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Raising the Barrier: Widening Participation, Female  
Emancipation and Taiwan's Search for World-Class  
Human Resources

屏障的消逝：九年義務教育與婦女解放運動之於台灣  
追求世界級人力資源之影響

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## Abstract

Gender inequality is a legacy of pre-modern societies which has proven remarkably durable throughout the world. In particular, the status of women in education and the workplace has always been that of second-class citizens, with little effort made to provide them with the same range of opportunities as males until comparatively recently in modern history. In Taiwan's case, the cause of gender equity was given a considerable boost in 1968 by the Nine-Year Compulsory Education Policy (NYCEP) which, although it made no specific gender provision, levelled the playing field for girls in both further levels of education and in the workplace in a time of great social change. The contention of this study is that changes in the social status of working women are reflected in the roles they are able to adopt within their societies and that the increased proportion of Taiwanese women in the high-status profession of teaching is indicative of an increasingly positive social view of women as participants in society. This study aims to investigate the effects of the NYCEP on women's participation in the teaching profession, using data on overall teacher numbers to show that it heralded an increasingly equitable employment environment for women in Taiwan.

Keywords: The 1968 Nine-Year Compulsory Education Policy, Gender Equity, Female Emancipation, Human Resources.

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## List of abbreviations

|        |  |
|--------|--|
| JHS    | Junior High School (also Junior High Schooling)                      |
| NYCEP  | Nine-Year Compulsory Education Policy                                |
| SHS    | Senior High School (also Senior High Schooling)                      |
| UNESCO | The United Nations Educational, Scientific and Cultural Organization |



## Chapter 1 - Introduction

### 1.1 – Research Background

In common with many countries in the developing world, Taiwan has been faced with the challenge of developing its human resources to maximize its economic and social competitiveness in the international arena. A crucial component of this battle has inevitably been the national education system, which was specifically targeted on various occasions for its impact on the skill levels of the workforce, as part of wider plans for national economic development. The most dramatic effects were felt as a result of the Nine-Year Compulsory Education Policy (NYCEP) of 1968, which widened participation both explicitly by mandating state-provided non-selective Junior High Schooling for all children; and implicitly by improving the ability of previously-marginalised groups to compete for entry to higher-still levels of education (HSLE) on graduation from Junior High Schools (JHS). The demand for JHS education created by this expansion required the production of adequately-trained teachers who eventually had themselves experienced nine years of compulsory education and were themselves beneficiaries of the reform.

The effects on gender equity are worthy of study since not only did girls participate in Junior High Schooling itself in unprecedented numbers, as a result of its newly-compulsory status, but they then progressed on to the *still-selective and non-compulsory* Senior High School and Tertiary Education levels at vastly increased rates post-1968. Indeed, recent enrolments rates at each level of education are roughly equivalent (for share of population) or weighted in favour of girls until the postgraduate level, when a gender bias re-emerges in favour of males: over the ten years 2004-14, an average of 49% of undergraduates were female, compared to 42% of Masters students and only 28% of PhDs (Ministry of Education, Republic of China



(Taiwan), 2015a). Furthermore, the rates of participation of women in the workforce once they left education also greatly increased in the wake of this reform, with married and single women at a variety of age cohorts experiencing increased opportunity for paid employment. Although traditional gender roles were not entirely swept away, a major barrier to female participation in education and the workplace was swept away and it is no exaggeration to say that the lot of Taiwan's women was revolutionized by this one act of widening participation. As Chang Chun-Chig notes, "The changes on women's role and status led to a structural change in Taiwan society and also hastened Taiwan's becoming an industrialized society" (Chang C.-C. , 1991, p. 5), complete with a system for developing its human resources that allowed it to develop economically at an astonishing pace.

One additional aspect of the NYCEP which served to improve the circumstances of Taiwan's women was that it required a wholesale expansion of the school system. In addition to the normal increase in demand driven by contemporary increases in the school-age population, there was a dramatic increase in the number of junior high schools which resulted from the NYCEP. Not only were new Junior High Schools needed to accommodate the newly-eligible student population, but the increasing number of JHS graduates seeking entry to Senior High Schools required more of these too and this led to an urgent need for more teachers to fill the void. The prestige, job security offered to teachers and opportunity for a government-funded higher education were immensely attractive, particularly to marginalised groups for whom social mobility by other routes was limited by economic barriers.

The logistics of this transformation were impressive. In order to create the capacity required to accommodate this influx of new students, a school building programme was undertaken across the island. Chou (2004) quotes the increase as from 487 Junior

High Schools in 1968 to 658 in 1981 and 706 in 1998, creating facilities for 1,009,300 new students to participate in Junior High School (JHS) (Chou P. C., 2004, p. 22).

Concurrently with the school building programme, staff training was also required to supply sufficient teachers, both at this level and to cope with knock-on effects resulting from larger numbers of children being eligible for enrolment in HSLE.

Teacher training underwent dramatic changes in this period, to provide the sheer numbers required by the newly-expanded school-system. Initially, teacher training was conducted in 'normal schools' (師範學校) as a three-year programme recruiting directly from Junior High School graduates. Between 1963 and 1967, these schools were transformed into 'normal colleges' (師範學院) offering five-year programmes of initial teacher education but again recruiting from Junior High School graduates. However, owing to the rapidity with which the expansion was implemented, there were initially too few teachers available who were trained to the previous standard and it is likely that the quality of teaching suffered until this could be addressed (Shu, 2016, pp. 47-49).

At the same time, the discussion should not merely be conducted from the perspective of a stage in Taiwan's development but must also take into account other developments that affected women's ability to participate outside the home. Most prominent amongst these was the introduction of effective and inexpensive contraception, typically Intra-Uterine Devices (IUD) and the combined oral contraceptive pill (COCP) which became widely available in Taiwan during the 1960s as part of a family planning campaign which had reached 43% of eligible couples by 1970 (Sun & Lee, 1971). These allowed Taiwanese women, in common with women around the globe, to make childbirth and subsequent maternal responsibilities a matter of choice and not an inevitability; and one which they could balance against other

priorities such as employment. This critical development is important to the story of Taiwan's women in the workplace as it enabled them to free up sufficient time from motherhood to participate in professional training and to devote considerably-greater amounts of time to their careers. Without this revolution in family planning, their ability to take advantage of the opportunities afforded them by the NYCEP would have been severely curtailed.

This study will examine the consequences of the NYCEP on women's status in society by examining how their employment as teachers in Elementary and Secondary level was affected by widened access to education in the wake of the NYCEP. It will establish that barriers to female education did exist; identify changes in participation rates that occurred in the decade after 1968; examine the effects of these barriers on the ability of females to achieve the level of qualification required to enter teaching; identify how women's participation in teaching changed in the following decade; and use these trends to discuss how the social status of women changed.

Using a gender-based approach to human capital theory, it will look to demonstrate that this reform did indeed mark a turning point for gender equity in Taiwanese society by demonstrating that unprecedented opportunities were opened to women in the high-status profession of teaching as a result of improved access to education at the Junior High School level. It is hoped that lessons can be drawn from this which can inform a more effective use of the female component of Taiwan's labour force in an era of declining birth rates and an ageing population.

## 1.2 - Research Objectives and Questions

Education is widely held to be a great social leveller and the lack of same to be a major barrier to social mobility and equity. Indeed, UNESCO define education as “a fundamental human right and essential for the exercise of all other human rights” and “a powerful tool by which economically and socially marginalized adults and children can lift themselves out of poverty and participate fully as citizens” (UNESCO, 2016).

The emancipation of these marginalised groups has been specifically targeted in international normative action, most prominently in the Convention against Discrimination in Education, which defined such discrimination as follows:

*...any distinction, exclusion, limitation or preference which, being based on race, colour, sex, language, religion, political or other opinion, national or social origin, economic condition or birth, has the purpose or effect of nullifying or impairing equality of treatment in education and in particular:*

*(a) Of depriving any person or group of persons of access to education of any type or at any level;*

*(b) Of limiting any person or group of persons to education of an inferior standard;*

*(c) Subject to the provisions of Article 2 of this Convention, of establishing or maintaining separate educational systems or institutions for persons or groups of persons; or*

*(d) Of inflicting on any person or group of persons conditions which are incompatible with the dignity of man. – UNESCO, 1960.*

In its traditional role as a professional and social gatekeeper, education determines the opportunities that are open to individuals and the degree of social mobility which is available to any particular social group within a given society (Apple, 2013).

Consequently, the educational and professional opportunities open to a specific social group can serve as a proxy measure for both how their society views that group’s

social role and the limits that their society is prepared to accept on their advancement. In particular, the extent to which a society's cultivation and deployment of its human resources exhibits gender equity is demonstrated by how well its education serves its girls; and by which professions they are cultivated for by state education.

The research objectives for this paper are to establish the extent to which Taiwanese women experienced barriers to education and employment prior to the NYCEP and how these barriers were raised after it. By examining how the previously male-dominated and highly-respected teaching profession became more open to women in the wake of the NYCEP, the reform's impact women's education and employment opportunities will be identified. The study will first establish the existence of social barriers to education for women in Taiwan prior to the NYCEP; then identify the effect of the NYCEP on female participation in education as both students and teachers; and then track the changes in the numbers of girls entering the teaching profession post-1968. Conclusions from this will be drawn regarding the extent of female emancipation heralded by these changes. At the same time, it will make some comments on the wider social context of Taiwan which have relevance to the issue of gender equity in that era. This study will investigate the following five questions:

1. What barriers to female education existed before 1968?
2. What changes occurred in female participation in higher-still levels of education (HSLE) after 1968?
3. Were females under-represented in the teaching profession prior to 1968?
4. What changes occurred in female participation in the teaching profession after 1968?
5. Is there evidence to suggest that the NYCEP impacted the social status of women in Taiwan?

### 1.3 Research limitations

The research has limited access to mass data on the number of years of schooling that each teacher held on entry to the profession. This means that an exhaustive quantitative study of the exact degree to which female status change as a result of improved access to the teaching profession was impossible. In the absence of this data, the study was forced to depend on arguments about the effect on social prestige that factorial changes in the Hollingshead model would have (the ‘Hollingshead model argument’) as well as what has been termed the ‘common sense narrative’ the association of a social group with a high-prestige occupation raises that group’s social prestige accordingly.

Lack of data also prevents quantifiable measurement of the prestige in which teaching has been held in Taiwan, and therefore no comparison of prestige before and after has been possible. Instead, the study has leaned on the simplifying assumption that gender bias has not reduced the prestige in which teaching is held to an extent which would invalidate either the ‘Hollingshead model argument’ or the ‘common sense narrative.’

### 1.4 Definition of key terms

This thesis will use several key terms in assessing and explaining the NYCEP and its impacts.

#### **Barrier**

A barrier will be defined as an economic, social or legal impediment to equitable participation which gives rise to discrimination. The operational definition of an education barrier as defined in UNESCO’s *Convention Against Discrimination in Education* quoted in full below.

## **Widening participation**

The 1997 Kennedy Report provides an operational definition of widening participation in education which the author has chosen for its simplicity, universality and utility in describing Taiwan's education reforms of the late 1960s.

*Widening participation means increasing access to learning and providing opportunities for success and progression to a much wider cross-section of the population than now. – (Kennedy, 1997)*

Under this definition, the NYCEP achieved the widened participation of a number of previously-disadvantaged social groups, most notably the poor, ethnic minorities and females.

## **Emancipation**

Female emancipation is a term with a long history. Although commonly used in connection with political rights, the author will use it in the wider context of the Oxford English Dictionary to reflect the legal, social and political nature of education reform:

*The fact or process of being set free from legal, social, or political restrictions.*  
(Oxford Dictionaries, 2016)

## **World-class human resources**

Owing to contemporary concerns over economic competitiveness in Taiwan, much debate has been raised regarding how the national education system can equip Taiwanese students with the skills they need to function in a global economy and the term 'world-class human resources' has gained favour. The search for 'world class human resources' will be used to refer to the development of policies and systems to create an internationally-competitive labour force through improved education.

## Chapter 2 – Literature Review

### 2.1 Theoretical models used

Human Capital Theory has long been a central tenet of economic policy for most developed and developing nations: industrialisation requires of the individual worker common basic standards of literacy, numeracy, socialisation and workplace discipline which are most easily imparted through a shared educational experience. Schultz crystallised the economists' view of labour productivity as being a function of a population's average education level (Schultz, 1961) and this view has essentially remained at the core of education policy across the world (Becker, 2009), (Fitzsimmons, 2015), (Gillies, 2012). Indeed, Human Capital Theory has gripped the globe's policy-makers to the extent that 'modernity' has become almost synonymous with a widely-accessible form of state-provided education which has its roots in the European Enlightenment tradition (Fagerlind & Saha, 1989, p. 32).

Gillies has conducted much useful work in critiquing the link made between HCT and education policy (Gillies, 2012), (Gillies, 2015), particularly by introducing the policy switch which occurred from regarding education as a form of economic consumption to one of investment. This, he identifies, is one of the key factors which drove economists to regard education as an indispensable part of industrialisation and thus of the quest for the sort of 'modernity' which consumed East Asia in the 20<sup>th</sup> Century and which Taiwan embarked on wholeheartedly in the post-war period. In addition to identifying the benefits of HCT as a driver for policy, he lays out the limitations inherent to regarding education policy solely as a tool for national development and ignoring its other dimensions. His warning that HCT sees, "education in one particular role only and its continued central importance relies almost entirely on its capacity to continue to be seen as economically vital" (Gillies, 2012, p. 234) should



alert educators and students alike as to how this functional approach fundamentally alters the nature of education and scholarship.

Bray, Adamson & Mason (Bray, Adamson, & Mason, 2014) provide useful theoretical models for approaching comparative education. In identifying the lack of standardisation in national education systems, the fluidity of education as a practical discipline and the situational nature of education analysis, they argue a convincing case for making the selection of a viewpoint an early step in conducting any comparison. Taking an academic perspective, this paper aims to inform discourse on the real-world effects of policy reform on gender parity as defined by The Dakar Framework for Action: “achieving equal participation of girls and boys in all forms of education based on their proportion in the relevant age-groups in the population” (UNESCO, 2000).

## 2.2 Widening participation in education

A.H. Halsey (1992) makes several pertinent observations on the motivations governments have for increasing access to education; and on the effects expanded High School enrolments have on the system within which they occur. Halsey notes from the example of expanded US High Schooling that this sort of expansion represents, “the transformation (of the system) from a mass terminal to a mass preparatory institution reflecting changes in the occupational division of labour from one largely made up of agricultural and industrial workers to an increasingly differentiated structure in which white-collar workers formed the majority” (Halsey, 1992, p. 18). As seen in Taiwan’s case, both the expansion of elementary education under Japanese rule and the NYCEP represented a shift from ‘education as the preserve of an elite’ to ‘education as the norm for the whole population and a first step on a formal educational journey’ and Halsey’s view is especially well-suited to the

case of those Taiwanese women who were destined for that whitest of white-collar work, teaching. Since the NYCEP was outlined in the Fourth Economic Development Plan (1965-68), by ROC's Council for Economic Development and Planning (CEDP) (The Republic of China, 1965), it is evident that this transformation of the Elementary level from a terminal to a preparatory stage of education was an explicit motivation on the part of the ROC government for expanding access to Junior High Schooling on Taiwan. Halsey's further comments on the distinction that must be drawn between the *absolute* and *relative* gains for disadvantaged groups produced by expanded access to education and these are also relevant to the theme of this thesis: it will discuss whether expanded access to education resulted in genuinely equitable outcomes for girls or merely pushed back the point at which the same lack of equity presented itself.

Kosack (Kosack, 2012) brings an analytic approach to the study of why nations choose mass education as policy. His contention that Taiwan's post-war education reforms were driven by the expectations of various "vital constituencies" (Kosack, 2012, p. 97) rather than top-down technocratic policy is insightful and supports the view that private education in Taiwan has been the preferred option only of the uppermost elites seeking competitive advantage and of those who had no state-provided alternative. This conclusion is supported by data on JHS enrolments which show that the market share of private school enrolments at this level collapsed in the wake of the NYCEP, once a free-at-the-point-of-use alternative was available (Ministry of Education, Republic of China (Taiwan), 2015a). Of particular note is Kosack's assertion that, having eliminated or alienated the Taiwan-born elites early in its rule, the KMT-dominated government could no longer rule via a semi-colonial approach using Japanese-era institutions and traditional social networks, but in the

wake of the 228 Incident instead had to appeal directly to the peasant population with opportunities for social advancement and increased wealth through education. This assertion is interesting in light of the tensions between traditional gender roles in Taiwanese society and the new opportunities for female wage-earning that economic restructuring produced. It can be inferred from Kosack's analysis that once the idea of light-industrial paid employment for girls was well-established in the minds of Taiwanese parents, they saw that the opportunity this presented for additional family income would depend on whether their daughters were educated or not and lobbied their political representatives accordingly.

### 2.3 Barriers to female education in Taiwan

A first step in describing a social barrier is to identify that one exists. Statistics collected by the Japanese colonial government and the government of the Republic of China show that Taiwanese girls attended school in far smaller numbers than boys throughout the first half of the 20<sup>th</sup> century but do not themselves provide an explanation. In order to demonstrate that a barrier exists, it is necessary to discount competing alternative explanations such as demographics or gender-based differences in ability.

Spohr's study (Spohr, 2003) of the labour economics of the reform provides evidence of a gender bias in education enrolments by demonstrating that the ratio of girls to boys in the overall population was far more evenly-balanced than it was in the overall school population prior to 1968. His analysis shows that the proportion of female births throughout the period was normal and could not explain their lack of representation in education by a simple lack of girls to educate. Similarly, he shows that girls did not experience significantly higher mortality rates than boys, so their limited numbers in JHS could not be explained by a spike in female child deaths

between graduating elementary school and entering JHS. He also provides both illuminating analysis of the subsequent effects of the education expansion of 1968 as well as evidence that even after retrocession, girls received fewer years of formal education than boys in Taiwan.

Lavy's study (Lavy, 2012) produces a potential explanation: females often underperform in competitive situations, particularly when placed in direct competition with males. When completing a set of tasks, Lavy's female subjects were able to perform on a par with the males when the tasks were presented in single-sex or non-competitive environments. Those same subjects, when placed in direct competition with each other or with the male participants, showed a notable decrease in performance relative to their previous level. Lavy's findings could be interpreted as meaning that Taiwan's girls were simply outperformed in the critical entrance exams during the period when entry to JHS was still selective and non-compulsory, and that the NYCEP simply removed this obstacle. However, a subsequent study by De Paola et al. (2015) shows that females who are accustomed to competitive environments show no such symptoms of nerves and perform equally well to their male counterparts in competitive and non-competitive environments, whether single-sex or co-educational. Inferring from these two studies, women who are subject to social perceptions of gender role can self-limit their competitive performance in order to conform to a social expectation that women are subordinate to men, but once those expectations are removed or no longer have an effect, there is no difference in intellectual performance resulting from gender.

Wolf (1972) describes the way in which aspects of traditional Taiwanese society acted as disincentives to female participation in education and indeed other facets of society outside the home. Her discussions of anthropological observation in Taiwan through

the 1950s and 1960s show a society in which a gender bias was institutionalised and where limited family resources were expended on the education and career advancement of male children while girls and women were rarely afforded similar opportunities. In this society, the choice families faced was normally that between educating boys and educating girls and universally came down in favour of boys. Indeed, even on those happy circumstances where resources exceeded those required for the basic male education, the choice between educating girls and educating boys *some more* predominantly favoured the male children.

Kubow and Fossum (2007) provide a thoughtful insight into the societal issues surrounding access to education. In particular, their discussion of the ways in which the motivations for a state to expand educational access and the limitations on its ability/will to do so are demonstrations of, “the compromises that cultures make as they confront larger value-driven issues” (Kubow & Fossum, 2007, p. 126) sheds light on the dilemmas facing developing nations. In Taiwan’s case, the desire to drive economic development through creating a larger, more highly-educated industrial labour force was in direct competition with traditional ideas of social status and family harmony which had previously obstructed women’s paths to education. Overcoming these barriers represented a compromise between the state’s vision for the future and society’s expectations of the present.

Fagerlind and Saha (1989) provide a timeless analysis of the personal and societal factors which accompany the use of education as a tool for national development. In particular, they identify the “personal costs to individuals from continued participation in in the school system” (Fagerlind & Saha, 1989, p. 80) at non-compulsory levels, which in the context of Taiwan in the 1960s and 1970s consisted of financial costs to families struggling to fund more than one child’s education; in the

loss of security in retirement resulting from failing to educate sons as well as their means would allow; and the opportunity costs to individual women who were expected to marry early and produce heirs for their husbands' families. These cumulative costs served to deter females more than males from continuing their educations beyond the basic mandatory level.

#### 2.4 Measuring social status

Transformations in the social status of a group are easy to see but hard to define, since social status itself is an agglomeration of individual subjective perceptions. We can, for example, identify the precise moment when a nation abolishes slavery but it is far harder to identify the moment when slaves and their descendants become treated as equals by other citizens. Hollingshead (2011) argues that “the status positions of individuals and members of nuclear families” (Hollingshead, 2011, p. 22) can be calculated according to objective measures of education, occupation, sex, and marital status. By assigning ‘scores’ to particular lengths of schooling; ranking occupation by perceived social status<sup>1</sup>; assigning arbitrary values to sex and marital status<sup>2</sup> depending on how they affect participation in the workforce, Hollingshead created an index which he proposed as a means of quantifying social status and removing the element of subjectivity. While the index is firmly rooted in the ideal of the American ‘nuclear family’, Hollingshead’s model provides a framework with which to estimate how social trends will affect the social status of individuals and groups, which estimates can then be compared against data on the four factors. Based on the four

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<sup>1</sup> Hollingshead created an ‘occupational scale’ based on the occupational titles used by the United States Census Bureau in 1970 and assigned each occupational category a score on a nine-step scale, with 9 being highest prestige category.

<sup>2</sup> Marital status primarily affected the overall status of families in determining how the average occupational status of household consisting of a breadwinner and a homemaker were calculated.

factor analysis, increasing the length of education an individual receives will serve to increase that individual's social status; gaining access to a higher prestige occupation category will likewise increase it; etc. For the purpose of this thesis, it will be assumed that the effect of a change in any one factor is consistent for all individuals; and that the effect of such a change on any social group will be in direct proportion to its effect on individual members of the group. Thus, an improvement in women's overall social status as a result of an additional three years of education will be assumed to be the same as its effect on an individual woman.



## Chapter 3 - Methodology

This thesis will be conducted first through review of literature on Taiwan's economic development and education policy history. Then, using secondary data gathered by various Ministries of the Republic of China government, it will identify trends in education level and population relevant to the national widening participation agenda. Setting the data against a theoretical background will allow a rigorous analysis of female participation in education.

In this thesis, the author will make use of two main theoretical tools: Rostow's Modernisation Theory (Rostow, 1959); and Human Capital Theory as expounded by Schultz (1961).

Modernisation Theory holds that economic development takes place in five stages: traditional society; preconditions for take-off; take-off; drive to maturity; and finally the age of high mass consumption. Of specific relevance to this thesis is the transition from a traditional society, characterised by a, "hierarchical social structure, with relatively narrow scope--but some scope--for vertical mobility" (Rostow, 1959, p. 4) and the establishment of the pre-conditions for take-off. In Taiwan's 'traditional society', vertical mobility was most commonly achieved via education in the Confucian mould and was virtually non-existent for women until the dawn of the 20<sup>th</sup> Century. Only with the development of the 'preconditions for take-off' in the late Qing and Japanese Colonial periods did there come any incentive for the ruling states to systematise and expand education so that it covered all children, and these were the twin imperatives of nation-building and economic development. The NYCEP represents the conscious 'drive to maturity' of the exiled government of the Republic



of China as it strove to develop the last remaining territory under its control and bolster its legitimacy as the ruling regime.

Fundamental to this claim to legitimacy was the development of Taiwan's economy, which required considerable investment in the island's 'human capital', defined here as the overall education and skill level of the workforce in an industrialised society. Recognising that the largely primary-industry dominated economy bequeathed Taiwan by the Japanese would not provide sufficient capital for their ambitious modernisation plans and hopes to regain the Chinese Mainland, the Nationalist government of Chiang Kai-Shek formulated a series of Economic Development Plans, the fourth of which laid out a massive expansion of universal compulsory and state-funded education beyond the primary level. As noted by Kosack (2012), this also served the political purposes of allowing them to bypass a largely-hostile Japanese-educated native-elite and break that group's traditional monopoly on public life; while simultaneously appealing directly to the Taiwanese masses by addressing their demands for new routes to social mobility and wealth via the modernised education system.

A prominent feature of Taiwan's education reform since the end of WW2 has been the development of a labour force which can 'punch above its weight' in terms of economic output, and make up for a comparative lack of numbers with high basic skill levels and individual productivity. Outperforming Taiwan's global competitors and maintaining the Taiwanese economy's comparative advantage has required that her workforce be suitably 'world-class', which in turn required a high standard of education at all levels. This thesis will use the term 'world-class human resources' to mean a workforce which at every level has received an education at or above the normal level for a country at Taiwan's stage of development. In the period since 1960,

this has meant the development of a differentiated workforce with a higher proportion of white-collar workers than previously, a process in which the education system and teaching professions play a critical role.

FIGURE 1 CONCEPTUAL MODEL OF THE STUDY

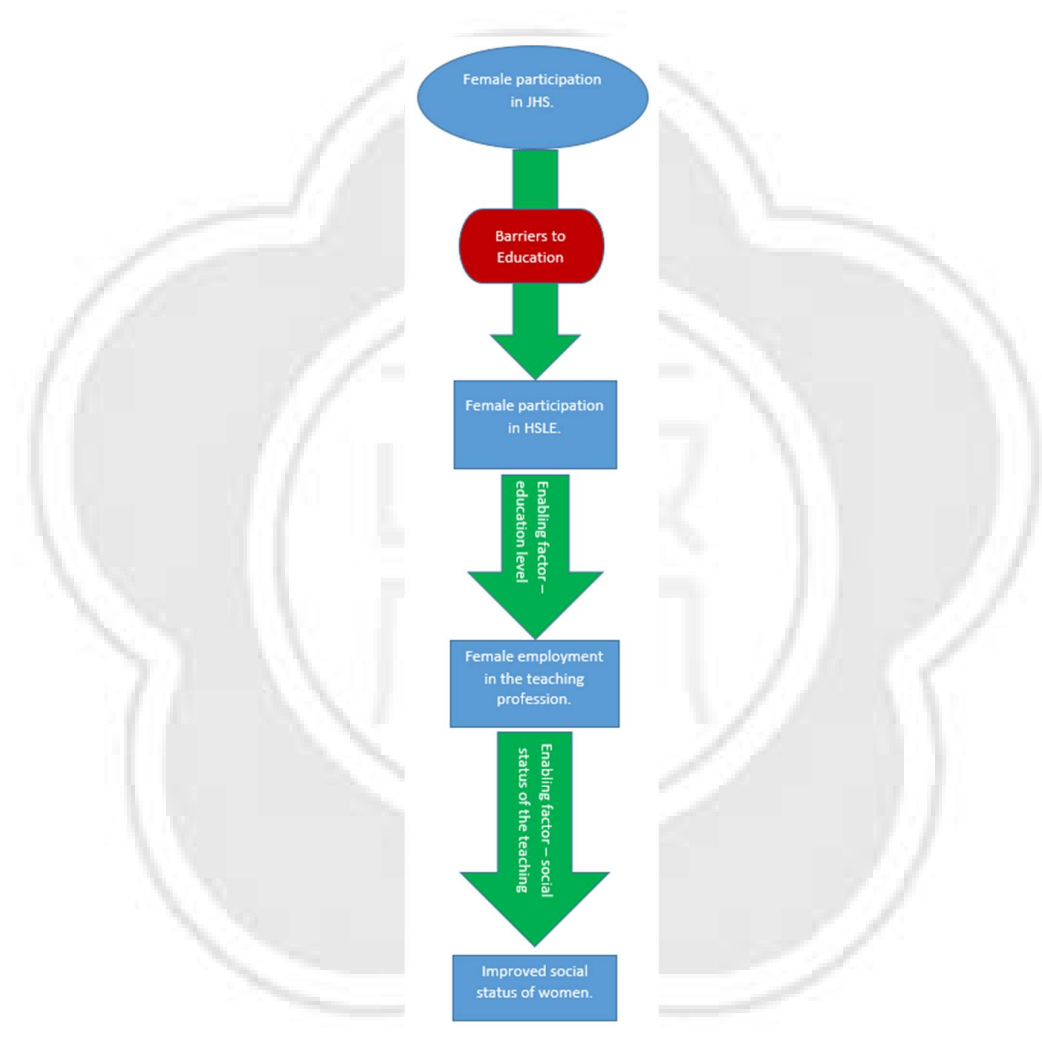


Figure 1 illustrates the theoretical framework which is envisaged in this study. Using the Hollingshead model, social status is derived from a number of factors and women’s social status is affected by two in particular which were affected as a result of the NYCEP: education level was explicitly changed as the intended outcome of the

reform; and occupation status changed as a result of the policy intention to upgrade the workforce. These factors are intertwined and ‘female participation in HSLE’ acts as an intervening variable for ‘female employment in the teaching profession, since access to teacher training courses is determined by a prescribed level of qualification. However, for the purpose of simplifying the theoretical model, they will be treated as separate independent variables.

This thesis will focus on the teaching profession at Elementary and Junior High Schools in the 10-year periods immediately before and after the NYCEP to conduct a comparative analysis across several dimensions as identified in the ‘Bray and Thomas Cube’ framework (Bray, Adamson, & Mason, 2014, p. 9). This profession has specifically been chosen to demonstrate how traditional gender roles changed over time and in the wake of expanded education opportunities for girls. Teaching has traditionally enjoyed high prestige in Taiwan (Fwu & Wang, 2002) and teachers have been traditionally depicted as exclusively male Chinese role models (Yau, 2015), so the extent to which females have been accepted into this profession serves to highlight how their social status improved to match that of the profession in the wake of the NYCEP. This study hopes to demonstrate that the NYCEP succeeded in making inroads against stereotypical gender roles in Taiwanese society and thus marked an unprecedented turning point in social perceptions of women in Taiwan. The specific focus will be on the students who completed JHS after 1969 and who subsequently qualified as Elementary/JHS teachers from 1975 onward, in contrast with their pre-1968 predecessors. Comparing the change in rates of female participation in Junior High School and the employment of female teachers at the Elementary and Junior High School levels over this time period, the paper will attempt to show that there was a historic bias against female participation in education as both students and teachers

which cannot be explained by demographic issues; and that this bias was substantially altered after the NYCEP when far larger numbers of qualified women were seeking far larger numbers of teaching positions. By looking at this time-series, it will identify those trends in both male and female teacher numbers associated with education systems, political change, educational finance, the local labour market, gender and socio-economic factors in order to identify how female education opportunity, access to the teaching profession were affected in the 1960s and 70s.

Having identified these trends, it will seek to explain them by drawing on pre-existing tensions in Taiwanese society at the macro and micro levels. These tensions included: those at the policy level between economic limitations and national development imperatives; and at the familial level, those between traditional family organisation and family financial necessities. It will then consider subsequent correlations between improved access to Junior High School and improved education and employment opportunities in later life for those girls who benefitted from the NYCEPs. In discussing access, it will focus on gender parity as defined by The Dakar Framework for Action.

## Chapter 4 – Research Findings and Discussion

Owing to the multi-faceted nature of the effects of the NYCEP, the findings will first be discussed under the headings of the individual research questions and then drawn together in light of the overall research objectives.

### **Historic background**

The history of education on Taiwan is one of political intent. From the earliest years the Confucian tradition dominated both syllabus and examination style (Ching & Chou, 2012, p. 21), providing society with a social order and technocratic leadership while giving eligible individuals a route for social advancement through study. The key point of this this kind of study was that it was conducted privately, with no state-supported system of schooling for prospective candidates, and it focussed on state-organised examinations and not teaching. Learning was via memorisation of privately-owned copies of classic texts, and while trades and native-place guilds often maintained libraries for talented sons, these texts were for the most part accessible only to families with the wealth to afford them. For the majority of this time, girls were excluded from taking the Imperial exam and although private education of daughters was not unknown, it lagged far behind that of their brothers who were able to use their learning to further themselves in the world outside the home. It was left to foreign missionaries to begin the task of educating Taiwan's girls, with the first school founded by Canadian George Mackay in 1884 (Peng & Wang, 2005).

After the Qing Empire ceded Taiwan to Japan in the 1895 Treaty of Shimonoseki, the new Japanese rulers introduced a 'modernisation' programme designed to make their new possession a profitable concern and to fully-incorporate Taiwan into their vision of Empire. Although in the Use the "Insert Citation" button to add citations to this

document.

initial stages both rulers and ruled were clear the relationship was a colonial one, the latter years of Japanese rule saw attempts to rewrite Taiwan's people as Japanese subjects rather than colonial ones, albeit second-class ones who would require a longer period of instruction before becoming fully-Japanese. A consistent part of this ongoing programme of moulding Taiwanese to Imperial expectations was the introduction in 1943 of a system of 6-years of compulsory primary education for both girls and boys, organised on Western lines and aiming to train Taiwan's children as skilled workers and obedient citizens (Ching & Chou, 2012, p. 24). In the words of Vernon Mallinson, this style of education served, "to produce not only a more literate and capable workman, but also to discipline him and shape him morally and socially for his lowly task" (Mallinson, 1961, p. 153). Taiwanese were expected to 'buy into' Japan's imperial project and accept their place in Japanese Imperial society, which included a strict segregation of genders in societies. Throughout the Japanese period these 6 years of elementary schooling were the only universal state-funded education for Taiwanese schoolchildren and entry to subsequent levels of education was both non-compulsory and selective, with the criteria for entry being to pass written entrance exams with appropriate grades. Owing to the segregated and second-class nature of the education they received, girls were at a distinct disadvantage when it came to competitive exams.

With the Japanese defeat in 1945, Taiwan came under the governance of the Qing Empire's recognised successor-state, the Republic of China (ROC). The new Nationalist government of Taiwan began a campaign of 'Sinification', to rid Taiwan of Japanese cultural influences and rebuild it as part of their vision of a modern Chinese polity. They did, however, retain many of the governance structures that had

existed in the colonial era. The 6-year basic education system was one of these structures and it remained in place until 1968 when it was replaced by a 9-year compulsory system with no entrance exam for entry to Junior High Schools and with co-educational schools being the norm. It is clear from the historic uses to which governments have put education on Taiwan that nation- and capacity-building have been its main focus and so in the context of this study it should be viewed on the Bray and Thomas Cube (Bray, Adamson, & Mason, 2014, p. 9) at geographical level 3.

There were several reasons behind the post-war decision to expand compulsory education beyond the elementary level, stemming from both social and economic causes. The limited number of Junior High Schools had long been a bone of contention for Taiwan's upwardly-mobile families and the resultant intense competition for places through competitive examinations was thought to have a detrimental effect on children's mental and physical health. The Ministry of Education began drafting policies to address the shortage of Junior High Schooling in what was then officially 'Taiwan Province' in 1955, with a proposal aimed merely at increasing the provision of Junior High Schooling in Taiwan alone without changing the entry routes or making this level mandatory. The Ministry next attempted to address the issue in 1964 with a plan to again expand non-compulsory JHS to allow more students to participate and thereby hopefully reduce the pressure of the entrance exam somewhat. However, these proved to be stopgap measures which had limited effect for girls and in 1967 the Ministry finally grasped the nettle by expanding the period of compulsory education for all children, regardless of gender, from six to nine years. The Nine-Year Compulsory Education Policy (NYCEP) was enacted only one year later (Chang C.-C. , 1991, pp. 9-52).

## **Women's Participation in Education**

In the era of western-style education (defined here as that of the post-Qing era), Taiwanese girls had historically had lower rates of participation in public education than did boys. The introduction of compulsory elementary schooling under Japanese rule brought about the first major change in the education of girls but still the female rates of participation lagged behind that of boys, dramatically so at the higher non-compulsory levels. Appendix A gives an illustration of this trend from the period 1900-03 of enrolment in the various schools which were available to Taiwanese children under Japanese rule: in the same year that 2,453 Taiwanese boys entered elementary schools, only 341 girls did. This vividly demonstrates that from the very beginning of modern education in Taiwan, there were significantly lower participation rates for girls than for boys (臺灣總督府總督官房文書課, 1900).

Statistics published by the Republic of China's Executive Yuan show that over the period under consideration, Taiwan consistently enjoyed a healthy gender ratio (Statistical Bureau, 2014). Similarly, Kan (Kan, 2010) demonstrates that the increased rates of enrolment observed after the reforms for both genders were not solely due to coincidental improvements in birth rate or child health. His data shows that birth and mortality rates for the children of both genders who benefitted from the NYCEP remained consistent with those for children born in earlier generations and so the dramatic rise in female participation cannot be explained by an increase in female infant births or a dramatic increase in female infant survival rates, but only by an increase in the proportion of female children who took part in education. For the purposes of this paper, it will therefore be assumed that gender differences in school enrolment over the period considered were not caused by any abnormal disparity in numbers between male and female children.



This trend of low female participation continued after the end of World War 2, since the incoming Republic of China government did not initially make significant changes to the length of compulsory education in Taiwan and consequently JHS participation rates for both sexes remaining comparatively low until the NYCEP. We can conclude from this that the upsurge in female participation post-1968 was not a correction of any (historically-speaking) temporary downturn but instead represented a genuine departure from the precedent of the modern (post-Qing) era.

The reasons for this precedent of gender discrimination were twofold: economic and cultural. Economic factors played a part at both governmental and familial level and both were defined by the availability or not of access to resources. Until Taiwan's national economic development reached a bare minimum level, the resources to provide for the building, maintaining, staffing and funding of sufficient schools for all children across the ROC-controlled islands were beyond the state's ability to provide. Chou (2004) gives details of the scale of physical preparation required for universalising Junior High Schooling in the run up to the NYCEP and demonstrates the scale of difficulty involved in expanding education provision across the entire island. This same lack of economic development also meant that large numbers of individual families could not provide the resources to fund their own children's education and therefore had to rely heavily on state provision, which was itself constrained by a lack of resources due to the relatively poor shape of the post-war economy. Table 'Number of students at all levels of schooling' in (Ministry of Education, Republic of China (Taiwan), 2015a) demonstrates that enrolment in private Junior High Schools fell drastically in the early 1970s, after rising consistently in the period prior to the reform taking effect. Although private school student numbers did begin a fresh rise almost immediately, they did not recover the same

absolute numbers until 1993, over a quarter of a century later, by which time they represented a far smaller proportion of overall enrolments than before. This sharp drop in the numbers of students enrolling in private schooling contrasts sharply with the simultaneous steep rise in those choosing state schools and lends credence to the idea that Taiwanese families made educational choices for their children with their financial constraints firmly in mind.

Culturally, the structure of Taiwanese society meant that parents relied on their sons to support them in old age while daughters were destined to become part of another family's household. This provided an incentive to maximise the earning potential of sons, a feat traditionally achieved through learning, while the education of daughters was a priority only in well-off families or those who hoped to increase the marriage potential of their girl children by giving them a sophistication and glaze of culture. In addition, folk-practices such as the "sim-pua" (新婦仔) form of marriage (Wolf, 1972, p. 171), in which families adopted a girl child to raise as a future daughter-in-law, acted as positive disincentives to families to spend on their female children's education. They removed any future benefit that could be accrued to either family through having an educated daughter since the natural parents had already passed guardianship over and the host parents had already secured their son's bride. In the zero-sum game of allocating financial resources to education, the family's long-term best interests were served by putting maximum effort into educating their sons and not 'wasting' any on their daughters.

In contrast, Kosack identifies an interesting political trend which affected girls' chances of education: the extent to which regime courting of "vital constituencies" (Kosack, 2012, p. 36) prompted educational reform. Having earlier eliminated large sections of the native-born Taiwanese elites during the 228 Incident and alienated the

survivors of that Japanese-educated social strata, the ruling Kuomintang (KMT) were obliged to abandon their initial semi-colonial practice of governing through these same local elites and instead seek legitimacy directly from the lower levels of society through a series of populist programmes (Kosack, 2012, pp. 92-98). One of these measures was to widen access to education for the children of Taiwan's largely-peasant families, as this was still widely held to be the primary means of economic improvement and social advancement in Taiwanese society.

### **Socio-Economic Barriers to Female Education**

Taiwanese girls had thus faced substantial barriers to education throughout the period when Taiwanese society could be categorised as being in the first two stages of Rostowian economic development: a 'traditional society' or having the 'pre-conditions for take-off'. Economic and social factors had interacted to create profound disincentives to the education of girl children and even the advent of industrialisation under Japanese colonial rule produced limited benefits in terms of either improved opportunity or increased parental motivation. Despite access to state-funded elementary schooling and a wider range of non-traditional occupations, Taiwan's women were, prior to the NYCEP taking effect, still labouring as components of a family unit under recognisably-'traditional society' family arrangements. They were not labouring as individuals in their own right who could make informed choices about when, where and what to labour at, let alone command their own earnings (Diamond, 1979, pp. 318-9) (Farris, 1994, p. 312) and had limited autonomy unless they were willing to break family ties completely. Thus, their social status had not essentially changed in an era when their brothers were performing military service or apprenticeships and were yet to set out on their own careers – daughters merely had more visible value to their parents as interim sources of monetary income until the

time came when the sons were free to take up their traditional role of providing for the family and the daughters could safely be married off.

### **Historic Influences on Teaching in Taiwan**

Taiwanese society has long held teaching to be a uniquely worthy profession and accorded its practitioners a high degree of respect, even when more material signs of appreciation such as salaries and pensions have failed to keep pace with the development of the wider economy. The relative statuses of teachers and women throughout Taiwan's history provided the greatest limitation on the extent to which women could participate in the teaching profession. Fwu and Wang identify the unique status of teachers as being based on three historic legacies: traditional Confucian culture; the Japanese occupation; and the post-war nation-building activities of the Nationalist-led Republic of China (Fwu & Wang, 2002).

Taiwanese society draws deeply on traditional mores and values from China, not least of all the legacy of the 'model teacher for every generation' (萬世師表), Confucius. Under his value system, scholars are accorded the very highest levels of status and the respect which is due a teacher is ranked equivalent to that given to parents. Both parents and teachers are regarded as conduits to a child's moral cultivation as well as being imparters of knowledge, with the teacher in particular being seen as a learned scholar and moral exemplar who demonstrates society's ideals of civic behaviour. Crucially, the image of the teacher in Confucian style was universally male and the plethora of classic idioms referring to teachers reflects this assumption of maleness e.g. 'a teacher for one day is a *father* for life (一日為師, 終身為父).' Women did not feature in this traditional view of teaching, not as students and particularly not as teachers.

The Japanese, as fellow-heirs to the Confucian legacy, also regarded the role of tutor as holding a uniquely prestigious place in society. The traditional Japanese term *sensei* (せんせい) reveals similar commonly-held assumptions about the characteristics of a teacher to those of traditional Chinese society: venerable, respected, morally-correct and definitely male. For the majority of the early period of Japanese rule, teachers were exclusively Japanese expatriate men who by virtue of their positions were both better-educated than the majority of Taiwanese (and indeed the majority of Japanese of the time) and also were exercising authority on behalf of the state. These twin traits (educated scholars and representatives of state power) granted them a status akin to ‘übermenschen’ or superior humans over their Taiwanese colonial subjects. This status differential was consciously reinforced by the colonial government through the selection mechanisms for colonial service and, once Taiwanese teachers began to be recruited, in the difference in conditions between Japanese teachers and their Taiwanese counterparts (Myers & Peattie, 1984, pp. 282-4).

Once the initial expansion phase of mass education under the Japanese had passed, local teachers were increasingly in demand to staff the schools set up for local students, a demand which increased still more once the policy of ‘Japanisation’ had been implemented to replace Taiwanese culture with the Japanese one in the minds of the islanders. It was in this period that a system for formal teacher training was first established on the island, as a result of the Meiji Court promulgating the Normal School Decree of 1886. This decree specified that cities and prefectures (including Taiwan) establish a system of ‘Advanced’ and ‘General’ Normal Schools to train teachers for the new education system which was to be strictly gender-segregated as a matter of state policy (Huang, 2016). The General Normal School trained their

students to be teachers and principals at state institutions across the country (the educational ‘coalface’) while Advanced Schools trained the staff of General Normal Schools and thus were responsible for setting the standards by which Taiwanese teachers taught Taiwanese students.

The lower priority which was given to female education under the Japanese is reflected in the respective training programmes for men and women at the Advanced Schools, where students enrolled hoping to become staff at Normal Schools and thus to train future generations of ‘coal-face’ teachers. Both the standards for entry to these programmes and their duration differed markedly, with males being selected at a higher threshold and trained more intensively.

*The male teacher education division admitted the graduates of general normal schools , the study period of this division being three years. The female teacher education division admitted those who completed two years’ study at the general normal schools, the study period for this division being 4 years. (Huang, 2016, p. 96)*

In other words, the future educators of women teachers in the Japanese era were not themselves required to have graduated from teacher training, whereas this was mandatory for their male counterparts.

Simultaneously, across the East China Sea, the ground was being prepared for the reforms in gender education which would eventually come to Taiwan. In the wake of the same humiliating defeat that forced their surrender of Taiwan to Japan, the Qing Empire was overthrown and eventually a new Republic of China emerged to take its place. The women’s rights movement played a visible part in the early political history of this new nation and, building on abortive and half-hearted efforts of the latter Qing government, the Republic instituted a new education system in 1912 (one year after the Republic’s foundation) which provided secondary education for girls

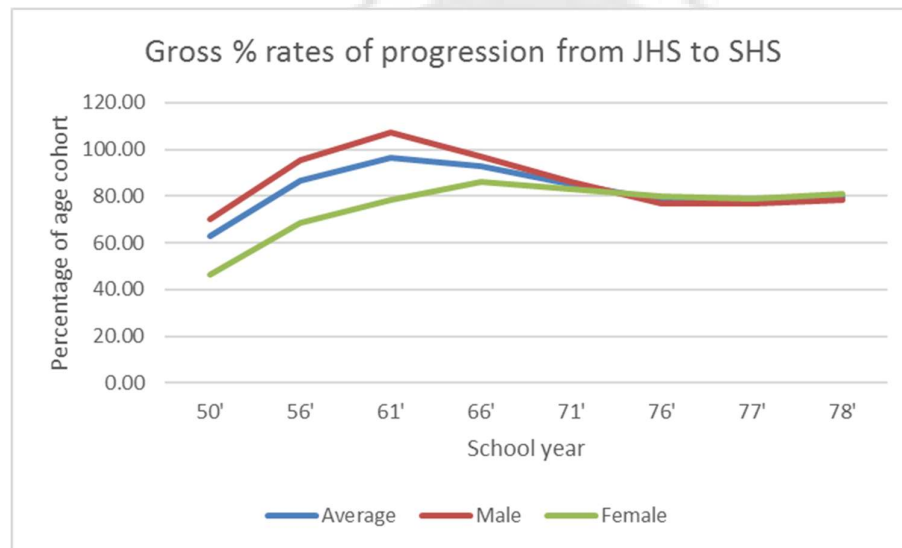
and approved co-educational elementary schools (Bailey, 2007, p. 6). The stark contrast in attitudes to educating women in Japan and China at this time is illustrated by admissions to higher education: the first women students of Tokyo Imperial University were only informally admitted in 1913, more than forty years after the Meiji government first mandated education for girls in 1871; women were able to matriculate in Beijing University from 1919, twelve years after the Qing court first approved state education for girls and a mere seven years after the Republic instituted female secondary education. As Bailey remarked, “the speed with which public education for women was formally sanctioned and implemented in early twentieth century China is sometimes overlooked” (Bailey, 2007, p. 123).

#### **Rates of Participation in Education in post-war Taiwan**

As a result of building on the already impressive primary-level achievements of the Japanese period, the KMT government had managed to increase participation in elementary schooling to 97%, despite a population increase of 3.3% and without sacrificing the spending per pupil on elementary education (Kosack, 2012, pp. 102-3). The pool of potential JHS entrants was consequently high from the early 1960s but prior to the introduction of compulsory JHS the actual enrolment rates remained low (see **Error! Reference source not found.**) with typically fewer than one half of each year’s elementary school graduates progressing their education to the secondary level prior to the NYCEP taking effect. This expansion and entrenchment of effective elementary schooling in the years prior to the enactment of the reform was important for a number of reasons. Not least of these was that it meant not only had sufficient schools to be built and teachers trained for far larger numbers of children to undertake JHS, but also that the children themselves had already been adequately prepared to enter and benefit from it. While the government’s motivation for same was avowedly

to create the workforce required to support the new economy, it created the conditions for a virtuous cycle of self- and national-improvement in boys as well as girls, with both genders reaping relative benefits in terms of schooling and labour force participation. Girls, however, were set to reap absolute benefits far in excess of the boys and of any gains they had made as a result of any prior education reform.

FIGURE 2 PROGRESSION RATE OF SCHOOL GRADUATES TO NEXT LEVEL (%)



SOURCE: AUTHOR, DATA FROM MINISTRY OF EDUCATION MAIN STATISTICS, 2015 EDUCATION STATISTICAL INDICATORS.

The first effect of the NYCEP was, as the measure intended, to increase the numbers of children proceeding beyond the previous 6-year compulsory level (see table 1). Statistics published by the Republic of China's Ministry of Education (Ministry of Education, Republic of China (Taiwan), 2015a) show the upsurge in enrolment for both boys and girls after the reforms took effect. In 1968, there were 375,409 boys and 241,816 girls enrolled in Junior High School: by the following year, an additional 49,407 boys and 44,867 girls had enrolled; five years after the reform, the numbers of enrolments had increased by over 40% for both genders. The same source also shows



that the class of '68 graduated from JHS in unprecedented numbers, with the 1971 figure adding nearly 100,000 JHS graduates to the 1968 one, which was itself the highest recorded number of JHS graduations since 1950. In terms of its explicit aim of increasing the pool of educated workers, the NYCEP initially had an excellent start. It also had considerable knock-on effects for the generation which benefitted from it and the girls in particular.

As Spohr (Spohr, 2003) illustrates, children of both sexes who were affected by the NYCEP enjoyed higher overall rates of educational attainment than those entering JHS before it. Spohr's statistical treatment of the movements in total years of schooling and attainment rates for junior high schooling and subsequent levels show the statistically-significant deviations from previous trends of both total numbers of years of schooling attained and completion of JHS (Spohr, 2003, p. 301). That the deviations grow so rapidly in those children entering JHS in and after 1968 demonstrates that these children were not only more likely to complete this level of schooling than their pre-reform counterparts but were also then more likely to go on to complete more years of non-compulsory HSLE after their graduation from JHS. Given that entry to HSLE remained competitive and by examination, this suggests that there was no dramatic drop in the 'quality' of individual JHS graduates since they were still able to pass the entrance exams for levels which had been unaffected by the reform, with the sole difference being that they could do so in far larger numbers. This makes sense in light of Kosack's assertion that the government devoted more resources than ever before to the primary education of the cohorts which went on to benefit from the NYCEP (Kosack, 2012, p. 103): the elementary school experience of these cohorts meant that they had been better prepared for Junior High Schooling than any previous generation had been.

Overall, however, numbers for JHS enrolments and completion both remained lower for girls than boys, illustrating Halsey's point about the difference between absolute and relative gains. Larger numbers of girls were entering JHS than before but larger still numbers of boys were also doing so. Interestingly, Spohr's data also shows that the rate at which successful completion of JHS increased for girls far outstripped that for boys in the four years after the NYCEP. In light of Lavy's conclusions on female underperformance in competitive environments to which they are unaccustomed (Lavy, 2012) and the data on improved primary education above, this immediate change in growth rates for the completion of JHS supports the conclusion that gender biases rather than gender-based limitations on innate ability were behind the lower JHS enrolment rates of girls prior to this reform; and that once girls had become used to competing in the meritocratic entrance exams on equal terms with boys, they demonstrated their previously-overlooked potential for education.

### **Rates of Participation in Teaching in post-war Taiwan**

The Nationalist regime which formed the post-war government of the Republic of China came to Taiwan conscious of their predecessors' policies of turning Taiwan into an inalienable part of the Japanese polity. They were also armed with their own intent of rebuilding their newly-won China as a centralised, unified state of which Taiwan was merely one component. While this resulted in significant immediate changes to the curriculum in Taiwanese schools (notably the 're-Sinicization' campaign (Chou P. C., 2004)), they initially made few changes to the structures of either education or teacher training. The Republic of China (ROC) government on Taiwan, like the Japanese colonisers, exerted absolute control over teacher training with the aim of producing teachers who, "were expected to impart knowledge and skills in order to produce a well-equipped and dedicated workforce needed to boost

the economy.” (Fwu & Wang, 2002, p. 218) just as the Japanese had. They expanded the network of Normal Colleges and Normal Universities to produce teachers of the required competency, commitment and in the required numbers to staff their intended educational project. They mandated teacher training programmes for the respective levels of schooling: for prospective Elementary School teachers it was a JHS diploma followed by 5 years in a Junior Normal College; and for prospective JHS teachers a 4-year programme at a Normal College after graduating from Senior High School. Aware that the success of their project required them to encourage high-calibre personnel into the teaching profession, they offered exceptionally generous terms (Lo, Hung, & Liu, 2002). Trainee teachers would receive tuition waivers, board and lodging, a small living wage and the guarantee of employment on successful completion of training. This employment, in turn, guaranteed a secure lifelong job, high social status, generous salaries and pensions, and a range of perks not available to other Taiwanese. As a result, teaching under the Republic of China represented an exceptionally attractive route to advancement for the talented children of poor families who could not afford the fees of elite Senior High Schools or universities. Similarly, women who performed at the highest level in examinations but whose family resources were exhausted on further education for their brothers were well-placed to succeed in gaining entry to teacher training programmes under the meritocratic and universal entrance-exam system. Indeed, Lo et al. identify that competition was so fierce for the places available that the quality of entrant to the Normal Schools and Colleges frequently exceeded that of the aforementioned elite schools.

*The student quality was relatively high compared to those at the top-ranked senior high schools. Quite a few graduates from these schools went on to more advanced*

*study and later became principles (sic) or government officers at local and national government agencies. (Lo, Hung, & Liu, 2002, p. 147)*

Data from the Ministry of Education (2015(b)) shows that women teachers benefitted extensively from the process of embedding education at the heart of national development. The percentage of female teachers at Primary (Elementary) level rose from 38% in 1966 to 49% in 1976 as the first post-68 JHS cohorts completed their training, while the results at the Secondary (Junior and Senior High) level were even more pronounced. Whereas in 1966 the proportion of women Secondary School teachers was less than 25%, this had almost doubled by 1978, the point at which those teachers who graduated JHS as part of the 1968 JHS cohort had completed Senior High Schooling and teacher training.

Prior to 1968, the gender balance of the teaching profession was heavily weighted in favour of men. In 1950, the first year for which data is available, women made up only slightly more than one-quarter of all Taiwan's teachers, including less than one third of all elementary school teachers and less than one fifth of all secondary school teachers. At the same time, women made up roughly half of Taiwan's population. Both males and females benefitted from increased opportunities in the teaching profession thanks to the NYCEP and the teaching profession can therefore be viewed as one of the most effective enablers of social mobility in Taiwan's modern history. It created not only freely-accessible meritocratic routes to single-generation social mobility but also created job vacancies at the end of these routes in sufficient numbers as to make a difference in the overall numbers benefitting from them. The effects on the numbers of women entering one of Taiwanese society's most highly-regarded professions were nothing short of dramatic, indicating a greater official acceptance of women in high-status occupations.

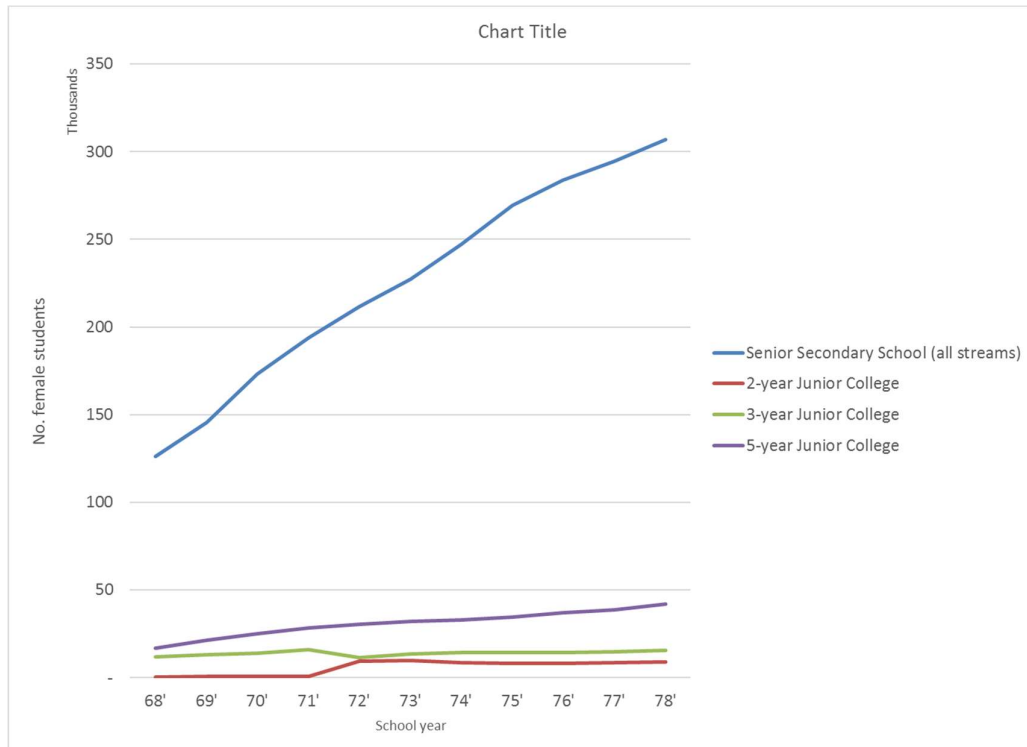
## **Effects of the NYCEP in Education**

The initial intent of the NYCEP was to develop Taiwan's economy by creating a larger pool of technically-competent workers to fill roles in the new manufacturing-based economy. It did not have any explicit agenda of equalising opportunities for women nor did it contain any specific gender-equality provision. It did, however, mandate universal Junior High Schooling for all and provided both a regulatory framework and administrative resources to track down and punish those families who neglected their daughters' educations or withheld them from school. While the success of the reform in increasing female participation specifically could be regarded as a side-effect rather than the main purpose of the reform, the education system devoted significant effort to enforcing their right to an education at both the mandatory state-funded level and whatever non-compulsory privately-funded levels they qualified for.

Significant amongst the educational opportunities created by the reform was the improved eligibility of girls for HSLE, which at this stage remained selective and entrance to which was still by competitive examination. In expanding the availability of Junior High Schooling for girls, the NYCEP not only trained them for roles in an industrialised economy, as noted by Halsey above, but also prepared them for the entrance exams to Senior High School (and thus laid the groundwork for their entering university) in unprecedented numbers. Indeed, in light of the findings of Lavy, (Lavy, 2012) it can be argued that the experience of Junior High School prepared girls in far greater numbers for the competitive environment of the college entrance exam, thus reducing any tendency Taiwan's girls may have exhibited to underperform when placed in competitive scenarios in a co-educational environment. As the figures in Figure 3 show, the numbers of female students present in all

subsequent levels of education began to increase almost as soon as the effects of the NYCEP began to trickle down to the respective level.

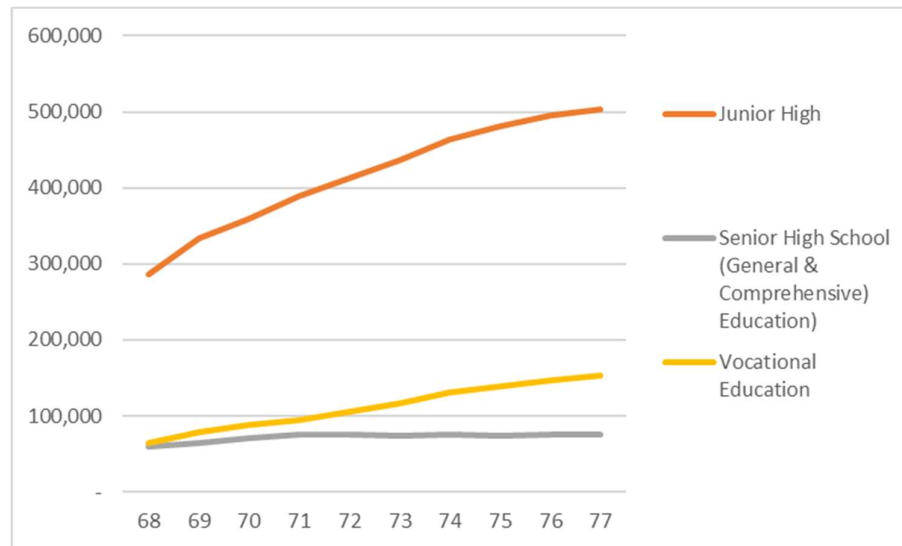
**FIGURE 3 NUMBER OF STUDENTS AT NEXT TWO LEVELS OF EDUCATION BY GENDER 1968-78**



Source: Ministry of Education Main Statistics, 'Number of Schools, Teachers, Staff, Classes, Students and Graduates (1950-2015)'

Figure 4 illustrates how the extent of the rise in girls enrolling in subsequent levels of education follows the progression of the 1968 cohort through the education system. Enrolments in JHS increased dramatically immediately the reform was implemented, as is to be expected from a mandatory and enforced measure; enrolments in Senior High School (SHS) (both general and comprehensive tracks) rose most sharply in 1970-71 when the 1967-8 intake graduated JHS; and vocational education surged by almost 50% in the five years following 1968.

Figure 4 Female enrolment trends in Secondary Education 1968-78



Source: Author, from data by Ministry of Education Main Statistics, 'Number of Schools, Teachers, Staff, Classes, Students and Graduates (1950-2015)'

The system of competitive entry by examination also worked to improve girls' chances of advancement to university by providing a more objective, data-driven and gender-neutral basis for allocating educational resources. Lavy has demonstrated that girls raised in non-competitive environments can underperform when placed in competition with male peers relative to their ability to carry out the same tasks in single-sex or non-competitive environments (Lavy, 2012). Not only did the system of entrance exams prevent schools from systematically excluding girls but also it removed the chance that the girls themselves (or their families) would 'undersell' themselves and exercise gender bias in their choice of schools to which they applied. By linking school choice to test score rather than aspiration or lack thereof, the entrance exam took the choice of school out of the hands of the girl and her family and allocated her a place in the institution to which her scores qualified her, rather than one she may have felt represented a suitably-modest level of aspiration for a young lady. As Yu argues, "the college entrance exam system decreased the

likelihood that women would select themselves into less prestigious colleges or non-university tracks upon graduating from high school” (Yu, 2015). A similar set of outcomes seems likely at the lower levels to which competitive entry pertained, however in the absence of comprehensive data on individual Senior High School admissions over the period this is impossible to prove.

At this point, Kubow and Fossum’s “larger value-driven issues” (Kubow & Fossum, 2007, p. 126) rear their heads: the lack of enshrined regulatory discrimination against girls for places in HSLE ran counter to the pre-existing social norm of favouring boys over girls illustrated above and indicate that the new government implicitly believed in opening opportunities for girls as well as boys. The results of a study by Cremer et al. (2010) argue that, since, “social mobility is maximized under the least elitist public education system” (Cremer, Donder, & Pestieau, 2010, p. 373), a deliberate policy-driven decrease in elitism resulting from widening participation in an education system will result in increased social mobility for the groups affected by the measures. As the data above shows, the impact in the case of Taiwan’s women was immediate and huge.

Despite the rapid increase in the rate of enrolments after 1968, both for JHS and HSLE, it is clear from the evidence above that not all children who successfully completed JHS were able to participate in higher non-compulsory levels of education. The selective, non-compulsory and above all unfunded nature of these levels meant that despite improvements in ability to participate, economic barriers still existed to actually taking up the opportunity. Just as ‘zero-sum’ calculations on the distribution of their families’ resources affected the participation of girls in JHS prior to the NYCEP, it is reasonable to assume that the same sorts of calculations would be made at the new divide between compulsory/state-funded and non-compulsory/unfunded



education, leaving women at a disadvantage beyond the mandatory level unless there were some advantage to family in developing them as human capital.

### **Effects of the NYCEP in Labour Force Participation**

Human Capital Theory is intrinsically about workforce and in this respect Taiwanese girls have spent the 20<sup>th</sup> century playing catch-up. Their participation in the workforce was traditionally limited by the nature of Taiwan's economy, which relied primarily on men to conduct on physically-demanding manual labour and consigned women to household chores and a small number of jobs deemed suitable for girls. Due to the low historic rates of employment outside the home, the demand for semi-skilled industrial labour which first arose in the Japanese era provided an unprecedented opportunity for girls to find paid work throughout the post-Qing period (Yu, 2015). However, as Diamond has pointed out, Taiwanese women's initial forays into the workplace were less of a blow for gender equity than commonly presumed and, "neither they nor anybody else (considered) it necessary or desirable that they receive an independent wage" (Diamond, 1979, p. 319). Instead, young unmarried girls in the workforce found themselves utilised along traditional lines as an additional source of family income which was then lavished on the sons; while married women's incomes were subsidising their children's and parents-in-law's spending choices.

The nature of the new economy the KMT's development plans produced was also better-suited to female employment outside the home than the previous agriculture/heavy industry model, since it offered light-industrial roles which relied manual dexterity and attention to detail instead of physical strength and endurance. As Parish and Willis identify,

*...the relative and absolute growth of female educational attainment in the following 40 years suggests that the rapid growth of the Taiwanese economy led to a shift in the pattern of labor demand toward more skill-intensive occupations in which males had a smaller comparative advantage. (Parish & Willis, 1993).*

These occupations greatly expanded the range of employment opportunities available outside the home for women who even into the 1970s, “were more likely to see their jobs as a brief interim between school and marriage” (Diamond, 1979, p. 317) than as the beginnings and foundations of independent careers. Consequently, the creation of new educational opportunities for girls coincided with increased earning potential for suitably-educated girls and thus made their employability a matter of critical importance to their families, whether their birth ones or their marriage ones. Yu (2005) illustrates that changing attitudes towards female employment continued after marriage, with Taiwanese wives maintaining high rates of labour force participation after both marriage and first childbirth, a trend also observed by Brinton (2001, p. 20). Yu attributes this to a combination of factors which led the Taiwanese labour market to be more motherhood-friendly than previously: the high demand for labour in post-war Taiwan which forced employers to seek out and retain female employees; and the small scale of the majority of Taiwan’s businesses. This latter led to closer employer-employee relations and better conditions for negotiating flexible working patterns but also dictated that employers had less scope to offer rewards over and above the basic level, as a result of which employees had little interest in working additional or irregular hours. The result of this labour market structure was that Taiwan’s new economy was conducive to balancing family duties such as childrearing with labour force participation.

The previous economic disincentive to families educating their girl children was thus overturned by the new economic realities of post-civil war Taiwan. As Chou Bi-Ehr

identifies, subsequent to the industrial development of the 1960s and 1970s, “the share of women in all industries has increased, including the traditionally male industries ... In other words, there is almost no segregation in the sex composition of these industries” (Chou B.-E. , 1994, p. 340). In light of the subject of this present study, Yu uncovered an interesting trend which also relates to the new employment roles open to women: the rate at which women continue their existing employment after marriage and first childbirth has a direct correlation with the number of years of schooling *their husbands* have had (Yu, 2005, p. 705). Although beyond the scope of this thesis, it would be interesting nonetheless to track the origin of this trend to see if the Nationalist government’s ‘feminism-friendly’ policy agenda shaped male attitudes toward gender roles.

However, the key to determining whether the increased participation of women in the workforce reflects genuine changes in social attitudes to women lies, as Diamond has identified, not in the bare fact of increased labour-force participation rates but in the nature of the jobs that are open to them. Despite women being increasingly able to avail themselves of employment opportunities outside the home, they were still significantly under-represented at the higher-status end of the employment spectrum by the time the first cohort of post-reform JHS graduates entered the workforce. In this respect, the teaching profession is a useful exemplar of how social attitudes changed in Taiwan since it began the modern period entirely closed to women, was open to them on a limited and second-tier basis throughout the first half of the twentieth century and retains a privileged position of respect in Taiwanese society to the present day.

Studies by Tsai et al. (Tsai, Liu, Chou, & Thornton, 2009), show that girls of the cohorts to enrol in JHS in and after 1968 enjoyed substantially better employment

opportunities than those before (Tsai, Liu, Chou, & Thornton, 2009), both in terms of number and quality. The women who benefited from this reform were not only more likely to be in employment (4% more likely for each additional year of schooling, (Tsai, Liu, Chou, & Thornton, 2009, p. 754)) and earning more (6% higher earnings for each year of schooling (Spohr, 2003, p. 316)) but also more likely to be in white-collar employment. Spohr argues that the majority of the increased labour force participation for female resulting from the NYCEP occurred in the private sector and that the biggest shift in employment was to the “modern sector” (light industrial manufacturing and services), with employment in this field increasing in probability by 6.7% for each additional year of schooling (Spohr, 2003, p. 315). Fields, meanwhile, quotes data on the proportion of economically-active women employed in Taiwan’s manufacturing industry by year of birth (Fields, 2007, p. 42). The data is taken at 5-year intervals according to the Republic of China calendar and since data from for birth year 1955 is not included it does not plot the trends for the first birth cohort to benefit from the NYCEP. It does, however, plot the results for birth years 1953 and 1958 and shows that women in the birth cohorts who enjoyed 9 years of education stood markedly greater chance of employment in manufacturing than those who came before, with the proportion of women in manufacturing peaking in 1986. Tsai, et al., Fields and Spohr all agree that the biggest shift in the employment pattern of Taiwan’s women was out of agriculture and into these new roles created by the economic transformation (ibid.)

Although, as Spohr identifies, increased educational opportunity resulted in increased earnings for women, it did not result in wage equality and women continued to earn less than their male counterparts afterwards. Bishop and Chiou (2004) examined this issue and their study revealed that in the period 1978-88 (sampled at 5-year intervals

according to the Republic calendar), the ratio of male-to-female earnings averaged 1.64, for samples with between 9 and 12 years of schooling. It is clear that while women made substantial absolute gains as a result of being better-educated, the relative gains were limited and did not entirely erase the gender inequity in Taiwan.

### **Effects of the NYCEP on Female Employment in Teaching**

The absolute gains were undeniable, however. Not only were women earning more than before, they were working in higher-status roles from skilled industrial work to ‘white-collar’ roles in the commerce, service and government sectors. Fuess and Hou, working with data supplied by the Directorate-General of Budget, Accounting and Statistics (DGBAS) found that in the 20 years from 1978, the percentage of females employed in Agriculture decreased from 22.79% to 7.03%; meanwhile, the percentage of women employed in commerce went from 16.79% to 26.18%, finance from 1.32 to 5.23, services 14.6% to 25.02% and public administration from 2.39% to 3.27% (Fuess & Hou, 2009, p. 5). Analysing their data using the occupational groups defined by the ROC government in its data, Fuess and Hou concluded:

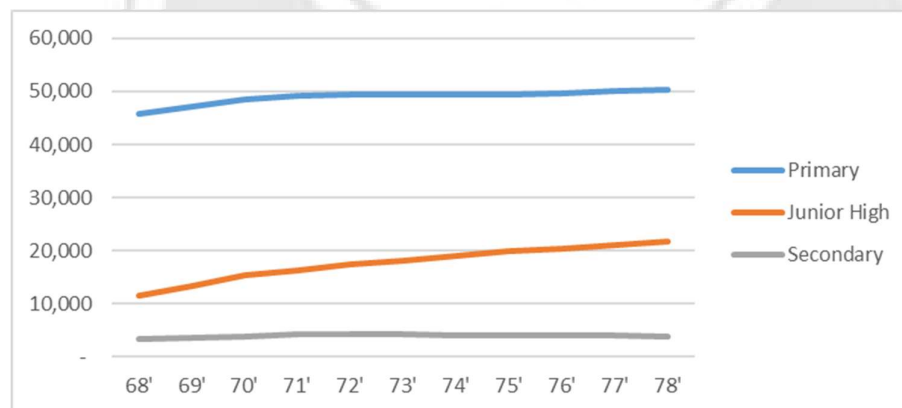
*For 1978 the measure of occupational segregation is only 9.66: less than 10% of the female workforce required relocation to accomplish gender balance across occupational groups. (Fuess & Hou, 2009, p. 8)*

In other words, by 1978, women were almost equally represented in every occupational group according to their share of the overall population, a testimony to their newly-won ability to enter previously male-dominated fields even at the highest status levels.

A significant source of the new high-prestige opportunities which lay open to Taiwan’s women lay in teaching as a result of the shortfall of teachers which had resulted from the massive expansion in teaching provision, and these occurred most

notably at the JHS level (Chou P. C., 2004) but also at SHS level as the system adapted to the knock-on effects of increased JHS enrolment. In the years immediately after 1968, teacher training institutions struggled to produce trained teachers in sufficient numbers to meet the demand created by the new schools and often in-service training was substituted for formal qualifications: Shu cites the holders of formal secondary school teaching qualifications as constituting less than 20% of all JHS teachers in Taiwan even up to 1975 (Shu, 2016, p. 49). Once adequately-trained and suitably-qualified teaching staff began to appear in the required numbers from 1976 onward, there were adequate numbers of new teaching positions for them to fill. Data from the Ministry of Education (2015a) shows that the fastest-growing source of new jobs in teaching in the ten years from 1968 was in Junior High Schools and that the *rate* of growth in new teaching posts there continued to accelerate even after 1976, when graduates of the first cohort to benefit from the NYCEP qualified as Secondary School teachers (Table 4).

FIGURE 5 NUMBER OF TEACHING POSTS AT EACH LEVEL OF SCHOOLING

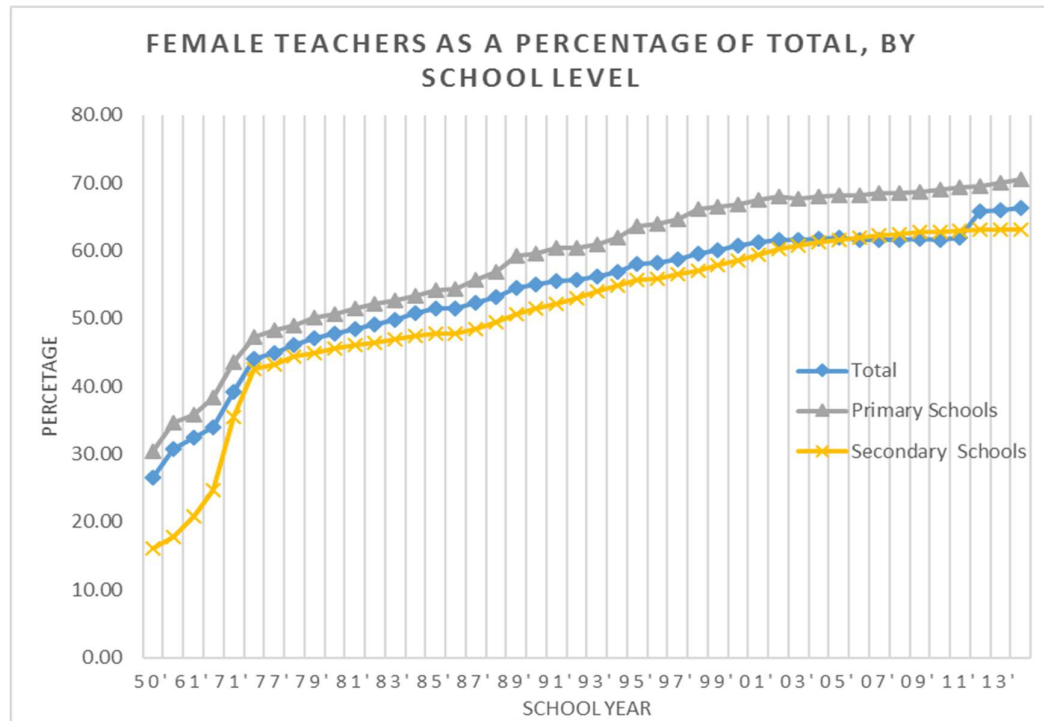


Source: Author, from data by Ministry of Education Main Statistics, Number of Schools, Teachers, Staff, Classes, Students and Graduates (1950-2015).

The Republic of China Ministry of Education has recorded gender-based data on education and the teaching profession for the bulk of the post-WW2 period, which allows for analysis of trends in female employment as teachers (Ministry of Education, Republic of China (Taiwan), 2015(b)).

As Figure 6 demonstrates, the most dramatic growths in the proportion of teachers who were women coincide with the time periods when the 1968 cohort qualified as teachers after their respective education and training periods. Those Elementary School teachers from the 1968 cohort graduated in JHS in 1971 and then spent a further 5 years in teacher training at the Normal Colleges, resulting in their entry to the profession in 1976 when we see the percentage of women teachers increasing by 8.9% from the 1966 figure. Only one greater ten-year increase in the proportion of female teachers occurred in the post-war period: a jump of 9.7% occurred from 1986-1996 at which time the female population was growing at less than 1.5% annually (Republic of China Statistical Bureau, 2015).

FIGURE 6 FEMALE TEACHERS AS A PERCENTAGE OF THE TOTAL AT EACH LEVEL OF SCHOOLING



SOURCE: AUTHOR; DATA SOURCE MINISTRY OF EDUCATION MAIN STATISTICS, 2015 STATISTICAL INDICATORS.

The situation for Secondary School teachers was made more complicated by the reform process itself being underway. At the same time as future Secondary teachers were undergoing their own secondary education and teacher training, other students were entering and graduating from JHS and many of these were progressing to SHS. Those women Secondary School teachers who graduated JHS as part of the 1968 cohort were required to first graduate from Senior High School (1974 at the earliest) before they were able to gain admission to the 4-year JHS teacher training programmes at Normal Colleges. As a result, these first beneficiaries of the NYCEP qualified as teachers and began entering the teaching profession in 1978. However, as Table 5 demonstrates, the greatest growth in the proportion of female secondary school teachers took place in the period 1971-76, immediately the 1968 JHS intake graduated. The explanation for this lies in Shu’s observation (Shu, 2016) on interim



measures driven by the need to find teachers for the new tidal wave of JHS graduates seeking Senior schooling. Teachers were hastily recruited with lower levels of training and qualification than would be required later on, in order to prevent gaps arising in the new policy of 9 mandatory years of education. The need for these additional teachers first became critical in 1971, when the first vastly-expanded cohort of post-reform JHS students graduated and sought entry to SHS.

### **Effects of the NYCEP on Women's Social Status**

The barriers to education which were historically experienced by Taiwan's women as a result of the state policies of the various governing regimes were clear instances of institutionalised discrimination under the UNESCO definition of discrimination in education. Both the Qing and Japanese Empires' ideals of education excluded women and to a great extent their ideals of women excluded education, at least on an equal footing to males. The founding ideals of the Republic of China included a strong feminist element and these were imported only slightly-diluted by time, across the Strait when the regime moved there wholesale in 1949 and set about building its new society.

These new ideals included overcoming the socially-imposed structural limitations Taiwan's women suffered from on the roles they could perform and the degree of autonomy they could expect to enjoy. These limitations stemmed from socially-constructed perceptions of appropriate gender roles most of which ultimately stemmed from a close association between female adulthood and reproduction. These perceptions were radically altered in the 1960s and 70s, in large part due to the improved education that Taiwan's women then began to receive but also by the advent and widespread adoption of effective medical contraception.

The era of the 1960s and 70s constituted a ‘perfect storm’ of changing conditions which swept away many of the barriers ‘traditional society’ on Taiwan presented to women’s equal participation in society. At the same time that the economy was changed to a model more suited to women’s employment, the education system was better-preparing women for work outside the home at higher levels than ever before. In addition, women were able to use effective family planning and thus determine for themselves how much of their time would need to be devoted to childcare. This enabled greater numbers of them to take on employment roles for which a long period of training was required.

### **Gender Effects of Widening Participation in Other Countries**

It should not, however, be concluded that Taiwan’s experience of the NYCEP was unique and cannot serve as an example or role model for future developments. Despite considerable differences in local conditions, the experiences of Bangladesh and Malawi in universalising elementary education showed similar trends to the NYCEP in societies which had similar socio-economic disincentives against educating girls, indicating that widening participation in this way may have common effects across all societies and levels of education. Bangladesh implemented its National Children Policy (NCP) in 1994 with specific aims including: free compulsory primary education for all children; free JHS for girls; and scholarships for all girls enrolling in rural secondary schools (Chowdhury, Nath, & Choudhury, 2002). The net effect has been to eliminate the gender gap at Elementary levels entirely and substantially raise the proportion of girls completing HSLE dramatically. Chowdhury, et al. note that positive discrimination and state-provided incentives to schools play a significant part in this top-down promotion of female education.

*A most important contribution to this is the scholarships that the State provides to girls attending secondary schools. As of June 1999, the government provided Tk 4.8 billion (US\$1=Tk 50) to 7.8 million girls (The Daily Star, 1999). The schools also simultaneously receive a small contribution from the state for every girl enrolled, which provides incentive for improved performance. (Chowdhury, Nath, & Choudhury, 2002, p. 200)*

Malawi also displayed “biases were related to family and social role expectations for females and the perceived capacity (or lack thereof) of schooling” and “economic, social, and political structures in society (which) did not provide opportunities for educated girls” (Chisamya, DeJaeghere, Kendall, & Khan, 2011, p. 748), making it similar in principle to the Rostovian ‘traditional society’ of Taiwan’s pre-industrial era. After adopting compulsory free primary education in 1994, Malawi saw primary enrolments double in 6 months and while education level varies considerably by region in Malawi, all levels saw a rise in the number of girls completing post-primary education and a similar surge in the labour market participation of girls who had subsequent to the 1994 universalisation of primary schooling (Hyder & Behrman, 2014).

## Chapter 5 – Conclusions and Recommendations

Prior to the NYCEP, Taiwan's women had experienced generations of institutionalised discrimination in education. Traditional Confucian society made no place for women outside of the home and the functional aspect of education as preparation for students to take up roles in society made this style of education largely irrelevant for girls. Even when ideas of gender equity began to proliferate in the late 19<sup>th</sup> Century, they were not put into widespread practice and female education in this period depended on individual families choosing to educate their girls for reasons of their own. Social circumstances and the implications of Confucian education itself meant that those families had profound economic incentives to focus maximum effort on providing for their sons' educations instead. In addition, the Qing state had no concept at all of mass education all until comparatively late and the inclusion of girls into that scheme was a step too far for the bankrupt Qing state.

The Japanese era opened some new opportunities for women, both in education and the workplace, but it did not make a substantial difference to the inferior social status of women in a Taiwanese society still dominated by Rostov's 'traditional' features. While the colonial government did recognise Taiwanese women as key parts of its 'model colony', it explicitly did not accord them fully-equal status, actively discriminating against them in terms of the number and quality of opportunities opened to them, as well as the quality of the education they were to receive. Women were expected to be second-class citizens whose primary role was that of home-maker and although women were admitted to mandatory elementary education during this period it was deliberately enshrined in colonial law that this was not to be on equal

terms to their male counterparts, since the education girls were to receive was never intended to be of the same standard as that of boys.

The Nationalist government at first made no changes to the structure of education on Taiwan and kept the system bequeathed them by the departing Japanese, making changes only to the curriculum to satisfy their desire to undo the effects of Japan's assimilation policy and replace it with one of their own. Although the early influence of the women's rights movement during the 'Nanking Decade' remained strong, the economic situation remained weak and girls' education had to wait until the resources were available to the state to fund it.

There are no examples of women teachers in Imperial-era Taiwan. As noted above, the Confucian education system existed to prepare students for the Imperial Exams and subsequent public life, from both of which women were wholly excluded. Only after Taiwan was surrendered to the Japanese Empire did the Qing government begin the first steps toward a formal education system which included girls, and it was left to their Nationalist successors to create an education system which incorporated female equity in education as a matter of course. All of these efforts, however, took place in the period before the government of the Republic of China took control of Taiwan.

Taiwan's post WWII Nationalist rulers acknowledged the need to educate the island's labour force in order to support their ambitious plans for economic development and nation-building in the same way that the Japanese had several decades earlier.

However, with greater concerns still demanding their attention on the Chinese Mainland, Taiwan received little of their attention and few substantive changes were made to the provision or structure of education beyond changing the syllabus to

reflect the nation-building agenda. Women teachers did, however, play a role in their future plans for the island and these plans took on a greater urgency after the regime was forced to flee the Mainland and was left with Taiwan as the main territory still under its control. The teacher training system developed in this period was a general purpose one designed to produce co-educational teachers for co-educational schools in a co-educational environment. However, the combination of gender-blind entrance exams, free tuition, attractive employment terms and a social bias towards elite schools meant that academically-gifted girls were at an advantage when competing for entry to Normal Schools and Colleges because their male counterparts were filtered into other institutions as a result of the social expectations on them. As a result, the gender ratio of trained teachers entering the profession began to tilt in favour of women from the late 1970s onward.

In contrast to the purposefully-discriminatory Japanese measures, the reforms of the education system implemented under the Republic of China were deliberately gender-blind in that, while no measure was introduced to specifically promote women's education, the provisions covered all children equally regardless of gender. Despite there being ample opportunity to exclude girls or even merely ignore their absence from schooling they were officially supposed to receive, the Republic expended considerable administrative effort to ensure that they were present, received the same education as their male peers and competed for access to the selective levels of the public education system on the closest thing to a level playing-field Taiwanese women had experienced in recorded history.

The entrance examination system also afforded those girls *who were qualified* an opportunity to compete with their male peers on a more or less equal basis and while this was not a provision of the 1968 reform, it did assist those who benefitted from the

NYCEP in furthering their education in institutions they may not previously have considered applying for as a result of gender stereotyping. The rise recorded in female access to SHS which occurred as soon as the reform took effect is the most immediate indicator of how girls' educational opportunities were altered by this combination of increased qualification level and gender-blind selection. The number of girls in SHS each year doubled in 10 years from 126,000 to 307,000, with the rate of increase remaining constant for over a decade and the number of girls exceeding that of boys from 1981 until 1996. Not only was JHS producing qualified girls in unprecedented numbers but the wider education system was both willing and able to absorb them into even higher levels.

The NYCEP was a prime example of the attitude to gender equity which had permeated the Republic from its founding and remained a part of its ideological DNA even when social conservatism blocked actual progress. The reform opened women's opportunities in ways far beyond those enshrined in the text itself, with knock-on effects to their position in society beyond the traditional settings of home and family. Most tellingly, the unprecedented ease with which Taiwanese women could enter the previously-inaccessible male bastion of teaching after the NYCEP took effect demonstrates the remarkable change in social attitudes which had accompanied mass female education and the willingness of a government to impose changes which ran contrary to the existing norms of Taiwanese society.

The proportion of women in the teaching profession surged at all levels and although there remained some inequalities in career progression within each level they were in general well-represented at all levels of the national education system. By 1984, women comprised more than half of all teachers in Taiwan; by 1989, 21 years after the reform and a single generation later, women teachers comprised a majority at

every level except tertiary where they comprised 31 compared with less than 8% in 1950. The explosion of female entry to the teaching profession after 1971 was due to a combination of increased opportunity created by demand for teachers; and increased capability created by better access to appropriate levels of education. The NYCEP was not the sole factor in creating this combination but it was the major factor in both creating the demand and putting women in a position to satisfy it.

In weakening the hold that structural social inequality held on women's prospects by imposing and enforcing mandatory education; and in rationing access to education through gender-blind entrance exams, the Republic of China government managed to strike a blow for women's rights with the NYCEP despite the lack of a specific gender-equity agenda in the reform itself. The active role that the government took in enforcing female participation in mandatory education is evidence that better-educated girls were not a wholly-unintended side-effect of the reform but an intrinsic part of it.

The changes wrought to women's employment by the process of economic development under the Japanese and Nationalist governments initially brought little change to the status of women as they were still mainly labouring as part of a family unit and had little control over their lives or independence from the family structure. There were, however, incremental changes brought about by the normalisation of women workers and once the momentum was gained in one 'status position' it became less unthinkable for it to change in others.

The fundamental changes to women's status can be assessed using Hollingshead's model, whereby social status is a composite of education, occupation, sex, and marital status. Of the four, only gender can be assumed static and independent of the effects



of the NYCEP. The impact of improved education on marital status is complex, since a better-educated bride is a more attractive match for a well-educated male but at the same time higher levels of education correlate to delayed marriage age and higher rates of non-marriage amongst women (Chang & Li, 2011). Indeed, data from the National Statistics Bureau's 'Women's Marriage, Fertility and Employment Survey' (National Statistical Bureau, 2014) shows that the average age at which women first get married has increased for each level of highest educational qualification; and furthermore that the difference in marriage ages between one level of qualification and the next has increased substantially. For example, in 1980, girls whose highest qualification was JHS married on average at 21.47 years; for SHS, it was 22.68; for Bachelor Degree graduates it was 25.01; and the difference in marriage ages from JHS to Bachelor's was 3.54 years. By 1985, the figures were 21.34, 23.15, 25.52 and 4.18 respectively. However, Chang and Li's findings indicate that while the proportion of Taiwanese women who remained unmarried "more than doubled" from the 1950-59 birth cohort to the 1960-69 one, the change was from around 1 in 20 to around 2 in 20 (Chang & Li, 2011, p. 10). For the purposes of comparing the social status of women before and after the 1968 education reform, this difference can be assumed to be negligible and the rate of marriage constant across these cohorts.

Thus, the greatest determinants of social status when applying Hollingshead's model to Taiwan's women in the aftermath of the NYCEP are the two variables 'years of schooling completed' and the 'occupational group' to which their profession belongs. Since the scores assigned to both these categories would increase as a result of women entering the teaching profession as a result of receiving adequate schooling, the changes wrought by the NYCEP have clearly had considerable impact on their overall status.

The aim of this thesis was to determine the extent to which the NYCEP opened new opportunities to Taiwanese women using rates of participation in education both as students and teachers as proxy measures for women's social status. The teaching profession was chosen as one which held high status throughout the period but which had traditionally been male-dominated. Female employment in this period also showed profound inequalities, and even when modernisation was begun under Japanese rule, remained limited to home-making and farm labouring as part of a family unit, with few roles consisting of paid employment and almost none allowing any autonomy by the girls themselves.

The Taiwanese society onto which this colonial policy of gender discrimination was grafted was eager to take advantage of the new earning power of its girls that industrial development provided but it did not fundamentally change its view of their role, seeing these opportunities instead as merely an extension of the traditional female role of providing for the family. Taiwanese girls remained under close family supervision and their earnings went directly into the family coffers; few were able to live an independent life despite their new-found earning power.

The NYCEP wrought considerable changes on Taiwanese society's perceptions of women and women's roles. It allowed any girl with the ability to gain the 'critical mass' of education which granted them entry to previously-closed professions and while it did not grant Taiwan's females complete educational equity in terms of the Dakar Framework, it pushed the inequity back to the highest levels of the education system. It was not, however, a policy success in isolation and had it been attempted earlier would likely have had poorer results from the female perspective. It took a society accustomed to women working outside the home and willing to accept the next step; financial incentives to educating girls in a new economic model; and the

ability of women to control their own fertility through effective contraception before opportunity could be translated into outcome.

This study has been limited by the need to simplify an essentially complex series of human choices into social trends. The exact nature of the effect of societal conditions on social mores has been assumed to be a simplistic cause/effect relationship and cannot hope to capture either individual choices or 'virtuous cycle' effects of social status on participation rates. It is possible that the greater acceptance of women into the teaching profession after 1968 was both a result of the improved social status of women in general and a cause of it, with barriers to entry falling as a result of the normalisation of women in high-status roles.

It is recommended that this question be resolved through comparative study of the social prestige of women teachers in the eras before and after the 1968 NYCEP took effect, using the Hollingshead model and a statistically-significant number of subjects. By tracing the education and employment records of a sample of Taiwan's Elementary and Secondary School teachers who qualified in the decade before the 1968 reform; and comparing their social status with a similar cohort who entered the teaching profession in the decade after 1974, a quantitative basis could be produced for determining the change in the social status of Taiwan's women which resulted from the NYCEP.

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Appendices

Appendix A. (臺灣總督府總督官房文書課, 1900)

| 第四四  |          | 學校所在地及距離 |          | 第四三    |          | 公學校 (△△內地人) |        | 明治三十三年十二月末日 |        |
|------|----------|----------|----------|--------|----------|-------------|--------|-------------|--------|
| 北臺   | 地方       | 學校名      | 所在地      | 臺灣總督府迄 | 地方廳迄     | 校數          | 教員     | 生徒          | 卒業     |
| 國語學校 | 臺北南門街    | 臺北南門街    | 臺北南門街    | 町間 二二九 | 里町間 二四九  | 總計          | 總計     | 總計          | 總計     |
| 國語學校 | 臺北龜洲祖師廟街 | 臺北龜洲祖師廟街 | 臺北龜洲祖師廟街 | 町間 六〇六 | 里町間 二二三八 | 澎湖          | 澎湖     | 澎湖          | 澎湖     |
|      |          |          |          |        |          | 宜蘭          | 宜蘭     | 宜蘭          | 宜蘭     |
|      |          |          |          |        |          | 臺南          | 臺南     | 臺南          | 臺南     |
|      |          |          |          |        |          | 臺中          | 臺中     | 臺中          | 臺中     |
|      |          |          |          |        |          | 臺北          | 臺北     | 臺北          | 臺北     |
|      |          |          |          |        |          | 合計          | 合計     | 合計          | 合計     |
|      |          |          |          |        |          | 同三十一年       | 同三十一年  | 同三十一年       | 同三十一年  |
|      |          |          |          |        |          | 明治三十二年      | 明治三十二年 | 明治三十二年      | 明治三十二年 |
|      |          |          |          |        |          | 合計          | 合計     | 合計          | 合計     |

| 地<br>方<br>校<br>數                     | 種<br>目 | 年<br>次 | 生      |        | 死<br>亡<br>學<br>徒 | 本<br>國 | 外<br>國 | 師<br>範<br>部 | 語<br>學<br>部 | 鐵<br>道<br>電<br>信<br>科 | 第一<br>附<br>屬<br>學<br>校 | 第二<br>附<br>屬<br>學<br>校 | 第三<br>附<br>屬<br>學<br>校 | 第四<br>附<br>屬<br>學<br>校 | 計 | 醫<br>學<br>校 | 師<br>範<br>學<br>校 | 國<br>語<br>傳<br>習<br>所 | 小<br>學<br>校 | 合<br>計 |   |
|--------------------------------------|--------|--------|--------|--------|------------------|--------|--------|-------------|-------------|-----------------------|------------------------|------------------------|------------------------|------------------------|---|-------------|------------------|-----------------------|-------------|--------|---|
|                                      |        |        | 入<br>學 | 卒<br>業 |                  |        |        |             |             |                       |                        |                        |                        |                        |   |             |                  |                       |             |        |   |
| 內<br>地<br>人<br>本<br>島<br>人<br>合<br>計 | 教<br>員 | 三十四年   | 三〇     | 二二     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 本<br>島<br>人<br>合<br>計                | 本<br>生 | 三十四年   | 二七     | 二〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 入<br>學<br>合<br>計                     | 入<br>學 | 三十四年   | 二七     | 二〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 卒<br>業<br>合<br>計                     | 卒<br>業 | 三十四年   | 二二     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 退<br>學<br>合<br>計                     | 退<br>學 | 三十四年   | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 死<br>亡<br>合<br>計                     | 死<br>亡 | 三十四年   | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 內<br>地<br>人<br>本<br>島<br>人<br>合<br>計 | 教<br>員 | 三十三年   | 二七     | 二〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 本<br>島<br>人<br>合<br>計                | 本<br>生 | 三十三年   | 二〇     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 入<br>學<br>合<br>計                     | 入<br>學 | 三十三年   | 二〇     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 卒<br>業<br>合<br>計                     | 卒<br>業 | 三十三年   | 一四     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 退<br>學<br>合<br>計                     | 退<br>學 | 三十三年   | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 死<br>亡<br>合<br>計                     | 死<br>亡 | 三十三年   | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 內<br>地<br>人<br>本<br>島<br>人<br>合<br>計 | 教<br>員 | 三十一年   | 二二     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 本<br>島<br>人<br>合<br>計                | 本<br>生 | 三十一年   | 一四     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 入<br>學<br>合<br>計                     | 入<br>學 | 三十一年   | 一四     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 卒<br>業<br>合<br>計                     | 卒<br>業 | 三十一年   | 一〇     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 退<br>學<br>合<br>計                     | 退<br>學 | 三十一年   | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 死<br>亡<br>合<br>計                     | 死<br>亡 | 三十一年   | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 內<br>地<br>人<br>本<br>島<br>人<br>合<br>計 | 教<br>員 | 三十年    | 二〇     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 本<br>島<br>人<br>合<br>計                | 本<br>生 | 三十年    | 一四     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 入<br>學<br>合<br>計                     | 入<br>學 | 三十年    | 一四     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 卒<br>業<br>合<br>計                     | 卒<br>業 | 三十年    | 一〇     | 一〇     | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 退<br>學<br>合<br>計                     | 退<br>學 | 三十年    | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |
| 死<br>亡<br>合<br>計                     | 死<br>亡 | 三十年    | 一      | 一      | 一                | 一      | 一      | 一           | 一           | 一                     | 一                      | 一                      | 一                      | 一                      | 一 | 一           | 一                | 一                     | 一           | 一      | 一 |

第四五

公 學 校

明治三十四年十二月末日