

The Role of Schools in Occupational Attainment in Japan: School Mediated Job-Search
Systems and High School Vocational Education

A Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at George Mason University

by

Yukiko Furuya
Master of Public Policy
University of Maryland, College Park, 2013
Master of Arts
The University of Tokyo, 2008

Director: Dae Young Kim, Associate Professor
George Mason University

Spring Semester 2020
George Mason University
Fairfax, VA

Copyright 2020 Yukiko Furuya
All Rights Reserved

DEDICATION

This dissertation is dedicated to my sister Sakiko. She was the most loved person. Her life inspired me to study education and schools in Japan.

ACKNOWLEDGEMENTS

I would like to thank my family, friends, and supporters who have made this happen. My loving husband, Roberto, assisted me in my life. Giving birth and raising my daughter, Victoria, motivated me to finish this research project. Drs. Dae Young Kim and Hiroshi Ishida provided me extensive advice and invaluable support for this dissertation project. Other committee members of my dissertation research, Drs. Tyler Myroniuk, Byung Hwan Son and Joe Scimecca were also of invaluable help. I am also grateful to Dr. Kazuo Yamaguchi for his critical comments for chapter three and Dr. Honda for kindly giving me permission to use the data which her team collected.

TABLE OF CONTENTS

	Page
List of Tables	viii
List of Figures	ix
List of Equations	x
List of Abbreviations	xi
Abstract	xii
Chapter One	1
Introduction	1
School Mediated Job-Search Systems.....	2
High School VET Programs.....	12
Conclusion and the Outline of the Dissertation	21
Chapter Two	
Do Schools Reduce or Reproduce Inequality? - School-Employer Networks, High School VET, and Class Inequality	24
Abstract	24
Introduction	25
School Mediated Job-Search Systems.....	27
High School Tracking and VET Programs	30
School Referrals as An Educational Intervention	34
Hypothesis	40
Data and Variables	42
Dependent Variables	44
Occupational prestige score.....	44
Job expectations and skill aspirations.....	44
Independent Variables.....	45
Use of school referrals.....	45
High school program type	46
Control Variables	47

Agreement with traditional gender roles	47
Cohort	48
Methodology	49
Descriptive Statistics	50
Results	53
Discussion and Conclusion	59
Appendix	64
Chapter three	
Can Girls Become Anything They Want? - Gender occupational segregation, Vocational Education, and School Mediated Job-Search Systems	65
Abstract	65
Introduction	66
Gender occupational segregation	69
School Mediated Job-Search Systems and High School VET	71
Hypotheses	78
Data	80
Dependent Variables	82
Female-dominant occupations	82
First-entry job leave	84
Independent Variables	85
Use of school mediated job-search systems	85
High school program type and education level	86
Control Variables	87
Time-dependent variables	87
Occupational prestige score	88
Cohort	88
Methodology	89
Descriptive Statistics	92
Results	96
Discussion and Conclusion	105
Appendix	111
Chapter Four	
Possibilities of Vocational School Education in Japan	112

Abstract	112
Introduction	112
Background	114
Research Design	121
Teacher Interview Analysis.....	123
Hypothesis	135
Quantitative Data and Methodology	137
Dependent Variables	139
Responses to survey questions	139
Independent Variables.....	139
Program types	139
Control Variables	140
Family socioeconomic status.....	140
Middle school and high school GPA.....	141
Views toward teachers.....	141
Willingness to attend the current school.....	142
Descriptive Statistics	143
Results	146
Discussion and Conclusion	152
Chapter Five: Conclusion	158
Findings and Discussion.....	160
Conclusion.....	168
References.....	175
Biography.....	190

LIST OF TABLES

Table	Page
Table 1. Mean comparison test and Chi ² test by use of school referrals	52
Table 2. OLS regressions: Job and skill aspirations by gender and cohort	58
Table 3. Appendix: Mean comparison test between remained and dropped observations	64
Table 4. Distributions of post-graduation paths by education and gender	71
Table 5. The list of occupation categories by gender representation.....	84
Table 6. Descriptive statistics by sex and use of school mediated job-search systems	95
Table 7. Logistic regressions predicting women's entry into female-dominant occupations for their first-entry job	99
Table 8. Discrete-time event history regressions predicting first-entry job leave	102
Table 9. Appendix: Descriptive statistics for remained and dropped observations.....	111
Table 10. Mean comparison test and Chi ² test by VET attendance.....	145
Table 11. OLS regressions: Students' attitudes toward (A) consult with teachers, (B) study to obtain certificates, and (C) try to improve GPA	148
Table 12. OLS regressions: Students' interest and knowledge about their alumni, employers, and post-secondary institutions	150
Table 13. OLS regressions: Students' levels of expectations that their schools are providing useful knowledge for their future	152

LIST OF FIGURES

Figure	Page
Figure 1 Distribution of wage by age, gender, and education	35
Figure 2 SEM showing relationship among family SES, VET, school referrals, job expectations, skill aspirations, and occupational attainment	54
Figure 3. The predictive margins of the effects of school mediated job-search systems on first-entry job leave by education (Model 3 for female).....	104
Figure 4. The predictive margins of the effects of school mediated job-search systems on first-entry job leave by education (Model 3 for male).....	105

LIST OF EQUATIONS

Equation	Page
Equation (1) $\lambda(tj xi)1 - \lambda(tj xi) = \lambda 0(tj)1 - \lambda 0(tj)\exp (xi\beta)$	91
Equation (2) $\logit \lambda tjxi = \ln \lambda tjxi 1 - \lambda tjxi = \ln \lambda 0 tj 1 - \lambda 0 tj \exp x\beta =$ $\ln \lambda 0 tj 1 - \lambda 0 tj + x\beta = \alpha j + x\beta$	91

LIST OF ABBREVIATIONS

Career and Technical Education	CTE
Coordinated Market Economies	CMEs
International Standard Classification of Occupations.....	ISCO
International Labor Organization	ILO
Japan Life Course Panel Survey	JLPS
Japan Life Course Panel Survey - Young.....	JLPS-Y
Japan Life Course Panel Survey - Middle	JLPS-M
Liberal Market Economies.....	LMEs
Ministry of Education, Culture, Sports, Science, and Technology Japan.....	
.....	Japanese Ministry of Education
Ministry of Health, Labour and Welfare Japan	
.....	Japanese Ministry of Labour
National Longitudinal Survey of Youth	NLSY
Organization for Economic Cooperation and Development.....	OECD
Social Stratification and Social Mobility Survey.....	SSM
Tokyo Metropolitan High School Students Survey	TM-S
Tokyo Stock Price Index.....	TOPIX
Vocational Education and Training	VET

ABSTRACT

THE ROLE OF SCHOOLS IN OCCUPATIONAL ATTAINMENT IN JAPAN: SCHOOL MEDIATED JOB-SEARCH SYSTEMS AND HIGH SCHOOL VOCATIONAL EDUCATION

Yukiko Furuya, Ph.D.

George Mason University, 2020

Dissertation Director: Dr. Dae Young Kim

This dissertation examines the role of schools in micro and macro level occupational attainment in Japan. Using two survey datasets – the Japanese Life Course Panel Surveys (JLPS, N=4,800) and the Tokyo Metropolitan High School Student Survey (TM-S, N=2,830) – and in-depth interviews with high school teachers as supplemental data, this research investigates how vocational programs and school mediated job-search systems, which are instituted with school-employer networks and in-school job placement offices, function to prepare young people, especially high school graduates, to enter the labor market. Overall, this study finds mixed effects of school mediated job-search systems on occupational attainment. While use of school mediated job-search systems increases the chances of finding a relatively stable and high prestige job for high school graduates from economically disadvantaged backgrounds, it also increases occupational gender segregation.

CHAPTER ONE

INTRODUCTION

The effects of education on micro- and macro-level social stratification patterns has been the subject of much discussion. Despite the general expectations for education to be meritocratic, the idea of meritocracy, including the function of education in stratification patterns, has involved controversy. Education and schools are one of the most important social institutions through which children acquire academic knowledge, learn social and cultural norms, and are stratified into different paths. The literature on institutions has revealed that social institutions preserve discriminatory practices and inequalities such as race, class, gender (DiMaggio 1998; Powell and DiMaggio 1991; Tilly 1998). While education provides individuals opportunities for social mobility, it also contributes to preserving the current social stratification. Given the discussions over education as a social institution, this dissertation aims to address the significant, but controversial, role of institutional social capital of schools, or school-employer networks, on occupational attainment.

This dissertation examines the school-to-work transition in Japan by focusing on school mediated job-search systems and their impacts on occupational attainments of young adults, especially high school graduates. Also, this dissertation pays close attention to the role of vocational education and training (VET) programs as those high schools

tend to have a larger share of students entering the labor market. Particularly, this study aims to reveal the interlocking effects of class, gender, school mediated job-search systems, and VET high schools on occupational attainment.

The literature on the school-to-work transition in Japan points out that the Japanese labor market is institutionally coordinated among government, employers, and schools (Brinton and Kariya 1998; Ishida 2007; Kariya 1991; Kariya, Ishida, and Sugayama 2000; Rosenbaum et al. 1990; Rosenbaum and Kariya 1989). Under the Japanese labor market, high school students rely on schools to find post-graduation jobs. Schools have enormous impact on post-graduation career paths, and firmly-established networks with employers directly affect students' occupational attainment. Schools have contributed to provide job opportunities for poor and working class individuals. However, the institutional coordination with employers and the power and influence schools have on students are a double-edged-sword that limit students' agency in job-search process and reproduce inequality that are embedded in the labor market.

SCHOOL MEDIATED JOB-SEARCH SYSTEMS

Historically, Japanese high schools have had a substantial role as matchmakers between students and employers. In Japan, most workers are hired directly after graduation across all educational levels. This custom of *Shinsotsu Saiyou*, which literally means “new-graduate employment,” was established in accordance with the development of school mediated job-search systems. New-graduate employment and school mediated

job-search systems were both the co-products of the coordination among government, business enterprises, and schools (Kariya et al. 2000).

In post-WWII Japan, the government planned to place middle school and high school graduates into blue-collar occupations to fill the growing demand for industrial labor. While massive recruitment of students was happening, teachers started to emphasize the importance of the active involvement of schools in the recruitment process to protect students from exploitative employers and harsh working conditions. Consequently, with the state regulation, employers and schools established school mediated job-search systems through which students were matched to jobs (Kariya et al. 2000).

School-employer networks were born with school mediated job-search systems. In the 1960s, the demand for a young workforce began to outpace the supply of high school graduates (Kariya et al. 2000). To secure new employees to meet their labor needs, business enterprises had to follow the request of schools. Schools and regional public job-placement offices started to have more power and influence in the recruitment process as the demand for labor was growing.¹ Schools demanded the improvement of

¹ Public job-placement offices are run by the Japanese government to provide job listings and other career supporting services for free. They provide information about social security benefits related to employment and vocational training programs and provide subsidies for trainers and trainees. There are 544 public job-placement offices in 2017 (Ministry of Health, Labour and Welfare Japan).

working conditions, and it became a universal norm for Japanese firms to employ students referred from schools. By accepting graduates referred from schools, business enterprises, especially large ones, were guaranteed a reliable workforce with little spending on advertisement and recruitment.

As school-employer networks became the centerpiece of the recruitment process, high schools and employers began to intensify their reliance on in-school job placement offices during the 1960s (Kariya et al. 2000). Since the 1960s, the primary duty of in-school job placement offices has been to support students in their job search and application. Generally, in-school job placement offices are common in schools with large numbers of students seeking post-graduation jobs. Teachers working in in-school job placement offices have various tasks such as providing job-search counseling services, conducting mock job interviews, screening and matching students with employers, and guiding students during job applications. Additionally, they help students to prepare job applications according to the state-regulated schedule.²

² The job market for high school students is separated from the ordinary labor market due to the government regulations protecting high school students. Under the Japanese regulation, firms are allowed to post jobs only after July 1st, and schools can submit students' job applications after September 5th. Firms can begin to offer employment after September 16th. This guarantees that most students find jobs within six months prior to graduation. Generally, high school students graduate in March and start

Among these tasks, screening which students can apply to which firms is one of the most important tasks for in-school job placement office teachers. The screening of students is a rigorous process that requires careful evaluation of students to determine if they match with the firms they are applying to. Conventionally, Japanese high schools allow students to apply to only one job at a time and do not refer students to jobs outside of school-employer networks. Schools do not allow students to apply to other jobs unless they are rejected from the first position. This one-student/one-employer rule is accepted because few employers reject students referred by in-network schools. The main purpose of the one-student/one-employer rule is to maintain mutual trust and long-established relationship between schools and employers.

Given such mutual trust between schools and employers, the Japanese literature describes school-employer networks as *Jisseki Kankei*, which literally means the relationship based on results. School-employer networks are strengthened and maintained through the consistent employment results of the school's graduates. To maintain such a relationship, schools need to have their students get hired by in-network firms, and firms need to hire students referred by in-network schools.

As the rule of one-student/one-employer rule and state-regulated recruitment schedule show, the recruitment process is under the strict control of schools. School mediated job-search systems limit students' agency and freedom to choose their own

employment from the first week of April. Thus, schools tend to plan school activities and events in consideration of these schedules.

jobs. State and schools established various regulations, rules, and customs to protect students from exploitative employers and harsh working conditions. Limiting students' freedom was justified because schools could intervene and protect graduates as long as students found jobs from in-network firms. Under the growing economy with a massive labor demand, focusing solely on in-networks firms to protect students was acceptable. Placing students to in-network firms in growing industries offering life-long employment with career advancement opportunities was beneficial for students. Moreover, it was impossible for schools to evaluate massive numbers of firms willing to hire their students.

School-employer networks were effective and adequate for successful school-to-work transition for students until the early 1990s (Brinton and Kariya 1998; Lynch 1994; Rosenbaum et al. 1990; Rosenbaum and Kariya 1989, 1991). For instance, Kariya (1991), who are a pioneer of school-to-work transition studies focusing on Japan's school-employer networks, revealed that even students from lower socioeconomic status (SES) backgrounds and limited academic achievements were able to find jobs because of the institutional linkage between schools and employers.

However, with the long economic recession since the late 1990s, like American and European counterparts, Japanese young adults have experienced difficulties in finding stable jobs. It became much more difficult for schools to secure jobs for their graduates through school-employer networks. Since the recession started, many business enterprises reduced the number of new employees and many regular positions have been replaced by contingent work. Faced with the recession and limited job opportunities, fewer high school graduates directly enter the labor market (Kosugi and Hori 2013).

These circumstances during the economic recession severely led to the deterioration of school-employer networks. Employers now have too much power in the hiring process, and schools are no longer able to successfully negotiate with employers for better jobs. Even if schools are able to place students to jobs, some of them find it difficult to stay in these firms for decades like earlier generations.

Young people who do not follow typical school-to-work transitions or career paths no longer benefit from the rules and regulations established by school mediated job-search systems in its heyday. Instead, the protections provided by school mediated job-search systems limit students' power, freedom, and agency to find better matching jobs. The literature points out that job placement relying solely on school-employer networks limit occupational freedom and opportunities of young adults (Brinton 2010; Honda 2005b; Tsutsui 2006). Faced with the difficulties of placing students in jobs during the economic recession, in-school job placement office teachers began to rely even more on in-network employers. Without knowing the actual job opportunities and labor market circumstances, teachers give too much credence to in-network firms. They believe that in-network firms always provide better jobs for students than firms outside of their networks (Tsutsui 2006).

Tsutsui (2006) points out that teachers' dependence on in-network employers lead them to misunderstand industries, career opportunities, and employers. Such job-search process results in job mismatch and early job leaving. Often, Japanese teachers have limited experience with job-search in the ordinary job market and work experience outside of the education industry. Under a growing economy, even if teachers do not have

much knowledge about jobs and industries, plenty of in-network employers offered jobs with promising benefits and career advancement chances. After the recession, however, job opportunities and the number of in-network firms have shrunk in many schools. Yet, few schools and teachers have reworked to change their job-search systems. Many are, in fact, unaware of job opportunities provided by out-of-network employers. Moreover, sending students to unknown employers is risks. They are worried about potential job mismatches with new employers and loss of in-network firms because not sending students to firms would result in loss of school-employer networks.

The literature also criticizes career counseling activities in high schools for channeling low-achieving students to become temporary workers, or risk becoming jobless to pursue unrealistic dreams (Arakawa 2009; Inui 2010). Honda (2005) interviewed Japanese *freeter*, or young temporary workers, and found that school mediated job-search systems deprive students from developing proper vocational aspirations to find jobs that fit their personalities and abilities. Instead, the stratification process in schools often overlaps with high school academic rankings. While selective high schools urge students to attend college, less selective high schools tend to stratify students to uncertain post-graduation paths by allowing them to pursue unrealistic dream jobs like artists, actors, designers, and writers. Around the 1990s, education policy in Japan shifted from focusing solely on academic ability to emphasizing career development and “way of life” that are both vague concepts to implement in classroom. As a result, some lower-ranked high schools which implemented these new curricula started to encourage students to find their dreams and pursue them.

Both school mediated job-search systems and career counseling activities in high schools have shown limitations to place students in realistic, stable jobs. Finding future jobs is difficult for many high school students who have little work experience, know little about what jobs are available to them, and have no clear idea what jobs they want to have. Thus, for many students, it is common to mention well-known occupations like doctors, lawyers, police officers, or unrealistic jobs like actors, designers, and musicians as their dream jobs (Moriwaki 2018). Instructing students to think about their future work is difficult for teachers who often have limited job-search and work experiences and limited knowledge about the labor market. For schools to practice effective and adequate career counseling activities, including raising realistic job expectations and helping with job-search, they need effective in-school job search offices with experienced teachers.

Yet, in-school job placement offices exist only in schools with large numbers of students seeking post-graduation jobs. In addition, in-school job placement teachers have various tasks such as providing job-search counseling services, having career fairs, screening and matching students with employers, maintaining relationship with employers, and guiding students in job applications. It is a tremendous amount of work and burden for teachers. Despite the importance of their roles, power, influence, and number of tasks, in-school job placement office teachers are neither career counselors nor job-search professionals. They teach regular classes and simultaneously work in job-placement offices through random assignments. Like many teachers, in-school job placement office teachers have little job-search experience in the regular job market or have hardly interacted with employers. By working for in-school job placement offices,

teachers learn more about school mediated job-search systems, school-employer networks, and high school students and their job opportunities. In schools without in-school job placement offices, it is much more difficult for both students and teachers to search jobs and prepare job applications.

However, even if there is an in-school job placement office in the school, the effectiveness and degree of school involvement in the job-search process varies. While teachers' experience, knowledge, and attitudes are important factors, the effectiveness of one school's in-school job placement office is predetermined by each school's history and the quantity of in-network firms. Brinton (2000) frames school-employer networks as institutional social capital and revealed that the strength of each school's ties with employers determines their stock of institutional social capital. She compared the size of school-employer ties among high schools and found that well-established vocational high schools had much stronger and broader networks than academic high schools regardless of their academic rankings.

In more recent years, given the increasing demand for higher education, high schools have built such institutional networks with postsecondary schools. These school-employer networks and school-college networks are fundamentally different from informal support systems like old-boy networks in the American elite society. While old-boy networks benefit only elite students with economic and cultural capital, these networks in Japan help students regardless of their SES background.

Yet, access to such resources is not readily available to everyone in Japanese high schools. Gaining access to the school's institutional social capital requires obtaining

official referrals from the school to firms or postsecondary schools, including junior colleges, two- or three-year post-secondary vocational institutions, and four-year colleges and universities. When students apply for jobs or postsecondary schools using school networks, they have to meet a series of screening criteria, including GPA, athletic and other kinds of school activities, and everyday behaviors such as politeness and personalities. When applying to jobs or postsecondary schools, all students, with or without school referrals, prepare application documents with the assistance of a homeroom teacher and in-school academic placement offices or job placement offices. Additionally, for a student to apply to a job, in-school job placement office teachers review the application package to verify if there are any problems or missing information, and after sending applications and taking interviews, they keep communicating with employers to see if students would be hired. Considering the important role of in-school job placement offices, finding and applying for a job without their assistance is incredibly difficult for students.

While schools provide various and vital support for students to apply to jobs and postsecondary schools, the application process is under the tight control and supervision of schools and teachers as well. To obtain access to school's social capital, students have to abide by the 'power' and 'control' mechanisms embedded in schools, particularly the institutional control that in-school academic placement offices and in-school job placement offices have over students.

Although school mediated job-search systems are in decline, they still play an active role in the school-to-work transition process for young adults in Japan. For

example, comparing individuals who relied on school referrals against those who did not, Ishida (2011) finds that many high school graduates, regardless of gender, cohort, and school type, still used this method to find and land jobs. Because of the importance of their role, school mediated job-search systems need to adapt to fit the current labor market where young people no longer follow conventional career paths of their parental generations. As research on school-mediated job-search system has focused primarily on first post-graduation job attainments, their effects on long-term outcomes such as post-first-entry jobs are largely missing. Moreover, the literature has missed how their effectiveness varies by program types and school demographics such as gender and SES of the student body.

HIGH SCHOOL VET PROGRAMS

In addition to school mediated job-search systems, this dissertation is particularly interested in the role of VET high schools, including both direct and indirect effects, on occupational attainment and readiness for future work. The positive effects of VET on mobility patterns within the working class are well known. Across the world, VET attendance reduces the risk of high school dropout, teenage pregnancy, and unemployment in addition to increasing the chances of becoming skilled workers (Beattie 2002; Catterall and Stern 1986; Kang and Bishop 1989; Kulik 1998; Perlmutter 1982; Plank, DeLuca, and Estacion 2008). Also graduates from VET programs tend to be more satisfied with their jobs than those from other programs (Conroy and Diamond 1976; Kulik 1998; Taylor 2002). In Japan, Katayama (2016) finds that Japanese students in

technical high schools are more aware of the relevance of school curriculum with future vocational careers than their academic program counterparts.

Despite positive effects of VET programs, the Japanese high school tracking system seldom channels students into vocational tracks. According to the OECD (2015), only 23% of students are enrolled in secondary vocational programs in Japan compared to 40% in France, 65% in Germany, 59% in Italy, 34% in the UK, and 46% in Sweden. About 80% of Japanese students attend academic programs instead.³ Yet, the majority of academic programs are mid- to lower-ranked schools similar to many VET programs. Although academic programs are supposed to prepare students to pursue higher education, many students have limited academic achievement levels that are closely linked to SES.

These lower-ranked academic programs have a larger percentage of graduates becoming jobless or non-regular workers than VET program students.⁴ The academic achievement gap between lower-ranked and higher-ranked academic programs is

³ In this paper, academic programs include *Futsūka*, or general programs to which about 70% of all high school students attend, and *Sōgō gakka*, or comprehensive programs to which about 5% of all high school students attend.

⁴ In 2018, the percentage of graduates became jobless or non-regular workers was 5.9% in general programs and 6.5% in comprehensive programs, while it was 2.4 % in technical programs and 3.1% in commercial programs (Ministry of Education, Culture, Sports, Science and Technology Japan 2018).

substantial, but students, parents, and teachers prefer academic programs over VET programs even if their academic ranks are comparable. When middle school seniors apply to high schools, their GPA predetermines which schools they will be admitted to, and few students consider program types when choosing future high schools. Under the strict academic hierarchy of Japanese high school systems, school rankings serve as direct indicators of SES than program types. Given the relative importance of academic ranks and the small proportion of VET programs, Japanese researchers have paid little attention to high school VET. It is largely unknown how teacher-pupil interactions in VET programs and the relationship between schools and employers differ in VET programs compared to other high school programs.

In Japanese education policy and high school system, VET programs used to be treated better. Honda and Tsutsumi (Honda and Tsutsumi 2014) argue that a decline in the social prestige of vocational high schools in Japan became apparent in the 1970s when education policy started emphasizing academic oriented curricula to improve college attainment. This policy shift aimed to reduce spending on VET programs by replacing VET programs, which cost much more to maintain than academic programs (Honda and Tsutsumi 2014). Despite a high demand for high school VET among students, families, as well as business enterprises, the government created an environment and discourse accusing VET programs of narrowing students' future. Following the detracking policy, local municipalities gradually switched VET programs into academic programs and emphasized the necessity to develop more academic programs. This policy shift resulted in the "brain flight" of applicants from public to private schools as well as

from vocational to general programs, causing declines in the average academic competency of students applying for VET programs and public schools (Kariya and Rosenbaum 1999; Nakanishi, Nakamura, and Ōuchi 1997). Detracking policy is still being implemented, and the long economic recession has pushed students to postpone entering the labor market and pursue post-secondary education instead (Horiuchi, Itoh, and Sasaki 2006). To respond to increasing college attendance rates and reduce spending on education, the government seeks to transform VET programs into comprehensive and academic programs.

Declines in the social prestige of vocational high schools are also associated with the development of middle-class identities among Japanese people. Since the 1970s, the percentage of people perceiving themselves as lower-class decreased while many began to identify as middle class. In 1955, 34.8% and 56.3% of Japanese people described themselves as middle-class and lower-class respectively, but in 1995 46.8% and 21.7% identified as such (Sūdo 2009). Since the 1970s, despite the persistent inequality in Japan, middle-class identities among Japanese people have not shown a definite downward trend (Sūdo 2009).

As Bourdieu and others observed, Western societies have accumulated class distinctions in cultures, dispositions, SES, and residential areas (Bourdieu 1984; Bourdieu and Passeron 1977). However, Japan has had little accumulation of such class distinctions because rapid expansion in education occurred simultaneously with new stratification patterns following the post-WWII era. Parents encouraged children to pursue higher education hoping that their children would achieve greater

intergenerational mobility or to be able to reproduce middle-class status. Regardless of academic achievement levels, most middle school students and their parents prefer academic high schools over vocational high schools with hopes to attend college.

The literature points out that many Japanese identify as middle class while their actual social statuses are lower. Misperceptions of their social status are associated with misperceptions about the socioeconomic inequality embedded in Japanese society (Sūdo 2009). In schools, misperceptions of inequality cause teachers to ignore the economic struggles of students. For instance, schools are believed to be meritocratic spaces where class distinctions do not matter, and any discussion of class differences are taboo.

Although some teachers are aware of students' economic difficulties, they cannot frame them within the language of class or economic inequality because talking about students' social class and economic struggles is considered to be discriminatory against lower SES students in Japanese schools (Hasegawa 2015; Kariya 2001; Tsuchiya 2015; Yufu 2015). In Japanese schools, it is a prevalent belief that academic ability is independent of social origins, and meritocratic achievement is the outcome of hard work (Kariya 1991, 1995, 2001). Linking social origins with academic achievement is a taboo and equality means equal treatment rather than equal opportunities.

Moreover, the discourse embedded in the Japanese education system posits that the purpose of schooling should not be vocational training, but strictly academic, a liberal education through which youths can pursue happiness and freedom (Honda 2009). Thus, academic high school teachers seldom talk about job-search unless students are vigorously looking for jobs and ask teachers assertively. If teachers encourage lower-

class students to seek jobs instead of pursuing higher education, such actions are construed as class discrimination whereby youths are prevented from pursuing their dreams. This is particularly a problem in academic programs where teachers are expected to assist students to pursue higher education.

In contrast, one of the most important outcomes in VET programs is occupational attainment. The majority of VET program students are committed to finding jobs, and schools frequently provide career-related seminars and job counseling services. In VET programs, job-search is not a sensitive or discriminatory topic for lower SES students. Within such a supportive environment, working-class students and teachers are able to have frank conversations about job-search regularly.

At the same time, growing numbers of students in VET high schools are pursuing tertiary education, including some seeking to enter prestigious top universities. For instance, Okabe (2010) finds that VET program students seeking higher education choose their college of choice by looking at college enrollment rates and the list of in-network colleges. The difference between students in elite academic high schools and those in non-elite schools, including VET programs, is their reliance on their schools' networks with universities. While the majority of students in elite academic programs take highly competitive entrance exams to be admitted into prestigious universities, most students in non-elite academic and VET programs use school referrals without written exams (Arakawa 2009; Nakamura et al. 2010).

The literature shows that vocational high school students pursuing higher education also rely far more on teachers and schools than academic program students do.

Nakamura and colleagues (Nakamura et al. 2010) find that close teacher-pupil interactions had large impacts on students' post-graduation plans in VET programs but less so for general programs. Chiba and Ōwada (2007) studied a case of a lower-ranked commercial high school in Tokyo and found that teacher-student interactions through one-on-one coaching sessions effectively help students with limited academic achievement and uncertain post-graduation plans increase their educational aspirations and make their college choices.

Findings from the literature suggest that teacher-pupil relationships and interactions are more effective in VET programs because of students' reliance on teachers and schools. In Japanese VET high schools, vocational education and training are provided only by teachers. Thus, the teacher-pupil relationships are akin to an apprenticeship in which students perceive their teachers as vocational practitioners and mentors. For example, Katayama (2016) finds that technical program teachers stress the importance of technical skills and explain employer expectations in everyday pedagogies. They regularly emphasize that the criteria for providing school referrals to first-rate firms are GPA and teachers' evaluation of student behavior.

VET high schools and teachers have more influence and power on students partially because of their strong networks with regional employers because students try to find jobs from in-network firms. To place students to in-network firms, additional teacher-pupil interactions and various activities are involved such as mock interviews, instructions for job-particular report writing, and lessons in etiquette. Thus, school-employer networks create additional educational environment and teacher-pupil

interactions. The literature finds that teacher-pupil relationships differ by school context and demographics such as gender, race and class of students, parents, and teachers.

School education involves both written curricula teaching various academic subjects and hidden curricula that are embedded in everyday life in schools. While various classroom activities, schoolwork, and teacher-pupil relationships are not part of the written curricula, they all affect educational outcomes and post-graduation paths (Anyon 1980; Rosenbaum 1976).

VET programs have a culture where schools and teachers are far more involved in students' planning of post-graduation paths. VET teachers utilize teacher-pupil relationships to channel students to employment and post-secondary educational institutions. However, when considering the effects of school context and demographics on teacher-pupil interactions, gender differences in VET high schools must be addressed as VET high schools in Japan are de facto gender-segregated institutions. Yet, gender homogeneity in VET programs is taken for granted, and few studies have focused on gender segregation in VET high schools. Thus, little is known how gender homogeneity in VET programs affect students' post-graduation paths. Considering low academic ranks of VET programs that are highly associated with SES, studying school mediated job-search systems among VET programs will contribute to understanding the intersections of class and gender inequality embedded in Japanese high schools.

Another problem with Japanese VET high schools is that they have limited emphasis on vocational skill formation compared to VET high schools in other industrial countries (Honda 2009; Horiuchi et al. 2006). Some researchers point out that Japanese

high school systems, including both VET and academic programs, have failed to develop curricula effectively linking educational contents and subjects to future work because of their reliance on networks with employers. For high school students to find jobs, school referrals matter more than what they have learned in school (Honda 2005b, 2009; Ishioka 2011; Tsutsui 2006). School-employer networks lead students to employment regardless of their vocational skills, academic knowledge, or readiness to join the workforce, and prevent schools from bridging their content to students' future work.

School mediated job-search systems and VET programs are intertwined and have both negative and positive impacts on students' post-graduation paths. This dissertation aims to reveal the role both schools and teachers play in the complex practice of school mediated job-search systems. Schools exercising school mediated job-search systems have more power and influence on students that reduce students' agency in finding jobs like regionally acclaimed VET programs. While the recession has limited their power and influence on employers, those schools have kept limiting students' agency on job-search. Moreover, access to declining school-employer networks is limited to large and influential schools and to high-achieving and well-behaved students. Low-income and low-achieving students, or students not following teachers' instructions would have limited access to them. Additionally, gender segregation in VET programs are highly linked with the gender segregation in the labor market and workplace. School mediated job-search systems, combined with VET, are likely to both reduce and reinforce inequality.

CONCLUSION AND THE OUTLINE OF THE DISSERTATION

The struggles of Japanese young adults working as non-regular temporary workers are beginning to be recognized as social problems since the early 2000s. Due to the lack of job security, stable income, and harsh working conditions, non-regular workers face the risks of poverty as well as physical and mental health impairment. Young adults from socially disadvantaged backgrounds are facing severe difficulties in establishing stable lives. As a result, marriage and family formation are no longer feasible life goals for young non-regular workers. Young population has declined rapidly, but population replacement is impossible because of the rapidly aging population and low fertility rates.

Yet, employment in full-time, regular, or permanent positions can also cause problems. Japanese firms are notorious for their harsh working conditions such as overtime work without compensation. While the government regulations prohibit firms to make employees work more than 40 hours in a week,⁵ few employers follow these rules. Firms require permanent employees to work more than non-regular workers, and many regular workers struggle with overwork. Moreover, they often face or endure all kinds of abuses, including sexual harassment, discriminations, and workplace bullying. Sometimes harsh working conditions cause employees' *Karōshi*, which literally means

⁵ However, the government allows the exception that allows employers and employees to make the special agreement permitting the maximum 360 hours overwork in a year.

overwork leading to death. After experiencing these harsh working conditions and overwork, regular workers often switch their jobs and enter non-regular work. Thus, finding regular positions offering acceptable working conditions is an important factor for young adults to form a stable career and life without mental and physical health risks.

People who entered the labor market during and after the recession have all experienced struggles in establishing stable career. Particularly, women with lower SES and limited education have faced serious problems. Opportunities for women to find regular positions with adequate salaries and acceptable working conditions are limited. Non-regular workers are predominantly women. Even those in regular positions, particularly married women, often switch to non-regular positions because they are unable to balance family and jobs due to harsh working conditions and pressures of traditional gender expectations. Married or unmarried, regular or non-regular workers, women struggle to establish economic stability and career advancement in their workplace and occupations.

Given these difficulties surrounding women and individuals who enter the labor market during and after the recession, the substantive focus of this study is to reveal both negative and positive effects of schools on the reduction and reproduction of class and gender inequality. In particular, this study aims to reveal interlocking effects of school mediated job-search systems, high school VET and its de facto gender segregation on occupational attainments of individuals with disadvantaged social origins, especially women. School mediated job-search systems have benefited working-class students to find jobs through school referrals, school-employer networks, and a range of job-search

assistance. Yet, due to the persistent class and gender inequality embedded in schools and the labor market, school mediated job-search systems also bolster the reproduction of inequality. Particularly, how school mediated job-search systems affect women is a largely missing topic in the literature. As the effectiveness of school mediated job-search systems is on the decline, it is important to reconsider the role of schools in school-to-work and school-to-college transitions. By examining school mediated job-search systems and VET, this study aims to find policy implications to transform them to provide more equitable and progressive job-search experience for everyone. Schools are not perfect solutions, but they are often the only place where socially disadvantaged youths can receive help and achieve social mobility and stability.

This dissertation is comprised of five chapters, including the introductory chapter, three independent research papers/chapters, and a conclusion chapter. Following this chapter, Chapter two examines the impact of high school VET and school referrals on both short- and long-term occupational attainments, as well as job expectations and skill aspirations. Chapter three examines how school mediated job-search systems affect women's entry to female-dominant occupations and how such differentiated placement affect their survival in first-entry firms. Chapter four examines the effectiveness of VET for economically disadvantaged and academically low-performing students on their readiness for future work. Chapter five concludes and discusses the findings, limitations, and directions for future research.

CHAPTER TWO
DO SCHOOLS REDUCE OR REPRODUCE INEQUALITY?
SCHOOL-EMPLOYER NETWORKS, HIGH SCHOOL VET, AND CLASS
INEQUALITY

ABSTRACT

Historically, Japanese high schools have had a substantial role in student job-search process as matchmakers. This paper examines the impacts of school-employer networks and vocational education and training (VET) high schools on first-entry and current occupational attainment. Also, their effects on skill and job expectations are evaluated given the indirect and long-term impacts of aspirations on one's occupational attainment. The dataset used in this paper is the Japanese Life Course Panel Surveys conducted by the University of Tokyo (JLPS, N=4,800). Structural Equation Modeling (SEM) and regression analyses found complex interrelations among school-employer networks, high school VET, job expectations and skill aspirations, and occupational attainment. While referrals from schools to firms increase first-entry occupational prestige scores, their effects on job expectations and skill aspirations are negative regardless of education levels. This paper's findings contribute to the existing literature by revealing the contradictory role of school-employer networks on job expectations, skill aspirations, and occupational attainments.

INTRODUCTION

Historically, Japanese schools, especially high schools, have had a substantial role in student job-search process as matchmakers. Under the institutionally coordinated labor market, Japanese most people find jobs while they are still in schools, including high schools, colleges, and graduate schools. This custom is called *Shinsotsu Saiyou*, which literally means “new-graduate employment.” Under the new-graduate employment process, college students can freely apply to jobs without permission or referral from schools while high school students must obtain school referrals to apply to jobs.

Under the strict government regulations, students seeking jobs must obtain official referral documents issued by schools. This regulation also prohibits firms from directly hiring or recruiting high school students without referrals from schools. Through schools referrals, students and employers are both permitted to join job-search process supervised by schools. This referral system, described as school mediated job-search systems in this paper, originally developed in the 1950s to 1960s and contributed to developing institutional coordination between schools and employers, or school-employer networks.

To refer students to in-network firms, schools screen students based on GPA. Particularly, referrals to well-known or popular firms are provided to students with high academic performance. With its meritocratic selection process and the effectiveness in placing students to jobs, school mediated job-search systems relying on school-employer networks were the efficient and equitable recruitment method until the 1990s.

However, after the long recession started in the 1990s, or known as *the lost ten years*, school mediated job-search systems have shown limitations. During the long recession, Japanese firms significantly reduced the number of new employees and replaced regular jobs, which refer to full-time, permanent jobs, to non-regular jobs such as part-time, contingent, flexible, temporary, short-term, informal, day labor, on-call, and all other types of precarious employment. These changes drastically transformed the job-search environment for young job seekers, especially those with limited education. The increasing demand for higher education and improved college enrollment rates also caused a great decline in the number of high school graduate job seekers and resulted in shrinking of the job market for high school graduates.

Although these changes caused a decline of the effectiveness, efficiency, and robustness of school mediated job-search systems, they have remained important in student job-search process. Because the direct and smooth school-to-work transition is considered to be a norm in Japan, finding a good job is difficult for individuals who already graduated or are trying to change jobs. In fact, new graduates entering firms stay with the first-entry firms for many years. The labor retention rate for individuals in their 20s is less than 20% and is about 10% for 30s. School mediated job-search systems have significant role in smoothly placing students to first-entry jobs. Yet, it is unclear whether school mediated job-search systems actually place students to good first-entry jobs through which they can develop stable life and upward mobility.

First-entry occupations have an immense power to predict individual status attainment, and sociologists have focused on the impacts of first occupational attainment

on social stratification patterns (Alexander and Eckland 1975; Blau and Duncan 1967; Ishida 1993; Sewell, Hauser, and Wolf 1980; Yu and Chiu 2014). Good first jobs not only help individuals stay with the firm, but also help them find subsequent good jobs. Because job change is becomingly more common among young Japanese, it is important to understand how schools contribute to student job outcomes even after first-entry jobs.

This paper aims to revisit the impacts of school mediated job-search systems on first- and post-first-entry job attainment and their indirect impacts on job expectations and skill aspirations. Since job expectations and skill aspirations are associated with job satisfaction, job mismatch, and future job attainment, this paper analyzes the effects of school mediated job-search systems on job expectations and skill aspirations as well. At the same time, this paper also examines the effects of vocational education and training (VET) programs because the role schools play in student job-search process is greater in VET programs compared to other high school programs.

SCHOOL MEDIATED JOB-SEARCH SYSTEMS

School mediated job-search systems do not simply provide job opportunities for socially disadvantaged students but also bolster inequality. Sociological research on education, social mobility, and stratification in industrial countries have revealed that schools often manufacture and reproduce the inequality of socioeconomic status (SES) and widen the opportunity gap by race, gender, and class (Ainsworth and Roscigno 2005; Alexander et al. 2008; Alexander and Eckland 1975; Arum and Shavit 1995; Basil Bernstein 1971; Blau and Duncan 1967; Blau and Hendricks 1979; Bourdieu and

Boltanski 1978; Bourdieu and Passeron 1977; Griffin and Alexander 1978; Ishida 1993; Ishida and Slater 2009; Lauder, Brown, and Halsey 2009; Sewell et al. 1980; Shavit and Blossfeld 1993; Shavit and Muller 1998). Education systems and schools are social institutions that reinforce inequality by producing signals and stigmas in association with financial, cultural, and social capital of individual families.

While these findings have contributed to establish universal theories of social stratification and mobility, they are based solely on European and American society where industrialization happened much earlier than Japan. In Japan, the fast-paced industrialization process involved and created various social institutions simultaneously. In the case of labor market, the industrialization process contributed to establishing the institutional coordination between the government, employers, and schools during the 1950s and 60s (Kariya et al. 2000). This institutional coordination made Japanese schools have a distinct role as a matchmaker and gatekeeper between students and employers. To fully analyze social stratification patterns in Japan, the existing theory of status attainment needs to pay a closer attention to the role of the institutional coordination and institutionally accumulated social capital in schools.

During the 1990s, the literature on social capital theory and institution theory treated Japan's school mediated job-search systems as a unique and important case showing that schools minimize inequality by providing job opportunities for working-class youths (Brinton and Kariya 1998; Lynch 1994; Rosenbaum et al. 1990; Rosenbaum and Kariya 1989, 1991). Kariya (1991) observed that the embeddedness of institutional linkages between high schools and employers allow Japanese students from lower-SES

backgrounds with limited academic achievement to find jobs. By providing official referrals, Japanese high schools give students access to a stock of social networks with employers.

The role of Japanese high schools in student job-search process is significantly greater compared to those in other countries. Brinton (2000) characterizes the role of high schools providing referrals as institutional social capital. For instance, American schools provide little assistance for students to find jobs. Generally, American high school students find jobs through personal connections or job advertisements. Holzer (1996) finds that the most common method to recruit non-college educated employees is newspaper advertisement, and only 3 percent of recently recruited employees were hired through school referrals. Today, the recruiting process has shifted from newspapers to internet services, but Holzer's findings suggest that young Americans without significant personal social ties must navigate the labor market on their own.

Although Japanese high schools provide students a lot of support and grant access to their networks, the effectiveness and robustness of school referrals has been in decline since the recession in the late 1990s. As the number of job listings significantly decreased, middle-class students shifted from finding jobs to attending college. College attainment rates reached 50% in the 1990s and surpassed the number of students entering the labor market. School-employer networks are sustained by the number of graduates entering in-network firms every year. The smaller pool of students seeking jobs means that employers cannot secure employees from school-employer networks. When school-employer networks become less reliable, employers rely less on them. To secure jobs for

students under the recession, high schools sought to keep their networks with employers by uninterruptedly placing students to those jobs.

Yet, schools often misperceive job opportunities outside of their networks, disregarded students' preferences, and paid little attention to working conditions (Honda 2005b; Tsutsui 2006). Without knowing the actual job opportunities and labor market circumstances, teachers often give too much credence to in-network employers. They believe that in-network firms always provide better jobs for students than firms outside of their networks (Tsutsui 2006). As a result, some graduates face difficulty to stay with their employers and leave jobs.

Unlike middle-class students pursuing higher education, poor and working-class students still rely on schools. Today, high school graduates who immediately enter the labor market after graduation tend to be from -SES backgrounds (Ishida, Kondo, and Nakao 2011; Kosugi and Hori 2013; Nakamura et al. 2010). They are more likely to face risks associated with non-regular employment that provide little job security.

HIGH SCHOOL TRACKING AND VET PROGRAMS

In industrial countries, the upper secondary education has an important role in macro-level social stratification patterns (Shavit and Muller 1998). In the Western literature, tracking and VET programs are one of the primary subjects of study. Findings from the literature show that VET lead to both negative and positive outcomes in educational and occupational attainments (Ainsworth and Roscigno 2005; Houtte 2005; Houtte, Demanet, and Stevens 2012). For example, in the U.S., the effectiveness of high

school VET and its educational and occupational outcomes differ by race, class, and gender, and VET programs expand demographic inequalities (Ainsworth and Roscigno 2005). Similarly, in their book of cross-national comparative research, Reisel, Hegna, and Imdorf (2015) point out the problem of gender homogeneity in VET programs that result in differentiated job outcomes between men and women.

Compared to the Western literature, the Japanese literature pays little attention to program type differences. This is largely due to small shares of students attending VET programs. According to the OECD (2015), only 23% of students are enrolled in secondary vocational programs in Japan compared to 40% in France, 65% in Germany, 59% in Italy, 34% in the UK, and 46% in Sweden. About 80% of Japanese students attend academic programs.⁶ In the Japanese literature, tracking means stratification of students to different high schools with various academic rankings. Academic rank differences are associated with educational opportunity gap between high-rank and low-rank high schools directly affect students' future status attainment (Arakawa 2009; Honda 2005a; Kariya 2001; Nakamura 2011; Nakamura et al. 2010). In fact, higher-ranked VET programs regularly send students to top universities like other higher-ranked academic programs, but their doors are usually closed for low achieving students. Since

⁶ In this paper, academic programs include *Futsūka*, or general programs to which about 70% of all high school students attend, and *Sōgō gakkō*, or comprehensive programs to which about 5% of all high school students attend.

high school academic rankings are more direct indicator of future status attainment than VET programs, the literature pays little attention to program type differences.

In Japan, public high school admissions solely rely on standardized exams and middle school GPA. When choosing a high school to apply, middle school students solely evaluate if the high school's academic rank matches their academic achievement levels. Most municipal governments allow middle school students to apply to only one school in their high school system. This restriction prevents students with financial difficulties from applying to a school in higher academic rank because failing in the admission causes them to either attend a private school or not attending high school altogether.

However, such achievement-based admissions inherently biased against lower SES students. Due to the pervasiveness of parental investment on private tutoring and exam preparation courses among middle-class families in Japan, students who lack access to private education and tutoring often struggle in school (Honda 2005a). Class inequality is embedded in Japanese high school systems that solely value academic achievement in admissions without considering the link between achievement and SES.

Additionally, students placed into lower-ranked schools may face further inequality without even knowing. The literature finds that lower- and higher-ranked schools affect oppositely on student educational and occupational aspirations. Arakawa (2009) finds that lower-ranked schools employing new type of curricula to “help students achieve a dream” to increase students’ aspirations to find jobs in unrealistic occupations, such as designers, musicians, and game creators. Compared to traditional VET programs

and higher-rank academic programs, teachers in these low-rank schools tend to offer everybody “equal opportunity to dream” and let low achieving students to leave academic competitions. Instead of pushing students to keep up with academic competitions, teachers in these schools emphasize “freedom,” “fun,” and “interest” of students. These instructions lead to lower student educational aspirations but raise career aspirations for unachievable occupations. As a result, these schools contribute to shifting aspirations from attending college or finding stable jobs to following unrealistic dreams.

Yet, what has been missing from the literature is an examination of the role traditional VET programs play on educational and occupational aspirations. Since the primary outcome of VET programs is employment, they are likely to convince students to find stable, regular jobs by cooling down educational aspirations, as well as job aspirations or expectations for unachievable dream jobs. In other words, VET programs lower unrealistic job aspirations to focus on feasible post-graduation jobs. Thus, even if lower-ranked academic and VET programs both lower job aspirations, VET programs lead students to jobs while academic programs would not. Additionally, despite a decline in school-employer networks in many schools, regionally acclaimed VET programs still maintain strong networks and effectively place students to jobs even during and after the recession (Brinton 2010). Thus, evaluating program type differences on job attainment and aspirations will contribute to fully understand what makes school mediated job-search systems work effectively and what needs to be changed to overcome their limitations.

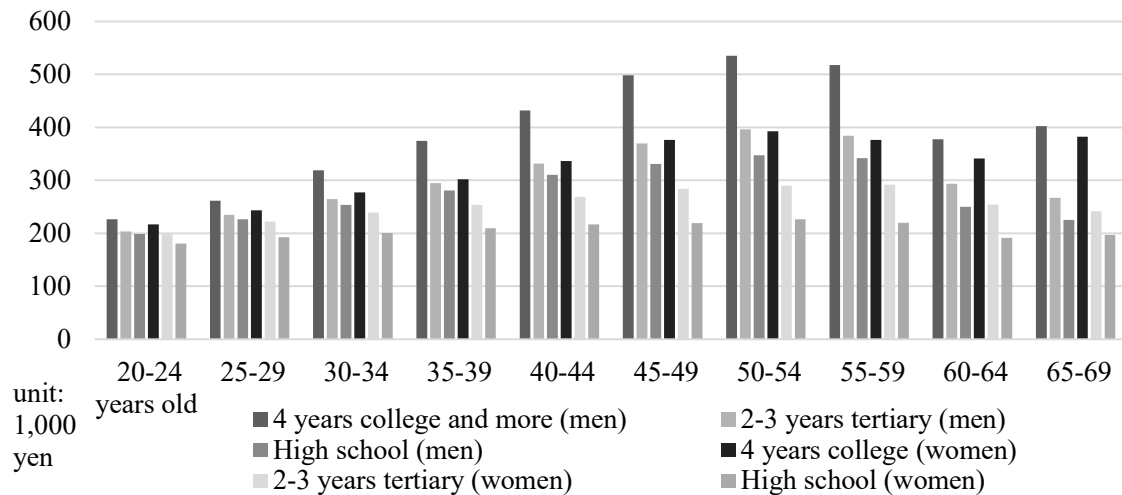
SCHOOL REFERRALS AS AN EDUCATIONAL INTERVENTION

Social stratification patterns in Japan highlight the complex relationship between education attainment and gender that are both associated with occupational attainment. Ishida (1993) finds that only 3.2% of Japanese male high school graduates in 1982 obtained upper white-collar occupations compared to close to 40% of male college graduates. The association between levels of educational and occupational attainment can also be found in more recent statistics as presented in Figure 1.

Figure 1 shows the difference in wages by education level, age, and gender. As it shows, the wage gap is entwined with education levels and gender. Female high school graduates earn the lowest wages among all groups. One of the key explanations of the wage gap between men and women and between high school and college graduates is their employment types – regular or non-regular positions. For the past decade, approximately 40% of all workers are employed in non-regular positions, and nearly 60% of them are females. Among high school graduate workers, nearly 70% of females work in non-regular positions compared to 30% of males. Even among college graduate workers, 34% females are working in non-regular positions while only 16% of males are working in non-regular positions.⁷ The difference between regular versus non-regular

⁷ The source of these numbers is the Study of the Structure of Employment Types 2014 [Koyō no kōzō ni kansuru jittai chōsa] (Ministry of Health, Labour and Welfare 2016). Yet, various other labor and economic statistics show similar numbers for a decade.

workers is clear in career advancement opportunities, levels of earnings, and access to social security benefits. In other words, finding a regular position is key to reducing economic risks.



Source: Portal site of Ministry of Health, Labour and Welfare
<http://www.mhlw.go.jp/toukei/itiran/roudou/chingin/kouzou/z2016/index.html>
 Created by editing the Basic Survey on Wage Structure 2016 (Ministry of Health, Labour and Welfare 2017)

Figure 1 Distribution of wage by age, gender, and education

Yet, finding a regular position is a difficult task for young people lacking job experience and skills. As mentioned earlier, it is especially difficult for young job seekers who have already graduated under the Japanese labor market where the direct school-to-work transition is a norm. Thus, using school mediated job-search systems is one of the

easiest and most common ways for young job seekers to find jobs while they are still in schools.

Typically, students choose firms within their schools' networks, and school referrals are prepared by in-school job placement offices. A package of official referral documents issued by an in-school job placement office is different from a letter of recommendation personally issued by teachers. Obtaining referral documents is a screening process for students to apply to jobs in in-network firms. Regardless of their schools' academic ranks, students in academic programs often struggle to find jobs because academic programs tend to have little ties with local employers and often do not have in-school job placement offices that prepare school referral documents.

In-school job placement offices exist in high schools with a large proportion of students seeking post-graduation jobs regardless of program type. Moreover, the number of students seeking post-graduation jobs directly affect schools' networks with employers. School-employer networks are sustained through the number of graduates employed in in-network firms every year. If a school fails to send graduates to some of in-network firms, those firms will be lost from networks. Therefore, having a large pool of students seeking jobs help schools to successfully maintain networks with local employers. Generally, VET programs have much higher percentage of students seeking jobs compared to academic programs that help them maintain networks with firms.

School referrals are also used in college admissions. In Japanese college admissions, students in highly selective schools apply to college through admission exams, but those in less selective and VET high schools use referrals issued by in-school

academic placement offices. Thus, regardless of program types or post-graduation plans, obtaining school referrals confers access to schools' social capital, especially for students in less selective high schools.

Whether applying for jobs or college, students must obtain school referrals. Obtaining school referrals is a screening process in which they are evaluated by GPA, school activities, and everyday attitudes and behaviors (Kariya 1991, 2001; Nakamura et al. 2010; Tsutsui 2006). For both students and teachers, obtaining and issuing school referrals are educational activities and learning process. It is not only a part of the job-search or college admission process, but also part of educational activities through which students learn respecting authority, committing to school activities, and study.

Since school referrals are more commonly used in schools serving lower SES students, it is important to consider their possible effects on school culture. The Western literature finds that schools often function to cultivate masculinity-oriented subordination, antagonisms, low aspirations, and anti-school working-class culture that abide institutional authority (Bourdieu 1984; Bourdieu and Passeron 1977; Gottfredson and Becker 1981; MacLeod 1987; McDonald and Elder 2006; Willis 1978). The Japanese literature also shows concerns for lowered aspirations among poor and working-class youths, but it finds few evidence suggesting schools cultivate anti-school culture.

Rather, Japanese schools seem to use school referrals to lead poor and working-class students to follow pro-meritocratic or pro-school culture and rules. The literature points out that school referrals are pedagogical tools for Japanese teachers to encourage students to acquire meritocratic achievement, appropriate behaviors, and educational and

occupational aspirations (Kariya 2001). Yet, as Arakawa (2009) warns, lower-ranked academic ranks encourage students to follow dreams and have seemingly higher aspirations for unachievable jobs. To use school-referrals as educational intervention, teachers need to instruct students to lower their aspirations for unrealistic, unachievable dream jobs and help them stay in academic competitions for stable and realistic jobs.

Helping students stay in academic competitions is particularly important task for working-class schools because educational and occupational aspirations are positively associated with occupational attainment. Students from affluent backgrounds have higher occupational aspirations that lead them to educational success and higher occupational attainment (Barone 2006; Domina, Conley, and Farkas 2011; Morgan 1998; Teachman 1987). In Japan, educational aspirations of students are highly associated with parental cultural capital transmitted to children in the form of shadow education, or parental investment in academic tutoring and extra-curricular activities outside of schools (Honda 2005a; Kariya 2001; Yamamoto and Brinton 2010). Researchers warn that students from lower SES show less persistence and commitment to schoolwork compared to economically privileged students. Those students are likely to be satisfied with lower educational aspirations and attainments, which contribute to reproducing inequality at a macro level in the society.

However, linking social origins with academic achievement is a taboo in Japanese schools. Kariya (2001) points out that Japanese educational systems focusing solely on academic achievement have failed to address class inequality. Because of concerns for being criticized for “discriminating” against poor and working-class students, Japanese

teachers avoid treating these students differently. They treat all students equally but care little about providing equal opportunities for economically disadvantaged students and overemphasize the idea that academic ability is independent of social origins, and meritocratic achievement is the outcome of hard work (Kariya 1991, 1995, 2001).

Yet, school context and teacher experiences also affect teachers in their perception and approach toward demographic differences. The literature on teacher education and career development has shown that teaching experiences, school demography, school culture, and relationships with pupils shape the professional identities and pedagogical practices of teachers (Beauchamp and Thomas 2009; Flores and Day 2006). Teachers experience the inequality of class, race, and gender differently depending on school contexts such as working-class schools, middle-class schools, minority schools, gender-segregated schools, VET schools, and urban schools. Such differentiated experiences shape various pedagogical practices and professional identities among teachers.

Even though linking social origins and academic achievement is a taboo in Japanese schools, realities of poor and working-class students are more apparent for some teachers. In-school job placement office teachers, especially those in VET programs, are ones who are directly working with those students. Students consult them about post-graduation plans, reveal financial situations and various class struggles. By serving poor and working-class students, who often have academic struggles, these teachers are likely to have pedagogical practices and professional identities suitable to support them. This

means that the decline of school mediated job-search systems would negatively affect the ability of schools to minimize inequality.

At the same time, as school mediated job-search systems have changed little since they were born, their limitations are becoming clearer in recent years. The labor market has become more flexible and job change has become more common among young people. Schools need to consider not only first-entry job attainment, but also long-term job attainment. As expectations and aspirations for future career have long-term effects on one's job attainment, this paper examines the effects of school mediated job-search systems on occupational attainment, job expectations, and skill aspirations.

HYPOTHESIS

The primary objective of this paper is school mediated job-search systems, particularly school referrals and VET programs and their relationship with job expectations, skill aspirations, and job attainments. Even if schools try to influence job aspirations to raise feasible job expectations and place them to jobs, it is difficult to do so for schools without effective school-employer networks. Thus, schools with a large number of in-network employers, such as some VET schools, are more likely to have more influence on job-search process. Their ability to issue referrals allow these schools to start early intervention and try to influence students' job expectations and skill aspirations.

However, it is unknown how gender ratio differences among VET high schools affect their interventions to students' aspirations, expectations, job-search process, and

decisions. Commercial program students are nearly 70% female and technical program students are over 90% male. As these are de facto gender segregated institutions, school referrals in commercial and technical programs are likely to have differentiated effects for men and women. Similarly, this paper also considers class inequality since the literature has not clearly distinguished SES differences between low-rank academic programs and VET programs. Lastly, this paper also considers cohort differences given declines in the effectiveness of school referrals in placing students to jobs after the recession. This paper establishes the following hypothesis:

Hypothesis 1: Working-class individuals are more likely to attend VET high schools and use school referrals to find jobs

(1-a) Working-class individuals are more likely to attend VET high schools

(1-b) Working-class individuals are more likely to use school referrals to find jobs

(1-c) Individuals attending VET high schools are more likely to use school referrals to find jobs

Hypothesis 2: Schools relying on school referrals place students to jobs by lowering job expectations and skill aspirations

(2-a) School referrals lead students to better jobs

(2-b) School referrals lower job expectations and skill aspirations

(2-c) VET high school lower job expectations and skill aspirations

***Hypothesis 3: The decline of school mediated job-search systems
expands class inequality***

*(3-a) School referrals have as strong positive effects as family SES on job
attainment*

DATA AND VARIABLES

The dataset used in this paper is the Japanese Life Course Panel Surveys (JLPS) conducted by the University of Tokyo. It was collected from individuals aged 20-34 (JLPS-Y, N=3,367), and individuals aged 35-40 (JLPS-M, N=1,433) for both males and females at the time of the first wave. In the process of data organization, I merged those two age groups into one dataset. JLPS uses a two-stage stratified sampling. They selected 271 towns by stratifying ten regions and four types of cities by population size and stratified into gender and age groups (5 years). The first wave of the JLPS-Y survey was sent to 9,777 individuals, and 3,367 responded, which was a 34.5% response rate. Similarly, the first wave of the JLPS-M was sent to 3,549 individuals, and 1,433 responded, producing a 40.4% response rate.

JLPS is one of the largest panel longitudinal surveys in Japan asking various questions, including occupation, family, education, health, and political and social views. JLPS collected detailed information on (1) occupations of respondents in various life stages, managerial status, employment status, type of industry, size of employer business,

and opportunities for professional development and career advancement; (2) SES backgrounds such as respondent and parental education, occupation, number of siblings, possession of material goods, marital status, occupation of spouse, and income; and (3) the lifestyle such as waking-up time, frequency of exercise, mental and physical health conditions, adaptation to traditional gender roles, and political and social attitudes. The first wave of the survey was distributed in 2007, and this study uses the data collected between 2007 and 2012 that include six waves in total.

JLPS is a longitudinal study and contains first-entry jobs and current jobs, but this paper pools wave one to six to conduct cross-sectional study because detailed job-change history is not available. Since wave one contains the most inclusive and reliable information on first-entry and current occupations, respondents who have never worked at the time of wave one are excluded from the analysis. The subject of study in this paper is individuals who experienced a direct school-to-work transition. Thus, respondents who dropped out of high schools, did not respond to post-graduation status, and experienced gap years between graduation and first-job entry years are excluded from the data. After eliminating those observations, the remaining sample size is 3,337 pooled from 2007 to 2016. Among them, 47.62% (1,589) are male and 52.38% (1,748) are female. The detail of differences between individuals remained and dropped from the data is shown in Table 3 in the appendix section.

DEPENDENT VARIABLES

Occupational prestige score

Responses to detailed occupation types are coded with occupational prestige scores. JLPS contains cleaned codes of respondent occupations according to the International Standard Classification of Occupations (ISCO) provided by International Labour Organization (ILO) (Tanabe and Aizawa 2008). In the process of data cleaning, JLPS research team did after-coding of responses in consideration of level of education and details of occupations for accuracy. Using these occupational codes, occupational prestige scores were inputted based on methodologies and calculations suggested by Tsuzuki, Seiyama and the study group of Japanese Social Stratification and Mobility survey (SSM) (Tsuzuki and Seiyama 1998). Some new occupations not included these works are coded based on the methodology developed by Aizawa (2008) using the same dataset of JLPS. Occupational prestige scores are coded for respondents' first-entry and current occupations as well as their father's occupation at the time respondents were 15 years old.

Job expectations and skill aspirations

Conventionally, the primary index of occupational or job aspirations used in the literature is expectations in specific occupations (Marini and Brinton 1984; Mau Wei-Cheng and Bikos Lynette Heim 2011; Powers and Wojtkiewicz 2004; Reskin et al. 1984). For example, the National Longitudinal Survey of Youth (NLSY), one of the commonly used datasets in the U.S., has a question asking respondents in high school

what kind of work they would like to be doing at age 35. This type of question is suitable for students who have no pre-determined idea about their future.

However, JLPS lacks this type of open question directly related to job expectations. More importantly, respondents of JLPS are adults who already graduated schools and are likely to have limited levels of expectations in changing their occupations in future. Thus, their attitudes toward current occupations is a better proxy for their career advancement and professional development expectations. Therefore, this paper uses the question asking respondents' levels of agreement with statements "I have a clear idea of what kind of work I want" as job expectations, and "I want to improve my job skills" as skill aspirations. These are the most relevant questions pertaining to respondents' views on professional development and future job expectations in JLPS. Responses to these questions are four-point Likert scale questions as (1) Agree, (2) Somewhat agree, (3) Somewhat disagree, and (4) Disagree. Responses are coded from 1 to 4 scores where (1) Agree is the highest score of 4. The responses to "I have a clear idea of what kind of work I want" are labeled as job expectations and to "I want to improve my job skills" are labeled as skill aspirations in the analysis.

INDEPENDENT VARIABLES

Use of school referrals

Wave 1 of JLPS asked respondents how they found their first, previous, and current occupations. The usage of school referrals and an in-school job placement office is determined by the question, "How did you apply for your first post-graduation job?"

The responses “through the school” and “through teachers” are operationalized as a dummy variable of using school referrals. Among the usable sample, school referrals are commonly used across education levels, but high school graduates (48%) are most likely using them compared to graduates of VET college (38%), two-year junior college (34%), and four-year college (17%).

High school program type

In wave two of the survey, JLPS asked high school program types. General, comprehensive, science, and international programs are coded as academic programs. Regardless of school selectivity, academic rankings, or difficulty of curricula, those academic programs are assumed to be designed to prepare students for higher education in Japanese high school systems. Thus, academic programs usually lack VET subjects in curricula, and students’ post-graduation paths are similar since many of them pursue some kind of post-secondary education.

While Japanese high school systems have several specialized programs, including VET, arts, sports, and other programs, this paper focuses on conventional VET programs that include technical, commercial, agricultural, fishery, and health care programs. These programs are categorized as a VET dummy variable (1 = VET). In the detailed analysis using regressions, this paper focuses on commercial and technical programs since these are the two largest VET program categories in Japan. It is important to note that some respondents lack the information on program types because 453 respondents (13% of the usable sample of wave one respondents) dropped out in wave two, and 110 (4% of the

usable sample of wave two respondents) did not respond or chose “unknown” to this question.

CONTROL VARIABLES

This study controls for middle school GPA, high school GPA, first-entry job employment type (permanent = 1, non-regular = 0), education (college degree = 1, no college degree = 0), father’s education (college degree = 1, no college degree = 0), and father’s occupational prestige score. For women, views on traditional gender roles (agree = 1, disagree = 0) and marriage status (experience of marriage at wave one = 1, never married = 0) are also controlled for. The variable of marriage status does not control for divorce and other types of separations since the objective of this paper is time-independent.

Agreement with traditional gender roles

When analyzing motivations and aspirations, gender differences need to be considered because social expectations for women as care takers often prevent them from aspiring and achieving as much as men. The literature points out that beliefs of appropriate gender role model of housewife and breadwinner husband are still persistent despite the significant improvement of women’s occupational and educational attainments (Bianchi et al. 2012; Cha and Weeden 2014; Cunningham 2008). In the case of Japan, a national survey reported nearly 45% of respondents support this traditional gender view (Cabinet Office, Government of Japan 2014). As traditional gender role

models are still prevalent in Japan, it is likely that employers, teachers, parents, and students are all exposed to such gender norms and internalize them.

To control for these issues of gender norms that are likely to be affecting females, this paper uses a question asking respondent how much they agree with the statement, “men’s job is to earn money and women’s job is to take care of the home and family.” The original question is Likert’s scale 5 points as (1) Strongly agree, (2) Somewhat agree, (3) Neither agree nor disagree (4) Somewhat disagree, and (5) Disagree. Responses are coded from 1 to 5 points where (1) Strongly agree is the highest score of 5. To control for levels of agreement with traditional gender role models, this study dichotomizes responses with removal of response (3) (“neither agree nor disagree” which does not mean a higher or lower value. After removing response (3), responses (1) and (2) are combined and coded as 1 while (4) and (5) are combined and coded as 0. This variable is named as “traditional gender roles” in the regression analysis.

Cohort

Regarding the impacts of the economic recession, this study divides the respondents into two cohorts. Individuals entering the labor market in 1995 or earlier are categorized as pre-recession cohort, and individuals entering the labor market in 1996 or later are coded as post-recession cohort. Instead of using birth year, these two cohorts are used because the time entering the labor market causes substantial differences in their experiences in job-search and career trajectories than birth year. For example, among individuals born in 1976, high school graduates enter the labor market in 1995 and are in pre-recession cohort, but college graduates did so in 1999 and are in post-recession

cohort. The number of pre-recession cohort is 1,666 and post-recession cohort is 1,1671. The analysis primarily controls for the effects of Post-recession cohort.

METHODOLOGY

First, this section presents a conceptual model of direct and indirect relationships between social origins, school referrals, high school VET, job expectations and skill aspirations, and first-entry and current job attainments. In order to draw a picture of the theoretical model revealing the interrelationships among these factors, this paper employs Structural Equation Modeling (SEM) and estimate the effects of each variable on occupational attainments. SEM has been widely used in social science research as it is suited for estimating complex causal relations among related factors, including direct and indirect effects (Acock 2013; Bollen 1989; Duncan 1966). SEM is suitable for analyzing longitudinal data and intergenerational status attainment since the causal relation shifts according to time and goes toward one direction. While traditional linear regressions assume that all independent variables have a direct influence on the dependent variable, SEM allows to analyze multiple pathways considering intervening variables. Although this paper is a cross-sectional study primarily using retrospectively collected variables, the theoretical model aims to reveal one direction causal relationship among parental SES, educational attainments, and first-entry and current occupational attainments.

This study also employs linear regression models to analyze the effects of school mediated job-search systems and VET on job expectations and skill aspirations. As teachers use school referrals to influence student aspirations (Kariya 2001), my analytical

model assumes that school referrals have direct effects on job expectations and skill aspirations.

DESCRIPTIVE STATISTICS

This section explains basic demographic characteristics of the sample. Table 1 presents the results of mean comparison test for continuous variables and crosstabulation for dummy variables between users and non-users of school referrals. All variables show statistically significant differences except current occupational prestige score and high school GPA. While school referral users are likely to find first-entry jobs with permanent and higher occupational prestige score positions, the effects seem to last relatively short time as there is no statistical difference in current occupational prestige scores. The results also show that the mean middle school GPA of school referral users is lower and they are less likely to have a college degree. Their family SES is lower than school referral non-users; their fathers have a lower mean of occupational prestige scores and are less likely to have a college degree.

In the Japanese high school admission system, higher middle school GPA is the most important determinant for admission to higher-ranked high schools that predetermine future socioeconomic status (Kariya 2011). Based on academic achievement levels, Japanese public high school admission systems stratify middle school students to high schools in different academic ranks. Thus, higher GPA in academically lower-ranked schools and higher-ranked schools have completely different values in terms of academic achievement levels, though high school GPA is an indicator

of attitudes toward schools, including academic activities. Program types also show statistically significant differences as school referral users are more likely to be VET program graduates. Also, job expectations and skill aspirations are lower among school referral users. For females, individuals using school referrals are more likely to agree with traditional gender roles. Among school referral users, there are more pre-recession cohort compared to non-users. Overall, descriptive statistics suggest that differences in occupational attainment, job expectations, and skill aspirations are associated with the use of school referrals that are closely associated with family SES.

Table 1. Mean comparison test and Chi² test by use of school referrals

	Full Sample	Use school referrals	No school referrals	Difference
Continuous Variables		Means		
First occupational prestige score	51.43 (8.122)	52.42 (7.991)	50.89 (8.144)	1.538***
Current occupational prestige score	51.53 (8.386)	51.76 (8.417)	51.42 (8.371)	0.344
Middle school GPA	3.203 (1.167)	3.065 (1.116)	3.272 (1.186)	-0.207***
High school GPA	3.165 (1.136)	3.201 (1.131)	3.147 (1.139)	0.0542
Father's occupational prestige score	51.45 (8.170)	50.54 (7.586)	51.89 (8.405)	-1.343***
Job expectations	2.798 (0.818)	2.740 (0.803)	2.827 (0.824)	-0.0870**
Skill aspirations	3.264 (0.743)	3.210 (0.757)	3.291 (0.735)	-0.0815**
* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ (two-tailed T-test) Note: Standard deviations in parentheses.				
Dummy Variables		Percentages		
First job - Permanent				significant at $p < 0.001$ (two-tailed chi2 tests)
No	17.29	4.34	24.16	
Yes	82.71	95.66	75.84	
Use of school referrals				
No	66.89			
Yes	33.11			
VET high school				significant at $p < 0.001$ (two-tailed chi2 tests)
No	78.19	68.99	82.86	
Yes	21.81	31.01	17.14	
Technical high school (male)				significant at $p < 0.001$ (two-tailed chi2 tests)
No	82.43	72.05	87.01	
Yes	17.57	27.95	12.99	
Commercial high school (female)				significant at $p < 0.001$ (two-tailed chi2 tests)
No	86.29	78.60	90.66	
Yes	13.71	21.40	9.34	
College graduate				significant at $p < 0.001$ (two-tailed chi2 tests)
No	67.16	82.41	59.61	
Yes	32.84	17.59	40.39	
Father has a college degree				significant at $p < 0.001$ (two-tailed chi2 tests)
No	74.33	81.16	71.03	
Yes	25.67	18.84	28.97	
Cohort				significant at $p < 0.001$ (two-tailed chi2 tests)
Pre-recession	50.57	62.46	44.05	
Post-recession	49.43	37.54	55.95	
Sex				significant at $p < 0.05$ (two-tailed chi2 tests)
Male	47.64	43.97	49.46	
Female	52.36	56.03	50.54	
Experience of marriage at wave 1				significant at $p < 0.001$ (two-tailed chi2 tests)
No	42.03	34.63	46.09	
Yes	57.97	65.37	53.91	
Agreement with traditional gender roles				significant at $p < 0.05$ (two-tailed chi2 tests)
No	67.74	63.68	70.02	
Yes	32.26	36.32	29.98	
N (maximum)	3337	1103	2228	

RESULTS

Figure 2 is the result of SEM analysis presenting the relationship between family SES, high school VET attendance, use of school referrals, job expectations and skill aspirations, and first and current occupational attainments. First, a higher family SES significantly increases middle school GPA. Higher middle school GPA lowers the likelihood of attending VET and using school referrals. As presented, having a father with higher occupational prestige score and a college degree decreases VET attendance, which in turn, increases college attendance. Individuals with a college-educated father are less likely to use school referrals but more likely to have a college degree. Moreover, father's higher occupational score increases both college attainment and first-entry occupational prestige score.

Although these results imply that seemingly meritocratic tracking is contributing to a systematic reproduction of class inequality, individuals without family prestige still have a good chance to find a higher prestige job with the support from schools. School referrals have statistically significant effects in increasing first-entry job prestige scores. Moreover, their effects are larger than family SES though the estimate is smaller than college degree. In contrast, VET programs have no clear impacts on first-entry job scores. As expected, school referrals have statistically significant negative effects on skill aspirations, but their effects on job expectations are unclear. Similarly, the effects of VET programs on job expectations and skill aspirations are unclear.

Yet, it is important to note that family SES, middle school GPA, and the use of school referrals and VET attendance are highly associated with each other. In spite of a

smaller number of observations, VET high school graduates are more likely to use school referrals compared to their academic program counterparts. Additionally, the effects of VET attendance would vary by program types. This multicollinearity between VET attendance, school referrals, and family SES, as well as a small number of observations and variety of VET programs, are likely to obscure the effects of VET on occupational attainments and job expectations and skill aspirations.

The results of SEM analysis suggest that school referrals have positive effects on individual first occupational attainment, but the effects of VET are rather negative. While family SES determines one's high school choice, schools help working-class individuals find jobs since school referrals have larger effects on occupational attainment than family SES. The results also suggest that school referrals have negative effects on job expectations and skill aspirations although coefficients are small. As expected, while a higher first-entry occupational prestige score increases job expectations and skill aspirations, school referrals cool down them. Individuals attending VET are likely to use referrals to find higher prestige first-entry jobs but less likely to attend college. Overall, the results suggest that school referrals help individuals find higher prestige first-entry jobs but lower job expectations and skill aspirations.

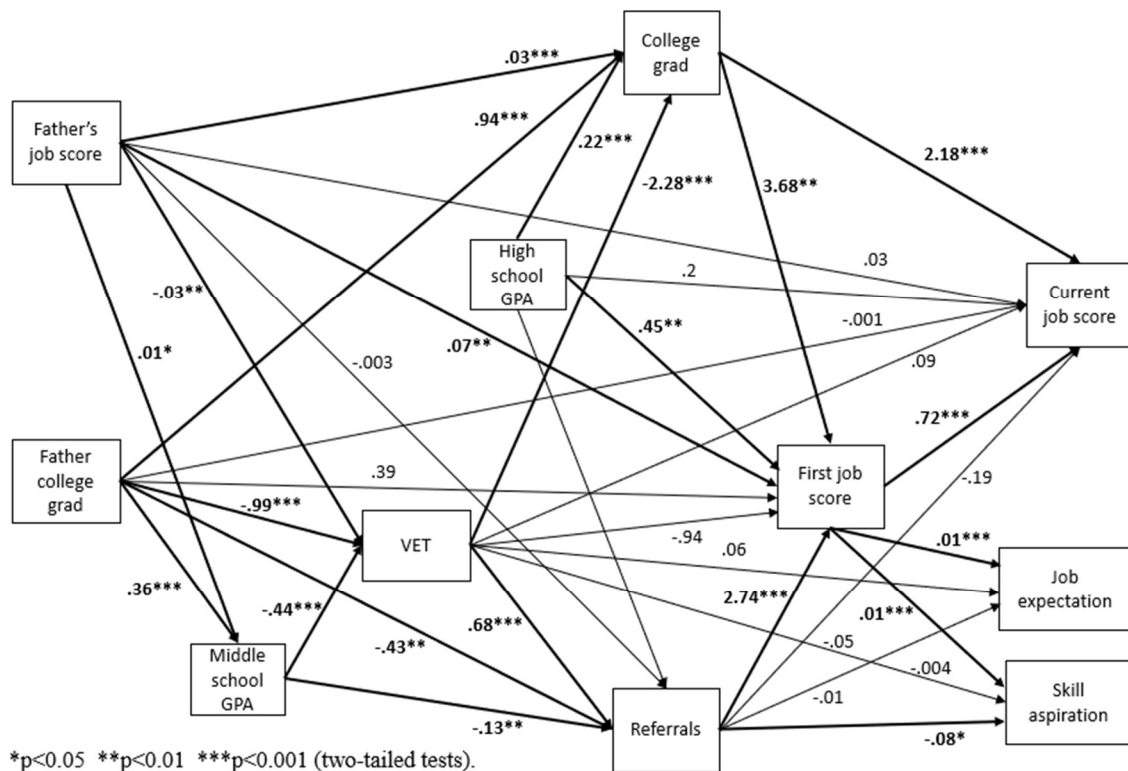


Figure 2 SEM showing relationship among family SES, VET, school referrals, job expectations, skill aspirations, and occupational attainment

Next, table 2 presents the result of OLS predicting job expectations and skill aspirations. The analysis aims to investigate the role schools play in job expectations and skill aspirations. Cohort is controlled for addressing the decline of effectiveness of school referrals and school-employer networks pre- and post-recession economy. If schools are failing to place students to jobs due to the recession and other changes in the labor market, individuals in different cohorts would show different attitudes toward jobs. As a note, the OLS analysis does not control for parental education, parental occupation, and

middle school GPA to avoid multicollinearity problem given the findings of the SEM analysis (Figure 1); family SES and middle school GPA are highly associated with each other, and they are also associated with college degree, first-entry occupational prestige scores, VET attendance, and the use of school referrals.

OLS regressions show that school referrals and technical programs have statistically significant negative effects on job expectations among post-recession cohort males, though they have no clear effects on skill aspirations. Similarly, graduation from commercial programs has statistically significant negative effects on skill aspirations among post-recession cohort females. For females, the result also finds that agreement with traditional gender roles have statistically significant negative effects on skill aspirations among post-recession cohort, but it has no clear effects among pre-recession cohort. Agreement with traditional gender roles decreases skill aspirations of post-recession cohort but has no clear impact on job expectations.

It is noteworthy that a college degree is also negatively associated with job expectations of males, especially post-recession cohort, while higher GPA increases their job expectations. As coefficients of college degree, technical program, and school referrals are all negative and similar sizes, school referrals and graduation from technical programs do not lower job expectations compared to college graduates. The literature suggests that lower-ranked high schools allow students to leave academic competitions and follow unrealistic dreams and have too high aspirations for future (Arakawa 2009; Nakamura et al. 2010). Yet, this is not likely the case in VET programs and schools relying on school-employer networks because placing students to jobs are important

educational outcomes for them. It seems that VET high schools lower students' aspirations for dream jobs and lead them to have realistic expectations for stable jobs.

Interestingly, the result also shows that permanent jobs have negative impacts on job expectations. The dummy variable of permanent position for first-entry job has statistically significant effects of lowering job expectations of post-recession cohort females, while it has no clear effects on males. The earlier section in this paper showed the wage gap between non-regular workers, who are largely women, and permanent workers. Yet, this result indicates employment in permanent positions rather have negative impacts on women's job expectations. In comparison, first occupational prestige score has small but statistically significant positive effects on job expectations among post-recession cohort females. More importantly, current occupational prestige score is positively associated with both job expectations and skill aspirations of males and skill aspirations of post-recession cohort females. This means that finding a permanent job is not enough for individuals, especially young females, to establish satisfying long-term career, but they also need to find high prestige jobs.

Table 2. OLS regressions: Job and skill aspirations by gender and cohort

	Job Expectation				Skill Aspiration			
	Male		Female		Male		Female	
	Pre-recession	Post-recession	Pre-recession	Post-recession	Pre-recession	Post-recession	Pre-recession	Post-recession
School referrals	-0.0674 (0.0778)	-0.182* (0.0825)	-0.0714 (0.0924)	0.0246 (0.0975)	-0.0260 (0.0683)	-0.102 (0.0706)	0.0384 (0.0824)	-0.00405 (0.0824)
Technical HS	-0.107 (0.0944)	-0.249* (0.107)			-0.0689 (0.0831)	0.0326 (0.0921)		
Commercial HS			-0.0829 (0.118)	-0.112 (0.164)			-0.0122 (0.105)	-0.278* (0.141)
High school GPA	0.0231 (0.0305)	0.0593* (0.0285)	0.0463 (0.0401)	0.00128 (0.0385)	0.01000 (0.0267)	0.0469 (0.0245)	0.0667 (0.0358)	-0.00289 (0.0326)
College graduate	-0.0846 (0.0875)	-0.217** (0.0812)	-0.152 (0.140)	-0.0890 (0.0898)	0.0721 (0.0767)	-0.0114 (0.0696)	0.180 (0.125)	0.00631 (0.0760)
First job - Permanent	-0.107 (0.137)	-0.0531 (0.0938)	-0.218 (0.153)	-0.281** (0.0985)	-0.0115 (0.120)	-0.0553 (0.0804)	-0.0586 (0.136)	-0.128 (0.0833)
First occupational prestige score	-0.00348 (0.00606)	0.00429 (0.00633)	0.0180* (0.00796)	0.0142 (0.00805)	-0.00419 (0.00532)	0.000300 (0.00543)	0.00900 (0.00710)	0.00482 (0.00681)
Current occupational prestige score	0.0155** (0.00579)	0.0125* (0.00637)	-0.00223 (0.00743)	0.00716 (0.00793)	0.0108* (0.00508)	0.0175** (0.00546)	0.00298 (0.00662)	0.0133* (0.00670)
Agreement with traditional gender roles			-0.114 (0.0993)	-0.0609 (0.0906)			-0.106 (0.0886)	-0.252** (0.0769)
Marriage at wave 1			0.130 (0.0978)	0.0896 (0.0980)			-0.0805 (0.0872)	-0.00800 (0.0828)
Constant	2.394*** (0.272)	2.052*** (0.209)	1.988*** (0.424)	1.917*** (0.339)	2.986*** (0.239)	2.433*** (0.179)	2.501*** (0.378)	2.615*** (0.287)
N	498	543	314	390	498	544	314	389
R ²	0.0255	0.0691	0.0491	0.0481	0.0213	0.0791	0.0466	0.0821

Note: Responses for job and skill aspirations range from 1 = Disagree to 4 = Agree.

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ (two-tailed tests)

DISCUSSION AND CONCLUSION

Findings from this paper illustrate the complex relationship between school referrals, high school VET, job expectations and skill aspirations, and occupational attainment. This paper examined the effects of school mediated job-search systems, particularly school referrals and VET programs, on job expectations and attainments in consideration of class inequality. The result of SEM analysis found the complex and mixed relationship between family SES, school referrals, VET high schools, job expectations and skill aspirations, and first-entry and current job attainment. Working-class individuals are more likely to attend VET high schools and use school referrals. School referrals increases first occupational prestige scores but lowers job expectations and skill aspirations. It seems that schools cool down individual aspirations for dream-like unachievable jobs and lead them to more realistic jobs. Moreover, by providing higher prestige first-entry jobs, schools also help individuals find higher prestige current jobs.

Overall, the results of SEM analysis support the ***Hypothesis 1: Working-class individuals are more likely to attend VET high schools and use school referrals to find jobs.*** First, the findings of SEM analysis support *Hypothesis (1-a) Working-class individuals are more likely to attend VET high schools*, as well as *(1-b) Working-class individuals are more likely to use school referrals to find jobs*. Having a father with a higher occupational prestige score and college degree lowers VET program attendance and school referrals use. The results also support *(1-c) Individuals attending VET high schools are more likely to use school referrals to find jobs*. While VET attendance and

school referrals are highly associated, only school referrals showed a strong large positive effect with a statistical significance on first-entry job attainment. Moreover, the effects of school referrals were stronger than family SES. These findings imply that working-class individuals still have a good chance to find a higher prestige jobs with support from schools. While the literature criticized school referrals for failing students to stay jobs, the results indicate they are still effective, particularly to secure jobs for working-class individuals. Since the literature has not specified that school referrals are more commonly used among poor and working-class individuals, these are important findings of this paper.

SEM analysis and OLS regressions found that VET programs and school referrals have both negative effects on job expectations and skill aspirations. Thus, findings support for *Hypothesis 2: Schools relying on school referrals place students to jobs by lowering job expectations*. Findings of SEM support (2-a) *School referrals lead students to better jobs*, and school referrals had no clear impacts on job expectations but slightly lowered skill aspirations with statistical significance. In OLS regressions, school referrals lowered job expectations among men in post-recession cohort. Although coefficients in all other models were statistically insignificant, they were mostly negative. These findings support (2-b) *School referrals lower job expectations and skill aspirations*. Similarly, the findings also support (2-c) *VET high school lower job expectations and skill aspirations*. In OLS regressions, technical programs had statistically significant negative effects on job expectations of post-recession cohort males, and commercial

programs had statistically significant negative effects on skill aspirations of post-recession cohort females.

However, these negative effects of school referrals and VET high schools are not larger than negative effects of college on aspirations. OLS regression showed that college degree also lowers aspirations and its effects are as large as school referrals and technical high schools. Considering findings from SEM analysis that both school referrals and college increase individual job attainment as much as family SES, it is likely that school referrals and college have similar roles in placing individuals to jobs. Thus, this paper supports (3-1) *School referrals have as strong positive effects as family SES on job attainment*. Therefore, findings also provide evidence to support ***Hypothesis 3: The decline of school mediated job-search systems expands class inequality***. Descriptive statistics basically confirmed findings of the existing literature pointing out the decline of school referrals since individuals using school referrals are more likely to be pre-recession cohort. Yet, school referrals are the central part of services and supports provided by schools. The decline of school mediated job-search systems will depreciate the value and effects of school mediated job-search systems to help economically disadvantaged students.

On the other hand, it is also important to note that school referrals and VET high school are possibly contributing to reproducing gender inequality. As presented in OLS analysis, the effects of school referrals and VET programs differ by gender. Additionally, traditional gender roles still play negative roles in women's aspirations. Schools are on the one hand contributing to reduce inequality by placing individuals to higher prestige

jobs, but on the other hand they are following current stratification patterns and contributing to reproducing gender inequality.

The results of this paper provide some important implications for schools in terms of their job-matching strategies. While they help students to secure jobs by lowering job expectations and job aspirations, they are in-fact in a decline. Students are less likely to use school referrals compared to previous generations for various reasons and they are more likely to experience job changes, contingent work, and unemployment. In order to keep and improve effectiveness of school mediated job-search systems, schools should more assertively intervene in the gender inequality that are addressed little in schools.

As a conclusion, this paper suggests that school mediated job-search systems need to update to pay close attention to long-term job-match. Once students leave schools, they have no access to in-school job placement offices or in-network firms. Schools should provide re-match chances for their graduates, particularly schools serving working-class students. In other words, schools must prepare options for their graduates to come back to in-school job placement offices to ask help. This will require schools to update and expand their in-network firms, and the government needs to allow more flexible job-search schedules for those at-risk youths.

Studying the case of Japan is a good way to examine well-established social mobility and social stratification theories in the Western society. The Japanese labor market has significant differences from more liberalized economies like the U.S. because of its highly coordinated social and economic systems under strong government involvement. Due to the small amount of research in English on Japanese school-to-work

transition systems, findings of this paper will contribute to schools, educators, policy makers, and researchers in other industrial countries to compare similarities and distinctiveness or convergence and divergence of education and schools in status attainment process.

However, there are several limitations in this study. First, the data contained a small number of observations for VET high school graduates. Given the close association between VET and use of school referrals, the small sample size caused problems to accurately determine the effects of VET. Also, this study used levels of agreement with statements “I have a clear idea of what kind of work I want” and “I want to improve my job skills” as proxies of job expectations and skill aspirations. However, these are not the best indicators. Moreover, as these questions were asked after years of graduation, schools and current occupational aspirations had only indirect relationship. Also, the majority of individuals in JLPS data entered the labor market before the mid-2000s. Considering the drastic change of the labor market after 2008, the newer data is necessary to study younger generations. In order to fully understand the effects of VET and school mediated job-search systems, further investigation using a newer data with a larger sample size, as well as qualitative investigation focusing more on complex aspects of occupational attainments and aspirations, is necessary.

APPENDIX

Table 3. Appendix: Mean comparison test between remained and dropped observations

	Full Sample	Remained	Dropped
Continuous Variables	Means		
First occupational prestige score	51.12 (8.201)	51.42 (8.125)	49.96 (8.394)
Current occupational prestige score	50.90 (8.524)	51.52 (8.384)	49.29 (8.676)
Middle school GPA	3.180 (1.181)	3.202 (1.168)	3.131 (1.210)
High school GPA	3.154 (1.144)	3.165 (1.136)	3.122 (1.165)
Father's occupational prestige score	52.05 (8.842)	51.45 (8.166)	53.51 (10.16)
Job aspirations	2.806 (0.847)	2.798 (0.819)	2.825 (0.907)
Skill aspirations	3.272 (0.758)	3.263 (0.745)	3.293 (0.787)
Dummy Variables	Percentages		
First job - Permanent			
No	21.32	17.32	36.08
Yes	78.68	82.68	63.92
Use of school referrals			
No	71.56	66.89	86.63
Yes	28.44	33.11	13.37
VET high school			
No	79.45	78.23	82.79
Yes	20.55	21.77	17.21
Technical high school (male)			
No	84.43	82.46	89.25
Yes	15.57	17.54	10.75
Commercial high school (female)			
No	87.47	86.31	91.02
Yes	12.53	13.69	8.98
College graduate			
No	72.43	67.19	84.49
Yes	27.57	32.81	15.51
Father has a college degree			
No	70.82	74.36	62.16
Yes	29.18	25.64	37.84
Sex			
Male	49.27	47.62	53.04
Female	50.73	52.38	46.96
Experience of marriage at wave 1			
No	45.54	42.05	54.44
Yes	54.46	57.95	45.56
Agreement with traditional gender roles			
No	68.60	67.79	70.63
Yes	31.40	32.21	29.37
N (maximum)	4800	3337	1463

Note: Standard deviations in parentheses.

CHAPTER THREE
CAN GIRLS BECOME ANYTHING THEY WANT?
GENDER OCCUPATIONAL SEGREGATION, VOCATIONAL EDUCATION,
AND SCHOOL MEDIATED JOB-SEARCH SYSTEMS

ABSTRACT

Despite much research on the Japanese school-to-work transition process, gender differences in job outcomes are largely unexplored. To fill this gap, this paper examines the effects of school mediated job-search systems and de facto gender segregation in high school vocational programs on Japanese women's occupational attainment. Using the Japanese Life Course Panel Surveys conducted by the University of Tokyo (N=4,800), this paper conducted logistic regression analysis and discrete-time event history analysis. Logistic regression found that school mediated job-search systems increase females' entry into female-dominant occupations. Discrete-time event history analysis also found the entry to female-dominant occupations increases the risk of females leaving first jobs. Overall, females using school mediated job-search systems face higher risks of leaving jobs while no such relationship is present for males. Findings from this paper provide evidence of the persistent gender segregation in the Japanese labor market partly reinforced by school mediated job-search systems.

INTRODUCTION

The school-to-work transition is a complex process involving educational tracking, schooling, the labor market, and transition to adulthood. Changes of social and economic contexts directly affect the school-to-work transition process. Particularly, instability of the school-to-work process hurt poor and working-class youths who have higher risks of disengagement in school, dropout, poorer educational and economic achievements, and unemployment (Brinton 2010; Bynner and Parsons 2002; Genda 2007; O'Reilly et al. 2018).

Using institutional theories, sociologists have revealed that the school-to-work transition process has both micro- and macro-level outcomes. While the school-to-work transition is socially constructed behavioral outcome for individuals, it reinforces broader stratification patterns (Brinton 2010; Brinton and Kariya 1998; Rosenbaum et al. 1990; Rosenbaum and Kariya 1989; Shavit and Muller 1998). The social embeddedness of institutions, such as the informal networks among government, schools, and business enterprises, has enormous impacts on individual and organizational choices and actions (Brinton and Kariya 1998; DiMaggio 1998; DiMaggio and Louch 1998; Powell and DiMaggio 1991; Tilly 1998). The school-to-work transition process in Japan is exactly the case displaying the embeddedness of social institutions because the majority of high school students find jobs through school-employer networks.

Historically, Japanese schools have played a major role as matchmakers between students and employers. This role is referred in this paper as school mediated job-search systems. School mediated job-systems facilitate school-employer networks. While

school-employer networks are informal coordination, they were shaped by the strict state regulations that do not allow firms to directly hire high school students without schools' permissions. School mediated job-search systems have been in place in both high schools, four-year and vocational colleges to alleviate youth unemployment and to reduce the risks of entering non-regular jobs among working-class Japanese youths (Ōshima 2012; Rosenbaum and Kariya 1989). Given the significant role of schools in the school-to-work transition process, Japan offers a unique case study to examine the mediating function of social institutions.

In the 1980s and 1990s, the literature on the school-to-work transition rigorously studied Japan's school-employer networks and found the evidence of efficiency, effectiveness, and equitability in the youth employment process. School-employer networks were perceived to be accelerating Japan's economic success (Bailey 2001; Blanchflower 2000; Brinton 1998, 2000; Brinton and Tang 2010; OECD 2000; Rosenbaum et al. 1990; Rosenbaum and Kariya 1989; Shanahan, Mortimer, and Kruger 2002). However, after the decade long recession of the 1990s, Japan's economy began to decline, and the government implemented a series of policy reforms to fight the recession. Especially, loosen labor regulations during the early 2000s allowed firms to replace regular workers with non-regular workers. Japanese employment types are largely categorized in *Seiki*, which literally means regular employment, and *Hiseiki*, which literally means non-regular employment. Regular employment includes full-time, permanent jobs that promises life-long employment with social security benefit. Non-regular employment includes precarious, contingent, part-time employment that do not

offer life-long employment or social security benefit. Since the recession started, many regular employees serving in lower-administrative, service, and sales positions were fired or switched to non-regular positions that characterized by low wages and few benefits.

Among those who entered the labor market after the recession, poor and working-class women have been facing harder struggles because of intersectional disadvantages of gender, class, and generation (Ishida and Slater 2009; Kosugi and Miyamoto 2015; Sugita 2015). Today, approximately 60% of female workers are employed in non-regular positions compared to 20% of male workers. Similarly, while youth unemployment rates remain low in Japan compared to other industrial countries, young people face higher risks associated with non-regular employment. Without sufficient work experiences or networks, it is difficult for young people to find regular, or permanent jobs. Additionally, because the smooth school-to-transition process is perceived to be a standard life course, once falling into non-regular employment, finding a permanent job is even harder. The triple jeopardy of gender, class, and generational inequality seriously impairs women's earnings, job stability, career advancement, and life.

This paper aims to shed lights on gender differences in the school-to-work transition process in Japan. While the existing literature on school mediated job-search systems has solely focused on men's job outcomes, gender differences have been neglected. By analyzing how informal school-employer networks embedded in the job-search process affect women and their career, this paper reveals how the school-to-work transition process reproduces gender occupational segregation.

GENDER OCCUPATIONAL SEGREGATION

Around the world, women are more likely to work in non-regular positions, earn less, do more unpaid work, and less likely to be promoted to management positions (OECD 2012). Despite the improvement of educational attainment and the labor force participation rate, women's achievements are not fully translated into economic success in the labor market as many women still struggle with gender inequality (Iannelli and Smyth 2008; Reisel et al. 2015; Shavit and Muller 1998; Smyth 2005; Yamaguchi 2019).

In Japan, gender inequality in the labor market is more apparent than in many other industrial countries. Men and women are often placed into differentiated career tracks and occupations due to the employment practices of Japanese firms such as lifelong employment and seniority system (Brinton 1992; Marini and Brinton 1984; Ono 2007, 2010; Shirahase and Ishida 1994; Yamaguchi 2019). These are inherently gender-biased practices that favor men promising lifelong commitments to firms. Because women are far more likely to leave jobs after marriage and childbirth because of traditional gender expectations, they are penalized in the labor market and in the workplace.

Yamaguchi (2019) points out that gender occupational segregation cannot be explained through gender differences in human capital, or labor-supply side factors. He analyzed the paradox that the equalization of human capital between men and women increases gender occupational segregation. His empirical findings suggest that educational specialization is not a primary cause of gender occupational segregation, but employers' stereotypes and discrimination is the primary reason. Similarly, Mun (2010)

finds that even college educated women experience more difficulties in finding permanent jobs commensurate with their education compared to men. By examining pre-hiring gender preferences among Japanese firms, she finds that firms often exclude women from more advanced, management positions.

Similarly, Ichikawa (2015) finds that college educated women have higher rates of leaving jobs than men because they are more likely to experience job-mismatches due to overeducation. She argues that educated women, stuck in low positions with little career advancement opportunities, have little motivation or commitment to stay in first-entry firms treating them poorly. Because Japanese firms hire young women primarily in lower administrative and service sector jobs in which education matters little, gendered hiring customs are more important in determining women's status attainment than meritocratic abilities.

Employment types also cause gender inequality because distinctions between regular and non-regular employment appear in wage differences, career advancement opportunities, job security, social security benefits, and social status. Women are channeled not only into female-dominant, low-status, low-paying jobs but also into non-regular jobs. Table 4 shows gender differences in post-graduation occupations. Women, especially high school graduates, are more likely to enter non-regular jobs or remain jobless compared to their male counterparts. The labor force participation rate and educational attainment of women have increased, and the enactment of gender equalization laws helps some women, but the vast majority of Japanese women are still facing inequality and discrimination in the labor market and in the workplace.

Table 4. Distributions of post-graduation paths by education and gender

		Men	Women	Female %
Permanent	High School	114,799	73,460	39%
	College	209,948	203,967	49%
Non-regular	High School	582	778	57%
	College	7,905	10,443	57%
Temporary	High School	2,743	5,051	65%
	College	4,762	4,421	48%
Other	High School	29,192	21,123	42%
	College	25,716	18,466	42%
Unknown or dead	High School	93	117	56%
	College	3,088	2,000	39%

Source: Portal Site of Statistics of Japan website (<https://www.e-stat.go.jp>)

Created by editing the School Basic Study 2017 (<https://www.e-stat.go.jp/stat-search/files?page=1&toukei=00400001&tstat=000001011528>) (Ministry of Education, Culture, Sports, Science and Technology Japan 2017)

SCHOOL MEDIATED JOB-SEARCH SYSTEMS AND HIGH SCHOOL VET

In industrial countries, educational qualifications are key indicators of job competitiveness for new graduates without much work experience (Jacob, Kleinert, and Kühhirt 2013; Spence 1973). Japanese high school teachers consistently tell students to raise their GPA because the screening process for issuing school referrals is based on academic record, and school referrals to desirable jobs are allocated to students with highest GPA (Kariya 1991; Katayama 2016; Rosenbaum and Kariya 1989). For VET program students, vocational skills/certificates are also important to find jobs. Katayama (2016) examined the effects of graduating from technical programs on job acquisition among Japanese high school students and found that GPA from technical courses had

significant positive impact on finding regular jobs. He explains that employers hiring high school graduates are predominantly small firms in nearby areas, and therefore, appreciate vocational skills even if students' actual knowledge and skills are limited. Others also find that employers, especially those in the school's networks, clearly prefer students from technical programs (Brinton 2010; Tsutsui 2006).

While these findings suggest the importance of academic achievement and vocational skills for male high school students, it is unclear whether these factors are equally important for female students. The literature on Western VET systems finds that the effects of high school VET differ by demographic characteristics. Students are channeled into occupations corresponding to their choice of VET courses, but such choices are predetermined by gender, race, and socioeconomic status (SES) (Ainsworth and Roscigno 2005; Colley et al. 2003; Jacob et al. 2013; Reisel et al. 2015).

The labor market structure also affects women's choice of VET courses and occupations. Estévez-Abe (2006) conducted a cross-national research on the relationship between gender occupational segregation and vocational education systems. Her findings suggest that countries with more vocational education programs had fewer women in manufacturing jobs. She argues that coordinated market economies (CMEs) placing greater weight into VET institutions have smaller share of women in manufacturing jobs while liberal market economies (LMEs) lacking VET institutions have a larger share of women in manufacturing jobs.

Despite these findings on the intertwined relationship between labor market structures, VET, and demographic characteristics, the existing literature on Japanese VET

says little about gender differences. In Japanese high school VET, technical programs and commercial programs are the two most dominant programs in terms of the number of students enrolled. Gender ratio difference between technical and commercial high schools shows a clear gender segregation as nearly 95% of students of technical program students are male, and nearly 70% of commercial program students are female.

Gender ratio differences are closely associated with women's experience in the labor market. Commercial high school curricula were originally designed to produce skilled workers for administrative and managerial positions in industrial and manufacturing firms, especially in accounting positions. Up until the early 1990s, female commercial high school graduates were still being hired in office clerics and sales positions to fill a massive demand for workers. Yet, since the late 1990s, firms began to hire more college graduates for administrative and managerial positions while service jobs, such as sales personnel and clerical workers, were being replaced by part-time workers without vocational training. Commercial programs have gradually lost their educational edge, and the only benefit they provide today are school-employer networks, which are also in decline (Bamba 2010).

However, school-employer networks are in decline even for commercial programs. School-employer networks are strengthened by the number of school graduates employed by in-network firms every year. In other words, without a constant flow of graduates to in-network firms, school-employer ties would be weakened. The Japanese literature reports a decline in the robustness and effectiveness of school-employer networks; the percentage of high school graduates using school referrals for job-search

was more than 80% in the 1970s (Ishida and Murao 2000), but this dropped to 50% in a 1983 survey (Ishida 2007). On the other hand, some schools have kept the quantity and quality of their networks. Brinton (2010) mentioned that VET high schools, especially regionally acclaimed ones, hold large number of employers in their networks. They maintain ties with employers not simply because they teach vocational skills, but the primary reason is the significantly larger number of students seeking jobs every year. They successfully send their graduates to in-network firms.

As some VET high schools have strong networks with employers compared to others, access to school-employer networks has always been limited to a certain group of people in the broader society. Studying school referrals in the 1950s and 60s, Sugayama (2000) finds that the percentage of individuals finding jobs through school referrals was much higher among high school graduates compared to middle school graduates. While middle school graduates had to find jobs through public job-placement offices which lead to less prestigious jobs, high school graduates found jobs through school-employer networks. According to his findings, 15.4% of middle school students and 69.9% of high school students in 1963 found jobs through school referrals, whereas 51.3 % of middle school students and 5.2% of high school students found jobs through public job-placement offices. He argues that students in certain schools, including VET high schools, had more access to school-employer networks than others.

At the time, VET high schools were one of the elite institutions along with universities that established institutional coordination between schools and employers during the 1920s and 1930s (Sugayama 2011). However, the social prestige of VET high

schools significantly deteriorated due to a decline in the demand for high school graduates in the labor market, the economic recession, and an increase in college attendance. Today, VET high schools are no longer considered elite institutions. While some have kept established ties with employers, many of them, especially commercial programs, are facing a deterioration of these networks.

Although school-employer networks have been in decline, the job-search process for high school students have changed little over decades. Due to the strict government regulations prohibiting employers from recruiting high school students directly, schools still mediate heavily in the recruiting process. In high schools, school-employer networks are provided via in-school job placement offices as one of referrals to firms. Students looking for jobs must use an in-school job placement office in the school even if the firm is outside of the school's networks. In addition to providing school referrals, in-school job placement offices offer career counseling and advising services for students. As part of their job, teachers in in-school job placement offices facilitate career related events, provide mock interviews, and share information about employers, the labor market, labor laws, social security benefits, and the job-search process. These roles enable in-school job placement office teachers to greatly influence students. As Rosenbaum (1976) found in American high schools, teachers and counselors use interpersonal relationships with students to pressure or encourage them to follow certain post-graduation paths. Japanese teachers use not only interpersonal relationship with students but also school-referrals as pedagogical tools to influence students' academic achievement and nurture personality suitable to employment (Kariya 1991).

Yet, teachers also cause job-mismatch problems. For instance, Japanese teachers often instruct students to find jobs from in-network firms because they believe those firms will be the most reliable and desirable without realizing that firms outside of networks could offer better jobs (Nakamura et al. 2010; Tsutsui 2006). Their reliance on in-network firms affects their judgment about employers and place students to jobs that are not right fit for them.

These cases suggest that in-school job placement office teachers almost function like a matchmaker for in-network firms, but their roles are different in some schools, especially in regionally acclaimed VET programs where new employers are awaiting to hire their graduates. In these schools, proper screening of firms is also an important job of in-school job placement offices. Screening firms is more commonly seen in in-school job placement offices in universities. As Ōshima (2012) finds, in-school job placement offices in universities mainly function as gatekeepers to protect and support students while those in high schools screen students primarily based on GPA. He finds in-school job placement offices in college are common among younger cohorts, women, first-generation college students, and those in lower-prestige colleges. Among students in low-prestige colleges, those who used in-school job placement offices tended to find more stable jobs. His findings suggest that in-school job placement offices, at least in college, provide better opportunities for students with SES disadvantages. Some VET high schools would also have similar roles to provide better job opportunities for students with SES disadvantages.

However, others find that school-employer networks reproduce gender inequality in job placement. Fujimoto (2015) examined the institutional ties between women's colleges and megabanks hiring graduates for regular, lower administrative positions. Analyzing the demographic and academic records of students and the interview data, she finds that employers evaluate the residency status of applicants to minimize their costs for personnel management assuming that female students. Since Japanese firms subsidize employees' commuting cost, they prefer employees living close to them. Employers assume that students living with parents are likely to live in close distance that save the cost of those subsidies. Moreover, she argues that living with parents indicate female applicants' obedience to patriarchal ideology that are suitable to entry-level clerical jobs at large firms. To cope with these expectations from firms, schools refer students living with parents rather than those with high GPA. Her findings suggest that school-employer networks survive even after the recession because some information, especially those preserving discriminatory customs, can only be obtained through informal institutional ties. The school-employer networks maintain gendered hiring practices and reinforce gender stratification in the labor market. As commercial programs are de facto female institutions, it is possible that school-employer networks in commercial high schools also function to reinforce gender occupational segregation.

School mediated job-search systems, including school-employer networks and in-school job placement offices, have various roles: issuing referrals, maintaining networks with employers, functioning as a matchmaker and a gatekeeper, and providing career counseling and advising services. Yet, they are likely to place female students to female-

dominant occupations, such as entry-level clerical, service, administrative occupations. Combined with VET systems, they are likely to reinforce the labor market structure preserving gender occupational segregation and inequality. For example, technical programs have more access to school-employer networks than others, including commercial programs, and school mediated job-search systems seem to function differently for women from men. Yet, schools also are able to have more progressive roles. Like in-school job placement offices in universities help working-class students and females to find jobs, it is possible that those in high schools also have similar progressive functions to place socioeconomically disadvantaged students to jobs.

HYPOTHESES

Although the effectiveness and robustness of school-employer networks seem to be in decline and the status of VET high schools is deteriorating, school mediated job-search systems still have important roles in placing students to permanent jobs. Schools are directly involved in student job-search process by providing access to school-employer networks and indirectly by supporting students to prepare job applications, interviews, and exams through in-school job placement offices. Looking at those various roles school mediated job-search systems and VET programs play in the school-to-work transition process, this paper examines their effects on gender, class, and generational inequality with following hypotheses. To control for generational differences, this study uses pre- and post-recession cohorts.

Hypothesis 1: Schools, including school mediated job-search systems and commercial high schools, reinforce gender occupational segregation by placing women in female-dominant occupations.

Hypothesis 1-a: Women who used school mediated job-search systems are more likely to enter female-dominant occupations.

Hypothesis 1-b: Women who attended commercial high schools are more likely to enter female-dominant occupations.

Hypothesis 2: Despite improved labor participation rates and educational attainment of women over decades, school mediated job-search systems still channel women into female-dominant occupations.

Hypothesis 2-a: Women who used school mediated job-search systems are more likely to enter female-dominant occupations regardless of cohort.

Hypothesis 3: Schools contribute to increasing survival of women's first-entry jobs by placing them to female-dominant occupations.

Hypothesis 3-a: Women who used school mediated job-search systems stay longer in their first-entry firms.

Hypothesis 3-b: Women who obtained a female-dominant occupation stay longer in their first-entry firms.

DATA

The dataset used in this paper is the Japanese Life Course Panel Surveys (JLPS) conducted by the University of Tokyo.⁸ It was collected from individuals aged 20-34 (JLPS-Y, N=3,367), and individuals aged 35-40 (JLPS-M, N=1,433) at the time of the first wave. In the process of data organization, I merged those two age groups into one dataset. JLPS uses a two-stage stratified sampling. They selected 271 towns by stratifying ten regions and four types of cities by population size and stratified into gender and age groups (5 years). The first wave of the JLPS-Y survey was sent to 9,777 individuals, and 3,367 responded, which was a 34.5% response rate. Similarly, the first wave of the JLPS-M was sent to 3,549 individuals, and 1,433 responded, which was 40.4% response rate.

JLPS is one of the largest panel longitudinal surveys in Japan asking questions including occupation, family, education, health, and political and social views. JLPS collected detailed information on (1) occupations of respondents in various life stages, managerial status, employment status, type of industry, size of employer business, and opportunities for professional development and career advancement; (2) socioeconomic backgrounds such as respondent and parental education, occupation, number of siblings, possession of material goods, marital status, occupation of spouse, and income; and (3) lifestyle questions such as waking-up time, frequency of exercise, mental and physical health conditions, adaptation to traditional gender roles, and political and social attitudes.

⁸ I obtained permission to use the panel data from the Center for Social Research and Data Archives and the Institute of Social Science at the University of Tokyo.

The first wave of the survey was distributed in 2007, and this study uses the data collected between 2007 and 2012 that is six waves in total.

As a note, a large portion of observations is dropped (35% of the total sample) from the final sample. While later waves asked job related questions, only wave one asked the most inclusive and reliable question regarding first-entry jobs. Thus, respondents who have never worked at the time of the first wave are excluded from the data for both logistic regressions and discrete-time event history analysis. As the subject of study in this paper is individuals who experienced direct school-to-work transitions, individuals who dropped out high schools or not failed to provide post-graduation status, and those who experienced gap years between graduation and first job entry years are also excluded. Additionally, for the purpose of event history analysis, respondents failing to answer their job exit time are left censored because the exact year of the event occurrence is unknown.⁹ After eliminating those observations, the remaining sample size is 3,121. Among them, 47.04% (1,468) are male and 52.96% (1,653) are female. Differences between included and excluded individuals from the data is shown in Table 9 in the Appendix section.

⁹ Left censored observations are excluded and coded as a non-event.

DEPENDENT VARIABLES

Female-dominant occupations

This paper uses a dummy variable for female-dominant occupations for first-entry jobs of female respondents. Gender inequality is a complex phenomenon, and no single index can capture all dimensions of gender occupational segregation. Yet, this paper employs Hakim index given its clear and simple focus on gender dominance and gender-integrated occupations (Hakim 1979, 1981, 1992). Hakim index calculates the difference between the level of over-representation in female-dominant jobs and the level of under-representation in male-dominant jobs. The representation coefficient for each occupation, the Hakim Index, is calculated based on the gender ratio in each occupation with the gender ratio of the whole workforce. The coefficient is obtained as $\frac{F_i}{T_i} / \frac{F}{T}$ for female and $\frac{M_i}{T_i} / \frac{M}{T}$ for male. This paper employs this basic equation to calculate female ratio in each occupation. Hakim (1992) defines that gender-integrated occupations should have female ratios around $\pm 10\%$ in the total workers. Since female shares in the total workers in the data is 52.89%, occupations above 62.89% of female shares are categorized as female-dominant occupations.

The data used in this paper has over and underrepresentation problems due to the small observations in some occupations. For example, 75% of “Police, maritime security, and train security officers” are women in JLPS, but the actual women ratios in these occupations is less than ten percent. In order to minimize these problems, detailed occupations are grouped into larger occupational categories based on ISCO’s

classifications with some modifications.¹⁰ The list of occupations by gender ratio is presented in Table 5.

¹⁰ ISCO does not have the category applicable to “restaurant owners” and “store owners,” and these are categorized as “Production and operations department managers in wholesale and retail trade” “Production and operations department managers in restaurants and hotels (corporate managers)” and “General managers in wholesale and retail trade” and “General managers of restaurants and hotels (general managers)” while JLPS collects those occupations separately. Thus, “Corporate or general managers and restaurant or shop owners” was created by combining those categories.

Table 5. The list of occupation categories by gender representation

First-Entry Occupation Categories	Male	Female	%	FTFT
<i>Female-dominant occupations</i>				
Life science and health professionals	12	96	88.89%	1.68
Life science and health associate professionals	17	107	86.29%	1.63
Clerks	220	708	76.29%	1.44
Teaching professionals	39	113	74.34%	1.41
<i>Gender integrated occupations</i>				
Personal and protective services workers	110	129	53.97%	1.02
Teaching associate professionals	20	19	48.72%	0.92
<i>Male-dominant occupations</i>				
Other associate professionals	261	201	43.51%	0.82
Physical and engineering science associate professionals	13	8	38.10%	0.72
Other professionals	20	10	33.33%	0.63
Sales and services elementary occupations	56	22	28.21%	0.53
Stationary plant and related operators	278	104	27.23%	0.51
Physical, mathematical and engineering science professionals	164	33	16.75%	0.32
Corporate or general managers and resutarant or shop owners	82	9	9.89%	0.19
Extraction and building trades workers	88	6	6.38%	0.12
Skilled agricultural and fishery workers	14	0	0.00%	0.00
TOTAL	1394	1565	52.89%	0.80*

* The average of the all occupational categories

First-entry job leave

The chances of leaving the first-entry job is used in the discrete-time event history analysis. Person-years are dichotomized into “left a job (=1)” and “stayed in a job (=0)” for each year. The models estimating the chances of leaving a job is specified in the methodology section.

INDEPENDENT VARIABLES

Use of school mediated job-search systems

Use of school referrals and in-school job placement offices is determined by the question in the first wave, “How did you apply for your first post-graduation job?” The responses “through the school” and “through teachers” are coded as the use of school referrals (use =1, not use =0). Similarly, wave two of JLPS asked if respondents used “information provided by teachers” “the job listings in the school” “information on employers provided in the in-school job placement office” “consultation in-school job placement office teachers” “mock interviews with teachers.” Using these services is coded as the use of in-school job placement offices (use =1, not use =0). Some used only school referrals or in-school job placement offices while others used both. The use of school mediated job-search systems is coded (use =1, not use =0) based on responses used either or both school referrals and in-school job placement offices.

The original data contained a large proportion of respondents lack the information on use of school mediated job-search systems. 412 (8.5%) respondents chose “not applicable” and 25 respondents (0.5%) chose “no answer” in the question asking the use of school referrals, and 838 respondents (17% of wave one respondents) disappeared in wave two. Among respondents disappeared in wave two, there are 1,056 respondents (27%) answered they used school referrals. Among respondents who chose “not applicable” or “no answer” for wave one question asking the use of school referrals, there are 197 respondents who chose using in-school job placement offices in wave two. After combining both responses who used school referrals and/or in-school job placement

offices, there are 2,796 respondents (58%) using them. Individuals who did not answer any of these questions dropped after removing individuals who had no records of first-entry jobs and those who experienced gap year(s) after graduation.

High school program type and education level

In this paper, high school program types and education levels are coded as 1) high school graduates from commercial programs (for females) and technical programs (for males) 2) high school graduates from all other programs 3) VET and junior college graduates 4) graduates of four years college and higher. High school program types are asked in wave two of the survey. While Japanese high school systems have several specialized programs, including VET, arts, sports, and other programs, this paper focuses on commercial programs and technical programs since they are the two largest VET program categories in Japan. It is important to note that a large proportion of respondents lack the information on program types in the dataset because two percent did not respond to this question, and 838 respondents (18% of wave one respondents) disappeared in wave two. In the first analysis of logistic regression using wave one, the information of high school program type is also recorded from the answer of wave two as wave one did not ask this question. Thus, individuals dropped from wave two do not have information on high school program type.

VET colleges and junior colleges are both two to three year, postsecondary tertiary institutions. According to the International Standard Classification of Education (ISCED) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), these VET colleges and junior colleges are considered to be 5B level, or an

associate degree level. In this paper, VET colleges and junior colleges are combined as associate degree, and four year colleges and higher are combined as college degree.

CONTROL VARIABLES

This study controls for the effects of middle school and high school GPA, employment type of first-entry jobs (permanent=1, non-regular=0), first-entry job and father's occupational prestige scores, educational levels, marital status, and pre- and post-recession cohorts.

Time-dependent variables

The duration in first-entry job is operationalized from the question asking the first-entry job entry year collected in the first wave. The job-leaving year, which sometimes occurred prior to the first wave, is operationalized from responses between wave one and wave six. Marital status is used only in event history analysis. In Japan, marriage is least likely to happen before first-entry job entry since the vast majority of people find first jobs while they are still in schools. Thus, marriage has no impact on the first-entry job choice. Since the duration of marriage is not available in the data, this study uses the marriage experience that are coded as ever married (=1) and never married (=0). Since the duration of marriage is not available in the data, each person-year count of the marriage experience starts at respondents' age of first marriage and lasts until their last observation between the first wave to wave six.

Occupational prestige score

The original data of JLPS contains cleaned codes of respondent occupations according to the International Standard Classification of Occupations (ISCO) provided by the International Labour Organization (ILO) (Tanabe and Aizawa 2008). As Aizawa (2008) explains about the detailed coding procedures, JLPS research team undertook after coding of responses in consideration of educational levels and details of occupations for accuracy. For instance, individuals without a college degree are less likely to be engineers, but sometimes they choose engineers instead of technicians. After-coding process modified these mistakes in responses. Thus, this paper uses these after-coded occupations to calculate occupational prestige scores. The author used methodologies suggested by the Japanese Social Stratification and Mobility survey (SSM) to calculate occupational prestige scores (Tsuzuki, and Seiyama 1998). Occupational prestige scores are coded for respondents' first-entry jobs and father's jobs at the time respondents were 15 years old.

Cohort

Regarding the effects of the economic recession on job search, this study divides respondents into two cohorts. This paper uses cohort instead of birth year because the difference in time of entry into the labor market produces greater differences in their job-search and career trajectories than birth year. Individuals entering the labor market in 1995 or earlier are categorized as pre-recession cohort, and individuals entering the labor market in 1996 or later are coded as post-recession cohort. The number of pre-recession

cohort is 1,525 while post-recession cohort is 1,596. Primarily, the effects of post-recession cohort are controlled for in the analyses.

METHODOLOGY

The analytic part of this paper consists of two components. The first analysis employs logistic regressions to predict women's entry to female-dominant occupations for their first-entry jobs. The second analytical part is the discrete-time event history analysis that examines the effects of school mediated job-search systems on the likelihood of leaving a first-entry job after a given length of time. In both analyses, the baseline group is high school graduates. In the analysis, female commercial program graduates and male technical program graduates are separately controlled for.

In the logistic regression analysis, the dependent variable is entry to female-dominant occupations, and the main independent variable is the use of school mediated job-search systems. The analysis uses only wave one data because one's duration of staying with the first-entry job has no impacts on her entry to female-dominant occupation as first-entry job. Thus, this is essentially a cross-sectional study using retrospectively collected information from various individuals.

The second analysis employs event history analysis which is one of the major methodologies in job-retention research (Cho et al. 2012; Kandel and Yamaguchi 1987; Kmec 2007; Kobayashi 2016; Ono 2010; Rosenfeld 1992; Somers and Birnbaum 1999; Tanova and Holtom 2008). The limitation of conventional linear regression in the analysis of survival data is the assumption that the residuals are normally distributed

while most events occur non-normally, and time to event follows an exponential distribution. Event history analysis captures non-normally distributed residuals embedded in time-dependent events and estimates the conditional probability of the occurrence of event by modeling it as a time-dependent variable where the risk of leaving a job depends on the duration of employment. By incorporating a time dimension, event history analysis provides a better understanding of job leaves than linear regression models.

This paper employs discrete-time survival analysis techniques (Allison 1982; Cox 1972). In the original data, some respondents answered the time of leaving their jobs at a year-month level while others did it at a year level. Thus, event times are recoded in years to standardize these different responses. The discrete-time event history analysis uses the data from wave one through six that were collected between 2007 and 2012. In the process of organizing the data, individuals who did not immediately start the first job are left censored. These observations are excluded and coded as a non-event. Right censoring occurs when subjects remain in their first job in the n th wave but disappear in the $n+1$ wave. After the preparation of the data, the dataset has the following characteristics: 24,550 years equal the total analysis time at risk and 3,121 individuals with 764 right-censored observations or those who reached the end of observation time are recorded. Person-years are dichotomized into “left a job (=1)” and “stayed in a job (=0)” for each year. Since respondents of JLPS-Y have been in the labor market for 15 years at most, the observation time is restricted to 15 years. Years are treated as dummy variables because the period effects did not fit to linear model.

In a discrete setting, for $i = 1, \dots, n$ the survivor function S_j , which estimates the probability of remaining with the same firm until time t_j , is defined as;

$$S_j = \prod_{1}^{j-1} (1 - \lambda_j)$$

where the hazard function λ_j represents the conditional probability of leaving the firm at time j conditional of having remained in the firm until then. In other words,

$$\lambda(t_j) = \lambda_j = P(T = t_j | t > t_j)$$

.

Using the framework proposed by Cox (1972), this model incorporates discrete time by defining the conditional odds of leaving the firm at each time t_j conditional on having remained in the firm up to that point using the following equation (1).

Equation (1)

$$\frac{\lambda(t_j|x_i)}{1 - \lambda(t_j|x_i)} = \frac{\lambda_0(t_j)}{1 - \lambda_0(t_j)} \exp(x_i\beta)$$

where $\lambda(t_j|x_i)$ is the hazard at time t_j for an individual with covariate values x_i , $\lambda_0(t_j)$ is the baseline hazard at time t_j and $\exp(x_i\beta)$ is the risk associated with covariate values x_i .

We then take the logit of λ_j and use equation (1) to obtain the following:

Equation (2)

$$\begin{aligned} \text{logit } \lambda(t_j|x_i) &= \ln\left(\frac{\lambda(t_j|x_i)}{1 - \lambda(t_j|x_i)}\right) \\ &= \ln\left(\frac{\lambda_0(t_j)}{1 - \lambda_0(t_j)} \exp(x\beta)\right) \end{aligned}$$

$$\begin{aligned}
&= \ln \left(\frac{\lambda_0(t_j)}{1 - \lambda_0(t_j)} \right) + x\beta \\
&= \alpha_j + x\beta
\end{aligned}$$

Equation (2) then defines our regression model, which is estimated using a logistic regression approach. Under this specification, the dependent variable is given by the binary dependent variable λ_j , which is a dummy variable of whether leaving the first job happened or not. In this model, independent and control variables include the duration staying with the first-entry job, the use of school mediated job-search systems, VET program attendance, middle and high school GPA, college degree, permanent position for the first-entry job, first-entry occupation's prestige score, father's occupational prestige score, father's college attendance, marital status, cohort, and female-dominant occupation for women's first-entry jobs. The constant on the hazard function λ_j is given by the estimated β coefficients.

DESCRIPTIVE STATISTICS

Table 6 presents descriptive statistics. In tables in this section and the result section, school mediation refers to school mediated job-search systems. At the individual level, 84% of female, 65% of male, 75% of school mediated job-search users, and 77% non-users experienced first-entry job leave. The means for age of first-entry job leave (30.32) and duration staying with the first-entry job (8.964) are larger among males compared to females. Moreover, the mean of first-entry job prestige scores is slightly higher among men compared to women. The use of school mediated job-search systems, including school referrals and in-school job placement offices is more prevalent among

women than men, and women have higher middle school and high school GPAs. However, women are less likely to have permanent jobs and less likely to attend four-year college. Even though women do better in middle and high schools and use school mediated job-search systems more than men, their achievements and efforts, as well as reliance on schools are not fully translated in educational and occupational attainments. These findings raise questions whether school mediated job-search systems have positive impacts on women's occupational attainments.

The differences of the mean age of leaving first-entry job and the mean years of duration staying with first-entry jobs between users and non-users of school mediated job-search systems are not as large as the differences between females and males. School mediated job-search users have higher high school GPA but lower middle school GPA compared to non-users. There are two reasons for their low middle school GPA. First, middle school students willing to find jobs after high school do not have incentives to do well academically since they do not need to attend top-tier academic high schools. Another reason is that academically struggling middle school students are channeled into high schools that place students to jobs instead of college. These schools are likely to have strong ties with employers because their graduates who entered in-network firms help them keep such ties.

School mediated job-search users are more likely to find permanent jobs with higher occupational prestige scores compared to non-users. College graduates are least likely to use school mediated job-search systems compared to other groups. Non-users have the higher mean of father's occupational prestige scores, the higher shares of having

a college educated father. Descriptive statistics suggest that women and working-class individuals rely more on schools to find jobs.

Table 6. Descriptive statistics by sex and use of school mediated job-search systems

	Full Sample	Female	Male	Use School Mediation	No School Mediation
Continuous Variables	Means				
Age of leaving first-entry job	28.90 (6.977)	27.65 (6.281)	30.32 (7.439)	28.88 (6.991)	28.94 (6.954)
Duration remaining in the first firm	7.866 (6.623)	6.891 (6.062)	8.964 (7.045)	8.053 (6.642)	7.510 (6.576)
First-entry job prestige score	51.45 (8.138)	51.33 (7.096)	51.59 (9.169)	51.97 (8.005)	50.47 (8.300)
Middle school GPA	3.222 (1.167)	3.285 (1.081)	3.152 (1.253)	3.184 (1.108)	3.295 (1.271)
High school GPA	3.177 (1.140)	3.267 (1.063)	3.069 (1.219)	3.237 (1.109)	3.024 (1.205)
Father's occupational prestige score	51.48 (8.115)	51.50 (8.119)	51.47 (8.113)	51.09 (7.756)	52.23 (8.716)
Dummy Variables	Percentages				
First-entry job leave					
No	24.48	15.55	34.54	25.35	22.81
Yes	75.52	84.45	65.46	74.65	77.19
First job - Permanent					
No	17.33	19.20	15.24	12.39	26.71
Yes	82.67	80.80	84.76	87.61	73.29
First job - Female dominant					
No	55.66	34.57	79.34	52.53	61.63
Yes	44.34	65.43	20.66	47.47	38.37
Use of school referrals					
No	66.00	64.08	68.17	48.22	
Yes	34.00	35.92	31.83	51.78	
Use of in-school job placement office					
No	30.84	24.29	38.63	3.43	
Yes	69.16	75.71	61.37	96.57	
Use of school mediated job-search systems					
No	34.41	28.68	40.87		
Yes	65.59	71.32	59.13		
Father has a college degree					
No	73.63	73.12	74.21	76.12	68.92
Yes	26.37	26.88	25.79	23.88	31.08
Cohort					
Pre-recession	48.86	49.30	48.37	52.03	42.83
Post-recession	51.14	50.70	51.63	47.97	57.17
Education levels and program types					
<i>Commercial high school graduates</i>	19.53	20.21	18.72	20.56	17.36
<i>Technical high school graduates</i>	4.78	0.63	9.62	6.27	1.67
<i>All other high school graduates</i>	6.07	8.38	3.38	7.67	2.72
<i>Associate degree</i>	34.10	45.34	21.00	37.36	27.30
<i>College degree</i>	35.53	25.44	47.28	28.13	50.94
N (maximum)	3121	1653	1468	2047	1074

Note: Standard deviations in parentheses

RESULTS

This section aims to evaluate the effects of school mediated job-search systems and commercial programs on women's entry to female-dominant occupations and their survival in first-entry jobs. Table 7 presents the results of logistic regressions predicting the likelihood of women's entry to female-dominant occupations. As I specified earlier, the information associated with respondents' first-entry jobs is collected from wave one, and therefore, the analysis is essentially a cross sectional study. The main independent variables – school mediated job-search systems, school referrals, and in-school job placement offices – are analyzed in separate models to examine the precise and detailed effects of school mediated job-search systems.

Model 1 results show positive and statistically significant effects of school mediated job-search systems, school referrals, and in-school job placement offices on women's entry to female-dominant occupations. Educational differences also show statistically significant positive effects on entry to female-dominant occupations compared to baseline groups – high school graduates.¹¹ While commercial high school graduates show large coefficients with a strong statistical significance, individuals with associate degree show the highest log odds of entry to female-dominant occupations. Similar to commercial high schools, most junior colleges and some vocational colleges have a high proportion of female students, and their curricula are often designed for sales,

¹¹ As mentioned earlier, female commercial program graduates and male technical program graduates are not included in the baseline group.

service, and office clerical occupations. Thus, some of these effects are associated with curriculum-employment linkages, as well as gender occupational segregation.

Yet, these effects become smaller and lose statistical significance in Model 2 after controlling for interaction effects between education and school mediated job-search systems, as well as first-entry job related factors and family SES. In Model 2 results, first-entry job prestige scores and permanent jobs have strong explanatory power, and the use of school mediated job-search systems loses its statistical significance. As mentioned earlier, Japanese high school admission systems stratify middle school students to high schools in different academic ranks. Each school functions to “cool down” or “heat up” students’ aspirations, depending on academic ranks, differentiated curricula and academic and career counseling services, and teacher-pupil relationships (Arakawa 2009; Nakamura et al. 2010). Such tracking systems and school mediated job-search systems function to place students to jobs that match their academic levels. Perhaps, finding female-dominant occupations, which are clearly associated with better jobs, is the easiest and safest strategy for women and their schools to secure jobs under a highly gender segregated labor market in Japan.

In contrast, cohort differences and family SES have no clear effects on women’s entry to female-dominant occupations. Post-recession cohort, who entered the labor market after the recession of 1996, still enter female-dominant occupations. Class inequality may have indirect effects on women’s occupational choices as it affects educational attainment or program type that influence first-entry jobs. Yet, the persistent gender segregation in the Japanese labor market seems to have larger impacts on

women's job-search than class inequality and generational differences. While gender equalization laws and various social changes have happened surrounding women, their effects on women's occupational choices are still limited. However, these results do not fully explain their true effects because of the limited number of observations to control for interactions between education and school mediated job-search systems.

Table 7. Logistic regressions predicting women's entry into female-dominant occupations for their first-entry job

	School Mediation		School Referrals		Job Placement Office	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
School mediation	0.415** (0.153)	-0.0943 (0.494)				
School referrals			0.418** (0.141)	0.251 (0.385)		
Job placement office					0.397** (0.149)	0.164 (0.492)
HS graduate (Commercial)	0.951*** (0.248)	-0.0874 (1.142)	0.930*** (0.249)	0.647 (0.582)	0.954*** (0.249)	0.111 (1.139)
Associate degree	1.044*** (0.170)	0.104 (0.519)	1.097*** (0.173)	0.438 (0.326)	1.059*** (0.171)	0.296 (0.511)
College degree	0.651** (0.212)	-0.509 (0.533)	0.745*** (0.218)	0.0286 (0.356)	0.668** (0.213)	-0.313 (0.533)
Middle school GPA	0.180** (0.0682)	0.0609 (0.0860)	0.169* (0.0682)	0.0515 (0.0854)	0.172* (0.0682)	0.0563 (0.0860)
High school GPA	0.0730 (0.0608)	0.108 (0.0754)	0.0812 (0.0607)	0.116 (0.0750)	0.0705 (0.0609)	0.103 (0.0755)
Post-recession cohort	-0.0724 (0.135)	0.0480 (0.172)	-0.0379 (0.135)	0.0788 (0.172)	-0.0744 (0.135)	0.0426 (0.172)
First job - Permanent		0.520* (0.207)		0.475* (0.211)		0.495* (0.207)
First-entry job prestige score		0.151*** (0.0139)		0.152*** (0.0141)		0.150*** (0.0139)
Father's occupational prestige score		-0.0130 (0.0105)		-0.0138 (0.0105)		-0.0131 (0.0106)
Father has a college degree		0.259 (0.193)		0.278 (0.193)		0.258 (0.194)
Associate degree * School Mediation		0.879 (1.194)		0.0536 (0.712)		0.634 (1.191)
College degree * School Mediation		0.330 (0.570)		-0.0563 (0.455)		0.105 (0.564)
HS graduate (Commercial) * School		0.545 (0.579)		-0.504 (0.568)		0.329 (0.579)
Constant	-1.131*** (0.299)	-7.429*** (0.960)	-1.019*** (0.284)	-7.644*** (0.912)	-1.088*** (0.295)	-7.565*** (0.958)
N	1228	957	1228	957	1223	953
Pseudo R^2	0.0431	0.174	0.0442	0.173	0.0431	0.174

Note: Coefficients of logit regressions. Numbers inside parentheses are standard error.

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ (two-tailed tests).

Next, Table 8 presents the results of the discrete-time event history analyses. These analytic models are designed to reveal the effects of school mediated job-search systems to examine: the effects of education (model 1), the effects of education, first-entry jobs, and family SES (model 2), and the effects of education, first-entry jobs, family SES, and interaction between education and school mediated job-search systems (Model 3) on the risks of leaving first-entry job. In these analyses, use of school referrals and in-school job placement offices are combined as school mediated job-search systems to evaluate the total effects of school mediated job-search systems.

The result shows no clear effects of school mediated job-search systems or VET programs on the job-leave occurrence. Post-recession cohort shows statistically significant effects in increasing the log odds of leaving a job for both women and men in Model 1, but a statistical significance disappears in Model 2 for women and Model 3 for both women and men. This suggests that cohort effects are larger and stronger for men than women. Gender differences are clear in other variables as well. Model 3 shows that marriage has statistically significant strong effects on women's log odds of leaving first-entry job while it has no clear effects on men. Among job-related control variables, employment in a permanent position clearly decreases the log odds of leaving first-entry job for both men and women. By contrast, occupational prestige score has no clear effects on women while it seems to help men remain in their first-entry job. For women, female-dominant occupations seem to decrease their risks of leaving first-entry job although the coefficients are small and statistically insignificant. These results imply that regardless of their use of school mediated job-search systems, VET program graduation, family

background, or job status, women, especially once they get married, are likely to leave their first-entry jobs.

However, because of the limited number of observations, the effects of VET program attendance are not fully explained, especially when the interaction effects are controlled. Thus, Figure 2 and 3 graphically reiterate the postestimation predictive margins of Model 3 for women and men, respectively. The gender differences in risks of leaving first-entry job probability are clear. Especially for the first three years, the predictive margins lie between 0.11 to 0.23 for women while these margins lie between 0.03 to 0.18 for men. In addition to gender differences, the use of school mediated job-search systems also shows differences in job-separation probabilities. For both men and women, the use of school mediated job-search systems seems to increase the probability of leaving first-entry job and centralize the distance of probabilities. This trait is clearer among women than men. Women using school mediated job-search systems have higher risks of leaving first-entry job regardless of education levels.

Table 8. Discrete-time event history regressions predicting first-entry job leave

	Model 1		Model 2		Model 3	
	Female	Male	Female	Male	Female	Male
School mediation	-0.0142 (0.0869)	-0.0221 (0.0964)	0.0682 (0.100)	0.0916 (0.118)	0.0977 (0.269)	0.205 (0.277)
Commercial HS graduate (female)	-0.218 (0.133)		-0.211 (0.168)		-0.561 (0.665)	
Technical HS graduate (male)		-0.0369 (0.165)		0.0465 (0.212)		-0.740 (0.637)
Associate degree	-0.215* (0.0964)	0.240 (0.135)	-0.311* (0.124)	0.461** (0.165)	-0.365 (0.284)	0.467 (0.341)
College degree	-0.0738 (0.122)	-0.223 (0.135)	-0.171 (0.154)	-0.00713 (0.172)	-0.0698 (0.297)	0.177 (0.269)
Middle school GPA	-0.0673 (0.0385)	-0.0266 (0.0420)	-0.0574 (0.0451)	-0.0216 (0.0523)	-0.0782 (0.0457)	-0.0253 (0.0523)
High school GPA	0.0122 (0.0347)	-0.0721 (0.0375)	0.0240 (0.0397)	-0.00729 (0.0450)	0.0288 (0.0398)	-0.00560 (0.0453)
Post-recession cohort	0.327*** (0.0744)	0.459*** (0.0917)	0.122 (0.0873)	0.216* (0.108)	0.112 (0.0876)	0.208 (0.108)
First job - Permanent			-0.648*** (0.109)	-0.884*** (0.151)	-0.669*** (0.111)	-0.922*** (0.153)
First-entry job prestige score			-0.00745 (0.00677)	-0.0213** (0.00649)	-0.00707 (0.00684)	-0.0200** (0.00655)
Female-dominant occupation (female)			-0.0882 (0.0959)		-0.102 (0.0967)	
Father's occupational prestige score			0.00788 (0.00549)	-0.00848 (0.00734)	0.00611 (0.00557)	-0.00884 (0.00736)
Father has a college degree			0.0676 (0.0993)	0.199 (0.135)	0.0951 (0.100)	0.179 (0.136)
Marriage					0.722*** (0.109)	-0.143 (0.151)
Comm HS grads * School Mediation (Female)					0.398 (0.687)	
Tech HS grads * School Mediation (Male)						0.881 (0.679)
Associate degree * School Mediation					0.0959 (0.307)	-0.0137 (0.390)
College degree * School Mediation					-0.186 (0.318)	-0.249 (0.312)

Year 1	0.713** (0.273)	2.058*** (0.461)	1.126** (0.401)	1.682*** (0.467)	1.656*** (0.411)	1.566** (0.479)
Year 2	0.416 (0.278)	1.447** (0.469)	0.916* (0.405)	1.243** (0.475)	1.424*** (0.414)	1.128* (0.486)
Year 3	0.436 (0.280)	1.384** (0.471)	0.983* (0.406)	1.134* (0.479)	1.454*** (0.414)	1.029* (0.488)
Year 4	0.254 (0.285)	1.437** (0.472)	0.707 (0.413)	0.994* (0.484)	1.129** (0.419)	0.899 (0.492)
Year 5	0.289 (0.287)	1.293** (0.476)	0.756 (0.415)	0.859 (0.490)	1.137** (0.420)	0.775 (0.497)
Year 6	0.238 (0.292)	0.881 (0.489)	0.806 (0.418)	0.604 (0.502)	1.141** (0.422)	0.529 (0.507)
Year 7	0.164 (0.298)	0.864 (0.493)	0.714 (0.425)	0.454 (0.513)	0.990* (0.428)	0.390 (0.516)
Year 8	-0.0429 (0.311)	0.702 (0.502)	0.401 (0.442)	0.597 (0.510)	0.628 (0.444)	0.542 (0.513)
Year 9	0.00927 (0.315)	0.338 (0.528)	0.625 (0.439)	-0.103 (0.567)	0.813 (0.441)	-0.147 (0.569)
Year 10	0.0368 (0.321)	0.908 (0.502)	0.584 (0.448)	0.567 (0.523)	0.758 (0.450)	0.531 (0.524)
Year 11	-0.336 (0.349)	0.0927 (0.564)	0.0129 (0.491)	-0.169 (0.595)	0.131 (0.493)	-0.202 (0.595)
Year 12	-0.0552 (0.340)	0.534 (0.539)	0.508 (0.466)	-0.00410 (0.595)	0.565 (0.468)	-0.0285 (0.595)
Year 13	-0.315 (0.367)	0.223 (0.576)	-0.305 (0.550)	-0.0778 (0.615)	-0.274 (0.551)	-0.0940 (0.615)
Year 14	-0.488 (0.395)	0.894 (0.528)	-0.0314 (0.534)	0.319 (0.580)	-0.0155 (0.535)	0.312 (0.580)
Constant	-2.130*** (0.305)	-3.704*** (0.481)	-1.946*** (0.581)	-1.407* (0.667)	-2.379*** (0.620)	-1.384* (0.705)
N	8482	8772	5963	6388	5963	6388
Pseudo R^2	0.0194	0.0549	0.0318	0.0706	0.0415	0.0722

Note: Coefficients of logit regression. Numbers inside parentheses are standard error.

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ (two-tailed tests).

Figure 3. The predictive margins of the effects of school mediated job-search systems on first-entry job leave by education (Model 3 for female)

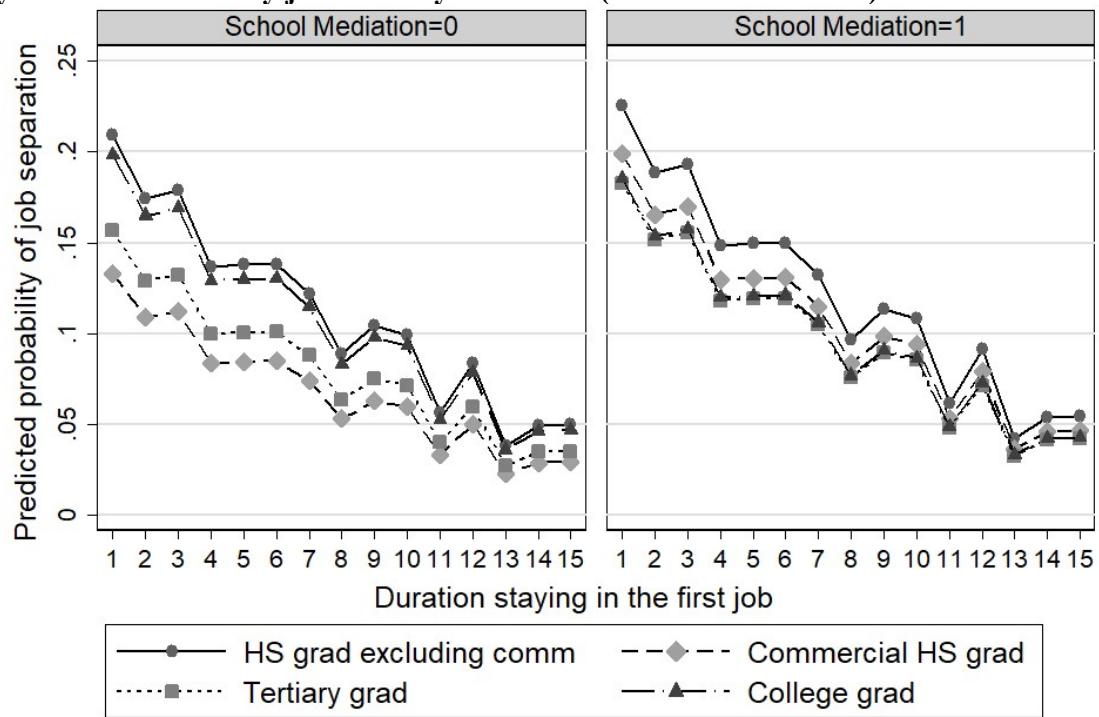
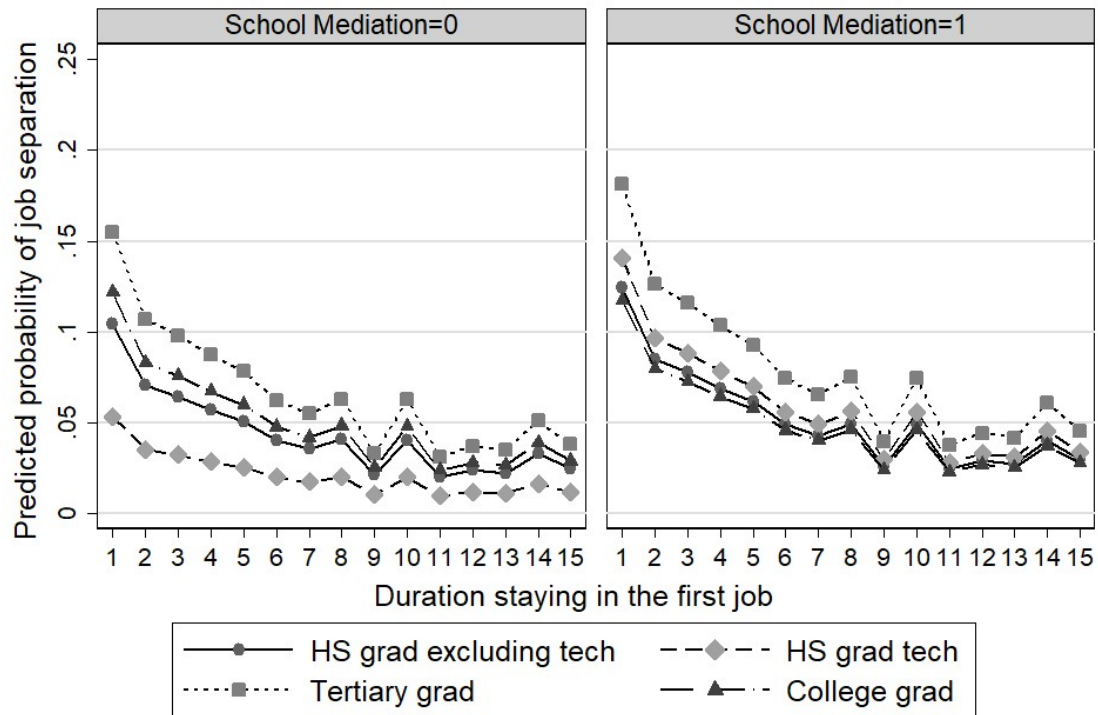


Figure 4. The predictive margins of the effects of school mediated job-search systems on first-entry job leave by education (Model 3 for male)



DISCUSSION AND CONCLUSION

This paper found several important implications about the relationship between school mediated job-search systems, gender occupational segregation, and high school VET programs. School mediated job-search systems place female students to jobs and alleviate class inequality to some extent, but at the same time, they reinforce gender inequality. Overall, this paper found that women who used school mediated job-search systems are more likely to enter female-dominant occupations than those who did not. Moreover, women who used school mediated job-search systems are more likely to leave

their first-entry jobs than those who did not, and female-dominant occupations do not help women stay longer with their jobs.

This paper supports *Hypothesis 1: Schools, including school mediated job-search systems and commercial high schools, reinforce gender occupational segregation by placing women in female-dominant occupations*. Logistic regressions predicting women's entry to female-dominant occupations (Table 4) suggest that school mediated job-search systems, including school referrals, which are supposed to be issued based on meritocratic evaluations of GPA, and other services provided by in-school job placement offices, increase the likelihood of women's entry to female-dominant occupations. These results support *Hypothesis 1-a: Women who used school mediated job-search systems are more likely to enter female-dominant occupations*.

Similarly, findings also support *Hypothesis 1-b: Women who attended commercial high schools are more likely to enter female-dominant occupations*. Graduation from commercial programs was not consistently statistically significant across analytic models, but it showed a strong statistical significance with large coefficients in Model 1. It is important to note that individuals with associate degree showed the highest log odds of entry to female-dominant occupations. As commercial programs and some tertiary institutions, especially junior colleges, are de facto gender segregated institutions, the effects of school mediated job-search systems and education levels/program types are likely to be correlated with each other. Since women's educational attainment has improved, the pipeline between schools and female-dominant

jobs happens not only among commercial high school graduates, but also among women graduates of tertiary institutions.

This paper also supports *Hypothesis 2: Despite improved labor participation rates and educational attainment of women over decades, school mediated job-search systems still channel women into female-dominant occupations*. Logistic regressions found no clear cohort effects on women's entry to female-dominant occupations. Regardless of generational differences, women have continuously entered female-dominant occupations. Thus, the findings support *Hypothesis 2-a: Women who used school mediated job-search systems are more likely to enter female-dominant occupations regardless of cohort*. Furthermore, Model 1 of discrete-time event history analysis (Table 6) showed the statistically significant effects of post-recession cohort, who entered the labor market after the recession of 1996, on first-entry job leave, but the coefficients were bigger for men compared to women and were not consistently statistically significant across models. These findings suggest that the recession hit male post-recession cohort harder while it had the limited effects on females since they have been discriminated in the labor market anyway. The fact that cohort differences have no effects on women's first-entry job leave implies that the situation surrounding women in the labor market has changed little over time. The persistent gender segregation in the Japanese labor market negates generational differences such as gender equalization laws, improvements in educational attainments and labor force participation rates, as well as negative changes, including the recession and the increase of contingent work.

This paper rejects *Hypothesis 3: Schools contribute to increasing survival of women's first-entry jobs by placing them to female-dominant occupations*. Discrete-time event history analysis and postestimation graphs suggest that school mediated job-search systems rather seem to increase women's log odds of leaving first-entry job although coefficients were small and statistically insignificant. Thus, the findings reject *Hypothesis 3-a: Women who used school mediated job-search systems stay longer in their first-entry firms*.

The effects of job-related factors have mixed effects on women. While employment in permanent jobs decreases the log odds of job leave for both women and men, higher occupational prestige score has no clear effects on women but help men to stay in first-entry jobs. For women, the entry to female-dominant occupations seems to reduce their risks of leaving first-entry jobs but the effects are statistically insignificant and the coefficients are small. In sum, these findings reject *Hypothesis 3-b: Women who obtained a female-dominant occupation stay longer in their first-entry firms*.

Overall, findings of this paper suggest that schools reproduce the gendered hiring practices of Japanese firms, and the use of school mediated job-search systems push women to enter female-dominant occupations. Perhaps, schools believe that placing female students to female-dominant jobs would be the best available choice for them. For instance, logistic regressions showed that permanent positions with higher prestige scores are more likely to be female-dominant occupations regardless of generational, class, and educational differences.

Thus, it is likely that women also voluntarily choose female-dominant occupations. Japanese working women face obstacles to earn and achieve as much as men who can commit to long working hours, overtime, and relocation to anywhere in the world for employers. Because of the persistent social expectations for women to be mothers and care takers, it is often difficult for Japanese women to keep working after marriage and childbirth. This paper also found that marriage has strong statistically significant effects on women's first-entry job leave risks regardless of cohort differences. For Japanese women, entering female-dominant occupations, which do not require the same level of commitment as more gender-integrated occupations, is a pragmatic choice under the gender-segregated labor market.

Schools and female students seem to favor female-dominant jobs believing they are better jobs, but they may misjudge those jobs. Even though they are seemingly better jobs, they do not necessarily provide long-term career for women. However, as long as the labor market is gender segregated and female-dominant occupations offer seemingly better jobs, this trait will continue. Unless Japanese firms change unequal, gendered employment practices and gender-segregated work environments, school mediated job-search systems will keep reinforcing gender segregation and the labor market will keep penalize women for being caretakers and potential caretakers.

The empirical findings from this paper suggest the importance of further investigations on the effects of school mediated job-search systems on micro- and macro-level social stratification patterns, including gender segregation in the labor market. In more recent years, young people tend to leave their first-entry jobs early compared to

previous generations regardless of firm size or economic circumstances (Kobayashi 2016). As job change is becoming more common, it is likely that social perceptions about job change is changing, and therefore, financial and opportunity costs of job leave may be changing as well. Unfortunately, it is difficult to analyze these changes using publicly-available portions of JLPS which provide no information on income earned from wages nor job changes over time. JLPS is not nationally representative, respondents answered questions related to job-search experience retroactively, and the number of observations is small. Future research should consider how these changes in the labor market affect school mediated job-search systems.

APPENDIX

Table 9. Appendix: Descriptive statistics for remained and dropped observations

	Full Sample	Remained	Dropped
Continuous Variables	Means		
First-entry job prestige score	51.12 (8.201)	51.45 (8.138)	50.01 (8.315)
Middle school GPA	3.180 (1.181)	3.222 (1.167)	3.101 (1.202)
High school GPA	3.154 (1.144)	3.177 (1.140)	3.103 (1.149)
Father's occupational prestige score	52.05 (8.842)	51.48 (8.115)	53.18 (10.06)
Dummy Variables	Percentages		
First job - Permanent			
No	21.32	17.33	33.68
Yes	78.68	82.67	66.32
First job - Female dominant			
No	56.86	55.66	60.89
Yes	43.14	44.34	39.11
Use of school referrals			
No	71.56	66.00	85.46
Yes	28.44	34.00	14.54
Use of in-school job placement office			
No	35.61	30.84	45.66
Yes	64.39	69.16	54.34
Use of school mediated job-search systems			
No	41.75	34.41	55.39
Yes	58.25	65.59	44.61
Father has a college degree			
No	70.82	73.63	65.18
Yes	29.18	26.37	34.82
Sex			
Male	49.27	47.04	53.42
Female	50.73	52.96	46.58
Cohort			
Pre-recession	56.77	48.86	71.47
Post-recession	43.23	51.14	28.53
Education levels and program types			
Commercial high school graduates	21.70	19.53	28.18
Technical high school graduates	4.57	4.78	3.94
All other high school graduates	5.36	6.07	3.23
Associate degree	34.87	34.10	37.17
College degree	33.50	35.53	27.47
N (maximum)	4800	3121	1679

Note: Standard deviations in parentheses. Age of leaving first-entry job, duration staying in the first firm, and job separation occurrence are not presented since individuals dropped from the dataset have no clear records for these variables.

CHAPTER FOUR

POSSIBILITIES OF VOCATIONAL SCHOOL EDUCATION IN JAPAN

ABSTRACT

This paper investigates the effects of high school vocational education and training (VET) on student readiness in their transition from school to employment in Japan. First, this study analyzed interview data collected from seven teachers in five VET programs and two teachers from two academic programs. Based on findings from the qualitative analysis, hypotheses focusing on students' attitudes toward schools, teachers, and post-graduation plans are created. Hypotheses are tested in OLS regressions using the Tokyo Metropolitan High School Student Survey (TM-S) collected from high school freshmen and juniors in the public high school system in the metropolitan Tokyo (n=2,830). The results suggest positive effects of VET program attendance on students' motivations for study and readiness for post-graduation plans for both college and job.

INTRODUCTION

The effectiveness of vocational education and training (VET) in upper secondary schools is a widely discussed topic in the education research. Whether VET programs reproduce or reduce inequality has been a hot topic, and the literature finds that VET programs reproduce inequality by placing working-class students in low prestige jobs but also prepares them for work and prevents other risks such as unemployment, dropouts,

and teenage pregnancies (Ainsworth and Roscigno 2005; Colley et al. 2003; Jacob et al. 2013; Reisel et al. 2015). The literature has rigorously studied job outcomes and institutional mechanisms of social stratification patterns caused by educational tracking. However, the educational process and learning experience from upper secondary VET has rarely been studied in scholarship pertaining to the study of inequality. For instance, the effects of upper secondary VET on students' attitudes and views toward teachers, schools, peers, and future jobs is largely a missing topic. This is surprising because understanding effective pedagogies to prevent downward mobility is an important mission for schools with a large proportion of poor and working-class students like VET high schools. Improving student learning experience will contribute to improving job and educational outcomes. Thus, this paper aims to fill the gap in the research by providing empirical evidence about the educational effects of VET on students' attitudes toward schools and teachers, as well as readiness for future occupations.

This paper focuses on Japanese high school VET because of their unique position in Japanese society. Studying Japanese VETs will provide useful examples for researchers across the world, especially for those studying countries with limited percentages of upper secondary VET programs. For example, developing countries tend to have lower percentage of VET program enrollment rates compared to advanced economies.¹² For those countries, Japan's case would provide useful insights. It is a

¹² On average between 2009 and 2018, secondary school VET enrollment rates are 5% for least developed economies, 10% for low and middle income countries, and

global phenomenon that skill acquisition is becoming an individual achievement, and employers are looking for workers with both hard and soft skills both within and outside of their countries. In Japan, these changes in notions and expectations for skill acquisition began after the recession in the late 1990s. High schools have faced hardships in placing students who lack marketable skills necessary for many jobs, and therefore, have struggled to motivate students for future career plans.

Given these changes and hardships surrounding Japanese high schools and students, this paper aims to examine differences between academic and VET programs in student learning experience and evaluate the effects of VET on students' readiness for future work. As Japan stands in between countries with and without VET systems, this paper aims to show how VET, even its presence is limited in the society, prepare students for future work. Findings of this paper will provide meaningful insights for countries facing similar problems of youth unemployment and risks associated with precarious work.

BACKGROUND

Undoubtedly, education is a central institution of cultural production, social reproduction, and has functioned to transmit, develop, and form knowledge, skills, and

18% for OECD member countries (The World Bank Group 2019). The numbers are calculated by dividing numbers of secondary vocational education pupils by numbers of secondary education pupils.

identities of students. Among these functions, one of the most important tasks for VET high schools is teaching specialized knowledge and skills required by occupations, firms, and industries. Yet, perceptions and definitions of ‘knowledge’ and ‘skills’ vary by national policy agenda, state control, and institutional structures like the labor market and education systems.

The social position of VET programs often relies on labor market structure in the society. For instance, Japan has a highly coordinated labor market structure in which vocational skills are not portable possessions because firms prepare employees to acquire firm-specific skills. Thus, skill-formation relies little on schools but relies heavily on firms. According to Estevez-Abe, Iversen, and Soskice (2001), levels of market coordination and skill formation systems are highly associated. They dichotomously categorize skill formation systems as general skill countries (liberal market economies or LMEs) and specific skill countries (coordinated market economics or CMEs). Three types of skills are distinguished: firm-specific skills acquired through on-the-job training, industry- or occupation specific skills acquired through apprenticeship training and vocational schools, and general skills with a high degree of portability independent from firm or industry types. They theorize that skill formation systems are affected by levels of involvement of business enterprises and government welfare systems. In theory, skill-formation in CMEs is based on school-based VET systems like those in Sweden and Germany, but this framework explains little about skill formation systems in Japan. Although Japan is one of CMEs and has specific skill formation systems, Japan provides

smaller government spending on education and welfare system compared to other CMEs, and skill formation systems are not based on school-based VET systems but on firms.

Busemeyer (2009) critically addresses the limitations of such dichotomous categorizations and suggests three models of skill regimes in CMEs: the segmentalist or firm-based skill regime (Japan), the integrationist or school-based occupational skill regime (Sweden), and the differentiated or workplace-based occupational skill regime (Germany). Busemeyer's categorization of skill-formation systems aligns well with Japan in terms of institutional coordination of the Japanese labor market. Japan relies little on school-based VET programs in skill-formation because historically-developed linkages between schools and employers provide a smooth school-to-work transition for youths, and employees acquire firm-specific skills suitable to their employer firms.

However, Japanese firm-based skill formation systems are now facing problems. As the research on the school-to-work transition in Japan points out, the quality and robustness of school-employer linkages are in decline. Consequently, schools holding limited number of networks with employers are struggling to place students to jobs and often rely too much on in-network employers which cause job mismatches (Tsutsui 2006). Even for VET programs, it is difficult to place students to jobs if they lack sufficient number of networks with employers. As the direct school-to-work transition is perceived to be common practice in Japanese society, young people who are unable to find jobs at the time of graduation not only face obstacles to find jobs, but also lose opportunities to acquire marketable skills. Even if they find full-time, permanent, regular jobs, their employers are often predatory firms known as *Burakku Kigyō* exploiting

young workers and forcing them to work long hours with low wages under harsh working conditions. Whether they fail to find jobs, quit jobs due to job mismatch, or escape from predatory employers, those young people face hardships to acquire proper skills on their own. This is a long-term risk for Japanese economy as firms are failing to nurture a skilled labor force.

Although a large part of the problem of job mismatch, unemployment, and precarious work lies with firms, schools should do more than basic academic preparedness. Honda (2005, 2009) argues that Japanese high schools fail to provide learning experiences that bridge education and work. She suggests teaching a wide range of subjects relevant to occupations, the labor market, labor rights, social security benefits, and civil society help students develop a link between education and work. Lacking such subjects in curricula, high school graduates often enter the labor market without any vocational skills or useful knowledge for their survival and end up experiencing job mismatch and leave their job. Like many LME countries, skill acquisition is becomingly an individual achievement independent from firms and industries, and most schools are struggling with preparing students to acquire marketable skills. While schools should provide liberal education and open opportunities, they also need to adjust for the reality of the labor market and prepare students for future work.

Even after the recession, the Japanese school-to-work transition has heavily relied on school-employer networks, and securing access to school-employer networks is more important in finding jobs than acquiring skills. Typically, high school students find jobs via school's referral to in-network firms and acquire firm-specific skills after entering to

firms that are widely recognized as On-the-job-training (OJT) in Japan. Thus, high schools did not need to develop specialized vocational education curricula to prepare students to acquire occupation-specific skills and knowledge.

Japan's skill formation systems rely little on VET schools partly because of high school tracking systems. Since only 20% of students attend VET high schools, and nearly 80% of students attend academic programs, skill formation cannot rely on schools.¹³ Yet, the majority of academic programs are mid- to lower-ranked schools in which many academically struggling students attend. Students in these lower-ranked academic programs have higher risks of becoming jobless or non-regular workers than VET program students. In addition to high school tracking systems channeling the vast majority of students to low- to mid-ranked academic programs, VET programs also have limitations in their curricula.

In Japan, VET high schools spend 30% to 40% of the time for vocational subjects whereas academic programs spend no time for vocational subjects. Yet, Japanese VET curricula are rather general than specific, and students learn mostly academic-oriented knowledge than hands-on skills (Honda 2009). The literature points out important differences between specific and general VET curricula. Shavit and Muller (2000) examined VET in various countries and found that VET reduces youth unemployment

¹³ In this paper, academic programs include *Futsūka*, or general programs to which about 70% of all high school students attend, and *Sōgō gakkō*, or comprehensive programs to which about 5% of all high school students attend.

and the chances to become unskilled workers, but the advantages of secondary VET are more evident in countries where VET is specific rather than general. Although Japan still has a low youth unemployment rate, and schools with strong networks still successfully place students to jobs, structural changes in the labor market due to the recession has negatively affected such networks and job outcomes (Honda 2005b, 2009; Tsutsui 2001, 2006).

On the other hand, student learning experiences are provided not only by curricula but also through everyday interactions with teachers. As a significantly higher percentage of students in VET programs immediately enter the labor market, teachers are one of the important sources for students to learn how to be ready for future work. For instance, Katayama (2016) finds that Japanese technical high school teachers educate students to “love machines” and emphasize the importance of positive attitudes toward work and vocations to help students acquire vocational identity, which has long-term effects on their job attainment.

To be ready for future work, acquiring an identity suitable to specific occupation and industry is also a central part of learning experience for many students. The existing research on socialization has revealed that learning is a cultural process intersecting with gender and class distinctions. People acquire identity, knowledge, habitus, and behaviors suitable to certain occupations and industries at school and in the workplace (Bates 1984; Coffey and Atkinson 1994; Willis 1978). For example, Bates (1984) noted that vocational curricula and job-search related education are a form of ‘anticipatory socialization’ which prepare students to acquire skills useful for employers. The literature also shows that

schools enforce young people to acquire vocational identities. Using Bourdieu's concept of habitus, Colley and colleagues (Colley et al. 2003) developed a theory of 'vocational habitus' and explained the process of occupational socialization in schools and workplaces. In their definition, vocational habitus is a set of dispositions and identities suitable for particular occupations and industries targeted by VET institutions. The authors studied three two-year vocational college sites where vocational education was constructed by the combination of classroom learning and on the job training in workplaces. Both in schools and workplaces, students are surrounded by social, cultural, and emotional aspects of vocations and acquire vocational habitus suitable to their vocational choices.

Similarly, Frykholm and Nitzler (1993) find that Swedish VET secondary schools focus more on transmitting dispositions and attitudes than practical knowledge or skills. According to their findings, teachers adjust their pedagogical practices to the habitus of students, which is influenced by prevailing vocational notions in the labor market, which, in turn, influence teachers' perceptions, attitudes, and discourse about students. In other words, the problem of vocational habitus is its function to reproduce class and gender inequalities by channeling students to those targeted occupations and reinforcing class identity and habitus to poor and working-class students in VET programs.

However, in the case of Japan, the division of class is not clearly aligned with the division of academic and VET programs because academic ranking of each school matters more than program differences. In public-school systems, all high schools, including VET programs, are stratified by academic rankings in each school district.

While most VET programs are ranked middle- to lower- academic rankings, some VET programs are ranked high and their graduates attend colleges like other higher-ranked academic programs. Because nearly 80% of high school students are attending academic programs regardless of individual academic achievement, many academic program students are coming from lower socioeconomic families like those in VET programs. This situation allows researchers to compare VET and academic programs in a quasi-experiment study setting because academic ranks are naturally controlled for, but there are few studies in this field. The comparison between VET and academic programs in this study will provide an important empirical evidence to show the effectiveness of VET.

RESEARCH DESIGN

This study employs both qualitative and quantitative methods approaches. The qualitative portion of this paper is used solely for the purpose of creating hypotheses and minimizing inherent biases in quantitative data, particularly the details of everyday life of students and pedagogies teachers in VET programs. First, this study analyzes the interview data collected from high school teachers. The sample size of interviewees is too small to establish a strong validity by itself, but findings from the interview data are used to fulfill gaps between quantitative data and student experience in schools. Based on findings from the qualitative analysis, this paper develops hypotheses and tests them in the quantitative analysis to evaluate the effects of VET on students' attitudes and behaviors toward teachers, schools, and future occupations.

The author conducted semi-structured in-depth interviews with seven teachers from five VET programs and two teachers from two academic programs in the greater Tokyo area public high schools. Interview questions in the prompt were mostly open-ended questions to understand their views about students, schools, and teaching with avoiding presumptions and biases of the author. The questions focused on teachers' views on their students' attitudes toward school, studying, other school activities, post-graduation planning, and inequality among students.

After obtaining the exemption approval to conduct in-depth interviews from IRB in spring 2015, the author conducted interviews between spring and winter of 2016. Each interview took about an hour and was recorded. The author recruited interviewees by making phone calls to in-school job placement offices in several high schools, which I selected in consideration of academic rankings in their school districts.

Interview data was transcribed in Japanese and translated to English, and pseudonyms were assigned to participants and schools to provide anonymity. For the analysis of transcribed interview data, I used the RQDA package in R statistical software. First, I conducted semi-automated keyword search as well as line-by-line open coding to identify and formulate ideas for further analyses. Next, I engaged in focused coding on specific concepts such as “school referrals,” “gender stereotypes,” and “pedagogical practices” and conducted detailed analyses.

TEACHER INTERVIEW ANALYSIS

Under the Japanese teacher education and recruitment system, few Japanese teachers have experience with job-search. Regardless of grades or teaching subjects, most teachers enter the occupation immediately after university graduation and never experience the general job market. Due to the limited number of VET programs, there are few chances for them to understand high school job-search systems and vocational education. Most Japanese public-school systems require teachers to move from school to school every three to six years, but few teachers experience VET programs because nearly 80% of high schools are academic programs. Therefore, teachers newly assigned to VET programs must learn high school job-search systems, vocational education, trends in the labor market, and relationship with employers. Additionally, many students struggled in middle schools and chose VET programs to avoid academic subjects. Thus, new teachers also acquire new pedagogical practices suitable to these students.

In interviews, the author mainly asked VET program teachers what obstacles VET programs face, what difficulties they had in teaching VET programs, and how they perceive class inequality, gender differences, vocational skills and knowledge acquisition, and job search of high school students. To answer these questions, all seven VET program teachers in the interview showed their concerns and frustrations that middle school teachers and academic high school teachers perceive VET schools negatively without knowing anything about their programs. They stressed that their students often find better jobs even compared to mid- to low- prestige college graduates. They said, “middle school teachers don’t know about vocational programs” or “they don’t know

about the job market.” These criticisms come from their experience and confidence in placing students to jobs. Their schools not only have strong ties with employers, including globally-recognized Japanese firms, but also have strong ties with mid- to low-prestige universities to which they can easily refer students even after they fail to find jobs.

VET program teachers in my interviews all recognized that they have a higher share of students from lower socioeconomic background compared to academic programs, and they showed great concerns for economically disadvantaged students. Their concerns directly affect career consultation and advising services they provide, and they try to convince students to find jobs instead of attending college. For instance, Mr. Satoh in K technical high school explained to me how he persuades students by explaining the cost difference between attending college and finding a job.

I always tell students to compare the cost of attending college and earnings from good jobs they can find with us. If they go to four-year college majoring in engineering, it will cost 60,000,000 yen for four years at least. Yet, with our assistance, students can find jobs paying at least 2,000,000 yen a year with benefits and future salary increases. For four years, they can earn more than 80,000,00, yen. Together, the cost difference is at least 14,000,000 yen. Additionally, college degrees won't pay them back much. If we explain these facts, many students understand that they should find jobs instead of attending college.

K technical high school has five technical programs and one science program. Their academic ranking is upper middle and about 50% of graduates attend four-year colleges, including some highly prestigious universities. However, Mr. Satoh mentioned that the school has a significant number of students with economic difficulties such as single mother households. He has taught Japanese literature in academic, commercial,

and technical programs for over 20 years. He shared his analyses of K technical high school in comparison to schools he previously taught and criticized the parents of K tech who often lack knowledge of the risks and costs of higher education.

Parents understand little about today's labor market. It is different from their time. College degrees used to promise better salaries and better jobs in their time. Many of them are high school graduates and faced economic disadvantages because of lacking a college degree. So, they believe that college can give their children better lives, but today, university education is universal, and it's for everyone. Anyone willing to enter university can do it. So, parents think their kids should go to college by borrowing "government scholarship." But it's a great risk. Unless students want to find jobs requiring a college degree, finding a job with our support is better than attending college with scholarship, which in reality, is a loan.

All seven vocational teachers emphasized the importance of explaining the cost of higher education and risks of using "government scholarship" that are essentially college loans offered by the Japan Student Services Organization (JASSO), a governmental organization. According to JASSO, which facilitate these loans, about 10% of college scholarship borrowers, excluding those with unemployment, health issues, poverty, and other difficulties to make payment, failed to pay the loan on time. In addition, Mr. Yamada from S technical high school also explained to me that their students are likely to face difficulties in college because VET program graduates have limited knowledge in academic subjects such as math and English. He said that some of those students may drop out and they would experience more hardships to find jobs than their students finding jobs with the school's help.

Compared to VET program teachers, academic program teachers in interviews were more prone to believe that college degree would give students better life chances

and career options even if their schools are academically ranked low. Ms. Numata teaches Japanese in one of such lower-ranked academic programs in a high poverty area. She is still in her 20s and has never experienced other schools. She told me that she can explain about college life and help students apply to colleges but can offer little help in finding jobs because she never experienced it herself. Moreover, Mr. Miura, who teaches social science at a lower-middle ranked school, confidently told me that his school has worked hard to increase college enrollment rates.

The difference between academic and VET program teachers in their attitudes toward pursuing college education is significant. All VET program teachers stressed that their top students prefer to find jobs in top firms over attending college. They told me that their students find good jobs easily than non-prestigious college graduates, and employers praise their performances as high as college graduates or even more. They are confident that students can find “good” jobs, meaning the firm size, reputation, salaries, and benefits their in-network firms offer, easily than graduates of non-prestigious colleges can. They understand differences in wages and career advancement opportunities between high school graduates and college graduates. Yet, Mr. Yamada said, “While college kids are playing around, our kids are working hard. Educational disadvantages disappear in four years.”

It is still uncertain if their graduates are all doing well because there is no data on salaries over time or career advancement status of former students. Their assumptions are based on conversations with employers and former students working for in-network firms. These VET teachers do not compare their students to college graduates from

prestigious universities. They stressed that their students do better than graduates of non-prestigious universities to which they can easily place students using their school-college networks. They said that non-prestigious universities have fewer job listings and in-network firms than they do.

To keep firms in their networks, teachers make a lot of effort to maintain close relationship with firms, especially firms they believe “good ones.” They stressed that firms trust their schools because they send highly qualified students with personalities suitable to their jobs who remain in these firms for many years. The best way to keep good relationship with those firms is sending high achieving students with “likable” or “suitable” personalities. However, the number of firms willing to hire their students is much bigger than the number of students. Particularly, commercial programs are struggling with keeping such ties with employers because sixty to seventy percent of students pursue tertiary education. Mr. Tanaka in A commercial high school explained how he tries to recruit good students to those “good” firms.

We want to keep good relationships with firms providing good working environments, salaries, benefits, and so forth. Students tend to look at big-name firms. In fact, these big firms are generally good places to work. On the other hand, some good firms are not always famous or big. Students have no idea about these firms. There are students hoping to apply for these firms, but we want to keep the quality of students high for these good firms. So, we ask excellent students with economic difficulties to apply for these good firms instead of applying to college. Students with high academic ability understand that going to good firms in our networks is a better option than attending college that require expensive tuition for four years.

By directly recruiting economically struggling high achieving students, he successfully sends highly qualified students from A commercial high school to those “good firms.” In comparison, S tech has a school culture in which all students compete for top firms. Mr. Yamada in S tech showed me a list of in-network firms to me. The list included a couple of Fortune-500 companies and many firms listed in the Tokyo Stock Price Index (TOPIX) part one enterprises, which are considered as top firms in Japan. He also said their students are hired as engineers and technicians, but not as “those guys just assembling products in a line.” He described how he encourages students to compete for top firms.

In our school, college is for losers. We have plenty of in-network colleges, and we can send as many students as we want. Students in middle-rank academic programs study hard to go to these mediocre colleges, but it’s so easy for our kids since there’s no competition because no one goes to college. As long as they got enough GPA, all of our kids get admitted in those middle-rank universities through our network. I always tell students that those universities will not give them a chance to be employed in top firms like those in our networks. So, I say “don’t spend a penny for college. You guys get jobs in the top 100 firms with us that are dream jobs for college grads.”

He explained that the critical factor for student success is a school culture pushing students to work hard to acquire dream jobs. Under his initiatives, the school has created a culture emphasizing hard work and competition by establishing new networks with employers. Before Mr. Yamada came, S tech had few job listings, and the school was one of the failing schools where students had no incentive to study because hard work led them nowhere. Using his personal networks with former students and employers, Mr.

Yamada expanded the school's networks with employers. Additionally, the school started to emphasize seniority and encourage older students to teach etiquette to younger students. More importantly, Mr. Yamada organized career fairs involving senior students and graduates and requires all senior students to talk to juniors and freshmen about their job-search experiences to emphasize the importance of hard work and preparations for job search.

Seniors take employment exams in September.¹⁴ Whoever failed or passed, got dream jobs or not, all of them must talk about their experiences in front of younger kids. Even kids who failed must explain why they failed. And of course, kids who passed exams and got dream jobs explain how, why, and what they prepared for job hunting. They talk like "I did this, I did that, and joined this club and worked hard, and I had this GPA, this certificate, blah blah, so I passed the exam. You guys should also work hard and come to our firm." So, I tell kids "If you work hard from freshmen year, you can get a dream job. If you don't, you fail. That's the difference between success and failure. Which way do you guys want to follow?"

¹⁴ In a common process under the Japanese government regulations and rules between schools and business enterprises, job listings for high school students are opened to students on July 1st. During the summer, students visit several firms through school's arrangement. After visiting firms, each student chooses one firm to apply in September. Students prepare a job application package which includes the schools' official referral letter. In mid-September, each student takes an academic exam, which is a generalized computer test like SAT in the US or other format, and an interview in a day. Within seven days after the exam, the firm notifies the school if they hire the student or not.

The Japanese literature criticizes that Japanese teachers tend to believe that providing specialized treatment for disadvantaged students are discriminatory against them (Kariya 2001). To protect economically disadvantaged students from alienation, Japanese teachers try to make the association between academic achievement and social origins as vague as possible by limiting competitions among students. Unlike these teachers in the literature, VET program teachers in my interviews frequently emphasized the importance of competition and hard work to motivate students and convince economically disadvantaged students to apply for jobs instead of college with student loans.

Yet, their strategies also involve problems of reinforcing gender and class differences. S tech's school culture is built upon class and gender homogeneity of the student body that reinforce working-class culture of masculinity and seniority. Students are urged to acquire occupational identity, communication skills, and leadership ability to find jobs. As the previous comments showed, Mr. Yamada often used "losers" "win" in his conversation and often used gendered language.

We don't leave struggling students alone. I talk to kids and say, "you guys can eat and sustain your life on your own after graduating from this school. Even if your parents die right now, you can still survive with this school. If you wanna get a better car, if you wanna get a beautiful wife, work hard and get them. That is the rule of life."

As Bourdieu (1977) shows how working-class speech celebrates coarse and crude words, Mr. Yamada himself seemed to prefer using masculine and coarse speech with

students. While teachers and senior students teach younger students etiquette, communication style considered to be appropriate in S technical school is not educated or sophisticated vocabularies and manners of middle-class norms. The case of S tech shows how Japanese technical high schools nurture pro-school culture by emphasizing masculinity and working-class identity.

In his well-known study, Willis (1977) analyzed the social process through which the Hammertown 'lads' develop 'anti-school' culture, acquire traditional masculinity, and enter manual working-class work. His findings not only show the limitations of education to mediate poverty but also suggests the role of masculinity in 'anti-school' attitudes and behaviors among working-class boys (Connell 1995). However, as Mr. Yamada described, students in S technical high school are well mannered, listen to teachers, study hard to acquire dream jobs, and follow school rules. Their school culture pushes hard work and meritocratic success and also highlight traditional masculinity and working-class unity, which Willis (1997) described as some of characteristics of 'anti-school' culture. While S tech's school culture share a lot with 'anti-school' working-class male culture, they translate them to 'pro-school' culture. Yet, it is important to consider how female students in their schools feel such school culture, and how will they maintain such 'pro-school' culture based on working-class masculinity if they have more female students in future.

Moreover, even with such pro-competition culture, encouraging students who experienced academic failure in middle school is still difficult job for teachers. They explained that working hard is a great challenge for many students in their schools since

their self-esteem is very low due to their previous experiences in middle school. Especially, mathematics and English are problems for many students. They said that academically struggling students seldom seek help because they do not know how to ask for help and that is why they were left behind in middle school. To help these students, VET programs in interviews developed systematic interventions. For instance, they use GPA to provide an experience of academic success for students to regain confidence. The highest grade is given to whoever obtained 80% or above instead of only top three percent or above 90%. Moreover, some schools arrange their curricula to focus more on basic knowledge, which are supposed to be taught in elementary and middle school. Mr. Yamada in S technical high school explained how and what they teach students.

When our kids get here, they start from the bottom. We make kids work hard to get good jobs, so we teach only basics. Nothing fancy, nothing excellent, nothing difficult. We don't care if people think us stupid or whatever. We force students to stay after school until they understand these basics. Look at this textbook we made for our kids. Full of pictures and diagrams. It's a shame for high schoolers, right? We need to teach them how to calculate fractions, decimals, and so forth. Some students have to start with memorizing multiplication table. People make fun of us, but we don't care.

While those teachers emphasize the importance of academic competition among students, they also emphasize the importance of assisting struggling students and teaching basics. S tech established a system to support academically struggling students by emphasizing baby steps, basics, tailormade teaching, and after-school study gathering. Similarly, other VET program teachers also offer extra support and empowerment for

students to acquire basic academic skills and gain confidence. Mr. Yamamoto in B commercial high school also explained how vocational courses, including everyday class activities and obtaining certificates, function to keep students motivated with step-by-step progress.

I always tell students that the life is endless studying. Yet, students can make progress only with small steps. Because we require them to obtain accounting certificate, it's easy for them to make step-by-step progress. It's like, now we are here, next is there, and so forth. They cannot think of long-term goals like five to ten years.

He described that students with lower self-esteem and little concrete idea about their post-graduation plans hardly see long-term goals. The issue of confidence is widely shared among VET program teachers, but commercial program teachers showed great concerns and struggles. Mr. Tanaka in A commercial high school also explained how he encourages students to have more confidence as follows.

Our students were not doing well in middle school. They underestimate themselves. They lack confidence. So, the first thing we do when students apply to jobs is helping students have more confidence to believe in themselves. I tell them "you have such experience in extracurricular activities" "there are no kids holding such a difficult certificate like you" "you have very high GPA" and whatever. When I ask them to tell me their strengths, they cannot think of anything, but when I suggest them some good things about them, they realize their abilities and achievements. They can improve if we encourage and lead them, but they cannot do things proactively because of their lack of confidence.

As these comments show, commercial and technical program teachers use different language to describe their pedagogical practices. There is a clear association with gender as 95% of students in technical programs are boys, whereas 70% of students in commercial programs are girls. Commercial high school teachers primarily talk about girls and technical program teachers talk about boys. Similarly, some of the concerns among commercial program teachers about their students are associated with the patriarchal Japanese culture in which women are told to be humble, calm, and sweet. Not only because of academic failure, but also because of gender oppression, many girls do not know that they can be confident and speak up for themselves.

Despite these differences associated with gender relations in schools and society, both technical and commercial program teachers highlighted that the experience of academic success helps students regain self-esteem and confidence. Particularly, they make a lot of effort to provide a learning environment encouraging students who experienced academic struggles in middle schools to regain their confidence and motivation for learning. Their pedagogies and systematic interventions for academic achievement will be similarly useful and helpful for students in many low- and mid-ranked academic programs.

Many students in low- and mid-level academic programs also experienced academic struggles in middle schools, but their schools seldom provide additional support or interventions. Academic programs do not need to take responsibility for their students' low achievement levels. These schools send students to lower-ranked colleges or vocational colleges that do not require even middle school graduate level proficiency.

These academic high schools do not need to face evaluations from employers. However, when students in VET programs do not meet the required achievement level, students will not be hired, and schools lose trust from in-network firms and eventually lose networks. Thus, it is important for VET programs to ensure that students, at least those who willing to find jobs, meet achievement levels expected by in-network employers.

HYPOTHESIS

The qualitative analysis of teacher interviews suggests that Japanese VET high school teachers try to motivate students to study, gain confidence, and successfully secure employment. Compared to academic program teachers, their educational goals focus solely on job attainment. Both technical and commercial program teachers stress that finding a job is better than college with student loans and sometimes recruit top students with financial difficulty to apply to jobs. Moreover, in both technical and commercial programs, intentionally or unintentionally, teachers contribute to reinforcing class and gender identity. Technical program teachers reinforce occupational identity suitable for blue-collar jobs. Their school culture and everyday interactions with teachers encourage students to be used to masculinity, seniority, and hard work for competition. Both in technical and commercial programs, teachers recruit top students with financial difficulty to apply to jobs, emphasize risks of attending college, and use highly gendered languages. However, as teachers in the interview said, their goal is to prevent downward mobility, unemployment, and indebtedness by preparing students for jobs.

The question is whether these efforts by VET program teachers actually help students have higher motivation for academics and prepare for future work. VET high schools prepare academically-weak students for a second chance. They offer a learning environment in which students can experience academic success by learning basic academic knowledge through step-by-step process and help students to gain confidence. If these pedagogies are successful, VET program students develop trust in teachers and schools and show higher motivation for study and their future than academic program counterparts. Therefore, the following hypotheses are tested in the quantitative portion of this paper:

Hypothesis 1: VET program students have higher motivation for school life and academic achievement compared to academic program students.

Hypothesis 1-a: VET program students follow teachers' advice such as raising GPA and obtaining certificates for post-graduation plans compared to academic program students.

Hypothesis 1-b: These attitudes stem from their higher level of reliance and trust on teachers and schools.

Hypothesis 1-c: These effects are constant regardless of their post-graduation plans of attending college or finding a job.

Hypothesis 2: VET program students are more prepared for post-graduation plans than academic program students.

Hypothesis 2-a: VET program students know more about their alumni's post-graduation destinations.

Hypothesis 2-b: VET program students have more trust that school education is relevant to their future regardless of post-graduation plans compared to academic program students.

These hypotheses are tested to understand how VET expands learning opportunities for poor and working-class students and academically struggling students. These students are less likely to pursue higher education and enter the labor market with or without jobs. In addition to occupational or educational attainment to overcome the double jeopardy of socioeconomic and academic disadvantages, schools need to prepare students emotionally and equip them with occupational identity and matured attitudes that are expected by employers. Once they graduate from high school, students obtain little help to survive the labor market. Helping poor and working-class students with little academic preparedness overcome their low confidence and find values in meritocratic achievement have both direct and indirect effects to reduce inequality.

QUANTITATIVE DATA AND METHODOLOGY

This study uses the Tokyo Metropolitan High School Student Survey (TM-S) collected from high school freshmen and juniors in the public high school system in the metropolitan Tokyo (n=2,830). The data was collected in 2008 as a research project on high school students in the Tokyo public high school system by the research team led by

Dr. Yuki Honda in the Department of Education at the University of Tokyo. TM-S was designed to reveal the lives of current high school students, especially VET program students. They selected 20 high schools: 3 general, 9 technical, 4 commercial, 1 international business, 2 agricultural, and 1 technical science programs in similar academic levels. Thus, this survey allows researchers to compare differences between VET and academic programs by examining academic achievement differences.

TM-S collected detailed information on high school experience. In addition to questions about families and socioeconomic backgrounds, the survey also covered respondents' levels of interest in school activities, learning academic and/or vocational subjects, relationship with friends and teachers, views about schools and society, and everyday life inside and outside of the school. TM-S also asked the reasons why respondents chose the current school, level of satisfaction with the school, and post-graduation plans.

This paper employs OLS regressions over ordered logistic regressions although both dependent and independent variables are Likert scale questions. To examine whether VET program attendance positively affects students, including attitudes toward schools and post-graduation plans, the distance among each response of Likert scale questions matter little. Rather, dichotomizing those responses and conducting OLS regressions are more useful to understand the relationship between VET program attendance and its effects on students.

DEPENDENT VARIABLES

Responses to survey questions

The main dependent variables are responses to questions related to motivations for school life and readiness for future work. The variables are created from responses to four-point Likert scale questions as (1) Agree, (2) Somewhat agree, (3) Somewhat disagree, and (4) Disagree. As this paper employs OLS instead of ordered logistic regressions, the responses are coded from 4 to 1 scores where (1) Agree is the highest score of 4. Some questions, particularly respondents' attitudes toward teachers, are used as control variables.

The author chose responses pertaining to students' attitudes toward schools, teachers, and post-graduation plans. Questions used as dependent variables are "Consult with teachers about post-graduation plans," "Study to obtain certificates," "Try to improve GPA," "I know which firms offer jobs to my school," "I know which firms hired our school alumni," "There are many opportunities outside of the school to use what I learned in the school," and "What I'm learning in school will be useful in the future."

INDEPENDENT VARIABLES

Program types

Attendance at a VET program is coded as a dummy variable. Among 20 schools that participated in the TM-S survey, 9 technical, 4 commercial, 1 international business, 2 agricultural schools are coded as VET (=1).

CONTROL VARIABLES

Family socioeconomic status

This paper uses father's education and the economic index calculated from family possessions of material goods as indicators of family socioeconomic status (SES). As the existing literature proved that differential access to education occurs by social origins, education is considered to be the major factor of cultural capital reproducing inequality (Bourdieu 1984; Bourdieu and Passeron 1977; Breen et al. 2010; DeLuca and Rosenbaum 2001; Ishida 1993). Similarly, father's occupation is a common indicator of social capital, which is primarily considered as embedded resource in social relations (Lin 2000; Lin and Erickson 2008). Conventionally, the literature studying Japan also uses father's education for cultural capital and father's occupation for social capital (Ishida 1993).

In the dataset, father's education is broken into 1) middle school 2) high school 3) two-years vocational institution 4) junior college 5) four-year college, and 6) graduate school. TM-S does not contain information on father's occupation, but it has an economic index calculated from family possessions of 1) Set of golf clubs, 2) Telescope or microscope, 3) Piano, 4) Arts or antiques, 5) PC, 6) facsimile, 7) Own room, 8) Dish washer, and 9) Toilet with electric bidet. Economic index is T-scores of standardized points, or Z-scores, of possessions of these materials. The minimum score of the economic index is 30.9 and the max score is 78.6 for the entire sample.

Middle school and high school GPA

This study controls for middle school and high school GPA and the willingness to attend the current school. Since all participating high schools are in similar academic ranks, respondents' middle school GPA are similar and shows no statistically significant difference in the mean comparison test presented in descriptive statistics section. While high school GPA also showed no statistically significant difference, it is an indicator for students' attitudes toward school activities, classroom lectures, and post-graduation plans.

Views toward teachers

While views toward teachers are affected by school culture and program types, they are not a direct result of VET attendance. To understand the precise effects of VET programs, this study controls for views toward teachers. The process of creating variables are same as the dependent variables. These variables are created from questions asking levels of agreement with "Teachers are good at teaching," "Teachers are friendly," and "Teachers are knowledgeable and experienced as specialists." The third choice asks students if their teachers are considered to be specialists in related vocational subjects such as accounting, programing, automotive mechanic, and electronics. In fact, teachers in VET schools often have certificates in related fields. Generally, commercial program teachers have accounting, marketing, and programming certificates, and technical program teachers have programing, electrician, car engineer, chemical engineer certificates.

Willingness to attend the current school

Responses to the questions asking the level of willingness to attend the current school are used as control variables. Japanese high school admission systems channel middle school students to high schools in various academic ranks. In addition to the competitive ratio of the total applicants to admission numbers, high school academic ranks are determined by the average of applicants' middle school GPA and high school entrance exam scores that are both closely associated with family SES as family spending on prep schools and tutors increases academic achievement.

In many high school districts, each student is allowed to apply to only one public school. Since high school education is not mandatory in Japan and not tuition free, if a student fails to be admitted, he or she has no choice but attends a private high school or not attend high school at all.¹⁵ In order to secure their admission, economically disadvantaged students, who cannot afford private schools, apply to a public school in lower academic rank than his or her actual academic achievement level. Thus, in the

¹⁵ Most municipal governments provide tuition assistance for economically disadvantaged students to attend public schools. However, financial burdens are considerable amount as tuition of private schools vary. From April 2020, the Japanese government starts private school tuition assistance up to 396,000 yen, which is about 4,000 dollars, for families earning less than 10,900,000 yen, which is about 100,000 dollars.

evaluation of high school life, students' willingness to attend their current schools is important factor to consider.

The variable is created from the question asking, "Is the school you are attending a school you wanted to attend?" The responses include (1) I really wanted to attend this school, (2) I had another school I wanted to attend, (3) I did not plan to attend this school, and (4) I did not have any preference. The responses are coded as a dummy variable as those who responded to (1) is coded as 1 and the rest are coded as 0.

DESCRIPTIVE STATISTICS

Table 10 presents the mean comparison test and Chi² test of variables used in this study by VET program attendance. Most variables show a statistically significant difference between VET and academic programs. Since participating schools are all in similar academic levels, there is no significant difference in the mean of GPA at 14 years old by program type. Although the difference is less than 1.55, the average economic status index of VET program students is lower than academic program students, and their fathers are less likely to have a college degree.

In terms of students' perceptions and attitudes toward schools and teachers, students in VET programs show higher means to survey questions asking their trust and appreciation of teachers and schools compared to students in academic programs. VET program students are more likely to agree with "This is my first-choice school." A larger percentage of VET program students chose the current school willingly compared to academic program students. Nonetheless, VET program students are more likely to hope

to find jobs than attending college compared to academic program students. These differences likely to be associated with school cultures, and teacher-pupil and peer-peer relationships that affect students' views and attitudes. However, both VET and academic programs show low GPAs and there is no significant difference between them.

Table 10. Mean comparison test and Chi² test by VET attendance

	Full Sample	VET	Academic	Difference
Continuous Variables	Means			
Economic Index	49.12 (9.965)	48.86 (9.998)	50.41 (9.705)	-1.546**
GPA at 14 years old	2.365 (1.083)	2.362 (1.096)	2.383 (1.011)	-0.0210
High school GPA	1.730 (0.891)	1.732 (0.898)	1.718 (0.856)	0.0142
Consult with teachers	2.176 (0.828)	2.207 (0.833)	2.014 (0.784)	0.192***
Study to obtain certificates	2.342 (0.896)	2.421 (0.893)	1.927 (0.791)	0.494***
Try to improve GPA	2.519 (0.877)	2.547 (0.876)	2.368 (0.868)	0.179***
Teachers are good at teaching	2.524 (0.744)	2.563 (0.744)	2.319 (0.710)	0.244***
Teachers are friendly	2.941 (0.790)	2.948 (0.799)	2.904 (0.745)	0.0440
Teachers are knowledgeable and experienced as specialists	2.933 (0.782)	3.002 (0.769)	2.572 (0.753)	0.429***
There are many opportunities outside of the school to use what I learned in the school	2.345 (0.807)	2.408 (0.810)	2.013 (0.705)	0.395***
When I was a middle school senior, I believed what I learn in high school would be useful in future	2.671 (0.967)	2.747 (0.960)	2.275 (0.904)	0.472***
I know which firms offer jobs to the school	2.242 (0.807)	2.337 (0.796)	1.734 (0.664)	0.603***
I know which post-secondary institutions our school alumni attend	2.420 (0.821)	2.476 (0.814)	2.122 (0.793)	0.354***
I know which firms hired our school alumni	2.313 (0.819)	2.389 (0.811)	1.906 (0.737)	0.483***
What I'm learning in the school will be useful in future	2.647 (0.846)	2.719 (0.833)	2.257 (0.809)	0.462***
* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ (two-tailed T-test)				
Note: Standard deviations in parentheses.				
Dummy Variables	Percentages			
This school was my first choice*	significant at $p < 0.001$ (two-tailed chi2 tests)			
No	51.91	48.97	67.33	
Yes	48.09	51.03	32.67	
I want to go to a college*	significant at $p < 0.001$ (two-tailed chi2 tests)			
No	72.55	74.58	61.73	
Yes	27.45	25.42	38.27	
I want to find a job*	significant at $p < 0.001$ (two-tailed chi2 tests)			
No	66.81	62.79	88.15	
Yes	33.19	37.21	11.85	
Father has a college degree*	significant at $p < 0.01$ (two-tailed chi2 tests)			
No	71.72	73.29	64.54	
Yes	28.28	26.71	35.46	
N (maximum)	2830	2377	453	

RESULTS

Table 11 presents OLS regressions predicting the effects of VET program attendance on students' efforts for post-graduation plans. The analysis uses responses from a question asking, "How assertively have you done following activities for your post-graduation plans?" Students chose levels of their assertiveness and commitment to activities of (A) Consult with teachers; (B) Study to obtain certificates; and (C) Try to improve GPA. Model 2 controls for the interaction effects of VET and post-graduation plans. The results show statistically significant positive effects of attendance at a VET program on student's levels of efforts for post-graduation plans across models in (A) (B) and (C) except Model 3 (A) and Model 2 and 3 (C).

As presented in Model 2 and 3 of (B) and (C), students perceiving that teachers are good at teaching and knowledgeable and experienced tend to consult with teachers more and study to obtain certificates and improve GPA. While students perceiving that teachers are friendly likely consult with teachers about their post-graduation plans, they do not necessarily study harder than students who do not consult with teachers.

As academic and VET programs in the data are all in similar academic ranks, most students have similar GPA at 14 years old. Thus, its effects are small though it shows a statistical significance in Model 1 (A) (B). For similar reasons, economic index also has little effects on students' attitudes and efforts towards post-graduation plans. While middle school GPA and lower SES are obstacles for many students to trust schools

and teachers, those who obtain a second chance in high school have different attitudes. High school GPA shows statically significant positive effects across models though coefficients are small compared to the effects of VET and views toward teachers. These traits are also observed in latter analyses presented in Table 12 and 13 as well.

The willingness to attend college also shows statistically significant positive effects in Model 2 across analyses, but the willingness to find a job has mixed effects. After controlling for the interaction effects of VET attendance and post-graduation plans, a statistical significance of VET disappears in Model 3 of (A) and (C), but it keeps a statistically significant positive effects on studying to obtain certificate. Having a post-graduation plan has statistically significant positive effects on studying among VET program students. Since the size of coefficients is large and a statistical significance holds among those willing to find jobs (Model 3, C), levels of willingness to find jobs have strong effects to increase motivations to study for future work.

Table 11. OLS regressions: Students' attitudes toward (A) consult with teachers, (B) study to obtain certificates, and (C) try to improve GPA

	(A) Consult with teachers			(B) Study to obtain certificates			(C) Try to improve GPA		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
VET program	0.227*** (0.000)	0.222*** (0.000)	0.135 (0.103)	0.512*** (0.000)	0.426*** (0.000)	0.231** (0.008)	0.149* (0.013)	0.117 (0.053)	-0.00326 (0.970)
This school was my first choice	0.128** (0.003)	0.0417 (0.340)	0.0414 (0.344)	0.153*** (0.001)	0.0702 (0.133)	0.0690 (0.139)	0.161*** (0.001)	0.0733 (0.113)	0.0762 (0.099)
Economic Index	0.00427* (0.047)	0.00314 (0.143)	0.00306 (0.154)	0.00300 (0.191)	0.00300 (0.192)	0.00282 (0.219)	0.00213 (0.356)	0.000992 (0.662)	0.000943 (0.677)
Father college graduate	0.0632 (0.186)	0.0114 (0.811)	0.0140 (0.767)	0.0497 (0.327)	0.0215 (0.672)	0.0260 (0.607)	0.107* (0.037)	0.0361 (0.472)	0.0412 (0.411)
GPA at 14 years old	0.0441* (0.025)	0.0246 (0.222)	0.0254 (0.207)	0.0422* (0.043)	0.0219 (0.309)	0.0234 (0.275)	0.0383 (0.070)	-0.00107 (0.960)	-0.0000487 (0.998)
High school GPA		0.0556* (0.022)	0.0559* (0.021)		0.0598* (0.021)	0.0608* (0.019)		0.0952*** (0.000)	0.0945*** (0.000)
Teachers are good at teaching		0.107** (0.002)	0.108** (0.002)		0.146*** (0.000)	0.148*** (0.000)		0.154*** (0.000)	0.157*** (0.000)
Teachers are friendly		0.152*** (0.000)	0.151*** (0.000)		-0.00554 (0.871)	-0.00816 (0.810)		0.0133 (0.694)	0.0113 (0.739)
Teachers are knowledgeable and experienced		0.0334 (0.322)	0.0341 (0.312)		0.106** (0.003)	0.108** (0.003)		0.112** (0.002)	0.113** (0.002)
I want to go to college		0.181*** (0.001)	0.0896 (0.387)		0.246*** (0.000)	0.0286 (0.795)		0.403*** (0.000)	0.322** (0.003)
I want to find a job		-0.0256 (0.615)	-0.299 (0.073)		0.167** (0.002)	-0.386* (0.032)		0.0501 (0.351)	-0.501** (0.004)
VET * I want to go to college			0.118 (0.321)			0.284* (0.025)			0.102 (0.418)
VET * I want to find a job			0.305 (0.082)			0.619** (0.001)			0.605** (0.001)
Constant	1.635*** (0.000)	0.840*** (0.000)	0.907*** (0.000)	1.609*** (0.000)	0.879*** (0.000)	1.029*** (0.000)	2.122*** (0.000)	1.308*** (0.000)	1.397*** (0.000)
N	1507	1482	1482	1498	1473	1473	1504	1478	1478
R ²	0.0284	0.0921	0.0941	0.0657	0.115	0.122	0.0218	0.108	0.115

* p<0.05 ** p<0.01 ***p<0.001 (two-tailed tests).

The next analyses examine the effects of VET attendance on readiness for post-graduation plans. Table 12 presents the result of OLS regressions predicting the effects of the same independent variables used in the previous analyses (Table 11) on students' knowledge about post-graduation destinations of alumni and in-network firms offering jobs to their schools. VET program attendance shows statistically significant positive effects on levels of agreement with these questions across models. Generally, VET high

schools have more networks with firms, and a larger share of students find jobs through such networks compared to academic programs. Thus, the results of (A) I know which firms offer jobs to my school; and (C) I know which firms hired our school alumni, are intuitive.

Furthermore, VET program attendance has statistically significant positive effects even on (B) I know which post-secondary institutions our school's alumni attend.

Regardless of program types, many students in mid- to low-rank high schools apply to post-secondary institutions, including four-year colleges, primarily using school referrals to in-network institutions. Thus, information of post-secondary institutions offering reserved admissions to their schools is one of the most important steps to pursue post-secondary education.

VET program has statistically significant strong positive effects across models on all questions, but the interaction effects with post-graduation plans show no statistical significance (Model 3 A, B, and C). These results suggest that VET program attendance has positive effects on knowledge about their alumni and in-network firms and post-secondary institutions regardless of their post-graduation plans. The results coincide with the findings from the qualitative analysis of this paper. VET programs have career fairs involving senior students and alumni to prepare freshman and junior students for post-graduation plans. These pedagogical strategies in VET programs help students pay better attention to their potential post-graduation destinations.

Table 12. OLS regressions: Students' interest and knowledge about their alumni, employers, and post-secondary institutions

	(A) I know which firms offer jobs to my school			(B) I know which post-secondary institutions our school alumni attend			(C) I know which firms hired our school alumni		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
VET program	0.645*** (0.000)	0.513*** (0.000)	0.503*** (0.000)	0.302*** (0.000)	0.271*** (0.000)	0.271*** (0.001)	0.463*** (0.000)	0.367*** (0.000)	0.378*** (0.000)
This school was my first choice	0.145*** (0.000)	0.0384 (0.350)	0.0392 (0.342)	0.181*** (0.000)	0.104* (0.015)	0.102* (0.018)	0.220*** (0.000)	0.141** (0.001)	0.144*** (0.001)
Economic Index	0.000345 (0.865)	0.0000118 (0.995)	0.0000198 (0.992)	0.00365 (0.083)	0.00191 (0.364)	0.00188 (0.373)	0.000133 (0.949)	-0.000215 (0.919)	-0.000146 (0.945)
Father college graduate	-0.0799 (0.078)	-0.0748 (0.095)	-0.0743 (0.098)	0.129** (0.006)	0.0826 (0.077)	0.0820 (0.080)	0.00138 (0.976)	0.0139 (0.767)	0.0146 (0.756)
GPA at 14 years old	-0.00574 (0.758)	-0.0189 (0.320)	-0.0188 (0.322)	0.0715*** (0.000)	0.0485* (0.014)	0.0486* (0.015)	0.0467* (0.015)	0.0367 (0.065)	0.0366 (0.066)
High school GPA		0.0542* (0.017)	0.0540* (0.018)		0.0548* (0.022)	0.0554* (0.021)		0.0450 (0.059)	0.0440 (0.066)
Teachers are good at teaching		0.117*** (0.000)	0.117*** (0.000)		0.0673* (0.049)	0.0670 (0.050)		0.0518 (0.130)	0.0522 (0.127)
Teachers are friendly		-0.0105 (0.727)	-0.0107 (0.723)		0.0871** (0.006)	0.0872** (0.006)		0.0459 (0.146)	0.0456 (0.148)
Teachers are knowledgeable and experienced		0.180*** (0.000)	0.180*** (0.000)		0.115*** (0.001)	0.116*** (0.001)		0.129*** (0.000)	0.129*** (0.000)
I want to go to college		0.0259 (0.598)	0.0248 (0.801)		0.190*** (0.000)	0.170 (0.097)		0.0380 (0.460)	0.0856 (0.404)
I want to find a job		0.181*** (0.000)	0.113 (0.468)		0.0119 (0.812)	0.0986 (0.545)		0.177*** (0.000)	0.0656 (0.688)
VET * I want to go to college			0.000605 (0.996)			0.0286 (0.808)			-0.0650 (0.581)
VET * I want to find a job			0.0738 (0.651)			-0.0922 (0.589)			0.116 (0.497)
Constant	1.727*** (0.000)	0.979*** (0.000)	0.986*** (0.000)	1.724*** (0.000)	1.022*** (0.000)	1.023*** (0.000)	1.765*** (0.000)	1.126*** (0.000)	1.115*** (0.000)
N	1517	1490	1490	1521	1494	1494	1518	1491	1491
R ²	0.109	0.176	0.176	0.0554	0.108	0.109	0.0762	0.118	0.119

* p<0.05 ** p<0.01 ***p<0.001 (two-tailed tests).

If these findings about students' attitudes toward teachers and schools are associated with their experiences in school, VET program students may have higher expectations and satisfactions for their school to provide useful knowledge for their current and future life. Table 13 shows the result of OLS regressions predicting the effects of VET program attendance on levels of agreement with (A) There are many

opportunities outside of the school to use what I learned in the school; and (B) What I'm learning in the school will be useful in the future. Model 3 also controls for levels of agreement with the question asking if they thought what they learned in high school would be useful in the future when they were middle school senior. This variable is added in the model because of its endogenous relationship with the dependent variables as it is highly associated with both (A) and (B).

VET program attendance has statistically significant positive effects on students' levels of expectations for school education across models. Even after controlling for post-graduation plans in Model 2 and 3 for both (A) and (B), VET program students show higher levels of expectations for their schools to teach useful knowledge compared to academic program students. On the other hand, among VET program students, those who willing to go to college show statistically significant lower expectations as shown in Model 3 of (B) while those who willing to find jobs show higher expectations. VET program curricula include fewer academic subjects compared to academic programs in design, but it is becoming an additional task for VET programs to prepare students for higher education as an increasing number of VET program students attend college.

Table 13. OLS regressions: Students' levels of expectations that their schools are providing useful knowledge for their future

	(A) There are many opportunities outside of the school to use what I learned in the school			(B) What I'm learning in the school will be useful in future		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
VET program	0.378*** (0.000)	0.216** (0.002)	0.182** (0.008)	0.378*** (0.000)	0.216** (0.002)	0.223** (0.003)
This school was my first choice	0.293*** (0.000)	0.0760* (0.037)	0.0258 (0.482)	0.390*** (0.000)	0.0760* (0.037)	0.156*** (0.000)
Economic Index	0.00346 (0.087)	0.00244 (0.171)	0.00206 (0.242)	-0.00180 (0.394)	0.00244 (0.171)	-0.00308 (0.113)
Father college graduate	0.0231 (0.608)	-0.00121 (0.976)	0.00798 (0.839)	0.0582 (0.218)	-0.00121 (0.976)	0.0407 (0.346)
GPA at 14 years old	0.0297 (0.109)	0.0163 (0.332)	0.00220 (0.895)	0.0566** (0.004)	0.0163 (0.332)	0.00883 (0.633)
High school GPA		0.0317 (0.116)	0.0262 (0.189)		0.0317 (0.116)	0.0408 (0.064)
Teachers are good at teaching		0.234*** (0.000)	0.221*** (0.000)		0.234*** (0.000)	0.125*** (0.000)
Teachers are friendly		0.123*** (0.000)	0.116*** (0.000)		0.123*** (0.000)	0.0150 (0.607)
Teachers are knowledgeable and experienced		0.297*** (0.000)	0.275*** (0.000)		0.297*** (0.000)	0.183*** (0.000)
I want to go to college		0.00770 (0.929)	-0.0149 (0.862)		0.00770 (0.929)	0.350*** (0.000)
I want to find a job		0.0434 (0.754)	0.0622 (0.649)		0.0434 (0.754)	-0.213 (0.158)
VET * I want to go to college		-0.0281 (0.778)	-0.0264 (0.788)		-0.0281 (0.778)	-0.261* (0.017)
VET * I want to find a job		0.0443 (0.760)	0.000916 (0.995)		0.0443 (0.760)	0.330* (0.037)
When I was a middle school senior, I believed what I learn in high school would be useful in future			0.129*** (0.000)			0.266*** (0.000)
Constant	1.669*** (0.000)	0.0858 (0.512)	-0.0193 (0.882)	2.107*** (0.000)	0.0858 (0.512)	0.770*** (0.000)
N	1538	1514	1512	1518	1514	1487
R ²	0.0787	0.329	0.348	0.102	0.329	0.290

* p<0.05 ** p<0.01 ***p<0.001 (two-tailed tests).

DISCUSSION AND CONCLUSION

Few datasets in Japan focus on students attending VET programs. By using both interview data collected from high school teachers and statistical data collected from

current VET high school students, this paper examined the learning process in VET programs from both teachers and students. Findings of the qualitative analysis suggest that VET schools teach not only vocational skills and knowledge but also help students who experienced academic struggles in middle school to regain confidence through step-by-step learning of basic academic knowledge. In this process, teachers often use VET subjects and GPA as tools to encourage students to study. Through these pedagogical practices, VET program teachers prepare students for the labor market. Based on these findings, this paper creates several hypotheses for quantitative analyses.

Overall, this paper finds evidence to support ***Hypothesis 1: VET program students have higher motivation for school life and academic compared to academic program students.*** OLS regressions predicting students' levels of consulting with teachers, studying for obtaining certificates, and studying to improve GPA suggest that VET program students are more likely to study to obtain certificates and to improve GPA, and consult with teachers (Table 12). Particularly, attendance at a VET program has consistent statistically significant positive effects on studying to obtain certificates across models. Overall, the findings support *Hypothesis 1-a: VET program students follow teachers' advice such as raising GPA and obtaining certificates for post-graduation plans compared to academic program students.* As the qualitative analysis shows, these two activities, studying for certificate and GPA, are frequently emphasized in VET programs. In interviews, VET program teachers explained that they provide step-by-step learning of the basics to make students accumulate small successes. These are new learning experiences for students who faced academic struggles in middle school.

Simultaneously, the results also show that students perceiving that teachers are good at teaching, knowledgeable, and experienced tend to consult with teachers and study to obtain certificates and improve GPA. As the descriptive statistics (Table 10) show, VET program students have higher levels of trust on teachers in these aspects. These results are not an explicit evidence showing a direct relationship between VET attendance and students' positive attitudes toward studying. Yet, these findings are an indirect evidence, at least partly, to support *Hypothesis 1-b: These attitudes stem from VET program students' higher level of reliance and trust on teachers and schools.*

The analyses also suggest that students perceiving teachers being friendly are more likely to consult with teachers about their post-graduation plans, but this factor is irrelevant from their efforts for studying. It suggests that a proper distance between students and teachers as professionals, and not as friends, help teachers lead students for more positive attitudes toward studying.

The analyses also support *Hypothesis 1-c: These effects are constant regardless of their post-graduation plans either attending college or finding a job.* Even after controlling for the effects of GPA at 14 years old, economic index, high school GPA, and post-graduation plans, the positive effects of VET program attendance on students' attitudes toward studying hold for consulting with teachers and studying to obtain certificates, though statistical significance for trying to improve GPA disappears. After controlling for the interaction effects of VET program students' post-graduation plans, the statistically significant positive effects remained only on studying to obtain certificates.

These analyses controlling for the effects of post-graduation plan provide some important implications for instructing students' post-graduation planning. As the results show, having a clear post-graduation plan help students to study and talk to teachers. Post-graduation plans are an important indicator of students' attitudes toward study, school, and teachers, but not all freshmen and junior students have decided their post-graduation plans. In other words, it is difficult for students who have no clear post-graduation plans to be motivated for studying. In interviews, VET program teachers emphasized that they encourage students to have clear post-graduation plans early on through everyday interactions and career fairs involving senior students and alumni. This strategy must be applied to all high schools and pay close attention to students with unclear post-graduation plans.

Similarly, OLS regressions presented in Table 13 showed students' readiness for post-graduation plans. The analyses provide strong evidence to support ***Hypothesis 2: VET program students are more prepared for post-graduation plans than academic program students.*** As mentioned in the results section, VET high schools have more networks with firms and larger numbers of students willing to find jobs through school-employer networks. The results coincide with this fact that VET program attendance consistently show a statistically significant positive association with (A) I know which firms offer jobs to my school; and (C) I know which firms hired our school alumni. Furthermore, VET program attendance has statistically significant positive effects even on (B) I know which post-secondary institutions our school alumni attend, across models.

These findings provide a strong support for *Hypothesis 2-a: VET program students know more about their alumni's post-graduation destinations.*

As the qualitative analysis shows, VET programs provide various career related events and consulting services from early on and instruct students to prepare for post-graduation plans. These career related events often involve senior students and graduates who failed or succeeded to find jobs. Through interactions with seniors and alumni in these career fairs, VET program students are likely to see the direct relevance between hard work in schools and future jobs.

Similarly, OLS regressions predicting students' level of expectations for their schools to teach useful knowledge (Table 14) also suggest that VET program students have higher levels of agreement with (A) There are many opportunities outside of the school to use what I learned in the school; and (B) What I'm learning in school will be useful in the future. Even after controlling for post-graduation plans, the statistically significant positive effects of VET program attendance on their expectations for schools and education hold. These results support *Hypothesis 2-b: VET program students have more trust that school education is relevant to their future regardless of post-graduation plans compared to academic program students.*

However, there are differences among VET program students. Students willing to go to college show lower expectations while those who willing to find jobs show higher expectations in (B) What I'm learning in the school will be useful in future. Due to fewer academic subjects included in VET program curricula, students willing to attend college may be less satisfied with their schools compared to those who willing to find jobs. As

increasing number of VET program graduates attend college, it is important to consider how VET programs should treat and instruct these students to be ready for higher education.

Overall, findings of this paper imply that VET program students are more likely to be prepared for post-graduation life than academic program counterparts not because of their backgrounds and personal traits, but primarily because of their experiences in their schools. These positive effects of VET programs on students' attitudes toward schools, studying, and future career may have indirect positive impacts, helping them avoid downward mobility.

Given the data limitation of TM-S, this paper focused only on the current level of readiness for future work among freshmen and juniors. Thus, it is still unknown how positive attitudes help VET program students for long-term status attainment. However, this paper contributes to the scholarship of vocational education by providing evidence that pedagogical strategies employed in VET programs may have a radical possibility for students' success. In VET programs, VET subjects and GPA function as a second chance for students who experienced severe academic struggles in middle schools to regain self-esteem by experience academic success. Teachers instruct students to prepare for post-graduation plans from early on and provide various opportunities to think about post-graduation career. For instance, career fairs involving seniors and alumni help students see the connection between schools and jobs. VET is not just for socioeconomically disadvantaged students or academically struggling students but can help anyone who will join the labor market in a near future.

CHAPTER FIVE: CONCLUSION

This dissertation research examined the school-to-work transition process in Japan and analyzed the effects of school mediated job-search systems and high school vocational education and training (VET) on job attainment and future-work readiness. Japanese high schools have had an important role in placing students to jobs through school-employer networks for decades. Their significant influence and power on job-search process is clear compared to American high schools that provide little support for job-seeking students. Some argue that school-employer networks have prevented schools from developing curricula bridging education and future work because school-employer networks are more important to find jobs than what students learn in schools (Honda 2005b).

Schools holding higher number and well-established networks with employers are often regionally acclaimed VET programs (Brinton 2010). Because a large percentage of VET program students enter the labor market, VET high schools have more networks with employers, and their students are more likely to find jobs with school referrals. Yet, the literature often treats school mediated job-search systems, including school-employer networks and in-school job placement offices, separately from VET programs. Due to the limited number of student enrollment in VET programs, few researchers have studied VET programs in Japan.

Furthermore, the relationship between VET programs and gender has been largely missing from the literature. Particularly, gender segregation in VET programs is taken for granted in the Japanese literature, and little has been discussed about how de facto gender segregation in technical and commercial programs affect male and female graduates differently. Gender ratio differences in VET high schools are enormous. Commercial program students are nearly 70% female, while technical program students are over 90% male. The lack of consideration of gender differences could cause a misjudgment in evaluating VET high schools and school mediated job-search systems. Despite the obvious gender differences, the literature on VET high schools tends to focus solely on technical programs and male students. Thus, little is known about how school mediated job-search systems or school referrals in VET programs lead to gender occupational segregation.

Evaluating both negative and positive effects of school mediated job-search systems and high school VET on job outcomes is an important research topic. While college attainment rates have improved across the world, college is still not for everyone. College enrollment rates have been about 50% in Japan and 40% in the US for over a decade (Ministry of Education, Culture, Sports, Science and Technology Japan 2019; National Center for Education Statistics 2019). With or without jobs, about half of high school graduates enter the labor market, and after post-secondary institutions, everyone enters the labor market. Education policy and schools need to pay greater attention to job attainment and treat it as important as college attainment.

Three independent papers aimed to understand how schools accumulate and exercise influence and power over students, and sometimes over employers. The underlying theme of three papers is social institution theory to examine the role of schools in reproducing, preserving, but also minimizing class and gender inequality as social institution. The main objective of the first paper is class differences and discussed about how schools cool down unrealistic job expectations and aspirations and place individuals to jobs. The second paper mainly discussed about the contradictory role of schools in placing female students to female-dominant occupations that do not help women establish long-term career. The third paper analyzed the educational effects of VET on students' attitudes towards schools, teachers, and future-work readiness.

FINDINGS AND DISCUSSION

This dissertation found mixed outcomes of school mediated job-search systems. The first paper discussed the positive and negative impacts of school referrals in conjunction with VET attendance on both first-entry and current occupational attainment. In status attainment theory, the importance of first occupational attainment on long-term status attainment is well known (Alexander and Eckland 1975; Ishida 1993; Sewell et al. 1980; Yu and Chiu 2014). First-entry occupational attainment is especially important in the Japanese labor market because finding a job immediately after graduation is perceived to be a standard, normative life course, and job change is not as common as in other countries. Students who failed directly enter to first jobs are more likely to

experience hardships finding a job on their own. Therefore, Japanese schools put a lot emphasis and effort on job placement.

However, schools rely too much on their school-employer networks in placing students to jobs. Their effort sometimes cause mismatch between students and employers. Students placed into jobs that do not really fit them often experience difficult time to stay with first-entry jobs and quit within a few years and face difficulty finding another job (Honda 2005b; Tsutsui 2006). Placing students to jobs is only the beginning for their long-term career, but the literature has discussed little about the effects of school mediated job-search systems on long-term job attainment. Thus, first paper aimed to reveal how schools help individuals find jobs and how they affect jobs beyond first-entry jobs directly and indirectly. Structural equation modeling (SEM) and regression analyses revealed complex interrelations among social origins, high school program types, educational attainment, occupational attainment, and job expectations and skill aspirations. In sum, the result of the first paper showed three main findings.

First, *working-class individuals are more likely to attend VET high schools and use school referrals to find jobs.* This seems to be self-evident, but the literature has not specifically pointed out the relationship between SES, VET, and school referrals. It also found evidence that *schools relying on school referrals place students to good jobs by lowering job expectations and skill aspirations.* SEM found that school referrals help individuals find higher occupational prestige score first-entry jobs that help individuals have higher prestige current jobs and higher job expectations and skill aspirations. More

importantly, it also found that school referrals had larger effects on job attainment than family SES.

OLS regressions showed that school referrals negatively affect both job expectations and skill aspirations of male and female pre- and post-recession cohorts. While the result did not show clear statistical significance, school referrals showed consistent negative effects on job expectations and skill aspirations across gender and cohort, but particularly on male post-recession cohort. Technical and commercial programs were also negatively associated with job expectations and skill aspirations across gender and cohort. Particularly, technical program attendance lowered male post-recession cohort's job expectations and female post-recession cohort's skill aspirations. Moreover, college also lowered male post-recession cohort's job expectations and was statistically significant. College, school referrals, and VET high schools all function to lower unrealistic, unachievable job aspirations and lead individuals to have feasible job expectations.

In sum, these findings imply that *the decline of school mediated job-search systems expand class inequality*. School referrals have stronger positive effects on individual job attainment than family SES, and particularly helpful for working-class students to find jobs. As school mediated job-search systems are in a decline, these positive effects of school referrals will likely to be diminished, and class inequality will become more difficult to overcome for working-class students.

In the second paper, the author focused on the function of schools as a social institution and analyzed the relationship between school mediated job-search systems,

VET programs, and women's entry into female-dominant occupations. The paper examined how these factors affect women's survival in first-entry jobs. Particularly, the paper aimed to reveal how schools lead female students to enter female-dominant occupations by looking at school referrals and in-school job placement offices that administer school referrals. Overall, the second paper found that ***schools, including school mediated job-search systems and commercial high schools, reinforce gender occupational segregation by placing women in female-dominant occupations.***

In the logistic regressions, school mediated job-search systems, including both school referrals and job placement office, increased women's entry to female-dominant occupations for their first post-graduation jobs. After controlling for interaction effects between school mediated job-search systems and education levels, school mediated job-search systems became statistically insignificant. This is largely due to data limitations with a small number of observations for commercial program graduates. To reduce this issue, the analysis treated education levels and middle school GPA as proxies for family socioeconomic background. In sum, findings implied that education and family socioeconomic background do not reduce women's entry to female-dominant occupations. Additionally, there were no cohort differences.

On the other hand, women with higher prestige jobs tend to be working in female-dominant occupations. It is understandable that women and schools try to find female-dominant occupations to obtain a better job. Yet, female-dominant occupations did not contribute to women's survival in first-entry jobs. Discrete-time event history regressions showed that school mediated job-search systems rather increase women's first-entry job

leave. The analysis controlled for family socioeconomic background, but college degree had no impacts on women's first-entry job leave. Among education variables, only associate degree was statistically significant, but the effects were different by gender. Associate degree increased first-entry job leave for males but decreased it for females, and neither college nor high school VET had clear effects on leaving first-entry job. More interestingly, while occupational prestige score had statistically significant effects to decrease men's chances of leaving jobs, it did not show clear impacts on women. Also, controlling for after-recession cohort had larger effects on men than women. These results confirm the complex characteristics of gender inequality in the labor market.

Despite higher labor participation rates and educational attainment of women over decades, school mediated job-search systems still channel women into female-dominant occupations.

School mediated job-search systems seem to be effective in helping socioeconomically disadvantaged men, but they do not necessarily help women to attain as much as men. The result imply that schools contribute to preserving gender differentiated job-search process. Schools may expect that placing female students to female-dominant occupations would help their career, but the empirical evidence of this paper denies it. School mediated job-search systems should introduce more gender egalitarian views and affirmative action and help female students find gender-integrated jobs to function as an effective educational intervention not only to support economically disadvantaged male students but also female students.

Compared to the first and second papers discussing school mediated job-search systems, third paper solely focused the educational effects of VET on current high school students. Sparked by the long economic recession, Japanese policymakers have begun emphasizing the importance of more vocation-oriented education to prepare students for the workforce. This trend is apparent not only in Japan, but also in other industrial countries because many jobs do not require a postsecondary degree. For instance, in the U.S., the Department of Education states that about 30 million “middle skills” jobs do not require a bachelor’s degree and pay median earnings of \$55,000 or more, and career and technical education (CTE) provides young adults these skills beginning in high school (U.S. Department of Education 2019).

Despite the increasing interest in VET, the percentage of high schools offering VET programs remains low in Japan. Japanese VET courses are not electives like career and technical education (CTE) courses in American schools, and therefore, students hoping to learn vocational courses need to attend VET programs.¹⁶ Yet, only 30% of Japanese high schools offer VET programs, and less than 20% of students attend VET programs. Even if drastic curriculum changes happen in VET programs, students outside of VET programs will not benefit with such changes.

¹⁶ Exception is comprehensive programs. About 70% of comprehensive high schools provide some kinds of VET courses, but comprehensive high schools account only for 5% of all high school programs in Japan.

Although their influence is limited and their pedagogical knowledge and experiences are rarely shared with academic programs, VET high schools have prepared students for jobs, including both immediate and after postsecondary education jobs. Thus, the third paper analyzed the impact of VET program attendance on students' attitudes toward schools and teachers, as well as their levels of readiness for future work.

Teacher interviews found that Japanese VET high school teachers try to motivate students, who experienced academic struggles in middle school, to study and regain confidence. Their educational goals focus solely on job attainment and perceive college as an easier option compared to find jobs. This is largely due to the proportion of economically struggling students to whom pursuing higher education means borrowing in massive amount of student loans. In technical programs, schools encourage students to acquire identities and personalities suitable to blue-collar jobs like adapting and conforming to masculinity, seniority, and hard work for competition. While these pedagogies may reinforce class inequality, they seem to be effective to prevent downward mobility, unemployment, and the huge burden of student loans. Based on findings from interviews, this paper established several hypotheses to examine how the learning environment of VET programs prepares students, regardless of post-graduation plans, for future work. Both qualitative and quantitative analyses suggest some important VET program pedagogical strategies that should be shared with other programs.

The paper found that *VET program students have higher motivation for school life and academic achievement compared to academic program students*. In OLS regressions, students in VET programs overall showed higher positive attitudes toward

“consult with teachers” “study to obtain certificates” and “try to improve GPA” compared to academic program counterparts. The positive effects of VET program attendance were especially strong in “consult with teachers” and “study to obtain certificates.” Additionally, the interaction between VET program students and “I want to find a job” and “I want to go to college” both showed higher coefficients for “study to obtain certificates” and “study to improve GPA.” Attendance at VET programs had clear and strong positive relationship with students’ attitudes toward teachers and studying.

The paper also found that *VET program students are more prepared for post-graduation plans than academic program students.* VET program attendance also had clear positive effects on students’ readiness for post-graduation plans and readiness for work. Its positive effects were all statistically significant and strong on responses for “I know which firms offer jobs to my school” “I know which post-secondary institutions our school alumni attend” and “I know which firms hired our school alumni.” These are all important information for students. Either planning to attend college or find a job, the information where their alumni ended up helps students to assess their possible post-graduation options.

Despite the low prestige and small shares of VET programs in the Japanese high school systems, these findings suggest that accumulated knowledge and experience of VET programs should be investigated and shared with other high school programs. Yet, considering findings of first and second paper on the difference of commercial and technical programs entangled with gender differences, VET programs still reinforce

gender inequality. VET programs and school mediated job-search systems must transform themselves to help male and female students aspire and achieve similarly.

CONCLUSION

Findings of three papers provided empirical evidence and important policy implications for the school-to-work transition process. By focusing on program types that are closely associated with and gender segregation in VET programs, this research aimed to fill the gap of the literature that has focused solely on male job outcomes. This dissertation also shed light on in-school job placement offices by examining how they contribute to strengthening the power, influence, and authority of school mediated job-search systems. School mediated job-search systems are comprised by school-employer networks, or school referrals, and in-school job placement offices. Yet, the existing research has focused solely on school-employer networks and paid little attention to in-school job placement offices, perhaps because in-school job placement offices have limited role in male students' job placement.

In sum, this dissertation research found that school-employer networks are still effective and important tool to help working-class students land jobs. It also found the significance of in-school job placement offices, particularly in female job placement. The existing research on gender inequality in education points out that female students are expected to be obedient, listen to teachers, and work harder than boys (Robinson 1992; Stromquist 2007). Schools nurture female students to be more gender conforming through interactions with teachers and peers. Findings of the second paper (chapter three)

confirmed such negative influence of schools on female students. In-school job placement offices has as much impacts as school referrals on women's entry to female-dominant occupations but those jobs do not help women establish long-term career. Even though schools help female students land relatively higher prestige first-entry jobs in female-dominant occupations, persistent gender inequality in the labor market pushes women to quit their jobs.

The Japanese labor market has severe gender segregation, both vertically within the occupation and horizontally across occupations. Moreover, economic inequality and gender inequality are largely overlapping because social status is determined by occupational status. Many women are working as part-time or non-regular workers with lower wages and little job security. Even though school referrals and in-school job placement offices increase individuals' chances to obtain higher prestige jobs, they reinforce gender inequality by following gender biased hiring practices embedded in job-search process.

Many poor and working-class female students and workers face the double jeopardy of class and gender inequality. Thus, findings of this research revealing the power and influence of schools on female students' job placement provides important policy implications. As the first paper (chapter two) showed, school-employer networks help students to find better jobs, and their effects are larger than family socioeconomic status. High school VET and college degree both decrease job expectations and skill aspirations even though they place them to relatively high prestige jobs. While lowering job expectations and skill aspirations would help males find jobs, it perhaps discourages

females to aspire and attain as much as male counterparts. Schools lower aspirations for unachievable, unrealistic dream jobs to place students to jobs, but for many female students, unachievable, unrealistic dream jobs would include gender-integrated, stable, relatively high prestige jobs that their male counterparts are placed into. In fact, it is often unachievable, unrealistic dream for women to compete against men in the gender segregated labor market. Social expectations for women to be caretakers are heavy burden, and employers avoid hiring or promoting them because of beliefs that women quit after marriage or giving birth. While gender inequality is largely caused by gender biased recruitment and employment practices in firms, schools still need to be aware of the embeddedness of gender inequality and challenge it. Schools need to understand negative consequences of lowering aspirations of female students that may deprive them from aspiring and achieving as high as male students.

Similarly, gender homogeneity of VET programs also reinforces gender inequality. As VET high schools are de facto gender segregated institutions that reflect gender segregation in the labor market, gender differences are taken for granted and teachers seemed to be aware of gender inequality embedded in job-search process. The third paper (chapter four) showed that VET programs provide better learning experience for students and prepare them for future work, but their pedagogies often involves gendered pedagogies relying on gender homogeneity in their schools. Their pedagogical strategies focusing on readiness for work is partly supported by their strong networks with employers that promise students jobs. Yet, it is likely that their close relationship

with employers cause them to instruct students to behave as employers want, including gender conforming attitudes.

Teachers in commercial programs primarily talk about female students, and teachers in technical programs primarily talk about male students. Especially, technical programs heavily emphasize masculinity and working-class identity suitable to blue-collar jobs. Teachers and in-school job placement offices in these schools internalize gendered hiring practices in their in-network firms and advise students to fulfill their gendered requirements and instruct students to consider long-term career based on socially imposed gender stereotypes. When considering intersectional inequality of class and gender that many women face, VET programs must pay more attention to gender equality both in admission to their schools and post-graduation job outcomes.

My dissertation research showed both negative and positive effects of school mediated job-search systems and high school VET on class and gender inequality. These systems are still useful and effective. Yet, to improve their effectiveness and robustness to assist diverse populations, schools need to be updated and adjusted to recent economic and social changes. Especially, drastic intervention to introduce gender equitability is urgently necessary. For example, school mediated job-search systems, including in-school job placement offices and school-employer networks, as well as VET programs should introduce gender quota in admission and gender empowering pedagogies to encourage female students to find jobs in more gender-integrated occupations for their long-term career development.

There are several limitations to generalize these findings and further research is necessary. First, the datasets used in this research, both JLPS and TM-S are not nationally representative sample but collected from the limited populations in limited areas. Particularly, the TM-S used in my third paper analyzing VET programs is collected from the metropolitan Tokyo area, which has fundamentally different economic conditions from other areas in Japan. Additionally, TM-S is one-shot cross sectional data so that it is difficult to evaluate the educational effects of VET programs on long-term status attainment.

As a remark, I would like to show possible directions to extend this dissertation research. Since this research focused solely on individuals who experienced direct school-to-work transition to assess the role of schools, individuals who dropped out or had gap years to find jobs were removed although they are even more vulnerable population. By including these individuals, the future research should examine the role of schools to prevent drop out and unemployment.

Another possible direction is cross-national comparisons. The primary object of this research was Japan although each of three papers built upon the literature of the school-to-transition process and VET from worldwide. While school mediated job-search systems are particular in the Japanese labor market that are deeply connected with schools, other countries have various school-to-work transition process and VET systems. For instance, in South Korea, VET enrollment has declined during the 1970s and 80s and is about 20% today. Similar to Japan, the government is trying to increase students' interest in VET. As a new attempt to prepare mid-skill workforce, the government

established related law in 2008 to establish newly organized “meister high schools” which accept students across the country. Students in meister high schools start working through on-the-job training for firms from freshmen or junior years. Thus, their educational model is similar to the dual system in Germany. In Germany, VET enrollment is over 50% and under dual education system, students attend classroom study in specialized VET schools and experience on-the-job training in firms. In comparison, American high schools offer electives for students who are not in VET high schools to take vocational courses. While the data is limited to public schools, more than 80% of public high schools offer CTE courses, more than 6% offer work-based learning or internships outside of schools, and more than 20% offer “career academy” that prepares students for both college and jobs in specific vocational areas (National Center for Education Statistics 2008). While American high schools do not help students find jobs, Korea and Germany VET schools indirectly help students find jobs by helping them experience on-the-job training. These examples show different levels of school involvement in school-to-work transition, and therefore, comparing these countries’ VET systems to Japan is a promising direction for future research.

Additionally, these countries have datasets designed to follow high school graduates and their occupational attainment. For example, the Youth Panel Survey of the Korea Employment Information Service particularly focuses on the school-to-work transition and mobility among young population in Korea. Similarly, the U.S. Department of Education has conducted several longitudinal surveys such as National Education Longitudinal Study of 1988, Education Longitudinal Study of 2002, and High

School Longitudinal Study of 2009. Reorganizing and preparing these surveys to be comparable datasets will require rigorous work, but it is a promising direction to extend this research project to understand the school-to-work transition and mobility in various countries.

REFERENCES

- Acock, Alan C. 2013. *Discovering Structural Equation Modeling Using Stata : Revised Edition*. Stata Press.
- Ainsworth, James W., and Vincent J. Roscigno. 2005. "Stratification, School-Work Linkages and Vocational Education." *Social Forces* 84(1):257–84.
- Aizawa, Shinichi. 2008. *Who Would Like to Quit a Job? : Analysis of Effects of Social Ascription and the Environment of Workplace and Family*. 14. Tokyo: University of Tokyo Institute of Social Science.
- Alexander, Karl, Robert Bozick, and Doris Entwisle. 2008. "Warming Up, Cooling Out, or Holding Steady? Persistence and Change in Educational Expectations After High School." *Sociology of Education* 81(4):371–96.
- Alexander, Karl L., and Bruce K. Eckland. 1975. "Basic Attainment Processes: A Replication and Extension." *Sociology of Education* 48(4):457–95.
- Allison, Paul D. 1982. "Discrete-Time Methods for the Analysis of Event Histories." *Sociological Methodology* 13:61–98.
- Anyon, Jean. 1980. "Social Class and the Hidden Curriculum of Work." *Journal of Education* 162(1):67–92.
- Arakawa, Yō. 2009. "Yumeoi" *Gata Shinrokeisei no Kouzai [The Positive and Negative Aspects of "Dream Achieve" Type Career Counseling at Schools]*. Tokyo: Toshindō.
- Arum, Richard, and Yossi Shavit. 1995. "Secondary Vocational Education and the Transition from School to Work." *Sociology of Education* 68(3):187–204.
- Bailey, Thomas. 2001. "Changing Labor Markets and the U.S. Workforce Development System." Pp. 429–48 in *Sourcebook of Labor Markets: Evolving Structures and Processes, Plenum Studies in Work and Industry*, edited by I. Berg and A. L. Kalleberg. Boston, MA: Springer US.
- Bamba, Hiroyuki. 2010. *Shokugyō Kyōiku to Shōgyō Kōkō - Shinsei Kōtō Gakkō ni Okeru Shōgyōka no Hensen to Shōgyōkyōiku no Henyō [Vocational Education and Commercial High Schools - Transition of Commercial Programs and*

- Commercial Education Under the New High School System*]. Tokyo: Ōtsuki shoten.
- Barone, Carlo. 2006. "Cultural Capital, Ambition and the Explanation of Inequalities in Learning Outcomes: A Comparative Analysis." *Sociology* 40(6):1039–58.
- Basil Bernstein, General Editor. 1971. "Primary Socialization, Language, and Education." *Education and Urban Society* 4(1):124–124.
- Bates, I. 1984. *Schooling for the Dole?: The New Vocationalism*. First Edition. Houndmills, Basingstoke, Hampshire : Atlantic Highlands, N.J: Macmillan Pub Ltd.
- Beattie, Irene R. 2002. "Are All 'Adolescent Econometricians' Created Equal? Racial, Class, and Gender Differences in College Enrollment." *Sociology of Education* 75(1):19–43.
- Beauchamp, Catherine, and Lynn Thomas. 2009. "Understanding Teacher Identity: An Overview of Issues in the Literature and Implications for Teacher Education." *Cambridge Journal of Education* 39(2):175–89.
- Bianchi, Suzanne M., Liana C. Sayer, Melissa A. Milkie, and John P. Robinson. 2012. "Housework: Who Did, Does or Will Do It, and How Much Does It Matter?" *Social Forces* 91(1):55–63.
- Blanchflower, David G. 2000. *Youth Employment and Joblessness in Advanced Countries*. Chicago: University of Chicago Press.
- Blau, Francine D., and Wallace E. Hendricks. 1979. "Occupational Segregation by Sex: Trends and Prospects." *The Journal of Human Resources* 14(2):197–210.
- Blau, Peter M., and Otis Dudley Duncan. 1967. *The American Occupational Structure*. New York: John Wiley & Sons.
- Bollen, Kenneth A. 1989. "A New Incremental Fit Index for General Structural Equation Models." *Sociological Methods & Research* 17(3):303–16.
- Bourdieu, Pierre. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Cambridge, Mass.: Harvard University Press.
- Bourdieu, Pierre, and Luc Boltanski. 1978. "Changes in Social Structure and Changes in the Demand for Education." *Contemporary Europe: Social Structure and Cultural Change*.
- Bourdieu, Pierre, and Jean Claude Passeron. 1977. *Reproduction in Education, Society and Culture*. London; Beverly Hills: Sage Publications.

- Breen, Richard, Ruud Luijkx, Walter Müller, and Reinhard Pollak. 2010. "Long-Term Trends in Educational Inequality in Europe: Class Inequalities and Gender Differences." *European Sociological Review* 26(1):31–48.
- Brinton, Mary C. 1992. *Women and the Economic Miracle: Gender and Work in Postwar Japan*. Berkeley: University of California Press.
- Brinton, Mary C. 1998. "From High School to Work in Japan: Lessons for the United States? The Social Service Review Lecture." *Social Service Review* 72(4):442–451.
- Brinton, Mary C. 2000. "Social Capital in the Japanese Youth Labor Market: Labor Market Policy, Schools, and Norms." *Policy Sciences* 33(3/4):289–306.
- Brinton, Mary C. 2010. *Lost in Transition: Youth, Work, and Instability in Postindustrial Japan*. 1 edition. Cambridge; New York: Cambridge University Press.
- Brinton, Mary C., and Takehiko Kariya. 1998. "Institutional Embeddedness in Japanese Labor Markets." Pp. 181–207 in *The New Institutionalism in Sociology*. New York: Russell Sage Foundation.
- Brinton, Mary C., and Zun Tang. 2010. "School–Work Systems in Postindustrial Societies: Evidence from Japan." *Research in Social Stratification and Mobility* 28(2):215–32.
- Bussemeyer, Marius R. 2009. "Asset Specificity, Institutional Complementarities and the Variety of Skill Regimes in Coordinated Market Economies." *Socio-Economic Review* 7(3):375–406.
- Bynner, John, and Samantha Parsons. 2002. "Social Exclusion and the Transition from School to Work: The Case of Young People Not in Education, Employment, or Training (NEET)." *Journal of Vocational Behavior* 60(2):289–309.
- Cabinet Office, Government of Japan. 2014. "Josei No Katsuyaku Suishin Ni Kansuru Yoron Chōsa 2 Chōsa No Gaiyō - Naikakufu [The Opinion Survey on Women's Career Advancement by the Cabinet]." *Yoron Chōsa [Opinion Survey]*. Retrieved April 19, 2018 (<https://survey.gov-online.go.jp/h26/h26-joseikatsuyaku/2.html>).
- Catterall, James S., and David Stern. 1986. "The Effects of Alternative School Programs on High School Completion and Labor Market Outcomes." *Educational Evaluation and Policy Analysis* 8(1):77–86.
- Cha, Youngjoo, and Kim A. Weeden. 2014. "Overwork and the Slow Convergence in the Gender Gap in Wages." *American Sociological Review* 79(3):457–84.

- Chiba, Shōgo, and Naoki Ōwada. 2007. "Sentaku Shien Kikan to Shitenō Shinrotayōkō Ni Okeru Haibun Mekanizumu [How Low-Ranking High Schools Assisting Students' Career and Educational Decision Makings as a Redistribution Mechanism]." *Kyōiku Shakaigaku Kenkyū* 81:67–87.
- Cho, Sung-Hyun, Ji Yun Lee, Barbara A. Mark, and Sung-Cheol Yun. 2012. "Turnover of New Graduate Nurses in Their First Job Using Survival Analysis." *Journal of Nursing Scholarship* 44(1):63–70.
- Coffey, Paul, and Amanda Atkinson. 1994. *Occupational Socialization and Working Lives*. Ashgate Publishing, Limited.
- Colley, Helen, David James, Kim Diment, and Michael Tedder. 2003. "Learning as Becoming in Vocational Education and Training: Class, Gender and the Role of Vocational Habitus." *Journal of Vocational Education & Training* 55(4):471–98.
- Conroy, William G., and Daniel E. Diamond. 1976. *The Impact of Secondary School Occupational Education in Massachusetts*. MA: Massachusetts State Dept. of Education, Boston. Div. of Occupational Education.
- Cox, David R. 1972. "Regression Models and Life-Tables." *Journal of the Royal Statistical Society. Series B (Methodological)* 34(2):187–220.
- Cunningham, Mick. 2008. "Changing Attitudes toward the Male Breadwinner, Female Homemaker Family Model: Influences of Women's Employment and Education over the Lifecourse." *Social Forces* 87(1):299–323.
- DeLuca, Stefanie, and James E. Rosenbaum. 2001. "Individual Agency and the Life Course: Do Low-SES Students Get Less Long-Term Payoff for Their School Efforts?" *Sociological Focus* 34(4):357–76.
- DiMaggio, Paul. 1998. "The New Institutionalisms : Avenues of Collaboration." *Journal of Institutional and Theoretical Economics (JITE) / Zeitschrift Für Die Gesamte Staatswissenschaft* 154(4):696–705.
- DiMaggio, Paul, and Hugh Louch. 1998. "Socially Embedded Consumer Transactions: For What Kinds of Purchases Do People Most Often Use Networks?" *American Sociological Review* 63(5):619–37.
- Domina, Thurston, Anne Marie Conley, and George Farkas. 2011. "The Link between Educational Expectations and Effort in the College-for-All Era." *Sociology of Education* 84(2):93–112.
- Duncan, Otis Dudley. 1966. "Path Analysis: Sociological Examples." *American Journal of Sociology* 72(1):1–16.

- Estévez-Abe, Margarita. 2006. "Gendering the Varieties of Capitalism: A Study of Occupational Segregation by Sex in Advanced Industrial Societies." *World Politics* 59(1):142–75.
- Estevez-Abe, Margarita, Torben Iversen, and David Soskice. 2001. *Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State*. Oxford University Press.
- Flores, Maria Assunção, and Christopher Day. 2006. "Contexts Which Shape and Reshape New Teachers' Identities: A Multi-Perspective Study." *Teaching and Teacher Education* 22(2):219–32.
- Frykholm, Clas-Uno, and Ragnhild Nitzler. 1993. "Working Life as Pedagogical Discourse: Empirical Studies of Vocational and Career Education Based on Theories of Bourdieu and Bernstein." *Journal of Curriculum Studies* 25(5):433–44.
- Fujimoto, Kayo. 2015. "Organizational Linkages in Japan's Female Labor Market: Information Exchanged in Networks." *Journal of Sociology* 51(4):968–83.
- Genda, Yūji. 2007. "Jobless Youths and the NEET Problem in Japan." *Social Science Japan Journal* 10(1):23–40.
- Gottfredson, Linda S., and Henry J. Becker. 1981. "A Challenge to Vocational Psychology: How Important Are Aspirations in Determining Male Career Development?" *Journal of Vocational Behavior* 18(2):121–37.
- Griffin, Larry J., and Karl L. Alexander. 1978. "Schooling and Socioeconomic Attainments: High School and College Influences." *American Journal of Sociology* 84(2):319–47.
- Hakim, Catherine. 1979. *Occupational Segregation: A Comparative Study of the Degree and Pattern of the Differentiation between Men and Women's Work in Britain, the United States and Other Countries*. 9. London: Department of Employment.
- Hakim, Catherine. 1981. "Job Segregation: Trends in the 1970's." *Employment Gazette* 89:521–529.
- Hakim, Catherine. 1992. "Explaining Trends in Occupational Segregation: The Measurement, Causes, and Consequences of the Sexual Division of Labour." *European Sociological Review* 8(2):127–52.
- Hasegawa, Yutaka. 2015. "Gakkō Kyōin Wa 'Kodomo No Hinkon' Wo Donoyouni Hāku Shi Soreto Dou Torikumou to Shite Iruka (Kodomo No Hinkon Ni Kyōshi Wa Dou Mukiaerunoka, Kadaikenkyū II) [How Teachers Perceive 'the Poverty of

- Children' and How They Deal with It (How Can Teachers Deal with the Poverty of Children? Project Research II)]." *Nihon Kyōiku Shakaigakkai Takiaki Happyō Yōshi Shūroku* (67):426–27.
- Holzer, Harry J., ed. 1996. "What Skills Do Employers Seek and How Do They Seek Them?" Pp. 45–70 in *What Employers Want, Job Prospects for Less-Educated Workers*. Russell Sage Foundation.
- Honda, Yuki. 2005a. *Tagenkasuru "Nouryoku" To Nihoshakai: Haipā Meritokurashika No Nakade [Multiplying Meanings of "Competencies" and the Japanese Society: Changing toward Hyper Meritocracy]*. Vol. 13. Tokyo: NTT Shuppan.
- Honda, Yuki. 2005b. *Wakamono to Shigoto: "Gakkō Keiyu No Shūshoku" Wo Koete [Youth and Employment in Japan: Beyond the "School-Mediated Job Search"]*. Tokyo: Tokyo Daigaku Shuppankai.
- Honda, Yuki. 2009. *Kyōiku No Shokugyōteki Igi - Wakamono, Gakkō, Shakai Wo Tsunagu [The Relevancy of Education to Vocation - Connecting Youths, Schools, and Society]*. Tokyo: Chikuma Shobō.
- Honda, Yuki, and Takaaki Tsutsumi. 2014. "1970 Nendai Ni Okeru Kōtōgakkō Seisaku No Tenkan No Haikai Wo Toinaosu [Reviewing the Historic Context of the Shift of Education Policy of High Schools in the 1970s]." Pp. 23–33 in *Rekishi to Keizai*. Vol. 56.
- Horiuchi, Tatsuo, Kazuo Itoh, and Eiichi Sasaki. 2006. *Senmon kōkō no kokusai hikaku - Nichi ou bei no shokugyō kyōiku [International comparison of vocational and special programs - Japan, Europe, and the US]*. Kyōto: Houritsu Bunkasha.
- Houtte, Mieke Van. 2005. "Global Self-Esteem in Technical/Vocational Versus General Secondary School Tracks: A Matter of Gender?" *Sex Roles* 53(9–10):753–61.
- Houtte, Mieke Van, Jannick Demanet, and Peter AJ Stevens. 2012. "Self-Esteem of Academic and Vocational Students: Does within-School Tracking Sharpen the Difference?" *Acta Sociologica* 55(1):73–89.
- Iannelli, Cristina, and Emer Smyth. 2008. "Mapping Gender and Social Background Differences in Education and Youth Transitions across Europe." *Journal of Youth Studies* 11(2):213–32.
- Ichikawa Kyōko. 2015. "Jakunen Daisotsu Josei no Souki Rishoku ni Kansuru Jisshou Bunseki [An Empirical Analysis on Early Job Turnover of Young Females with University Degree]." *Seikatsu Shakaikagaku Kenkyū* 22:31–46.

- Inui, Akio. 2010. *“Gakkō Kara Shigoto E” No Henyō to Wakamonotachi: Kojnka, Aidenthithī, Komyunithī* [“School to Work” Transitions and Youth: Individualization, Identity, and Community]. Tokyo: Aoki Shoten.
- Ishida, Hiroshi. 1993. *Social Mobility in Contemporary Japan: Educational Credentials, Class and the Labour Market in a Cross-National Perspective*. London: Macmillan.
- Ishida, Hiroshi. 2007. “Kōkō ga Syūshoku Assen wo Suru Koto: Kōkō ga Harō Wāku? (Tokusyū Kokonimo Atta Rōdō Mondai: Kyōiku to Rōdō) [High schools as Job-Matching Institution. Special Issue for the Labor Problems and Education].” *Nihon Rōdō Kenkyū Zasshi* 49(4):56–58.
- Ishida, Hiroshi. 2011. “Transition from School to Work among Japanese Youth.”
- Ishida, Hiroshi, Hiroyuki Kondo, and Keiko Nakao. 2011. *Gendai No Kaisou Shakai 2 - Kaisou to Idou No Kouzou* [The Contemporary Social Stratification 2 - The Structure of Stratification and Mobility]. Tokyo Daigaku Shuppankai.
- Ishida, Hiroshi, and Yumiko Murao. 2000. “Joshi Chūsotsusha Rōdō Shijō no Seidoka [Institutionalization of the Labor Market for Middle School Graduate Women].” Pp. 155–92 in *Gakkō, Shokuan to Rōdō Shijō: Sengo Shinki Gakusotsu Shijō no Seidoka Katei* [Schools, Public Employment Security Offices, and the Labor Market - The Institutionalization of the New Graduates’ Labor Market], edited by T. Kariya, S. Sugayama, and H. Ishida. Tokyo: Tokyo Daigaku Shuppankai.
- Ishida, Hiroshi, and David H. Slater. 2009. *Social Class in Contemporary Japan: Structures, Sorting, and Strategies*. London: Routledge.
- Ishioka, Manabu. 2011. “Kyōiku” Toshiteno Shokugyōshidō No Seiritsu - Senzen Nippon No Gakkō to Ikōmondai [The Development of School Mediated Job-Matches as Education - Pre-WWII Japan and School-to-Work Transition]. Tokyo: Keisōshobō.
- Jacob, Marita, Corinna Kleinert, and Michael Kühhirt. 2013. “Trends in Gender Disparities at the Transition from School to Work: Labour Market Entries of Young Men and Women between 1984 and 2005 in West Germany.” *Journal of Vocational Education & Training* 65(1):48–65.
- Kandel, Denise B., and Kazuo Yamaguchi. 1987. “Job Mobility and Drug Use: An Event History Analysis.” *American Journal of Sociology* 92(4):836–78.
- Kang, Suk, and John Bishop. 1989. “Vocational and Academic Education in High School: Complements or Substitutes?” *Economics of Education Review* 8(2):133–48.

- Kariya, Takehiko. 1991. *Gakkō / Shokugyō / Senbatsu no Shakaigaku: Kōsotsu Shūshoku no mekanizumu [Sociology of Schools, Occupation, and Selection: The Mechanism of Employment of High School Graduates in Japan]*. Tokyo: Tokyo Daigaku Shuppankai.
- Kariya, Takehiko. 1995. *Taishū Kyōiku Shakai No Yukue: Gakurekishugi to Byoudoushinwa No Sengoshi [The Future of the Mass Education Society: The Post-War History of Meritocracy and the Equalism Myth]*. Vol. 1249. Chūōkōronsha.
- Kariya, Takehiko. 2001. *Kaisōka Nippon to Kyōiku Kiki [Education in Crisis and Stratified Japan - From Reproducing Inequality to Incentive Divide]*. Tokyo: Yūshindō Kōbunsha.
- Kariya, Takehiko. 2011. *The Japanese Forms of Credential Inflation and Their Effects on University Education: How Has the Value of Degrees Changed in the Era of 'Universal Access' to University Education?* 48. Tokyo: University of Tokyo Institute of Social Science.
- Kariya, Takehiko, Hiroshi Ishida, and Shinji Sugayama. 2000. *Gakkō, Shokuan to Rōdō Shijō: Sengo Shinki Gakusotsu Shijō No Seidoka Katei [School, Public Employment Security Offices, and the Labor Market-The Process of Institutionalization of the Labor Market for New Graduates from Schools]*. Tokyo: Tokyo Daigaku Shuppankai.
- Kariya, Takehiko, and James E. Rosenbaum. 1999. "Bright Flight: Unintended Consequences of Detracking Policy in Japan." *American Journal of Education* 107(3):210–30.
- Katayama, Yūki. 2016. *Monozukuri to Shokugyō kyōiku - Kōgyō Kōkō to Shigoto no Tsunagarikata ["Making Stuff" and Vocational Education - Relationship between Technical High Schools and Job Acquisition]*. Tokyo: Iwanami Shoten.
- Kmec, Julie A. 2007. "Ties That Bind? Race and Networks in Job Turnover." *Social Problems* 54(4):483–503.
- Kobayashi, Tōru. 2016. "Why Do Young Workers Quickly Leave Their First Jobs? : Discussion of Changes in the Japanese Employment System." *Nihon Rōdō Kenkyū Zasshi* 58(2):38–58.
- Kosugi, Reiko, and Yukie Hori. 2013. *Kōkō daigaku no misyūshokusha heno shien [Assistance for high school and college graduates without jobs]*. Tokyo: Keisōshobō.

- Kosugi, Reiko, and Michiko Miyamoto. 2015. *Kasōka Suru Joseitachi - Roudou to Katei Karano Haijo to Hinkon [Women Becoming Underclass - Alienation from Labor and Family]*. Tokyo: Keisōshobō.
- Kulik, Liat. 1998. "Effect of Gender and Social Environment on Gender Role Perceptions and Identity: Comparative Study of Kibbutz and Urban Adolescents in Israel." *Journal of Community Psychology* 26(6):533–548.
- Lauder, Hugh, Phillip Brown, and A. H. Halsey. 2009. "Sociology of Education: A Critical History and Prospects for the Future." *Oxford Review of Education* 35(5):569–85.
- Lin, Nan. 2000. "Inequality in Social Capital." *Contemporary Sociology* 29(6):785–95.
- Lin, Nan, and Bonnie H. Erickson. 2008. *Social Capital: An International Research Program*. Oxford ; Oxford University Press.
- Lynch, Lisa M. 1994. "Payoffs to Alternative Training Strategies at Work." Pp. 63–95 in *Working Under Different Rules*, edited by R. B. Freeman. New York: Russell Sage Foundation.
- MacLeod, Jay. 1987. *Ain't No Makin' It: Leveled Aspirations in a Low-Income Neighborhood*. Boulder, Colo: Westview Press.
- Marini, Margaret Mooney, and Mary C. Brinton. 1984. "Sex Typing in Occupational Socialization." Pp. 192–232 in *Sex Segregation in the Workplace: Trends, Explanations, Remedies*. Washington, D.C.: National Academy Press.
- Mau Wei-Cheng, and Bikos Lynette Heim. 2011. "Educational and Vocational Aspirations of Minority and Female Students: A Longitudinal Study." *Journal of Counseling & Development* 78(2):186–94.
- McDonald, Steve, and Glen H. Elder. 2006. "When Does Social Capital Matter? Non-Searching for Jobs across the Life Course." *Social Forces* 85(1):521–49.
- Ministry of Education, Culture, Sports, Science and Technology Japan. 2018. "Post-Graduation Paths of High School Graduates by Program Types 2018." *Ministry of Education, Culture, Sports, Science and Technology Japan*. Retrieved February 7, 2020 (http://www.mext.go.jp/a_menu/shotou/shinkou/genjyo/021203.htm).
- Ministry of Education, Culture, Sports, Science and Technology Japan. 2019. "Gakkō kihan chōsa - Heisei 30 nendo kekka no gaiyō [Basic Statistics of Education, the digest of 2018]." *Ministry of Education, Culture, Sports, Science and Technology Japan*. Retrieved February 24, 2020

(https://www.mext.go.jp/b_menu/toukei/chousa01/kihon/kekka/k_detail/1407849.htm).

- Morgan, Stephen L. 1998. "Adolescent Educational Expectations: Rationalized, Fantasized, or Both?" *Rationality and Society* 10(2):131–62.
- Moriwaki, Ichiro. 2018. "Kōtō Gakkō Ni Okeru Shokugyō Shidō No Jissenteki Kadai [Practical Problems in Career Counseling Activities in High Schools]." *Ryūtsūdaigakuronshū - Ningen, Shakai, Shizen Hen* 30(2):75–86.
- Mun, Eunmi. 2010. "Sex Typing of Jobs in Hiring: Evidence from Japan." *Social Forces* 88(5):1999–2026.
- Nakamura, Takayasu. 2011. *Taishūka To Meritokurashī [Educational Expansion and Meritocracy - The Paradox of Examination and Recommendation in Educational Selection]*. Tokyo: Tokyo Daigaku Shuppankai.
- Nakamura, Takayasu, Shō Fujihara, Yuki Katayama, Akiko Nishida, and Kō Iwata. 2010. *Shinro Sentaku No Katei To Kouzou: Kōkō Nyūgaku Kara Sotsugyō Made No Ryōteki Shitsuteki Apurōchi [The process and structure of making decisions for post-graduation paths - Quantitative and qualitative approach from the entrance to high school to graduation]*. Kyoto: Minerva Shobō.
- Nakanishi, Yūko, Takayasu Nakamura, and Hirokazu Ōuchi. 1997. "Sengo Nihon No Kōkōkan Kakusa Seiritsu Katei to Shakai Kaisou - 1985 Nen SSM Chōsa Dēta No Bunseki Wo Tsūjite [High School Streaming and Social Stratification in Post-War Japan: Analyzing the Data Set of the 1985 SSM National Survey]." *Nihon Kyōiku Shakaigaku Kenkyū* 61–82.
- National Center for Education Statistics. 2008. "Career and Technical Education (CTE) Statistics - Table H1. Percentage of Public High Schools That Are Regular, Career/Technical, and Other Special Focus, and Various Characteristics of Each School Type: 2008." *National Center for Education Statistics*. Retrieved December 30, 2019 (<https://nces.ed.gov/surveys/ctes/tables/h01.asp>).
- National Center for Education Statistics. 2019. "The Condition of Education - Postsecondary Education - Postsecondary Students - College Enrollment Rates - Indicator February (2019)." *National Center for Education Statistics*. Retrieved February 24, 2020 (https://nces.ed.gov/programs/coe/indicator_cpb.asp).
- OECD. 2000. *From Initial Education to Working Life: Making Transitions Work*. Paris: OECD Publications.
- OECD. 2012. *Closing the Gender Gap: Act Now*. Paris: OECD Publishing.

- OECD. 2015. *Education at a Glance 2015*. Paris: OECD Publishing.
- Okabe, Satoshi. 2010. *Toritsu Senmonkōkō No Seito No Daigaku Shingaku Kibō to Sono Kitei Youin [What Contribute to Students' Aspirations of Higher Education in Public Vocational Programs in Tokyo]*. 57. Tokyo: Tokyō Daigaku Kyōikugakubu Hikaku Kyōiku Shakaigaku Kōsu and Benesse Kyōiku Kenkyū Kaihatsu Sentā.
- Ono, Hiroshi. 2007. "Careers in Foreign-Owned Firms in Japan." *American Sociological Review* 72(2):267–90.
- Ono, Hiroshi. 2010. "Lifetime Employment in Japan: Concepts and Measurements." *Journal of the Japanese and International Economies* 24(1):1–27.
- O'Reilly, Jacqueline, Janine Leschke, Renate Ortlieb, Martin Seeleib-Kaiser, and Paola Villa. 2018. *Youth Labor in Transition: Inequalities, Mobility, and Policies in Europe*. New York: Oxford University Press.
- Ōshima, Masao. 2012. *Daigaku Syūshokubu ni Dekiru Koto [Things university caree and job placement office can do]*. Tokyo: Keisōshobō.
- Perlmutter, Deborah E. 1982. *Career Training Choice: Project CATCH. A Follow-up Study of Students Denied Admission to Vocational High Schools*. New York: New York City Board of Education, Brooklyn, NY. Office of Occupational and Career Education.
- Plank, Stephen B., Stefanie DeLuca, and Angela Estacion. 2008. "High School Dropout and the Role of Career and Technical Education: A Survival Analysis of Surviving High School." *Sociology of Education* 81(4):345–70.
- Powell, Walter W., and Paul J. DiMaggio, eds. 1991. *The New Institutionalism in Organizational Analysis*. 1 edition. Chicago: University of Chicago Press.
- Powers, Rebecca S., and Roger A. Wojtkiewicz. 2004. "Occupational Aspirations, Gender, and Educational Attainment." *Sociological Spectrum* 24(5):601–22.
- Reisel, Liza, Kristinn Hegna, and Christian Imdorf, eds. 2015. *Gender Segregation in Vocational Education*. Vol. 1st edition. Bingley, UK: Emerald Group Publishing Limited.
- Reskin, Barbara F., National Research Council (U. S.). Committee on Women's Employment and Related Social Issues, National Academy Press, United States. Dept. of Education, and United States. Employment and Training Administration. 1984. *Sex Segregation in the Workplace: Trends, Explanations, Remedies*. Washington, D.C.: National Academy Press.

- Robinson, Kerry H. 1992. "Class-Room Discipline: Power, Resistance and Gender. A Look at Teacher Perspectives." *Gender & Education* 4(3):273.
- Rosenbaum, James E. 1976. *Making Inequality: The Hidden Curriculum of High School Tracking*.
- Rosenbaum, James E., and Takehiko Kariya. 1989. "From High School to Work: Market and Institutional Mechanisms in Japan." *American Journal of Sociology* 94(6):1334–65.
- Rosenbaum, James E., and Takehiko Kariya. 1991. "Do School Achievements Affect the Early Jobs of High School Graduates in the United States and Japan?" *Sociology of Education* 64(2):78–95.
- Rosenbaum, James E., Takehiko Kariya, Rick Settersten, and Tony Maier. 1990. "Market and Network Theories of the Transition from High School to Work: Their Application to Industrialized Societies." *Annual Review of Sociology* 16:263–99.
- Rosenfeld, Rachel A. 1992. "Job Mobility and Career Processes." *Annual Review of Sociology* 18(1):39–61.
- Sewell, William H., Robert M. Hauser, and Wendy C. Wolf. 1980. "Sex, Schooling, and Occupational Status." *American Journal of Sociology* 86(3):551–83.
- Shanahan, Michael J., Jeylan T. Mortimer, and Helga Kruger. 2002. "Adolescence and Adult Work in the Twenty-First Century." *Journal of Research on Adolescence (Wiley-Blackwell)* 12(1):99.
- Shavit, Yossi, and Hans-Peter Blossfeld. 1993. *Persistent Inequality: Changing Educational Attainment in Thirteen Countries. Social Inequality Series*. Boulder, CO: Westview Press.
- Shavit, Yossi, and Walter Muller. 1998. *From School to Work. A Comparative Study of Educational Qualifications and Occupational Destinations*. Oxford: Oxford University Press.
- Shavit, Yossi, and Walter Muller. 2000. "Vocational Secondary Education." *European Societies* 2(1):29–50.
- Shirahase, Sawako, and Hiroshi Ishida. 1994. "Gender Inequality in the Japanese Occupational Structure." *International Journal of Comparative Sociology (Brill Academic Publishers)* 35(3/4):188–206.
- Smyth, Dr Emer. 2005. "Gender Differentiation and Early Labour Market Integration across Europe." *European Societies* 7(3):451–79.

- Somers, Mark John, and Dee Birnbaum. 1999. "Survival versus Traditional Methodologies for Studying Employee Turnover: Differences, Divergences and Directions for Future Research." *Journal of Organizational Behavior* 20(2):273–84.
- Spence, Michael. 1973. "Job Market Signaling." *The Quarterly Journal of Economics* 87(3):355–374.
- Stromquist, Nelly P. 2007. "The Gender Socialization Process in Schools: A Cross-National Comparison." *Background Paper Prepared for the Education for All Global Monitoring Report 2008*.
- Sūdo, Naoki. 2009. *Kaisou Ishiki No Dainamikusu: Naze Soreha Genjitsu Kar Azureru Noka* [The Dynamics of Cognition of Social Stratification: Why It Differs from the Reality]. Tokyo: Keisōshobō.
- Sugayama, Shinji. 2000. "Chūsotsusha Kara Kōsotsusha He [Transition of Employment from Middle School Graduates to High School Graduates]." in *Gakkō, Shokuan to Rōdō Shijō: Sengo Shinki Gakusotsu Shijō no Seidoka Katei* [Schools, Public Employment Security Offices, and the Labor Market - The Institutionalization of the New Graduates' Labor Market], edited by T. Kariya, S. Sugayama, and H. Ishida. Tokyo: Tokyo Daigaku Shuppankai.
- Sugayama, Shinji. 2011. "Shūsha" *Shakai no Tanjō: Howaito Karā kara Burū Karā he* [The Birth of "Working for Company" Society: From White Collar to Blue Collar]. Nagoya: Nagoya Daigaku Shuppankai.
- Sugita, Mai. 2015. *Kosotsu Josei no 12 Nen - Fuanteina Roudou Yuruyakana Tsunagari* [12 Years of High School Graduate Women - Unstable Work and Loose Networks]. Otsuki shoten.
- Tanabe, Shunsuke, and Shinichi Aizawa. 2008. *An Instruction Manual and Coding Procedures for Occupational and Industrial Coding System*. 6. Tokyo: University of Tokyo Institute of Social Science.
- Tanova, Cem, and Brooks C. Holtom. 2008. "Using Job Embeddedness Factors to Explain Voluntary Turnover in Four European Countries." *The International Journal of Human Resource Management* 19(9):1553–68.
- Taylor, Anthea. 2002. "Job Satisfaction Among Early School Leavers Working in the Trades and the Influence of Vocational Education in Schools." *Journal of Youth Studies* 5(3):271–89.
- Teachman, Jay D. 1987. "Family Background, Educational Resources, and Educational Attainment." *American Sociological Review* 52(4):548–57.

- The World Bank Group. 2019. "DataBank | The World Bank." *The World Bank Group*. Retrieved March 29, 2019 (<https://databank.worldbank.org/data/home.aspx>).
- Tilly, Charles. 1998. *Durable Inequality*. CA: University of California Press.
- Tsuchiya, Yoshiko. 2015. "Sukūru Sōsharu Wākā No Tachiba Kara (Kodomono Hinkon Ni Kyōshi Wa Dou Mukiaerunoka? Kadaikenkyū II)[From the Viewpoint of School Social Workers(How Can Teachers Deal with the Poverty of Children? Project Research II)]." *Nihon Kyōiku Shakaigakkai Takiaki Happyō Yōshi Shūroku* (67):428–29.
- Tsutsui, Miki. 2001. "Kōsotsu Rōdō Shijō no Henbō to Chūshō Kigyō no Koyō Senryaku [The transformation of the labor market for high school graduates and the recruiting strategies of small to medium enterprises]." *Kyōiku Shakaigaku Kenkyū* 69:5–21.
- Tsutsui, Miki. 2006. *Kōsotsu Rōdō Shijō No Henbō to Kōkō Shinro Shidō, Shūshoku Assen Ni Okeru Kōzō to Ninshiki No Fuicchi: Kōsotsu Shūshoku Wo Kirihiraku [The Transformation of the Labor Market for High School Graduates and Unmatched Perception of High School Career and Educational Counseling - Reclaiming the Job Search of High School Graduates]*. Tokyo: Tōyōkan Shuppansha.
- Tsuzuki Kazuharu, and Seiyama Kazuo. 1998. *Occupational Evaluations and Prestige Scores [SSM 1995 report series]*. 1995 SSM Study Group and University of Tokyo.
- U.S. Department of Education. 2019. "CTE Data Story: Insights into How CTE Can Improve Students' Income after They Graduate." *CTE Data Story*. Retrieved December 30, 2019 (<https://www2.ed.gov/datastory/cte/index.html>).
- Willis, Paul. 1978. *Learning to Labour : How Working Class Kids Get Working Class Jobs*. Routledge.
- Yamaguchi, Kazuo. 2019. *Gender Inequalities in the Japanese Workplace and Employment: Theories and Empirical Evidence*. Vol. 22. Singapore: Springer Singapore.
- Yamamoto, Yoko, and Mary C. Brinton. 2010. "Cultural Capital in East Asian Educational Systems: The Case of Japan." *Sociology of Education* 83(1):67–83.
- Yu, Wei-hsin, and Chi-Tsun Chiu. 2014. "Off to a Good Start: A Comparative Study of Changes in Men's First Job Prospects in East Asia." *Research in Social Stratification and Mobility* 37:3–22.

Yufu, Sawako. 2015. “Kyoushi No Pāsupekuthibu: Kojinka, Datsu Seijika, Datsusenmonshokuka (Kodomo No Hinkon Ni Kyoushi Wa Dou Mukiaerunoka, Kadaikenkyū II) [Perspectives of Teachers: Individualization, de-Politicization, de-Specialist (How Can Teachers Deal with the Poverty of Children? Project Research II)].” *Nihon Kyōiku Shakaigakkai Takiaki Happyō Yōshi Shūroku* (67):430–31.

BIOGRAPHY

Yukiko Furuya graduated from Yokohama Commercial High School, Yokohama, Japan in 2002. She received her Bachelor of Arts from Ferris University, Yokohama Japan in 2006. She received her Master of Arts from the University of Tokyo in 2008. After working as a business consultant for two years in Tokyo, she came to the U.S. and received her Master of Public Policy from University of Maryland in 2013.