participation, there was a significant difference in the employment support program participation according to gender, major, and school type. Second, as a result of the binomial logistic regression analysis conducted to identify the factors influencing the participation in the university student work experience program, the individual variables include humanities majors in majors, academic grades, recognition of youth subsidy, and student support system and career related counseling and satisfaction with the support system. Third, the factors influencing the participation in the work experience program at universities in the non-metropolitan areas were humanities among majors, student loans, grades, and satisfaction with the student support system and career related counseling and support system among educational support variables. Fourth, the factors influencing the participation in the work experience program for universities in the metropolitan areas were the individual variables, whether youth subsidy, university characteristics, school type, and employment preparation factors, job experience while attending school, volunteer work, and contest experience. Based on the results of the study, the implications for setting the direction of the university employment support program and the limitations of the study were discussed.

1. Introduction

The university entrance rate in 2020 in Korea is 79.4%, which is relatively high, while the employment rate of university graduates is relatively low at 44.2% (Statistics Korea, 2021). Even if they are employed, more than 6 out of 10 employed are part-time workers, and the level of job instability is serious, while the turnover rate within 1 year after joining the company has risen significantly to more than 75%. As the unemployment problem of university graduates intensifies, the social role and responsibility of universities have been continuously demanded. That is, today's universities are required to foster the talented people who can respond not only to traditional academic and research functions, but also to the rapid changes and demands of society. Career and employment support is one of the major roles of universities. University students have also said that their largest concern in university life was 'career after graduation (employment, entrepreneurship, advancement, etc.)', and that 'taking courses for career exploration in the field of their major' was the most necessary part of university support. In an effort to address this problem, many domestic universities have established career employment related organizations since the 1990s, and provide various educational curricula related to job competency. The organizations related to career and employment in universities are operated under the names of career development centers, employment support centers, and human resource development centers, while providing career and job counseling, self-introduction writing, special lectures on employment, interview training, and support for obtaining certifications.

The university employment support program is a formal or non-formal curriculum that connects students' careers and employment in order to supplement the bias of academic centric curriculum and reflect the demand for human resources in industries (Lim, 2018). Employment programs at universities consist of subject and extracurricular subjects (Choi, 2020). Career exploration and career planning for the underclassmen, and employment competency development for the upperclassmen are consisted of the programs to strengthen field capabilities. The university employment support program helps the students with career planning and provides on-the-job training so that they can get a job at a related institution where they can perform the job they want by strengthening their job competency. Furthermore, by providing the information on companies, document preparation, and interview skills, they are strengthening the competencies necessary for employment. Employment support programs vary depending on the type of operation, but generally include job fairs, career aptitude tests, job mentoring, work experience programs, job camps, job counseling programs, and job clubs (Shin et al., 2013). The significance of the university employment support program is, first, to provide necessary information for choosing a career path and occupation, and through this help to establish employment strategies (Seon et al., 2012). One can identify the basic job skills one needs and systematically prepare for employment. Second, as a preparation step for employment, it is intended to help the students acquire relevant qualifications, such as values, attitudes, and skills, as well as job and occupational knowledge to enable the employment.

The effects of employment support programs have been continuously addressed in the relevant previous studies. The university students who participated in the employment support program provided by the university are more likely to choose a job with higher occupational aptitude than the non-participant students (Baek & Hwang, 2009), career path decision-making self-efficacy, job preparation

behavior (Park, 2016; Youn, 2015; Lim, 2018), job satisfaction after university graduation (Kang et al., 2008; Roh et al., 2011), and job matching degree (Oh & Lim, 2020) have significant effects on employment performance. That is, the level of aptitude matching may be confirmed by identifying the job through the work experience program, which can reduce the rate of turnover due to maladaptation after graduation. However, not all types of employment support programs are positive for the employment performance. For example, taking career education courses among the types of employment support programs was found to have a negative impact on the job satisfaction and major alignment, but the experience of participating in the work experience program affected aptitude and interest, workplace and job satisfaction, academic background, skills, and majors. It was found to have a positive effect on concordance (Park & Park, 2019) and achievement of employment goals (Kim, 2015). Furthermore, it was confirmed that the higher the participation in the psychological test program, the lower the wage level, but the higher the participation in the work experience such as internship (Mo et al., 2019). As such, in the case of work experience programs provided by universities, they have a direct or indirect influence on the university life, so it is meaningful to examine the influential factors.

Notwithstanding which, while there are different influences on the employment performance depending on the type of employment support program as well as the location of the university (metropolitan area or non-metropolitan area) (Ryu, 2005; Chae & Kim, 2009), an analysis or study of employment support programs for individuals and universities is inadequate. Furthermore, as the transition of university students towards the world of profession becomes important, despite the increasing number of studies on university employment support programs, the proportion of studies focused on employment performance is high (Kim, 2015; Roh et al., 2011; Mo et al., 2019; Shin et al., 2013 ; Lim, 2018; Heo, 2016). Hence, in a situation where interest in university careers and employment is increasing, and participation in the employment support programs are increasing, it would be necessary to examine the factors that affect the participation in the work experience programs by individual variables, university characteristics, educational support variables, and employment preparation factors.

In this study, in order to identify the variables that affect university participation in the employment support program, the related variables are sought to be analyzed for university students by dividing them into individual variables, university characteristics, educational support variables, and employment preparation factors. The research questions for conducting the research are as follows. First, what are the individual backgrounds that vary according to participation in the employment support program? Second, what are the predictive factors that determine the participation in the university work experience program? Third, what are the predictive factors that determine the participation in university work experience programs in the non-metropolitan areas? Fourth, what are the predictive factors that determine the participation in the university work experience programs in the metropolitan area?

2. Analysis of Previous Studies

The employment support program was introduced to help the university students transition smoothly from school towards the labor market by providing the information on jobs, strengthening the will

to find employment through work experience, and cultivating job competency (Kim, 2012). In the university evaluation, as the employment rate was emphasized as an external factor along with an internal factor of education, the two factors interacted, which further promoted the university's employment support program (Lim, 2018). First, the employment support program enhances the sense of employment and job-seeking efficacy to form an active and positive employment attitude and attitude through the understanding of one's vocational aptitude and ability, and the improvement of the will and desire for employment. Second, by searching information on the type of job and job you want to work for, it helps you decide on a career path in the field of employment, and supports job-seeking decision-making for job execution. Third, it is operated with the goal of helping successful employment by discovering one's potential strengths and improving job-seeking skills that may be communicated to job-seeking agencies by learning the job search and employment skills required for the desired job type and job field (Kim, 2012).

The studies on the participation in the employment support program in universities affect labor market performance and employment performance (Roh et al., 2011; Mo et al., 2019; Shin et al., 2013; Choi, 2017; Chun et al., 2019) and the participation in the employment support programs may be classified into studies that analyzed the impact of individual career development (Kim & Jung, 2013; Kim, 2012; Youn, 2015; Lee & Youn, 2012; Lim, 2018). The classification is organized as follows.

First, as a study that uncovered the effect of employment support programs on the labor market performance and employment performance, it highlighted the relevance among the university students' employability and full-time employment (Roh et al., 2011; Shin et al., 2013; Chun et al., 2019), employability (Youn, 2015; Lim, 2018), and wages (Mo et al., 2019). It turned out that participation in the work experience program among employment support programs and receiving help had a positive effect on full-time and part-time employment even after considering the effects of student and university variables (Shin et al., 2013). Roh et al. (2011) analyzed the effects of student participation and benefits of employment courses and employment support programs on employment performance. As a result of analyzing the impact of participation in career guidance programs on job acquisition after graduating from university, Kim (2015) found that completion of career and employment related courses, interviews and resume writing, increased the employment probability of graduates who participated in the employment support programs, and in the case of work experience programs, it had a positive effect on the achievement of employment goals, but it was found to lower the employment probability of graduates who participated in career counseling programs and employment camps. Among the employment programs, the results are different depending on which program you participated in. At the individual level, work experience and on-campus job fair programs were found to have a significant effect on employment, but not significant when variables were input at the university level. It turns out that it may not be possible (Heo, 2016).

In particular, among the employment support programs, when participating in and receiving help from a work experience program, it has a positive effect on employment performance even after considering the effects of individual student variables and university characteristics (Shin et al., 2013), yet in the case of participation among the employment program factors, and in the case of psychological test, the wage level was somewhat lower as the participation was increased, and the wage level

was higher as the participation in the work experience program (Mo et al., 2019). Beyond all, as a common feature of previous studies, it is revealed that activities in which direct information related to employment is provided increase employment performance (Chun et al., 2019; Heo, 2016).

Second, this study analyzed the effect of participation in the employment support program on the university students' career development. It was revealed that the satisfaction with university career support (Lee & Youn, 2012), self-efficacy in career path decision-making (Youn, 2015; Lim, 2018), job preparation behavior, employment goal setting and employment strategy (Kim & Jung, 2013) have significant effects. Kim (2012) surveyed high school and university student trainees who participated in the youth workplace experience program and surveyed the actual conditions and satisfaction with the participation program. As a result of the study, it turned out that 81.7% of the respondents participated in the training program to gain experience for employment after graduation, promoting organizational life and social experience, identifying vocational aptitude and practical skills, supporting career planning, and providing opportunities for developing vocational skills. As confirmed. Park & Park (2019) analyzed the effects of career course completion and work experience participation experience on the job satisfaction, aptitude and major matching for 4-year university students by using the data from the 2015 'University Graduates' Occupational Mobility Survey' data. revealed that taking career education courses had a negative effect on the job satisfaction and major match, but the experience of participating in the work experience program increased aptitude and interest, workplace and job satisfaction, academic ability, skill (function), and major match. Furthermore, Park (2016) verified the effectiveness of a career exploration and job experience program for university students who took career and career choice courses at S University in Seoul, and consequently, it turned to have a positive effect on changes in the university students' career path decision related self-efficacy and the level of career path decision.

Meanwhile, while the study used the same analysis data (Korea Employment Information Service's 'University Graduate Job Mobility Survey'), it demonstrated different results. In a study by Kim (2015), Chun et al. (2019), the results of analyzing the effect of participation in career guidance programs on job acquisition after graduating from university demonstrated that graduates who completed career and employment related courses, interviews, and participated in resume writing programs were employed. appeared to be highly probable. In a study by Park & Park (2019), as a result of analysis using the 2015 GOMS data, it turned out that career education courses had a negative effect on the job satisfaction and major congruence. Naturally, in the case of career and employment course participation in the employment support program, the study of Kim (2015) found that it had a negative effect on the achievement of employment goals. Since the results may differ depending on the design of the study, it is necessary to closely examine the research process before interpreting the results.

Examining the individual background variables related to university participation in the employment support program, Shin et al. (2013) analyzed the characteristics of students who participated in the employment support program and the characteristics of the university they belonged to, in terms of gender, female students, and the students who own three or more certifications, students who have experience in overseas training or internship, vocational education and training as a job preparation activity, and universities in the metropolitan area and private universities have a high rate of university characteristics. Furthermore, the higher the household income, grade point average, and scholarship

benefit rate, the higher the response rate that participation in the employment support program was helpful. Together with which, the student loans can also be seen as a factor that increases participation in the employment support programs. Chun et al. (2019) revealed that career guidance program participants had more loan experience than non-participants. It may be expected that students from the economically difficult environments are making efforts for practical job hunting activities such as preparing for employment in order to get a job immediately after graduation. As the factors influencing university participation in the employment support program, individual characteristics include gender, qualifications, overseas training, student loans, grades, internship, vocational education and training experience, and university characteristics predict university type and location. In particular, as a result of the analysis based on panel data, this study suggests that among existing studies, studies on how gender and grade corresponding to individual characteristics as objective indicators affect career path decision-making give implications. First of all, gender has received attention among the demographic variables in career path decision-making. It is important to find out whether gender differences affect career choice. That is, the socially expected gender role and the individual's attitude to respond to it are considered important in career related research. In the Korean society, in particular, if there are role assignments, invisible barriers and discrimination between men and women, it can have a negative impact on the development of women's self-efficacy (Choi, 2002). Hence, in this study, the individual variables were added to comprehensively examine the influence of gender and grade level on the university students' career path decisions.

3. Research Method

3.1 Analytical data

In this study, the data from the ‘Graduate Occupational Mobility Survey (GOMS 2018)’ of 2019 of the Korea Employment Information Service were used. The ‘University Graduates Occupational Mobility Survey’ has conducted research on education, occupation, training, and employment of university graduates each year since 2006. At the time of the 2018 survey, 3,916 university students enrolled in 2-3 or 4-year universities who responded to both the Employment Preparation Program and University Demand among all of the GOMS subjects were set as the study subjects for analysis.

3.2 Variable composition

To investigate the variables that affect the university student participation in the employment support program, the following variables were constructed by reflecting university students' personal, university, and employment preparation behaviors.

3.2.1 Dependent variable

In this study, to analyze the variables that affect the participation in the employment support

program, the participation in the employment support program was set as a dependent variable (participation = 1, non-participation = 0) and dummy-coded.

3.2.2 Independent variable

The independent variables were classified into personal characteristics, university characteristics, and job preparation behavior. The variables related to personal background included university graduate's gender, age, whether he or she had student loans while attending school, field of major, graduation grade, and experience of taking a leave of absence. Gender was input into a dummy with values of female = 0 and male = 1. Age was entered as a continuous variable in year and month units. Student loans while enrolled were put into a dummy of No = 0 and Yes = 1. In the case of majors, humanities = 1, social studies = 2, education = 3, engineering = 4, natural sciences = 5, medicine = 6, and arts and sports = 7 were classified for survey according to the classification system of the Korea Educational Development Institute (2006). In this study, after excluding medicine and arts and physical education, humanities, social studies, education, engineering, and natural sciences, respectively. Leave of absence was dummy-coded as having experience = 1 and no experience = 0. Graduation GPA was classified into 4.0, 4.3, and 4.5 perfect points, which are the standard for each university, and was converted into 100 points.

As the university characteristic variable, the location of the school was converted into a dummy such that Seoul, InChun, and Gyeonggi area = 1, and non-metropolitan area = 0. School type was dummy-coded as 2-3 years = 0, 4 years = 1. Forms of establishment are classified into national, public, private, large national corporations, special law national corporations, and special law corporations, which are dummy coded as private = 0 and national and public = 1.

As the educational support variables, educational infrastructure and curriculum satisfaction questions were set. Satisfaction with educational support is measured based on the students' perceptions of educational facilities, student support systems, curriculum, and lectures. For the satisfaction with educational infrastructure, four items were input including educational facilities of the university where they graduated, student welfare facilities, student support systems, and career related counseling and support systems.

The employment preparation variables include whether there is a job goal before graduation, experience in language training, experience in education and training related to a job (employment) after entering university, whether to obtain a certification, experience studying for job aptitude tests at companies, studying foreign languages such as English, volunteering, winning contests, contest activities, appearance management, resume writing, and interview training were dummy-coded as no = 0 and yes = 1.

3.3 Analytical method

To analyze the data, the analytical method was set by reflecting the characteristics of the dependent variable. Since the participation in the employment support program is a binary variable consisting of 0 or 1 and follows a binomial distribution, a binary logistic regression was used to analyze

the probability of the dependent variable by the influence of the independent variable. Furthermore, the basic descriptive statistics and frequency analysis were conducted to identify the characteristics of the respondents, and cross-tabulation was conducted to analyze the degree of participation by the type of employment support program according to major. For the processing of missing values, the full information maximum likelihood method (FIML) was used. The collected data were analyzed using the SPSS 24.0 for Windows.

4. Research Results

4.1 General characteristics

The general characteristics of the respondents are as illustrated in Table 1. In terms of gender, 40.3% were female and 59.7% were male, and the type of school was 12.4% for 2-3 year universities and 87.6% were for 4 year universities. As for the majors, 39.3% were engineering, 25.7% were social studies, 15.1% were natural sciences, 14.4% were humanities, and 5.5% were education, accounting for a high percentage of engineering majors.

Table 1. General characteristics of study subjects

Classification		Frequency (people)	Ratio (%)
Gender	Male	2,338	59.7
	Female	1,578	40.3
Total		3,916	100.0
Type of school	2-3 year university	484	12.4
	4 year university	3,432	87.6
Total		3,916	100.0
Major program	Humanities	564	14.4
	Social sciences	1,005	25.7
	Education	216	5.5
	Engineering	1,538	39.3
	Natural sciences	593	15.1
Total		3,916	100.0

4.2 Participation rate by the type of employment support program by major

Table 2 demonstrates the results of confirming the degree of participation by the type of employment support program according to major. The participation rate for career employment courses was the highest at 59.8%, followed by vocational psychological tests such as personality and aptitude at 54.2%, interviews and resume writing at 43.1%, company recruitment briefings at 39.4%, on-campus job fairs at 39.2%, group counseling at 38.6%, and work experience programs 32.6%, followed by employment camp at 15.3%.

Table 2. Participation rate by the type of employment support program by major

		Major program										Total (people)
		Humanities		Social sciences		Education		Engineering		Natural sciences		
		n	%	n	%	n	%	n	%	n	%	
Career path employment course	Non-participant	241	42.7	395	39.3	97	44.9	603	39.2	238	40.1	1,574
	Participant	323	57.3	610	60.7	119	5.1	935	60.8	355	59.9	2,342
Work experience program	Non-participant	419	74.3	654	65.1	150	69.4	1,016	66.1	399	67.3	2,638
	Participant	145	25.7	351	34.9	66	30.6	522	33.9	194	32.7	1,278
Occupational psychology test	Non-participant	232	41.1	472	47.0	66	30.6	739	48.0	283	47.7	1,792
	Participant	332	58.9	533	53.0	150	69.4	799	52.0	310	52.3	2,124
On-campus job fair	Non-participant	339	60.1	641	63.8	174	80.6	881	57.3	345	58.2	2,380
	Participant	225	39.9	364	36.2	42	19.4	657	42.7	248	41.8	1,536
Group counseling	Non-participant	341	60.5	614	61.1	141	65.3	948	61.6	362	61.0	2,406
	Participant	223	39.5	391	38.9	75	34.7	590	38.4	231	39.0	1,510
Interview, resume preparation	Non-participant	319	56.6	566	56.3	143	66.2	845	54.9	354	59.7	2,227
	Participant	245	43.4	439	43.7	73	33.8	693	45.1	239	40.3	1,689
Employment camp	Non-participant	485	86.0	837	83.3	194	89.8	1,298	84.2	501	84.5	3,315
	Participant	79	14.0	168	16.7	22	10.2	240	15.6	92	15.5	601
Corporate recruitment seminar	Non-participant	353	62.6	617	61.4	195	90.3	865	56.2	343	57.8	2,373
	Participant	211	37.4	388	38.6	21	9.7	673	43.8	250	42.2	1,543
Total (people)		564		1,005		216		1538		593		3,916

By major, in the case of engineering majors, it turned out that career employment courses, on-campus job fairs, interviews and resume writing, and participation in company recruitment briefings were the highest, while work experience programs and employment camps were social science majors with the high participation rate.

4.3 Logistic regression analysis for the work experience program related participation

The binary logistic regression analysis was performed to analyze the factors affecting the participation in the work experience program among the employment support programs.

The results of the binomial logistic regression analysis on the factors of participation in the work experience program among the employment support programs are as illustrated in Table 3. It is calculated by the Wald statistic (regression coefficient/standard error) 2, and the larger the Wald value, the smaller the p-value and the regression coefficient is interpreted as significant. Exp(ß) means an exponential coefficient, and represents the degree to which the probability of participation in the work experience program increases when a specific independent variable increases by 1 unit, assuming that there is no change in other independent variables. Through the analytical results, the factors influencing the participation in the work experience program are higher grades, more aware of the youth support fund, higher satisfaction with the student support system (scholarship

and overseas training, etc.) , and it is apparent that the higher the participation rate in the work experience program, the more experienced the contest and the mock interview, and the lower the participation rate in the work experience program for the humanities major.

Table 3. Results of the binary logistic regression analysis having effect on the work experience program related participation

Item			ß	SE	Wald	df	p	Exp(B)
Individual variable	Gender		.060	.093	.421	1	.516	1.062
	Age		-.020	.019	1.038	1	.308	.980
	Major	Humanities	-.483	.139	12.128	1	.000	.617
		Social sciences	-.033	.116	.082	1	.775	.967
		Education	-.075	.184	.166	1	.683	.928
		Engineering	.034	.110	.097	1	.755	1.035
		Natural sciences	.041	.064	.410	1	.522	1.042
	Student loan		.023	.081	.078	1	.779	1.023
	Leave of absence		-.141	.096	2.146	1	.143	.869
	Grades		.292	.096	9.175	1	.002	1.339
	Youth subsidies perceived		.159	.074	4.558	1	.033	1.172
University characteristics	Location of school		.056	.079	.509	1	.476	1.058
	Whether national or public		.029	.088	.108	1	.742	1.029
	Type of school		-.222	.129	2.975	1	.085	.801
Education support variable	Satisfaction with education support facilities		.040	.064	.377	1	.539	1.040
	Satisfaction with student welfare facilities		-.004	.059	.005	1	.944	.996
	Student support system (scholarship and overseas training, etc.)		.131	.046	8.183	1	.004	1.140
	Satisfaction with career path related counseling and support system		.097	.049	3.945	1	.047	1.101
	Satisfaction with major related curriculum and contents		.019	.058	.110	1	.740	1.019
	Satisfaction with major related faculty's capabilities and enthusiasm		-.029	.061	.227	1	.634	.971
	Satisfaction with the method and quality of classes		-.089	.070	1.597	1	.206	.915
	Level of satisfaction with major		.111	.060	3.387	1	.066	1.117
	Level of satisfaction with school		-.062	.061	1.033	1	.309	.940
Job preparation variable	Whether a job goal before graduation		.111	.077	2.082	1	.149	1.118
	Work experience while in school		.195	.083	5.462	1	.019	1.215
	Education training experience		.052	.074	.505	1	.477	1.054
	Foreign language training experience		.108	.103	1.117	1	.291	1.114
	Certification		-.124	.077	2.605	1	.107	.884
	Aptitude test		.037	.084	.191	1	.662	1.037
	Foreign language		.185	.100	3.429	1	.064	1.203
	Volunteer activities		.203	.076	7.045	1	.008	1.225
	Competition		.461	.083	31.213	1	.000	1.586
	Extracurricular activities		.290	.087	11.199	1	.001	1.336
	Appearance care		.073	.107	.465	1	.495	1.076
	Mock interview		.154	.075	4.153	1	.042	1.166
Constant			-2.982	.665	20.119	1	.000	.051

4.3.1 Logistic regression analysis for the participation in work experience program in the non-metropolitan area

The binary logistic regression analysis was performed to analyze the factors influencing the participation in the work experience program of university students in the non-metropolitan areas. The analytical results are as illustrated in Table 4. The factors analyzed to affect the participation of university students in the non-metropolitan areas were humanities (Wald = 13.087, p = .000), student loans (Wald = 4.135, p = .042), and grade points (Wald = 9.019, p = .003), and among the educational support variables, the student support system (Wald = 9.850, p = 0.002) and career related counseling and support system satisfaction (Wald = 5.909, p = 0.016) were found. Among the employment activity variables, language training experience (Wald = 4.907, p = 0.027), competition (Wald = 19.480, p = 0.000), external activities (Wald = 8.021, p = 0.005), mock interview (Wald = 4.699, p = 0.030) were yielded.

Table 4. Results of the binary logistic regression analysis having effect on the work experience program related participation (non-metropolitan universities)

Item			ß	SE	Wald	df	p	Exp(B)
Individual variable	Gender		.241	.144	2.788	1	.095	1.273
	Age		-.035	.028	1.543	1	.214	.965
	Major	Humanities	-.810	.224	13.087	1	.000	.445
		Social sciences	-.197	.176	1.259	1	.262	.821
		Education	-.113	.258	.193	1	.660	.893
		Engineering	-.061	.159	.147	1	.701	.941
		Natural sciences	.020	.057	.119	1	.730	1.020
	Student loan		.246	.121	4.135	1	.042	1.279
	Leave of absence		-.144	.143	1.015	1	.314	.866
	Grades		.428	.142	9.019	1	.003	1.534
	Youth subsidies perceived		.092	.110	.704	1	.401	1.097
University characteristics	Whether national or public		-.013	.116	.012	1	.912	.987
	Type of school		.049	.198	.062	1	.804	1.050
Education support variable	Satisfaction with education support facilities		.056	.096	.339	1	.560	1.058
	Satisfaction with student welfare facilities		-.043	.087	.251	1	.616	.958
	Student support system (scholarship and overseas training, etc.)		.229	.073	9.850	1	.002	1.258
	Satisfaction with career path related counseling and support system		.178	.074	5.808	1	.016	1.195
	Satisfaction with major related curriculum and contents		-.029	.085	.116	1	.734	.971
	Satisfaction with major related faculty's capabilities and enthusiasm		-.029	.090	.106	1	.745	.971
	Satisfaction with the method and quality of classes		-.095	.103	.850	1	.357	.909
	Level of satisfaction with major		.113	.091	1.567	1	.211	1.120
	Level of satisfaction with school		-.034	.094	.134	1	.714	.966

Item		ß	SE	Wald	df	p	Exp(B)
Job preparation variable	Whether a job goal before graduation	.059	.113	.270	1	.603	1.060
	Work experience while in school	.013	.119	.011	1	.915	1.013
	Education training experience	-.047	.111	.182	1	.670	.954
	Foreign language training experience	.337	.152	4.907	1	.027	1.401
	Certification	-.202	.118	2.904	1	.088	.817
	Aptitude test	.081	.134	.370	1	.543	1.085
	Foreign language	.201	.137	2.165	1	.141	1.223
	Volunteer activities	.012	.114	.011	1	.915	1.012
	Competition	.549	.124	19.480	1	.000	1.731
	Extracurricular activities	.378	.133	8.021	1	.005	1.459
	Appearance care	.243	.156	2.421	1	.120	1.275
	Mock interview	.245	.113	4.699	1	.030	1.277
Constant		-3.592	.988	13.226	1	.000	.028

The factors that affect the participation of university students in the non-metropolitan areas are high grades, student loans, student support systems (scholarships and overseas training, etc.) and the career related counseling and support systems. The higher the participation rate in the work experience program, the higher the experience of contests, external activities, and mock interviews, and the lower the participation rate of the work experience program in the humanities major. It is determined that the difference is due to the support to build practical experience in connection with the major. In the case of humanities majors, the low participation in the employment support program rate suggests that the students in humanities and social sciences majors need specific career and employment support.

4.3.2 Logistic regression analysis for the participation in work experience program in the metropolitan area

The binary logistic regression analysis was performed to analyze the factors influencing the participation in the work experience program of university students in the metropolitan area. The analytical results are as illustrated in Table 5. The factors analyzed to influence the participation of university students in the metropolitan area's work experience program were whether it was a youth subsidy in the individual variable (Wald = 4.416, p = .036), and the type of school (Wald = 5.527, p = .019) in the university characteristic variable. Among the employment activity variables, job experience while attending school (Wald = 9.379, p = 0.002), volunteer work (Wald = 11.342, p = 0.001), and competition (Wald = 11.919, p = 0.001) were yielded. Based on which, the factors influencing the participation of university students in the metropolitan area are the more aware of the youth subsidy, the more they have job experience while in school, the more they have experience in volunteer work and competitions, the higher the participation rate in the work experience program, and among the types of schools, the more the 4-year university, it is apparent that the lower the participation rate in the work experience program.

In common, it may be seen that the experience of the competition has a great influence on the participation in the work experience program, and the recognition of the youth subsidy has an influence

in the metropolitan area and the entire region. However, among the educational support variables in the non-metropolitan areas and all areas, satisfaction with student support and career related counseling and support systems influenced participation in work experience programs, but no influence was found in the metropolitan area. In the metropolitan area, the characteristics of the school type (2-3 years or 4 years) demonstrated an influence, and in the non-metropolitan areas, the student loans were found to have an effect on the participation in the work experience program. The location of the university is a variable that affects the employment performance of university graduates (Ryu, 2005; An & Hwang, 2018; Chae & Kim, 2009). The strategies for participation in the employment support programs according to university location are required.

Table 5. Results of the binary logistic regression analysis having effect on the work experience program related participation (metropolitan universities)

Item			ß	SE	Wald	df	p	Exp(B)
Individual variable	Gender		-.095	.125	.573	1	.449	.910
	Age		.002	.029	.005	1	.946	1.002
	Major	Humanities	-.281	.183	2.373	1	.123	.755
		Social sciences	.094	.159	.350	1	.554	1.099
		Education	.002	.273	.000	1	.995	1.002
		Engineering	.084	.156	.292	1	.589	1.088
		Natural sciences	.027	.081	.113	1	.737	1.028
	Student loan		-.177	.112	2.475	1	.116	.838
	Leave of absence		-.156	.133	1.373	1	.241	.855
	Grades		.208	.135	2.367	1	.124	1.231
	Youth subsidies perceived		.216	.103	4.416	1	.036	1.242
University characteristics	Whether national or public		.144	.147	.951	1	.329	1.154
	Type of school		-.419	.178	5.527	1	.019	.657
Education support variable	Satisfaction with education support facilities		.003	.089	.001	1	.976	1.003
	Satisfaction with student welfare facilities		.043	.083	.275	1	.600	1.044
	Student support system (scholarship and overseas training, etc.)		.061	.060	1.028	1	.311	1.063
	Satisfaction with career path related counseling and support system		.045	.066	.457	1	.499	1.046
	Satisfaction with major related curriculum and contents		.055	.080	.480	1	.488	1.057
	Satisfaction with major related faculty's capabilities and enthusiasm		-.029	.084	.116	1	.734	.972
	Satisfaction with the method and quality of classes		-.079	.098	.657	1	.418	.924
	Level of satisfaction with major		.089	.082	1.169	1	.280	1.093
	Level of satisfaction with school		-.067	.082	.663	1	.415	.935
Job preparation variable	Whether a job goal before graduation		.142	.109	1.707	1	.191	1.152
	Work experience while in school		.369	.120	9.379	1	.002	1.446
	Education training experience		.107	.101	1.123	1	.289	1.113
	Foreign language training experience		-.095	.142	.447	1	.504	.909
	Certification		-.072	.102	.488	1	.485	.931
	Aptitude test		.032	.111	.083	1	.773	1.033
	Foreign language		.075	.150	.249	1	.618	1.078
	Volunteer activities		.358	.106	11.432	1	.001	1.431
	Competition		.388	.112	11.919	1	.001	1.475
	Extracurricular activities		.224	.117	3.710	1	.054	1.252
	Appearance care		-.078	.151	.265	1	.606	.925
	Mock interview		.070	.104	.455	1	.500	1.072
Constant			-2.826	.963	8.620	1	.003	.059

5. Conclusion and Discussion

In this study, the factors influencing the universities' participation in the employment support program were analyzed using the Korea Employment Information Service's Graduate Occupational Mobility Survey (GOMS 2018) data. Based on the analytical results, the conclusions and implications are discussed as follows.

First, as a result of the cross-analysis performed to confirm the individual background related differences in the participation in the employment support program, there were significant differences in the participation in the employment support program according to gender, major, and school type. In many studies on the employment performance of university graduates, compared to the results of previous studies that found that gender, university, rank, or location have an effect on employment, it was confirmed that gender, major, and university characteristics have an effect on the participation in the employment support programs. The Existing studies covering personal background and employment performance reveal that the men's employment performance are higher than the women's, or that in the case of majors, the employment period, full-time or part-time employment, etc. is different depending on the major. In terms of the results of this study, it was confirmed that there was a difference in the participation in the employment support program according to the major, and that the participation rate in the employment program decreased as the humanities major increased.

Second, as a result of the binomial logistic regression analysis performed to identify the factors influencing the university student participation in the work experience program, it turned out that the individual variables included humanities, academic grades, youth subsidy recognition, and among educational support variables, satisfaction with the student support system and career related counseling and support system. As for the employment activity variables, it turned out that the participation in the work experience program was rather more affected by job experience, volunteer work, contest, external activity, and mock interview while in school. The more aware of the youth subsidy, the higher the satisfaction with the student support system and career related counseling and support system, the more job experience while in school, the more experience of contests and mock interviews, the higher the participation rate in work experience programs, and the higher the humanities major, the lower the participation rate of the work experience program.

It is clear that the university participation in the employment support programs has a positive impact on the employment performance after graduation. However, according to research, not all job preparation experiences, including contests and external activities, as job preparation behaviors of university students have an impact on employment (decent job) (Moon et al., 2014; Jo, 2021). This means that if one focuses only on building specifications for employment, one's qualifications, language training experience, and experience in external activities will only increase, but will not affect one's actual employment performance. In the end, the participation in the employment support program alone cannot guarantee the employment performance, which suggests that learning activities that set specific career paths and employment processes and put plans into practice are more important than anything else in order to demonstrate the employment performance. Hence, it is important for the university students to identify their aptitudes and interests in order to improve their participation in the employment support program and performance, and equip themselves with the capacity for self-directed career design

so that they can develop and design their own careers according to social changes. For the self-directed career planning, the support for the learning activity programs that help career planning, such as introducing a career counseling professor system with universities, is required. Towards this end, it is necessary to think about designing an effective self-directed career design learning activity program for the process of designing and operating an employment support program.

Third, the factors influencing the participation of university students in the non-metropolitan areas were the humanities, student loans, credits in individual variables, and satisfaction with the student support system and career related counseling and support system among educational support variables. Among the employment preparation factors, language training experience, competitions, external activities, and mock interviews appeared. This means that the higher the grades, the student loan, the higher the satisfaction with the student support system and the career related counseling and support system, the more language training experience, the higher the participation rate in the work experience program, the greater the experience of contests, external activities, and mock interviews. This means that the participation rate in the work experience program decreases as the humanities major increases. The location of the university analyzed separately in this study is a variable that affects the employment performance of university graduates (Ryu, 2005; An & Hwang, 2018; Chae & Kim, 2009). The strategies for participation in the employment support programs according to university location are required. It is determined to be due to the difference in support to build practical experience in connection with the major. In the case of humanities majors, the low participation in the employment support program rate suggests that the students in humanities and social sciences majors need specific career and employment support.

Fourth, the factors influencing the participation in the work experience program of university students in the metropolitan area were the individual variables, which turned out to be whether youth subsidies were used, university characteristics, school types, and job preparation factors were job experiences while attending school, volunteer activities, and contest experiences. The more aware of the youth subsidy, the more job experience while attending school, and the more volunteer work and contest experience, the higher the participation rate in the work experience program. In the case of job experience while attending school, it is related to the work-study parallel system, a policy that supports students enrolled in 4-year universities to build practical experience in connection with their major. As the results of the study demonstrated that the work experience while attending school had an effect on the participation in the employment support program, the significance of the work experience linked to the major was confirmed through the work-study parallel system. It is reported that the participation in the employment support program is not helpful because the employment support program lacks linkage with future employment. Hence, the university's employment support program should enhance the industry-academic linkage through close linkage with the industry, such as the work-study parallel system, and help them find employment by containing practical contents.

This study is significant in that it provides the implications for setting a direction to increase the employment readiness behavior by analyzing the influential factors of participation in the employment support program. Recently, as the contents and methods of employment screening by companies have diversified, internships, certificates, club activities, and external activities other than credits

are considered. Recruitment methods and contents are also gradually changing, such as blind, NCS, interviews, occasional interns, and AI recruitment. In many previous studies examining the influential factors related to the employment performance of university graduates, personal backgrounds such as university attended, major, and household income have been found to be factors that are difficult to change through effort. In this respect, the participation in employment programs and employment preparation behaviors that can change according to individual motivation, effort, and will are meaningful activities that help develop career employment capabilities. Hence, in order to improve the employment competitiveness of university students at the university level, interest and efforts are needed to increase student career counseling and support and participation in job preparation activities.

Given COVID-19, the opportunities to participate in extracurricular programs and student activities, including various employment support programs provided by universities, in addition to the regular classes, have steeply decreased. As a result, it was difficult to demonstrate the student employment performance. Universities should effectively redesign and operate programs in line with changes in the educational environment, such as online employment support programs. Furthermore, if one understands the actual conditions of participation methods, such as how information was obtained for participation in each type of university employment support program, why not participate in other types of programs, and what the expected employment performance are, it will be helpful for designing the employment support program. It is necessary to actively promote employment support programs opened at the university level, along with work experience programs, on-campus job fairs, career exploration and job experience, interviews and resume writing, career related counseling programs, and job camps. The low participation rate across all types of employment support programs in this study may be attributed to the lack of program participation information.

Notwithstanding the implications of this study, it comes with some limitations. First, there is a limitation that the factors influencing the participation in the employment support program could not be designed in various ways due to the limited use of variables. In the future, it would be necessary to examine the influential factors from various perspectives by conducting in-depth interviews with the university students who participated in the employment support program. Second, as a result of not diversifying the questions, the content validity analysis and internal consistency analysis of the panel data had to be omitted, which remains a limitation of the study. Third, in the follow-up studies, it would be better to further classify and consider the differences in terms of intensity according to the duration of participation, number of participation, and type (for example, participation in a one-time test vs. attending a lecture in a one-semester education program). Fourth, it would be necessary to conduct research that qualitatively explores the operational status and effects of differentiated programs by the universities rather than the distinction between the locations of universities or majors in the metropolitan and non-metropolitan areas. Fifth, it is difficult to identify the causal relationship according to the time lagged between participation in the employment support program and employment readiness factors. In particular, since the participation in the employment support program may be viewed as a category of the employment preparation behavior depending on the study design, caution must be exercised in interpreting the research results.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

An, G. D., & Hwang, M. G. (2018). The Analysis of Department Class of Supporting the Student Employment to Motivate Student's Job Preparation. *Journal of Employment and Career, 8*(2), 139-157.

Baek, B. B., & Hwang, Y. J. (2009). Determinants of Job Satisfaction of Wage Worker. *Journal of Vocational Education & Training, 12*(2), 123-146.

Chae, C. K., & Kim, T. G. (2009). Determinants of Employment Status Of University (College) Graduates Youth. *The Journal of Vocational Education Research, 28*(2), 89-107.

Choi, G, E. (2017). A meta-analysis of effectiveness of job searching programs in universites. The Graduate School of Sookmyung Women's University, Master's thesis.

Choi, J. H. (2002). A study on gender-role and career recognition of youth. Inha University, Master's thesis.

Chun, Y. M., Jung, S. C., & Nam, K. S. (2019). The Effect of Participation in University Job Support Program on Employment. *Journal of The Korean Data Analysis Society, 21*(1), 141-151.

Heo, G. (2016). A Study of Affecting Factors on Outcome in Labor Market using Hierarchical Linear Modeling. *THE JOURNAL OF VOCATIONAL EDUCATION RESEARCH, 35*(4), 47-61.

Jo, Y. S. (2021). The Effect of Universities graduates Job Preparation Behavior on Employment and Decent Jobs. *The Journal of Learner-Centered Curriculum and Instruction, 21*(1), 133-161.

Kang, W. J., Kim, J. I., & Kim, J. W. (2008). A Study On The Analyses And Effectiveness Of The Job Search Supporting Programs By Universties. *Journal of Human Resource Management Research, 15*(1), 17-36.

Kim, E. S. (2012). Analysis on the Job Experience Program of Youth: Focused on the Program Participants in 2011. *The Journal of Career Educational Research, 25*(4), 39-55.

Kim, Y. J. (2015). An Analysis on the Influence of Employment Goal Setting to University Student's Employment Preparation Behavior. *Journal of the Korea Academia-Industrial cooperation Society, 16*(11), The Korea Academia-Industrial Cooperation Society, 7293-7299.

Lee, J. H., & Youn, B. R. (2012). Determinants of Labor Market Outcomes by College Majors: Comparing Graduates in Social Sciences and Humanities with in Natural Sciences and Engineering. *Korean journal of sociology of education, 22*(4), 199-226.

Lim, K. S. (2018). The Effectiveness of Employment Support Program on Career Decision Self-Efficacy, Employment Readiness Behavior, and Employment Possibility of University Students. *Journal of Educational Innovation Research, 28*(3), 177-193.

Mo, Y. M., Kim, N. S., & Lee, I. S. (2019). An Analysis on the Effect of College Admission Types and Participation in the Employment Program on Graduates' Employment Outcomes.

Journal of Education & Culture, 25(5), 171-197.

Moon, S. G., Choi, K. S., & Lim, S. Y. (2014). Influence of College Career Support on Helping College Graduates Enter the Labor Market and Its Results. *Journal of Competency Development & Learning (JCDL), 9*(2), 27-50.

Oh, S, U., & Lim, T. H. (2020). The Causal Relations of University student's Employment Preparation Behavior and Satisfaction Factors in the First Job after Graduation. *The Journal of Korean Career·Entrepreneurship & Business Association, 4*(1), 23-50.

Park, H. C., & Park, C. S. (2019). The Effects of Career Education Curriculum on College Graduates' Job Satisfaction and Career Choice: Talents, Interests, and Majors. *The Journal of Career Education Research, 32*(3), 109-137.

Park, Y. H. (2016). A Study on the Effectiveness of Career Exploration and Work Experience Program: The 3rd year students at the S university in Seoul. *The Journal of Career Education Research, 29*(1), 165-183.

Roh, K. R., Park, Y. H., & Hur, S. J. (2011). The effects of participation in university's career development programs on college graduates' employment, employment status, and job satisfaction. *Korean journal of educational research, 49*(1), 63-92.

Ryu, J. S. (2005). A Study on the Outcome in Labor Market of Provincial University Graduates. *Korean Journal of Labour Economics, 28*(2), 1-27.

Seon, H. Y., Lee, J. K., & Kim, S. K. (2012). Career Problems of College Students:A Concensual Qualitative Research Study. *Asian Journal of Education, 13*(2), 1-24.

Shin, H. S., Nam, S. K, & Min, B. C. (2013). Evaluating the Effectiveness of Universities' Employment Support Programs on Employment Status. *The Journal of economics and finance of education, 22*(1), 211-235.

Statistics Korea. (2021). Youth Employment Trends and Unemployment Trends. KOSIS(Korea Statistical Informatatin Service.

Youn, J. H. (2015). The Study on the Relationship between Self-Esteem, Career Decision Self Efficacy, Employability of College Students. *Journal of Employment and Career, 5*(2), 29-46.