ADVERSE EVENT ON EDUCATIONAL SYSTEM CASE STUDY; HISTORICAL THAILAND'S EDUCATIONAL POLICY AND NATIONAL TESTING SCORE

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Abstract

Under a democratic system, the policy is the most crucial factor that made the party is selected to be representative of the citizen. Furthermore, "Favorited" policy is a key success factor to indicate which party would be selected as "Government" or "Opposition." Similarly, in Thailand, all parties propose the policies that hopefully would gain a number of voters. Regarding to official Thailand national statistical office report 2015, there are 696,321 voters (who work for school, both public and private school, ministry of education's staff are included) in educational system and 13,954,735 related voters (students from primary school, secondary school, undegraded students and graduated students) that is around 29.7 % of total voters. As the historical data from 2001 to 2011, all of Thailand's government came from the party got 11,637,495 – 15,387,223 voters then voters from the educational system was being focused from all parties.

Educational policy was used as the key attractiveness for the party from the democratic system. Every composition of the educational system was defined and typed for understanding that finds "How to assess them?" Especially in school level, government welfare was created for teacher and more increasing in every government. Finally, the teacher's average total income was higher than others who similarly work for the government. By theoretical assumption, the performance of teaching process should vary with input on return to someone who is responsible. The empirical results from national testing examination show controversy on the assumption, result from national testing examination stable and trend to die-down while total return to staff of teaching process is significantly increasing and still trend to higher. But not for the coup, educational policy from the revolutionary party look like base on idealism, focus on problem-solving by theory, that sounds good by logic at the first but there are many limitations to the theory. National testing's result increased scores by the revolutionary party's administration but not significant gain scores as people's expectation. Although, the coup's policy on education was not canceled or inhibit the favorite educational policy but is not the same advantage as a democratic party. Outcomes from teaching process required more than during democratic government that effect to educational staff's norm, more strictly control process and more systematic process (also create some non-skill and time consumed in the same time). Finally, resistance to enforcement/punishment was the major cause to create "Ignorance."

The primary purpose of the study is to explore the adverse effect of the educational system by the relationship between cause, educational policy, and education output, historical result from Thailand's national testing score. Analysis of data was based on documentary research methodology from empirical evidence, both official and un-official documents were analyzed, the content analysis was used in this study. The bias of pollical interest is declared by self-support in the study; without any support by both democratic and revolutionary parties.

Background

Thailand's System of Government

Basically, Thailand's system of government follows democratic form of government with the King as Head of State. The current king of Thailand is his majesty king Vajiralongkorn (Rama X) since October 2016. Thai's people praise king as the highest institute, beyond other institutes and above all of political conflict. Both people's representative

from house of senate and house representative give the most respect to majesty king Vajiralongkorn; that is major reason to remain peace in Thailand.

For twenty years ago, although Thailand's democratic form has been challenged by many threats but a commitment for the response to the crown can make Thailand overcome critical situation up until now. There are six governments and 15 ministers of education in 13 years. Six governments came from the national election (democratic form) 4 governments and the last come from the revolution until the present.

This study specifically concerned on Thailand's system of government between 2006 –2018 that was analyzed and discussed in the next part.

Thailand's Educational Policy

Before 13 October 2018, Thailand's educational policy was set under the three key components. The first is the constitution of Thailand that guarantees the minimum right to access education. The second is the national economic and social development plan, the master plan for Thailand development. And, the last is government policy that prime minister declares to parliament, the framework of policy that all ministers transform to educational policy. After that national strategy, was created by constitution power, is the second component above national economic and social development plan and government policy.

History of Thailand's National Testing

National testing was organized by national institute educational testing service (public organization) under national education act B.E. 2542 (1999). There are five national educational tests including as the follows.

Ordinary national educational test (O-NET) is the test for students in normal educational program, grade 6 (primary school), grade 9 (middle school) and grade 12 (high school). Vocational national educational test (V-NET) is the test for both students in vocational certificate program and diploma/high vocational certificate. Non-formal educational test (N-NET) is the test for students in non – formal educational program that includes certificate of junior and senior high school. Budish national educational test (B-NET) and Islamic national educational test (I-NET) are the tests for students in the religious educational program.

From the official record of the ministry of education, there are more than 95% of Thai's students that have been tested by 2 levels of O-NET at grade 6 and 9. Then O-NET score is used to be the indicator for educational policy success.

Data Analysis

Educational Policy Analysis

As the previous paragraph, there are 15 ministers of education in 13 years, 10 ministers came from democratic government and 5 ministers were from revolution. Average time in positional period is 10.404 months, 8.04 months for the democratic ministers and 12 months for revolution ministers. The detail was shown in figure 1. Under the assumption that success depends on continuous times, educational policy from revolution look like trend to success than democratic minister, especially less than a year. Each minister of education set educational policy under the 3 major components, under the assumption that approximately time to success is 2 years after the policy was launch (estimated policy success time is initial year + 3) as figure 2. Under the same assumption, the success of policy time from democratic ministers shown in 2009, 2010 to 2016 and the rest from revolution minister as figure 3.
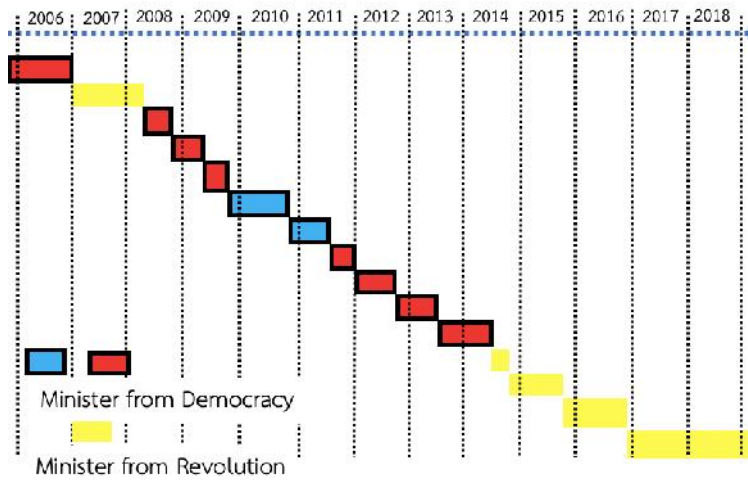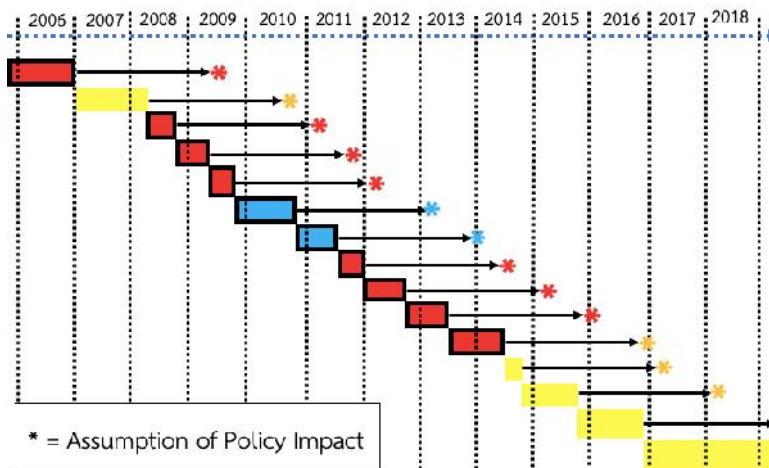
Figure 1. Positional period of minister of education

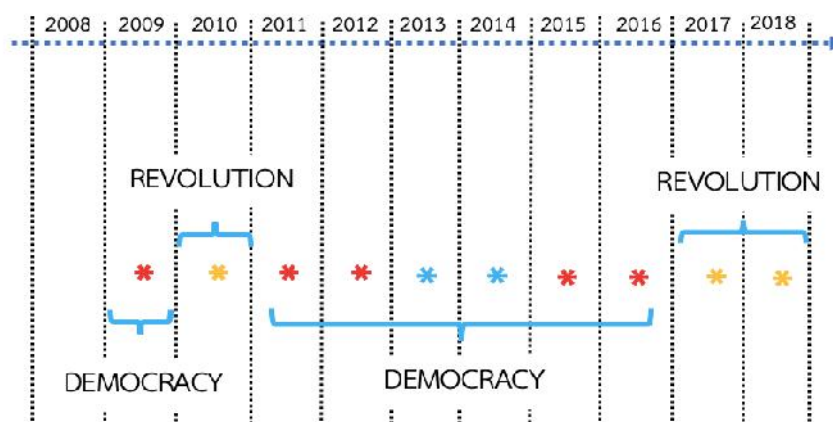
Figure 2. Estimation of policy success time

Figure 3. Success of policy time

Component of Educational Policy

Data from the official document, minister of education announced their policy, was analyzed by value chain model in this paper. The results are described as follows:

Period 2007 - 2008

This period is the educational reform. After the revolution in 2006, the government appointed the ministry of education as change agent. Minister put strong policy on the educational system and organization reform

Period 2008 - 2014

This period is the democratic educational system; there were many investments in infrastructure, educational tool and supportive system. Human-ware was concerned to develop as a key success factor. However, there were less evidence to approve the success of educational policy

Period 2014 – 2018

This period is the supportive educational system, after revolution in 2014, government appointed soldier to be a minister of education in 2 terms after that medical doctor in psychology was appointed. Major policies are promoting of learning by activities and human-ware development, related educational tools also included.
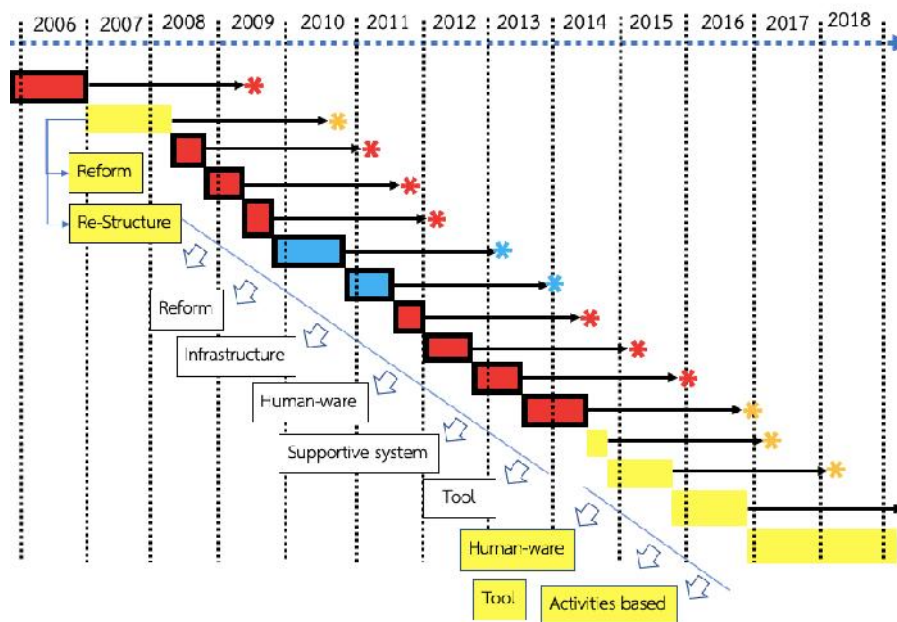

Figure 4. Composition of educational policy

National Educational Score Analysis

Concept of Analysis

Under statistic assumption, the national educational score cannot directly compare year by year because there are many factors that affect the population variance. The suitable method should compare with targeted score (50%) and based on standard value (Z – score); calculated from population's mean and population's variance as follows;

$$Z = \frac{(x - \mu)}{\sqrt{\sigma^2}}$$

Where

Z   =   standard value

x =   variable

μ =   population mean

σ^2 =   population variance

If $x = 50\,\%$

     μ in unit of %

     σ^2 is population variance that calculate in unit of %

This study modified O-NET score to Z-score as follows;

$$Z = \left.(50 - \mu\,(\%))\middle/\sqrt{\sigma^2}\right.$$

After Z – score was modified, area under the curve (AUC) of normal distribution from Z - score was used to be an indicator for educational policy success.

Under both statistic assumption and approximately time to success, this study analytes pattern of AUC, 3 subjects; mathematics, science and English, in term of year + 3 from the first time of policy launch.

Analysis of National Score by Subject
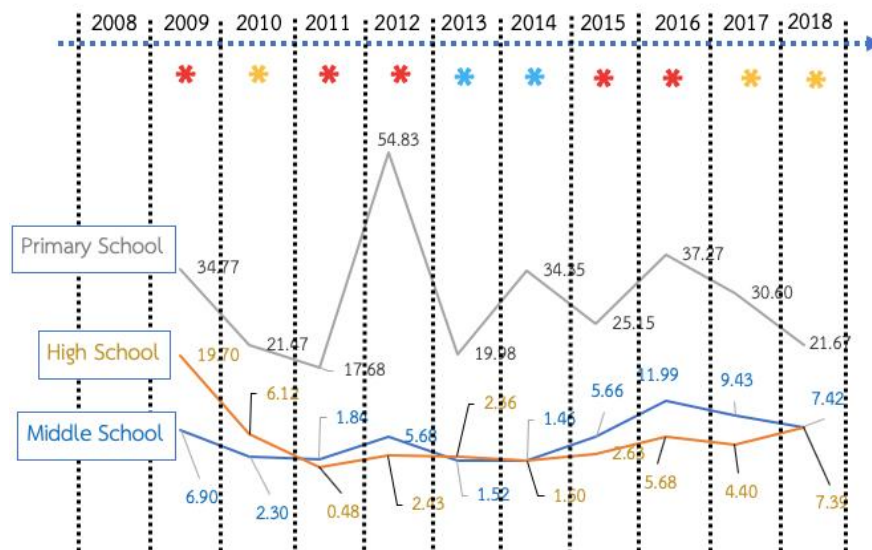
Mathematics Subject

Figure 5. Pattern of the national educational score in mathematics subject

From figure 5. All of the graph looks like have a cyclic pattern, especially in 2011 to 2013 and 2015 to 2017.
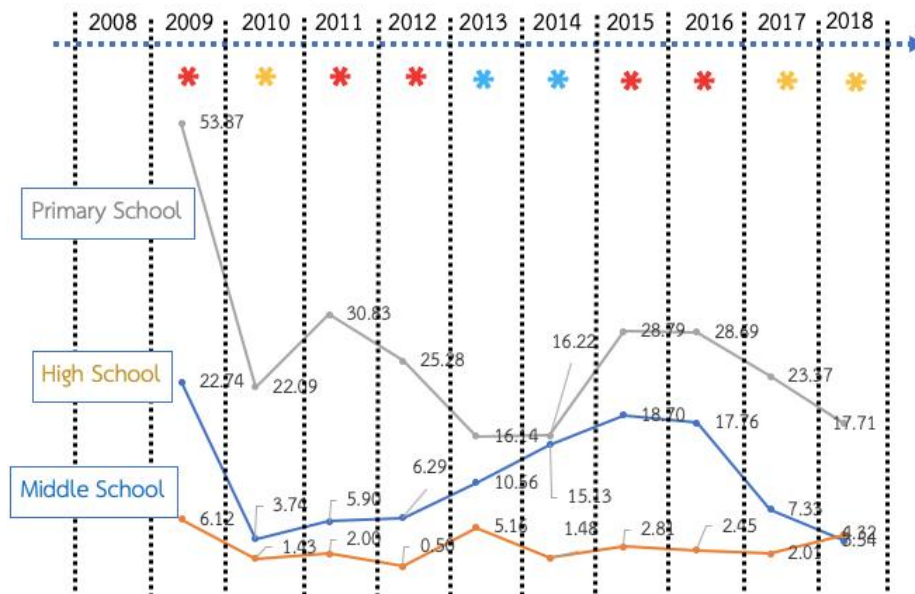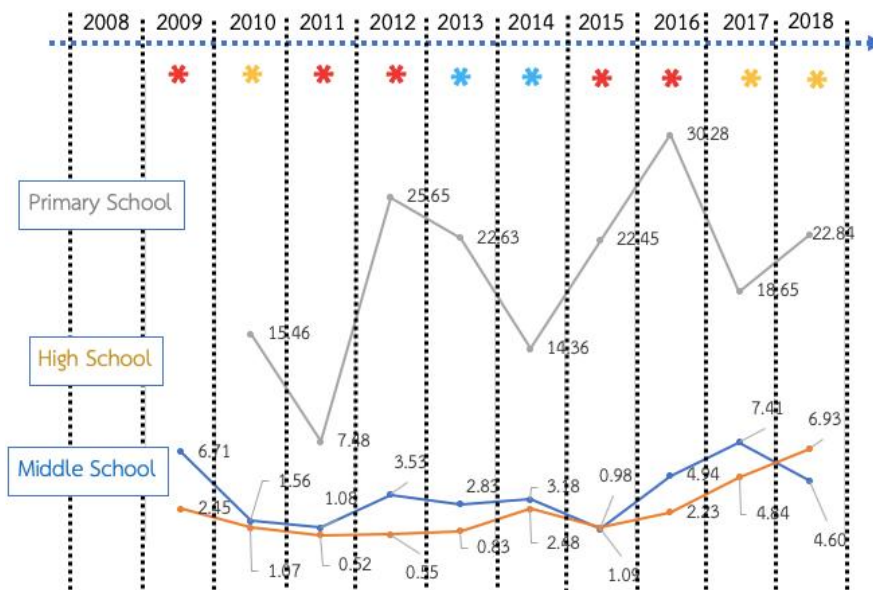
Science Subject

Figure 6. Pattern of national educational score in science subject

From figure 6. All of graph look like have a cyclic pattern, especially in 2009 to 2011and 2014 to 2017.

English Subject

remark: national educational testing in english subject was establish in 2010.

Figure 7. Pattern of national educational score in English subject

From figure 7. There are not pattern of national educational score in English subject

Analysis of National Score Movement

In the longitudinal study, students have been stepping up every three years, from primary school to middle school and from the middle school to high school, then the set of national score at year Y, Y + 3 and Y + 6 come from the same student. Pattern of the dataset may be used to explain the success of policy in a continuous approach.
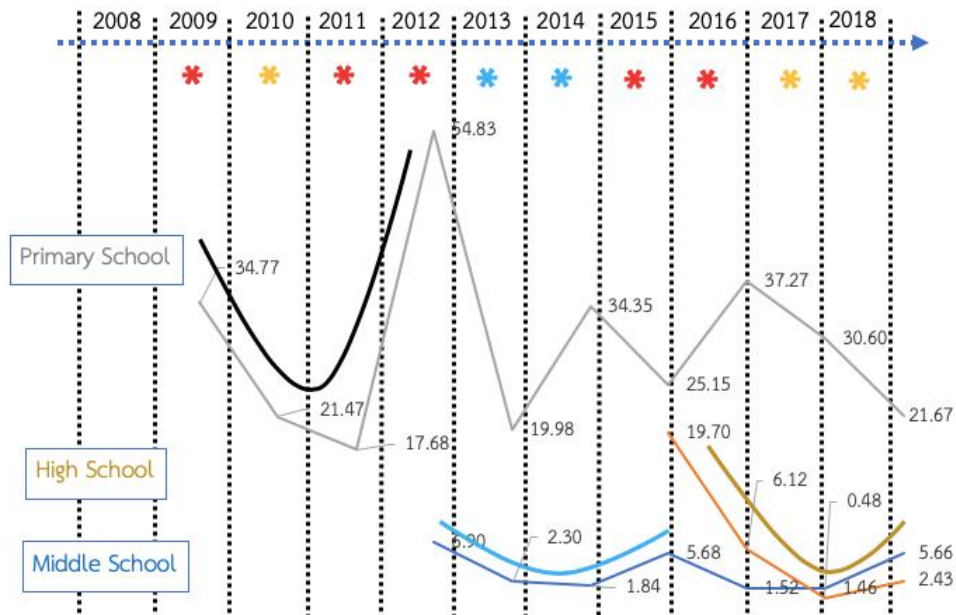
Mathematics Subject

Figure 8. Movement of mathematics national educational score
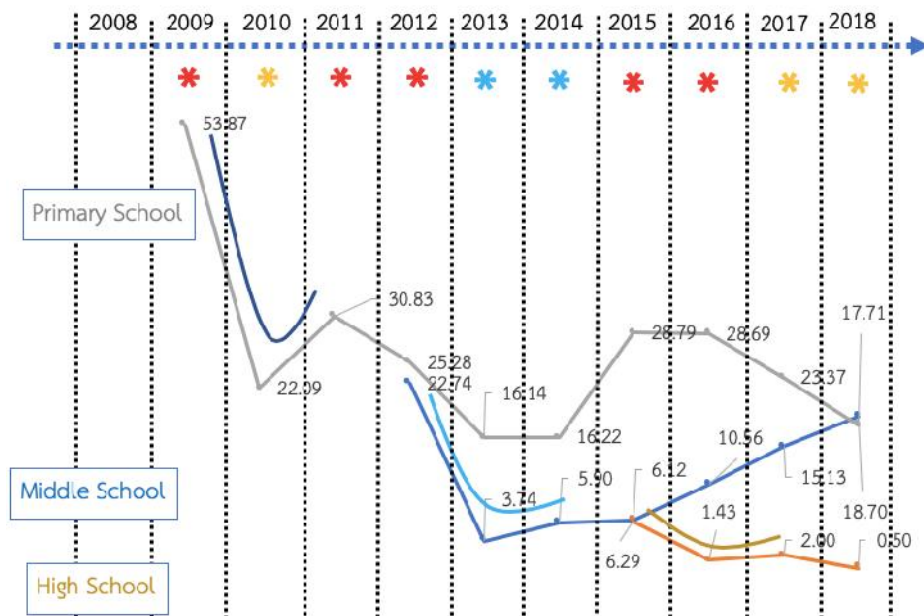
Science Subject

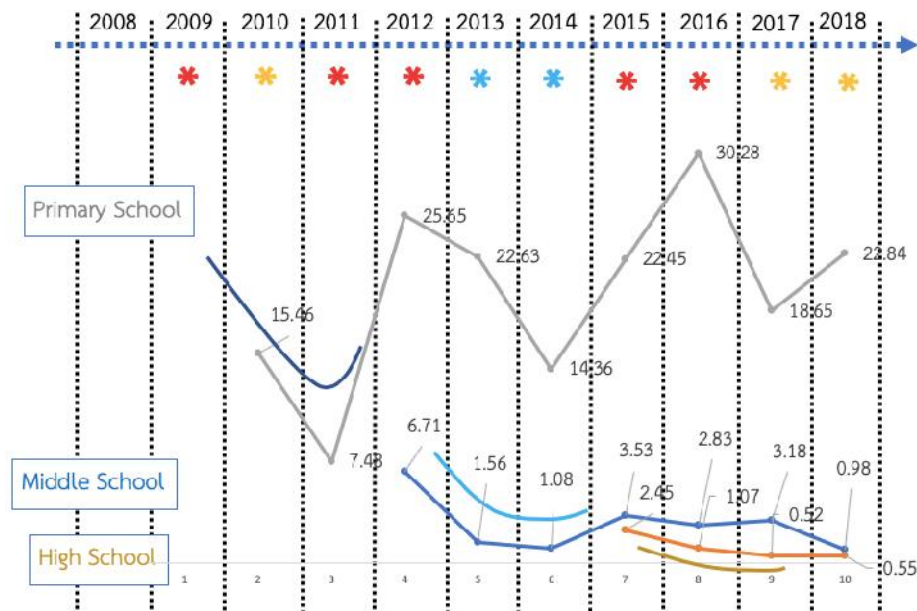Figure 9. Movement of science national educational score

English Subject

Figure 10. Movement of English national educational score

Figure 8, 9 and 10. Show movement pattern of mathematics national educational score. There is a parabola pattern in each student generation, Y, Y+3, and Y+6. The highest score is shown in primary school then drops drown at middle school and raise in high school. In the other point of view, there are look like a parabola pattern in the first three years in each level of education that minimum value may affect democratic minister in primary and middle school and high school may affect by the revolution minister. The patter cannot confirm with statistic method due to the data limitation.

Adverse Event on Educational System

As previously analyzed and discussed data, under the assumption that national educational score is representative of educational policy success. The expected national educational score should have a positive coefficient with linear trend of data or naïve pattern. However, the majority of the data has an irregular pattern or dies to drown. There are the swing data patterns in the period of educational policy change both of switching in democratic form and revolution government. The continuous policy may produce effective output to the educational system. However, after 13 October 2018, Thailand's national strategy was announced and forces all government to formulate an educational policy under the national strategy framework that may solve the problem of discontinuous policy.

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