

# The Impact of Learning at Higher Education Institution in Facing Industry 4.0: Study of Employability at Pedagogy Students in Indonesia

Anissa Lestari Kadiyono, and Elsa Tamara Shalsabila

Fakultas Psikologi, Universitas Padjadjaran, Jl. Raya Bandung Sumedang KM. 21 Jatinangor, Sumedang 45363, Indonesia

**Abstract.** Employability means having a set of skills, knowledge, understanding, and personal attributes that makes a person more likely to choose and secure occupations in which they can be satisfied and successful. Teacher is a profession who needs a lot of psychological readiness to be fulfill, so young teacher can be satisfied and successful at their career. A lot of universities have pedagogy faculty to make teacher profession fulfill. This study aims to describe graduate employability of pedagogy students in Indonesia. The research design used was quantitative non-experimental. The research subjects were 237 persons, which comprised of 133 public university pedagogy students and 104 private university pedagogy students. The data was obtained using two stage cluster random sampling technique. Employability data obtained was based on employability theory by Dacre Pool and Sewell (2007) which included five dimensions, namely Career Development Learning, Experience, Degree Subject Knowledge, Understanding, and Skills, Generic Skills, and Emotional Intelligence. The result showed that their graduate employability tends to be high. This means that pedagogy students at universities tend to have a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose, secure and retain occupations in which they can be satisfied and successful which is characterized by knowing their career goals and what will be achieved from their career, have enough experience that will be needed in the workplace, have enough knowledge, skills, and understanding of the studies that has been learned, have enough skills that will be needed in the workplace, and quite able to understand, manage, and control their emotions and others. But there are some skills should they develop to facing industrial revolution that have technological demands.

**Keywords:** Employability · Pedagogy students · Higher education · Revolution industry 4.0

## 1 Introduction

Good quality of residents is indicated with good quality of education, health, and productive human resources. One of quality standards is called Human Development Index (HDI) which shows development level in a region based on the development of human resources (Ekosiswoyo, Kardoyo, & Raharjo, 2008). HDI is one of the parameters to determine the development capacity of a region, and the application that forms the basis

for the region in order to improve the development success in the region (Riani, 2006). However, based on the results of UN Development Program survey (UNDP), Indonesia's HDI rate in 2015 was only 0.689 out of 1 (Arisman, 2018). This indicates that Indonesia's regional development is still at the 5th rank compared to the other 10 ASEAN countries.

Indonesian HDI with a rate of 0.689 indicates that the development and the quality of Indonesia's residents have not reached its optimum. This also shows the development level of Indonesia based on the human resource development is still not optimal. One way to improve the quality of national development is to focus on the quality of human resources. In order to create good quality of human resources is through education (Ghavifekr, Jani, & Kenayathulla, 2016). Education is a fundamental sector for the country that provides positive benefits for its development. Education contributes greatly to the development of social life through increasing knowledge, skills, attitudes, and productivity; therefore, education is expected to produce a good quality of workforce. Education is functionally focused on preparing people to face the future in order to make life more prosperous.

Teacher is one of the most important parties in education. Teacher has main roles to educate, teach, guide, direct, train, evaluate, and understand students. The quality of education is largely determined by teacher quality standards (State Gazette of the Republic of Indonesia of 2005 Number 157, 2005). Teacher profession has a very strategic function, role, and position in national development in the field of education, as confirmed in Law of the Republic of Indonesia Number 14 of 2005. Teacher becomes the party that manages, provides, and assists learning, as well as understands the development of students to actualize their various potentials. Teacher is also the party to be imitated by the students because their mastering broad and complex learning material can guide students to meet established competency standards (State Gazette of the Republic of Indonesia of 2005 Number 157, 2005). Teacher as an educator contributes the most in molding someone in the field of education such as getting knowledge, which in turn will improve one's quality as a human resource. Therefore, in order to produce qualified teachers, their employability to become a teacher must be conditioned since in faculty of pedagogy.

According to Law No. 12 of 2012 concerning Higher Education, Higher Education is a level of education which includes diploma, bachelor, master, doctoral, professional, and specialist programs. According to Higher Education Data Base, the number of higher educations in Indonesia in 2018 was approximately 5,000 (PDDIKTI, Higher Education Data Base, Ministry of Research, Technology and Higher Education, 2018). Higher education is divided into two, namely public universities and private universities. According to Law No. 12 of 2012 Article 1, Public Universities are universities established and / or organized by the government, further managed by the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia. While Private Universities are universities that are established and / or organized by the community. Guidance and supervision over the implementation of private universities are carried out by the Private Higher Education Coordination.

According to McNair (2003), successful graduates will need to have greater ownership of their employability skills and the confidence to cope with economic upheavals in order to identify and capitalize on career opportunities over lifetime. As the number of graduates entering the workforce increases, so competition for jobs intensifies. New technological demands are common and new types of job roles continue to emerge. These challenges make university students must have an employability.

This research was carried out in public pedagogy universities and private pedagogy universities in Bandung, which is the most populous city in Indonesia after Jakarta, Surabaya, and Medan (Kemendagri, 2018) and is also one of cities of education in Indonesia. Being a university that produces the greatest number of teachers in Bandung provides an opportunity to contribute in improving the quality of teachers in Bandung in order that in the end they will be able to improve the quality of Indonesia's human resources. Thus, final year students who take pedagogy faculty in public universities and private universities are expected to have high employability to become a qualified and competent teacher. It is known that the ratio of the number of student applicants and those who are accepted to public universities is 4: 1, and pedagogy graduates from public universities have a one to two month waiting time span required to finally get a job as a teacher. While in private university, it is known that the ratio of the number of student applicants and the accepted ones is 2: 1, and the waiting time span required to finally get a job as a teacher is within one year. This shows an indication of difference in employability between pedagogy students in public universities and private universities. This indication is supported by a study that suggests in selection process of employee candidates, companies prioritize employing graduates from public universities rather than private universities. This is because companies consider graduates from public universities to have the necessary academic qualifications and work skills that are considered important in current work environment (Singh & Singh, 2008; Davie, 2016).

Nowdays, there is a high standard of recruiting prospective workers. In the end, is only willing to recruit workers who are reliable and professional. When individuals already have the skills that will be needed in the workforce, they will be able to compete to get a job. Therefore, the final year students are required to be able to prepare themselves well to face the world of work, so that when they graduate they can become quality graduates, and competitive. This research was conducted to see how employability for teacher graduates from both private and public universities, so that information can be used to improve the quality of graduates as prospective teachers in the future.

## 2 Literature Review

Dacre Pool and Sewell (2007) states that employability is having a set of skills, knowledge, understanding, and personal attributes that makes a person more likely to choose and secure occupations in which they can be satisfied and successful. There are three factors that can affect one's employability (McQuaid & Lindsay, 2005), namely individual factors, external factors, and personal environment. First, in individual factors, it is known that employability of pedagogy students in both public and private universities is influenced by employability skills and attributes such as the willingness to work as a teacher, confidence in facing the work environment as a teacher, having the ability to manage time, interpersonal skills in team work, communication skills including during presentation or interview process, and time management including flexibility in work. It was also known that gender does not affect employability of pedagogy students both in public and private universities. Second, as for external factors, including Demand Factors, namely employment factors such as workplace location and teacher competition level, employment policies such as the ease of

obtaining public services specifically in accessing information and communication, and ease of access to transportation and child care, available job characteristics including compensation or shifts, and labor recruitment factors such as procedures or selection systems. Third, as for personal environmental factors, the responsibility to fulfill family needs, especially when the parents work as teachers influence employability of the pedagogy students both in public and private universities. Access to personal and financial transportation also influences employability. The three factors above become things that can influence employability of pedagogy students to become a teacher. Employability facilitates pedagogy students to identify work and career opportunities.

According to Pool and Sewell (2007), there are five dimensions that can shape a person's employability level, which were measured in this study. The five dimensions are as follows:

1. Career Development Learning  
Career Development Learning includes activities that help students see available job opportunities, how to present themselves effectively to companies, and how to make decisions about their careers.
2. Experience - Work and Life  
Having life and work experience, graduates are able to tell their experiences to the company.
3. Degree Subject Knowledge, Understanding, and Skills  
The subject's assessment of high and low level of knowledge, skills, and their understanding of pedagogy that has been obtained since in college will help them get the desired career.
4. Generic Skills  
Basic skills of individuals who can support learning in a study program in any discipline, and which can be used in various contexts whether in the context of education or work, such as creativity, adaptability, willingness to learn, work independently, work in team, ability to work under pressure, oral communication, written communication, numeracy skills, attention to detail, time management, making plans, and the ability to use technology.
5. Emotional Intelligence.  
The capacity of a person to recognize their feelings as well as others', to motivate themselves, and manage emotions well.

### **3 Theoretical Framework**

According to McQuaid and Lindsay (2005) there are three main factors that can affect a person's level of employability, namely, individual factors, personal circumstances, and external factors.

#### **3.1 Individual Factor**

In individual factors there are several components that can affect employability in a person including:

- Employability Skills and Attributes

In this component that can affect employability in a person is the individual has the willingness to work, has responsibility, confidence, time management skills, interpersonal and communication skills, and the ability to work in groups. This component is needed because qualifications such as a degree usually need to be equipped with skills that can be used in various fields to get a job.

- **Demographic Characteristics**  
In this component that can affect one's self-employability is the age, and sex of the individual, and this component can affect the motivation or ability of individuals to do certain jobs.
- **Health and Well-Being**  
In this component that can affect employability in a person is the health and limitations of the individual. This component refers to the importance of health that workers have.
- **Job Seeking**  
In this component that can affect employability in a person is the ability of individuals in job search such as the stage of making a CV, interview, and presentation skills. This component refers to how well a person identifies and looks for work.
- **Adaptability and Mobility**  
In this component that can affect employability in a person is the ability of work flexibility (working hours, work, sector). This component refers to the strengths and weaknesses of individuals, their ability to achieve work targets, and their willingness to have flexible working hours and the possibility of working in various sectors.

### **3.2 Personal Circumstances**

In personal circumstances there are several components that can affect employability in a person including:

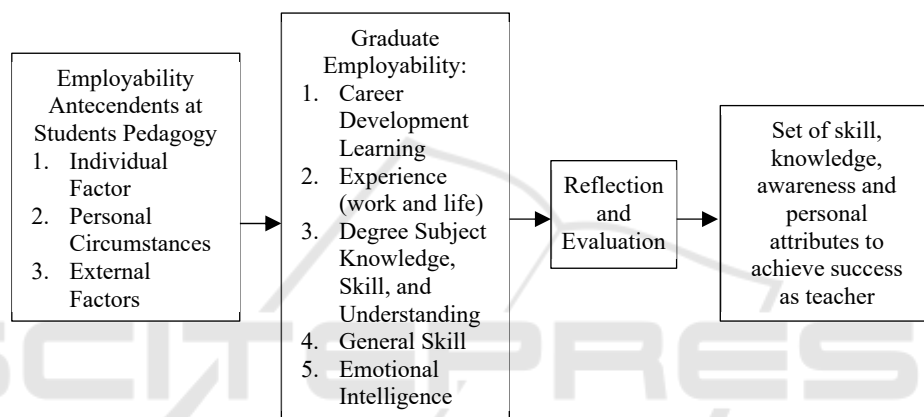
- **Household Circumstances**  
In this component that can affect employability in a person is the responsibility to meet family needs. This component can affect the ability, willingness or social pressure for someone to take up work opportunities.
- **Work Culture**  
In this component that can affect employability in a person is culture when the work owned is supported by family, peers or other personal relationships and the wider community. This component refers to broader social influences that will have an impact on individual attitudes and achievement.
- **Access to Resources**  
In this component that can affect employability in a person is access to transportation, finance, and social life.

### **3.3 External Factors**

In external factors, there are several components that can affect one's employability, including:

- **Demand Factors**  
In this component that can affect employability in a person is labor market factors (such as location problems and the level of competition), macroeconomic factors (such as economic stability), characteristics of available job openings (such as payroll systems, working conditions, hours of work and division of work shifts, etc.) and labor recruitment factors (such as recruitment procedures and employee selection systems, etc).
- **Enabling Support Factors**  
In this component that can affect employability in a person is an employment policy factor (such as the ease of getting public services such as the ease of accessing information and communication, and the ease of getting access to transportation and childcare).

Theoretical framework can be seen below:



**Fig. 1. Theoretical Framework.**

#### 4 Development of Hypotheses

Employability features more prominently on the agenda of higher education institutions when the economy falters or changes: the majority of students, and their families, expect a degree to deliver a career pathway as well as an education (Oliver, 2015). Having a set of skills, knowledge, understanding, and personal attributes that makes a person more likely to choose and secure occupations in which they can be satisfied and successful as a teacher, is the first step to become a teacher with optimal functions. According to Law Number 14 of 2005, which will ultimately have an impact on the quality of Indonesian education development. According to Joosten (2016), when pedagogy students have high employability, they will not experience job strains in their work environment and they will have a good relationship with their headmaster or supervisor. In addition, by having a high employability to face the work environment as a teacher, they will interpret their work as a meaningful thing where this will lead to fulfillment of employment supply and demand. Thus, in the end they will have a successful career as a teacher (Zheltoikhova & Baczor, 2016).

Pedagogy students in both public and private universities have challenges and roles to produce qualified teacher candidates. This research was conducted to examine level of employability of pedagogy students and whether there are differences in employability between pedagogy students in public universities and private universities in order that more in-depth information can be obtained to improve the quality of both public and private universities.

## 5 Methodology

This comparative study used a non-experimental approach with a quantitative research design. The data was obtained using a questionnaire where there were 36 items with a Likert scale to measure the level of employability had by pedagogy students. The sampling technique used was two stage cluster random sampling. The characteristics of the sample in this study were final year pedagogy students in public universities and private universities in Bandung city, Indonesia. The statistical process of analyzing data to see an overview of employability of pedagogy students in both public and private universities was carried out using frequency descriptive test. The total of employability score was divided into four categories, namely low, slightly low, slightly high, and high. As for to see a comparison of employability between pedagogy students in public universities and private universities, authors conducted a normality test first. The results showed that the data were not normally distributed, therefore authors used Mann Whitney nonparametric test. In order to see how significantly dimensions of employability predict the formation of employability, authors used regression analysis test.

### 5.1 Instruments

The measuring instrument used to measure the employability of final-year students in this study is an adaptation of the CareerEDGE Employability Questionnaire Model created by Dacre Pool and Sewel in 2007. This questionnaire contained 36 items consisting of 5 dimensions. The five dimensions are career development learning, work/ life experience, degree subject, knowledge, skills, and understanding, generic skills, and emotional intelligence. The measurement scale used in this study is a Likert scale with a range of 1-7, with the following explanation; 1 = Strongly disagree, 2 = Disagree, 3 = Little disagree, 4 = Neutral, 5 = Little agree, 6 = Agree, 7 = Strongly agree. Here are some example item to measure:

#### 2. Career Development Learning

- I know what kinds of work would suit my personality
- I know what I want to do when I finish my degree
- I know what is required for me to successfully secure the sort of work I want to do

#### 3. Experience Work/Life

- I have a lot of work-relevant experience
- I can explain the value of my experience to a potential employer



4. Degree Subject Knowledge, Skill and Understanding
  - I am satisfied with my academic performance so far
  - My academic performance so far is in line with my career aspirations
5. Generic Skills
  - I have good oral communication skills
  - I work well in a team
  - I am prepared to accept responsibility for my decision
6. Emotional Intelligence
  - I am good at working out what other people are feeling
  - I am good at knowing how I am feeling at a given time
  - I am able to manage my emotions effectively

Reliability measurement using Alpha Cronbach:

**Table 1.** Reliability Statistics.

<i>Reliability Statistics</i>	
Cronbach's Alpha	N of Items
.912	36

This mean that measuring instrument very reliable and can be used at higher level academic setting.

## 5.2 Respondent and Process

Demographic characteristics of respondents in this study are as follows:

**Table 2.** Demographic Data of Public University Respondents.

<b>Total of Respondents</b>		<b>Frequence</b>	<b>Percentage</b>
		133	100%
<b>Gender</b>	Male	31	23%
	Female	102	77%
<b>Faculty</b>	Faculty of Mathematics and Natural Sciences Education	38	28%
	Faculty of Education	54	41%
	Faculty of Language and Literature Education	25	19%
	Faculty of Sports and Health Education	16	12%
<b>Semester</b>	7	86	64%
	9	41	31%
	11	2	2%
	13	3	2%
	15	1	1%



**Faculty:** In public university pedagogy students, faculty-based data showed that 28% of students came from Faculty of Mathematics and Natural Sciences Education, 41% came from Faculty of Education, 19% came from Faculty of Language and Literature Education, and 12% came from Faculty of Sports and Health Education, as seen in Table 1. While in private university, it was found that 21% of the students came from Department of Mathematics Education, 53% came from Department of Biology Education, and 26% came from Department of Language Education Indonesian and Regional Literature, can be seen in Table 3.

**Semester:** In public university pedagogy students, 64% was in the 7th semester, 31% was in the 9th semester, 2% was in the 11th semester, 2% was in the 13th semester, and 1% was in the 15th semester, as seen in Table 1. While in private university, 41% was in the 7th semester and 59% was in the 9th semester, as seen in Table 2.

**Table 3.** Demographic Data of Private University Respondents.

Total of Respondents		Frequence	Percentage
		104	100%
<b>Gender</b>	Male	29	28%
	Female	75	72%
<b>Departement</b>	Department of Mathematics Education	22	21%
	Department of Biology Education	55	53%
	Department of Indonesian and Regional Language and Literature Education	27	26%
<b>Semester</b>	7	43	41%
	9	61	59%

### 5.3 Analysis

In this study, data will be generated in the form of an employability descriptive at pedagogy students. Employability at pedagogy students is divided into four categories, namely high, tend to be high, tend to be low, and low. This is done to see the overall employability that is owned by the research subjects. The greater the score obtained, the higher the employability they have. Conversely, the smaller the score obtained, the lower the employability it has. Thus, to find out the total employability score, the class length is determined in advance with the following calculation:

$$\text{range scale} = \frac{\text{maximum score} - \text{minimun score}}{\text{number of category}} = \frac{180 - 36}{4} = 36$$

Based on this formula, the employability score category can be seen in the following table:

**Table 4.** Classification of Employability.

Range	Classification
36 – 72	Low Employability
73 - 108	Tend to be Low Employability
109 – 144	Tend to be High Employability
145 – 180	High Employability

Based on the categorization that has been done, there will be a subject that is categorized as displaying:

1. High: Having knowledge, understanding, skills, and personal attributes that can make them feel satisfied and successful in their work.
2. Tend to be Tall: Tend to have knowledge, understanding, skills and personal attributes that can make them feel satisfied and successful at work.
3. Tend to be Low: Tend to lack knowledge, understanding, skills, and personal attributes that can make them feel satisfied and successful in their work.
4. Low: Lack of knowledge, understanding, skills, and personal attributes that can make them feel satisfied and successful in their work.

Then calculate the total score of each dimension of the employability variable at pedagogy students, followed by dividing each of these dimensions into four categories, namely high, tend to be high, tend to be low, and low. The five dimensions of employability in question are career development learning, experience, degree subject knowledge, understanding, and skills, generic skills, and emotional intelligence.

## 6 Result and Discussion

Based on the recapitulation data of employability measurement tools, it was found that in public universities, a total of 5% of pedagogy students had low employability, 78% had slightly high employability, and 17% had high employability. Based on descriptive statistical analysis, it was also known that the average employability score of public university pedagogy students was 131.90 where the score fell into the category slightly high. This shows that the majority of final year pedagogy students in public universities tend to have knowledge, understanding, skills, and personal attributes that can make them feel satisfied and successful in their work.

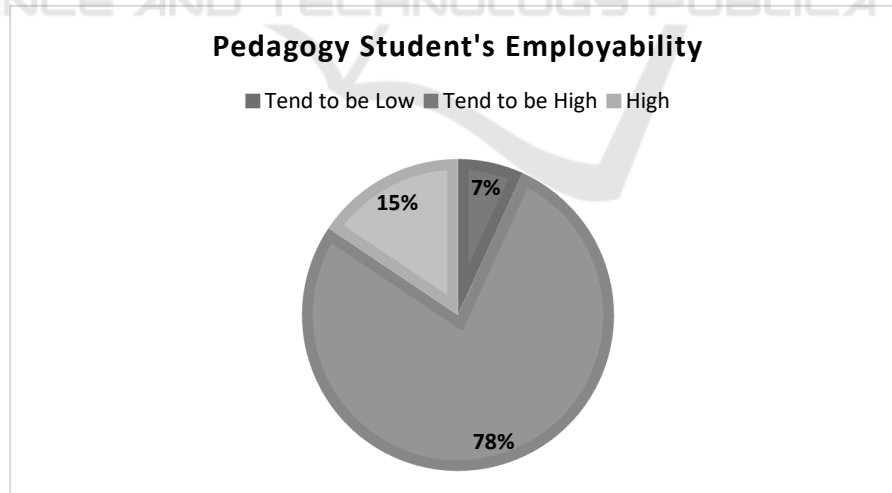
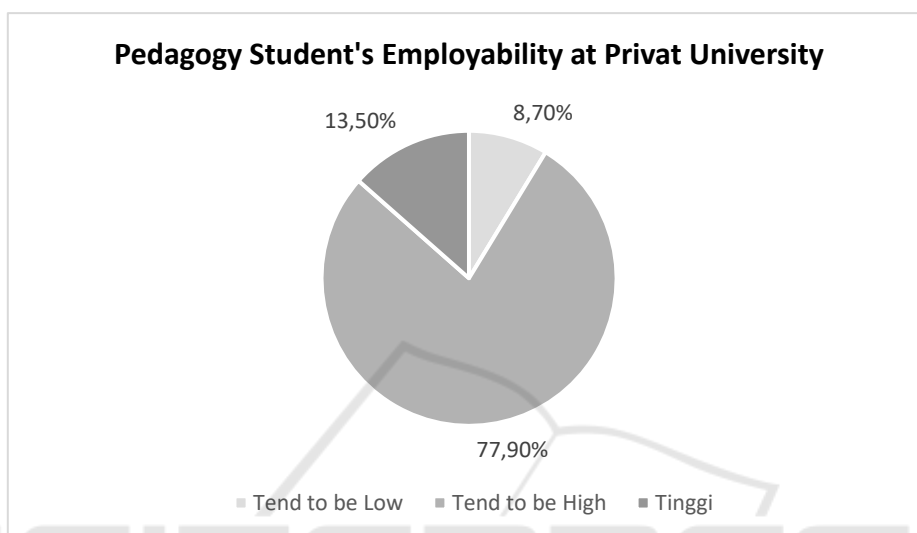


Fig. 2. Pedagogy Student's Employability.

While in private universities, it was found that 8.70% of pedagogy students had slightly low employability, 77.90% had slightly high employability, and 13.5% had high employability. Based on descriptive statistical analysis, the average employability score of pedagogy students in private universities was 125.47 where it fell into the category slightly high. This shows that the majority of final year pedagogy students in private universities tend to have knowledge, understanding, skills, and personal attributes that can make them satisfied and successful in their work.

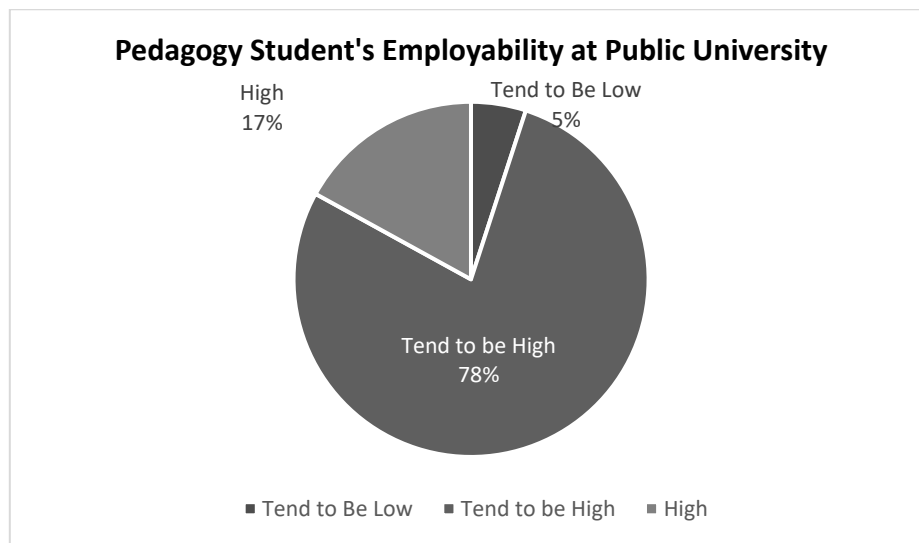


**Fig 3.** Pedagogy Student's Employability at Private University.

Pedagogy students in public universities have higher mean rank value compared to private universities. This shows that employability of pedagogy students in public universities is higher. Authors also conducted a comparison test using Mann Whitney. The results showed  $p\text{-value of } 0.002 < \alpha 0.05$ , therefore there are significant differences in employability between pedagogy students in public universities and private universities.

The significant difference in employability between pedagogy students in public universities and private universities is resulted from two factors. First, Raw Input. Based on the selection process held in public universities, it is known that there were more than 28,000 applicants at University X in 2019. However, there were only 7,055 students accepted. Ratio between the number of applicants and the number of accepted students was 4:1. This ratio shows that the selection process in public universities is indeed quite competitive, therefore the accepted students are the selected ones with certain employability capacities or attributes. While based on the selection process held in private universities, it was found that there were 6,750 applicants at University Y in 2019 and there were 3,667 students accepted. Ratio between the number of applicants and the number of accepted students was 2:1. This ratio shows that the selection process held in private universities is less competitive.

Second, university accreditation. Accreditation shows that there is an acknowledgment of the university given by an authorized institution namely BAN-PT after being assessed that the universities have met certain requirements or criteria, both

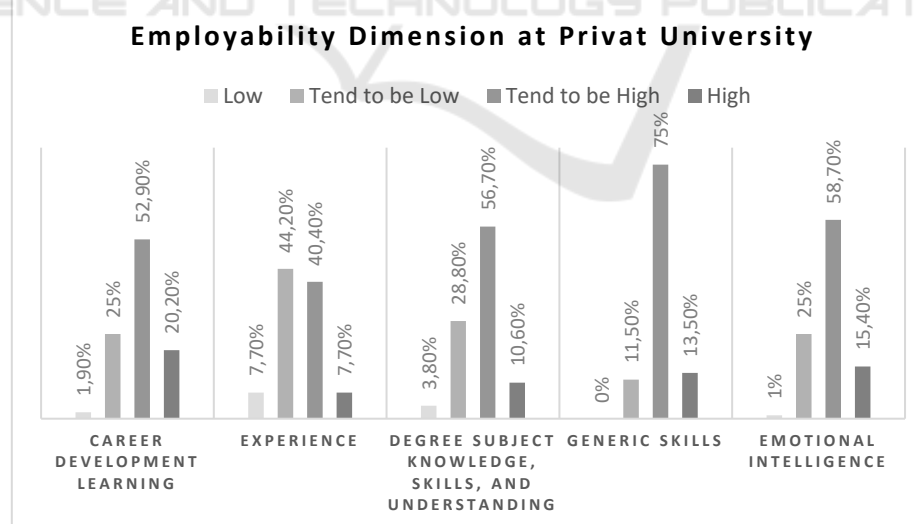


**Fig. 4.** Pedagogy Student's Employability at Public University.

in terms of vision and mission, human resources including lecturers and students, and curriculum. According to the National Accreditation Board of Higher Education, in 2018, public universities were accredited A and private universities were accredited B (BAN-PT, 2016). University accreditation certainly has an impact on the quality of programs that take place at each university. In conjunction with efforts to prepare students to face the work environment, public universities provide several facilities to improve their students' employability to be teachers. First, the PPL program (Field Experience Program) for three months in the final year. This program is implemented in senior high school where the job is to become a teacher who teaches high school students. Besides PPL, there are also KKN programs or Community Service Program. This KKN is held in villages for 40 days where the KKN group consists of public university students from diverse faculties. When viewed from a variety of models for the implementation of teacher professional education, there are four programs. First, Regular Academic which includes PGSD Program and Education Study Program in each faculty. Second, Non-Regular Program or Equalization of Bachelor Degree Qualifications for Elementary, Middle School, High School Teachers, consisting of PGSD Collaboration with the Regional Government of City, Boarding PGSD, Advanced PGSD, PGSD PJJ, PGSD Dual Mode, PGSMP, and PGSMA. Third, Deed Program which covers Deed IV in the field of study, Deed IV of Diklat, and Deed IV of Cooperation of Education and Training Center. Fourth, New Program to be developed is the Teacher Professional Program which includes PPG (Teacher Professional Education) and PLPG (Teacher Professional Training Education). Through this approach to improve teacher professionalism, public universities have made systemic efforts to adjust the system and model of teacher education implementation which is expected to be able to meet the professional standards of educators and education personnel. These strategic steps include PPG (Teacher Professional Education Program), PLP (Introduction to Schooling Fields), Micro Teaching, PLPG (Teacher Professional Education and Training), Matriculation

(activities to fulfill student competencies in order that the gap between content / learning experience and different curriculum can be fulfilled according to the competencies that must be fulfilled, the purpose of this matriculation is to equalize the competencies of students from different schools especially students from region).

While in private universities, in conjunction with efforts to prepare pedagogy students to face work environment, the programs facilitated by private universities are only in the form of PPL (Field Experience Program) for 3 months in final year, which is more or less the same as in public university, the program is implemented in senior high school where the job of the teacher is to teach senior high school students. In addition to PPL, there is also a Community Service Program (KKN), which is also more or less the same as in public university where the program is held in villages and the KKN group consists of private university students from diverse faculties. A different program from public university is in private universities, there is internship program where pedagogy students in private universities are required to take internships three times before graduating, namely in the second semester, fourth semester, and seventh semester. Furthermore, public universities apply a more supportive curriculum than private universities to improve the employability for pedagogy students. Some courses to prepare the public university pedagogy students' professionalism in using learning tools to teach are Educational and Guidance Psychology, Education Management, Educational Research, Learning Curriculum, Study Curriculum and Learning Planning, Learning Media that requires students to create tools that will be able to help them teach, Learning Theory, Evaluation of Learning, Guidance and Counseling, Kapita Selekt, Educational Platform, and Development of School Practicum. The curriculum of private university also prepares their pedagogy students to improve their employability, however not as complete as the public university. This can be seen from fewer courses which are used to prepare private university pedagogy students to teach, namely Microteaching courses, Kapita Selekt Learning, Learning Innovation, Curriculum and Learning, Educational Seminars, Counseling Guidance, Learning



**Fig. 5.** Employability Dimension at Privat University.

Models, Media and Learning Resources, and School Administration. These differences between public universities and private universities contribute to university accreditation that in the end result in the students' employability.

When viewed based on dimensions, it can be seen that the majority of pedagogy students in this study, both from public universities and private universities, had employability in a slightly high category. Here are employability dimension at Privat University:

It's a little bit different whith Employability Dimension at Public University:

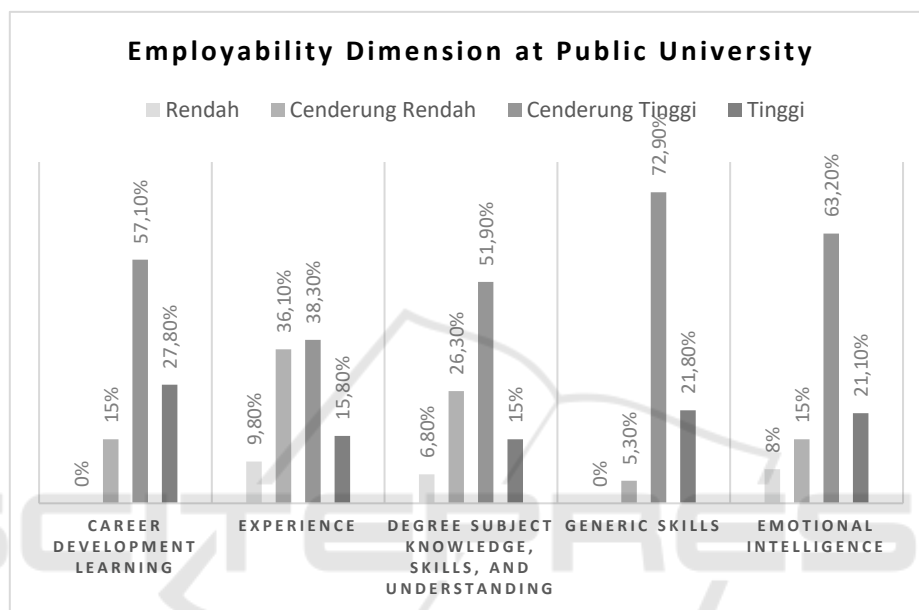


Fig. 6. Employability Dimension at Public University.

When viewed based on dimensions, it can be seen that the majority of pedagogy students in this study, both from public universities and private universities, were in slightly high category. The dimensions of Career Development Learning, Degree Subject Knowledge, Understanding, and Skills, Generic Skills, and Emotional Intelligence were in the category slightly high for pedagogy students both in public and private universities. This indicates that they tend to know career goals and ways to achieve these career goals, tend to have the knowledge, skills, and understanding obtained during college that can support their employability to face the work environment as a teacher, tend to have basic skills that can support their employability to work as a teacher, and tend to be able to understand emotions of themselves and others and be able to control those emotions. As for Experience dimension, pedagogy students in public universities had experiences in slightly high category which means that they tend to have work and life experiences that can support their employability to work as a teacher. While pedagogy students in private universities had experiences in slightly low category which indicates they tend not to have work and life experiences that can support their employability to work as a teacher.

At Career Development Learning, a total of 27.80% of pedagogy students in public universities and 20.2% of pedagogy students in private universities were in the high category which means that they know career goals and ways to achieve these career goals. In this dimension of Career Development Learning, pedagogy students in public universities had a greater mean value than those in private universities. This difference in mean value is significant because it turns out that there are significant differences in the dimensions of Career Development Learning between pedagogy students in public universities and private universities. This result is because the programs that support to be a teacher in private university are still not sufficiently complete compared to public universities, therefore they cannot make the pedagogy students feel the importance of having career goals that are in accordance with the study programs taken. It can be seen from the comparison, programs in public universities are PPL programs, KKN, four models for the implementation of teacher professional education such as Regular Academic, Non-Regular Programs or Equivalent Bachelor Degree Qualifications for Elementary Teachers, Middle School, High School, Deed Program, and the new program to be developed is the Teacher Professional Program which includes PPG (Teacher Professional Education) and PLPG (Teacher Professional Training Education). Through the teacher professionalism program approach, systemic efforts have been made to adjust the system and model of teacher education implementation which is expected to be able to meet the professional standards of educators and education personnel. These strategic steps include PPG (Teacher Professional Education Program), PLP (Introduction to Schooling Fields), Micro Teaching, PLPG (Teacher Professional Education and Training), and Matriculation. As for in private universities, there is no program to support employability of their pedagogy students other than PPL, KKN, and internships.

Significant differences in programs facilitated by public and private universities certainly contribute to the results found in dimension of Career Development Learning. Pedagogy students in private universities do not feel that being a teacher, and that having a career that is in accordance with the courses taken, is important in the development of human resources. Thus, they experience confusion, hence the answer that their career aspirations are not becoming a teacher. Authors also conducted a regression analysis test to identify how significantly the dimension of Career Development Learning can predict employability variables. The result was  $R^2$  value of 0.813 and p-value of 0.00. This indicates that employability is significantly predicted by the dimension of Career Development Learning by 81.3%.

Second, in the Experience dimension, a total of 15.80% of pedagogy students in public universities and 7.7% of pedagogy students in private universities were in the high category which means that they have experiences in the work environment or everyday life that can support their employability to be a teacher. In this Experience dimension, pedagogy students in public universities have a higher mean rank value than those in private universities. However, this difference in mean rank value is not meaningful because it turns out that there is no significant difference in the Experience dimension between pedagogy students in public universities and private universities. This result is presumably because pedagogy students both in public universities and private universities have more or less the same opportunities and experiences that can support their employability to be a teacher. Both in public universities and private universities, pedagogy students are given the facilities in the form of the obligation to follow PPL in final year. Programs such as PPL are actually very appropriate to



implement because according to Smith's research in 2017, learning process that is experienced directly from the field related to work or work-related learning must be a mandatory component of a university's curriculum program because it provides opportunities for students to know and recognize more in how the conditions of employment. By knowing the conditions of employment, pedagogy students know what things needed to be developed in themselves so they can better prepare themselves when it comes to work environment as a teacher (Smith, Smith, Smith, & Fotheringham, 2017). Authors also conducted a regression analysis test to identify how significantly the Experience dimension can predict employability variable. The result is  $R^2$  value of 0.673 and p-value of 0.00. This indicates that employability is significantly predicted by the Experience dimension of 67.3%.

Third, on the dimension of Degree Subject Knowledge, Understanding, and Skills, a total of 15% of pedagogy students in public universities and 10.6% of pedagogy students in private universities were in the high category which means that they have the knowledge, skills, and understanding obtained since in college that can support their employability to be a teacher. In the dimension of Degree Subject Knowledge, Understanding, and Skills, pedagogy students in public universities have a greater mean value than those in private universities. However, this difference in mean value is not meaningful because it turns out that there is no significant difference in the dimension of Degree Subject Knowledge, Understanding, and Skills between pedagogy students in public universities and private universities. This result is not in accordance with the ideal condition because it is seen from university accreditation, public universities have A accreditation and private universities are accredited B. Accreditation shows that there is acknowledgment of the universities given by the authorized institution namely BAN-PT after being assessed that the universities met certain requirements or criteria, both in terms of vision and mission, human resources including lecturers and students, and the curriculum. The difference in accreditation should make a difference in academic performance such as the knowledge, understanding and skills of the pedagogy students. However, in reality this does not occur because in the data collection, it does not ask about GPA (Grade Point Average) or academic achievements that have been achieved by the pedagogy students, therefore they cannot ascertain whether students who answer high scale in this dimension have indeed high GPA or only their ideal condition. Authors also conducted a regression analysis test to identify how significantly the dimension of Degree Subject Knowledge, Understanding and Skills can predict employability variable. The result was  $R^2$  value of 0.606 and p-value of 0.00. This indicates that employability is significantly predicted by dimension of Degree Subject Knowledge, Understanding, and Skills by 60.6%.

Fourth, on the dimension of Generic Skills, 21.80% of pedagogy students in public universities and 13.5% of pedagogy students in private universities were in the high category which means that they have basic skills that can support their employability to work as a teacher. In the dimension of Generic Skills, pedagogy students in public universities have a greater mean value than those in private universities. This difference in mean value is significant because it turns out that there are significant differences in the dimension of Generic Skills between pedagogy students in public universities and private universities. Authors also conducted a regression analysis test to identify how significantly the dimension of Generic Skills can predict employability variable. The result was  $R^2$  value of 0.918 and p-value of 0.00. This indicates that employability is significantly predicted by Generic Skills dimension by 91.8%.

Likewise with the fifth dimension, namely Emotional Intelligence, a total of 21.10% of pedagogy students in public universities and 15.4% of pedagogy students in private universities were in the high category which means that they are able to understand their emotions as well as the emotions of others, and able to control the emotions. In Emotional Intelligence dimension, pedagogy students in public universities have a greater mean rank than those in private universities. The difference in mean rank value is significant because it turns out that there is significant difference in Emotional Intelligence dimension between pedagogy students in public universities and private universities. Authors also conducted a regression analysis test to identify how significantly the Emotional Intelligence dimension can predict employability variable. The result was  $R^2$  value of 0.540 and p-value of 0.00. This indicates that employability is significantly predicted by Emotional Intelligence dimension by 54%.

The results of Generic Skills and Emotional Intelligence dimensions are because raw inputs or capacities of pedagogy students in public universities are better than those in private universities. The capacity includes basic skills and the ability to recognize and manage emotions. Although the experiences obtained are more or less the same between pedagogy students in public universities and private universities, however basic skills and the ability to recognize and manage emotions are more trained in public university pedagogy students than private university pedagogy students.

## **7 Limitations**

The study was conducted on teacher students and conducted a comparison between students at public universities and private universities. No further tests were done on what things could be affected by the presence of employability in students. This research also cannot be generalized to other majors that have different forms of demands and curriculum content.

## **8 Future Research Directions**

Based on research, work has begun to develop a measurement tool with which students can evaluate their employability and identify any areas in which they need to access further opportunities for development. The intention is for this tool to be made available to practitioners also, to enable them to assess if their employability interventions are achieving their aims.

## **9 Practical Implications**

The results found that 7% of pedagogy students in both public and private universities had low employability, that's mean they need development to improve their employability. Based on research, Generic Skill have more impact to improve their graduate employability. It's mean they must develop their ability to learn, to work as group, to have leadership skill, to communicate with others, to make a planning, to

presentation in front of public, and so on. It's all about soft skill they have to develop during their study at university.

Authors also conducted a comparison test to identify whether there were differences in employability between pedagogy students in public and private universities. The results showed therefore there were significant differences in employability between pedagogy students in public universities and private universities, that employability of pedagogy students in public universities is higher. It's mean privat university must develop their program, curriculum, and study to make their students have an employability as high as pedagogy students at public university.

## 10 Conclusion

Employability of pedagogy students in public universities is higher than employability of pedagogy students in private universities. Employability prediction based on dimensions from the greatest predictors sequentially are Generic Skills, Career Development Learning, Experience, Degree Subject Knowledge, Understanding, and Skills, and Emotional Intelligence. Dimensions of Career Development Learning, Generic Skills, and Emotional Intelligence in pedagogy students in public universities are higher than private universities. There are no differences in the dimensions of Experience and Degree Subject Knowledge, Understanding, and Skills between pedagogy students in public universities and private universities. Subsequent research can examine further what skills are needed by pedagogy students in both public and private universities in the face of work environment as a teacher.

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