The purpose of this study is to analyze the effects on employment of female university graduates by educational mismatch. An “exact match” is defined as the condition where attained educational qualifications (S) are equal to required educational qualifications for the job (R), and “overeducation” if S > R, based on the definition by Duncan and Hoffman (1981). For example, if R is high-school graduate level and S is university graduate level, then it is overeducation because S > R. This study uses data based on the subjective measurement method that persons themselves think and answer a questionnaire on R, which is one of two educational mismatch measurement methods (subjective method and objective method). This study refers to the Assignment model, which is the theoretical foundation of educational mismatch and surveys previous studies. Using the concept of educational mismatch, I analyze the tasks female university graduates face when employed including i) effects of educational mismatch on early turnover, ii) persistency of educational mismatch by comparison between Japan and the Netherlands, iii) effects of educational mismatch on wages by comparison between Japan and the Netherlands.

The data used in this study are REFLEX for i) ii), PIAAC for iii). REFLEX was conducted in 2005-6 for persons who graduated from universities in 2000 in 15 countries (sample number: Japan 2,501, the Netherlands 3,425). It is possible to figure out employment and educational mismatch situation in two points of time. PIAAC was conducted in 2011-12 for persons aged 15-65 in 24 countries (sample number: Japan 5,278, the Netherlands 5,170). Both data include questions about required educational qualifications for the job. REFLEX examined persons aged 20s and university graduates as opposed to PIAAC which surveyed persons aged 15-65 with various educational qualifications. The reason why I choose the Netherlands is because first the Netherlands do not persist educational mismatch. Second, employment rate of female university graduates in the Netherlands is higher than that in Japan. Third, labor market in the Netherlands secures flexible mobility between full-time and part-time job as opposed to Japanese labor market.

As for i), I argue that overeducation accelerates turnover using Cox’s proportional hazard analysis. Both male and female university graduates are likely to quit the jobs due to overeducation. There is no gender differences of overeducation turnover effects, however, actual turnover rate of overeducated female university graduates is higher than males. This is because males are likely to get the jobs related to their majors even though they are overeducated, then they are less likely to quit the jobs. I point out that turnover rate of females is higher than that of males because females are likely to be mismatched both in educational levels and majors. In addition, my results show
that females who experienced longer job search are less likely to quit their jobs. This is because females get their jobs after a long search based on the findings that their wages are not high and they do not satisfy their jobs enough.

As for ii), I investigate why educational mismatch in Japan is not resolved easily focusing on routes of resolving educational mismatch by probit estimate. I compare the results of Japan with those of the Netherlands where educational mismatch does not persist. Results show that the effect of internal transfer to exit from overeducation is larger than that of job change in Japan and vice versa in the Netherlands. I also indicate that work experience does not affect overeducation persistency at all in Japan, but it lowers persistency in the Netherlands. As for gender difference, the effect of internal transfer to exit from overeducation is only found in males, not in females. Furthermore, the female’s probability of descent from an exact match to overeducation is higher than for males in Japan. No gender differences of persistency factors are found in the Netherlands.

As for iii), I analyze whether there exists wage penalty of educational mismatch as the reason for low employment rate of female university graduates in Japan by applying Heckman’s two-step estimation. The effect of educational mismatch on wage is estimated focusing on the difference by sex, full-time job/part-time job, having children through comparison with the Netherlands whose labor market secures to transfer between full-time job and part-time job. Results show that there exists wage penalty of overeducation and that wage penalty of females who have part-time job is larger than that of those who have full-time job. I find out that having part-time job, rather than having children, increases the wage penalty of overeducation. In case of the Netherlands whose employment rate of female university graduates who are raising children is high, I do not find negative effects of overeducation on wage based on the difference of having children or not and full-time job/part-time job. Thus, overeducation wage penalty of females who have part-time job is a disadvantage for them in Japan. Based on these results, I consider the reason why overeducation wage penalty of females increases as opposed to males. Focusing on difference of working hour flexibility by sex and by being overeducated or not, I argue that females choose part-time job, which has working hour flexibility, even though they face the wage penalty of overeducation due to their housework responsibility.

In summary, I conclude that overeducation accelerates early turnover of young university graduates and that it is difficult to resolve overeducation and that overeducation causes wage penalty in Japan. Particularly female university graduates face more serious educational mismatch than males. This means that females are more likely to face educational mismatch in terms of both levels and majors, then to quit their jobs. It is more difficult for females to resolve overeducation than males. Therefore, females cannot help but choosing part-time jobs due to flexibility of working hours even though they face increase of wage penalty by part-time job.