A Study on Managing Difficulties and Their Corresponding Strategies of Continuing Education of Vocational High School & Senior High School with Low Birthrate in Taiwan

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ABSTRACT

This study aims at investigating managing difficulties and their corresponding strategies of Continuing Education of Vocational High School & Senior High School with low birthrate in Taiwan. Through a questionnaire survey, the study objects were teachers from Continuing Education of Vocational High School & Senior High School. 554 copies of questionnaires were sent, 501 valid questionnaires were withdrawn. Based on the results, generalizing the conclusion is as follows: (1) “teacher stress” and “enrollment issues” indicate higher perception in managing difficulties. (2) “strengthening school marketing and enrollment strategies” are recognized highly. (3) Having less than 15 classes in public school, teachers who are aged over 41, with 11~15 year experiences, feel highest awareness to managing difficulties. (4) Teachers are in the position of an administrative director aged over 31, with an educational background of graduate school, having 6~10 or 16~20 year experiences, their attitudes about corresponding strategies are the most active and positive. (5) Teachers who have the higher awareness on school managing difficulties have the more active and positive responses to school corresponding strategies.

Keywords: Low Birthrate, Continuing Education of Vocational High School & Senior High School, Managing Difficulties, Corresponding Strategies

1. INTRODUCTION

People are one of four elements in a nation. The population structure and citizens’essence of a nation will positively influence its sustainable development. In recent years, the low birthrate is towards a global trend. According to the statistical
data (2011) of Household Registration Department, Ministry of Interior, the population birthrate in Taiwan dropped from 2.297% (1981) to 1.165% (2001), and then the lower rate was 0.721% (2010). In fact, there were 166,886 babies born in Taiwan in 2010. The population birthrate rapidly declined to be 0.895% that formed a low birthrate type of society in Taiwan.

According to the population for years from Household Registration Department, Ministry of Interior, the Statistical Department, Ministry of Education estimates 2012~2022, the enrollment in Junior High School are 284,724/ 2012 & 173,069/ 2022. Within the next decade, the enrollment in Junior High School will decrease more than 100,000 students. The enrollment in Senior High School & Vocational High School calculate below 200,000 students in 2020. (The Statistical Department, Ministry of Education 2011) The enrollment will be insufficient for Senior High School & Vocational High School and consequently it will be more difficult for Continuing Education of Vocational High School & Senior High School. If the numbers of students keep declining, schools will face some situations such as reducing classes, reducing departments or stopping enrollment that will cause some issues including an excess of teachers, idle space and equipment, even school transforming or school strategic alliances.

Diploma is every thing that people who have generally the concept are fond of Senior High School than Vocational High School and the Continued Education is their last choice when they choose schools. This situation results in that the Continued Education Schools enroll students with low learning motive, low achievement, low socioeconomic conditions and low family function eventually. (Ministry of Education, 2011a) In addition to the low birthrate, the factors those make the Continuing Education Schools encounter managing difficulties also include admission without entrance exam, diverse entrance programs and implementing the 12-year basic education, phasing in tuition-free education. It was discussed how to create the new value of Continuing Education Schools and their reforms and transformations in school affair director meeting of Senior Secondary Continuing Education School held by Ministry of Education in 2011. (Ministry of Education, 2011b) Educators should be aware of school managing difficulties because of low birthrate and conduct related supporting measures and facilitate sustainable management for Continuing Education School.
The objects in the domestic and international literature and the related researchs less focus on corresponding strategies of Continuing Education of Vocational High School & Snior High School with low birthrate. Therefore, the researchers hope by sampling methods to analyse and deduce managing difficulties and their corresponding strategies of Continuing Education of Vocational High School & Snior High School owing to low birthrate and then expect the research results to offer a reference of the related issues for the related units in future.

2. RESEARCH DESIGN AND IMPLEMENTATION

(1). Research Framework

According to backgrounds, motives and purposes of the research and the data of the relevant literature results, summarize and analyse the results to design the possible relationship between the variables of the research and then build the research framework. Teacher individual and school backgrounds are the independent variables, managing difficulties and their corresponding strategies of Continuing Education of Vocational High School & Snior High School owing to low birthrate are the dependent variables. Investigate teachers of Continuing Education of Vocational High School & Snior High School with the different background about their responses to managing difficulties and their corresponding strategies of Continuing Education owing to low birthrate. Research framework is shown in Figure 1.

The variable contents are described as follows:

A. The teacher individual background variables: gender, age, duty, education, and years of service.

B. The school background variables: school attribute, school location and school scale.

Dependent variables include:

A. Managing difficulties of Continuing Education of Vocational High School & Snior High School owing to low birthrate: enrollment issues, teacher stress, idle resources and indefinite school orientation

B. Corresponding strategies of Continuing Education of Vocational High School & Snior High School owing to low birthrate: strengthening school marketing and enrollment strategies, developing the new market, adjusting department and exquisite education, idle campus resource planning, reformation development and school strategic alliance.
Figure 1 Research Framework

(2). Research Object

The full-time teachers were in public or private Continuing Education of Vocational High School & Senior High School in Taiwan in 2011.

(3). Research Tools

This study adopts the survey of the questionnaire. Compile the questionnaire of managing difficulties and their corresponding strategies of Continuing Education of Vocational High School & Senior High School owing to low birthrate according to collected data by referring to relevant literatures.

3. ANALYSIS AND DISCUSSION OF RESEARCH RESULTS

The population of the study was the full-time teachers in public or private Continuing Education of Vocational High School & Senior High School in Taiwan. The survey of the questionnaire was implemented by stratified random sampling, and the sampling distribution was as follows: the north of Taiwan 253(45.73%), the middle of Taiwan 157(28.41%), the south and the east of Taiwan 144 (25.86%). From May 21 to June 8, 2012, the total of Sampling amounted to 63 schools, 554 copies of questionnaires were sent and 501 valid questionnaires were withdrawn.
(1). Analysis of Teacher Individual Background and School Background

A. Gender: male, 50.3% and female, 49.7%
B. Age: below 30, 17.2%; 31-40, 38.9%; 41-50, 25.5%; over 51, 18.4%
C. Duty: Teachers are in the position of an administrative director, 11.6%; teachers are in the position of team leader, 25.1%; teachers are in the position of a tutor, 50.5%; full-time teachers, 12.8%.
D. Education: Education University, 15.4%; General University, 39.3% and Graduate School, 45.3%
E. Years of Service: below 5 years, 42.9%; 6-10 years, 26.1%; 16-20 years, 8%; over 21 years, 11.8%
F. School Attribute: 197 teachers teaching in public schools, 39.3%; 304 teachers teaching in private schools, 60.7%
G. School Location: 258 in the north of Taiwan, 45.5%; 146 in the middle of Taiwan, 29.2%; 127 in the east and south of Taiwan, 25.3%
H. School Scale: there are 66 schools having below 6 classes each, 13.2%; there are 172 schools having 7-15 classes each, 34.3%; there are 107 schools having 16-24 classes each, 21.4%; there are 156 schools having over 25 classes each, 31.1%.

(2). Teachers of Continuing Education of Vocational High School & Senior High School How to Face Managing Difficulties of Schools and Their Corresponding Strategies with Low Birthrate.

A. Teacher’s Awareness: enrollment issue, teacher stress and indefinite school orientation, teacher's perceptions are higher than idle resources shown as Table 1.
B. Teacher’s Corresponding Strategies include strengthening school marketing & enrollment strategy, developing the new market, adjusting department & exquisite education, idle campus resource planning and reformation development & school strategic alliance shown as Table 1.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Variable</th>
<th>Number of Question</th>
<th>M</th>
<th>SD</th>
<th>Score Sequencing</th>
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<tbody>
<tr>
<td>Managing Difficulty</td>
<td>Indefinite School Orientation</td>
<td>6</td>
<td>2.80</td>
<td>.71</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Enrollment Issue</td>
<td>4</td>
<td>3.21</td>
<td>.73</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Idle Campus Resource</td>
<td>3</td>
<td>2.56</td>
<td>.82</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 1  Statistics and Analysis
Teacher Stress 4 3.39 .69 1  
Overall Managing Difficulty 17 2.99 .57  
Reformation Development & School Strategic Alliance 7 3.95 .58 4  
Strengthen School Marketing & Enrollment Strategy 4 4.26 .47 1  
Adjusting Department & Exquisite Education 4 4.11 .50 2  
Developing New Market 4 3.96 .58 3  
Idle Campus Resource Planning 3 3.82 .66 5  
Overall Corresponding Strategy 21 4.02 .43  

N=501

(3). The Relationship between Teacher Individual Backgrounds and School’S Managing Difficulties with Low Birthrate, The Statistical Results are Shown as Table 2.

A. There is no significant difference in the aspect of gender.
B. Regarding enrollment issue and idle campus resource, teachers who are aged 41-50 and over 50 have higher awareness than those aged below 31.
C. There is no significant difference in the aspect of teacher’s duties.
D. There is no significant difference in the aspect of education backgrounds.
E. Teachers who are at the different years of service have significant differences to every single managing difficulty. Teachers who are with 11-15 years of service have higher awareness than those with below 5 or over 21 years of service.

Table 2 Teacher Individual Background and School Managing Difficulty

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gender</th>
<th>Age</th>
<th>Duty</th>
<th>Education Background</th>
<th>Year of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indefinite School Orientation</td>
<td>(3)&gt;(4),(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Enrollment Issue</td>
<td>(3),(4)&gt;(1)</td>
<td>(3)&gt;(1),(5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idle Campus Resource</td>
<td>(3)&gt;(1)</td>
<td>(4)&gt;(1),(2)</td>
<td>(3),(5)&gt;(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Stress</td>
<td>(2)&gt;(1),(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Managing Difficulty</td>
<td>(3)&gt;(1)</td>
<td>(3)&gt;(1),(5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N=501:
Age: (1) below 30, (2) 31-40, (3) 41-50, (4) over 51; Years of service: (1) below 5, (2) 6-10, (3) 11-15, (4) 16-20, (5) over 21

(4). The Relationship between Teacher Individual Backgrounds and Their Corresponding Strategies with Low Birthrate, The Statistical Results are Shown As Table 3.
A. There is no significant difference in the aspect of gender. The results conform to the study of Jen, 2006 and Shue, 2008.

B. Regarding strengthening school marketing & enrollment strategy, adjusting department & exquisite education, developing new market and idle campus resource planning, teachers who are aged 31-40 and 41-50 and over 51 have positive responses than those aged below 30. The results conform to the study of Wu, 2008.

C. Regarding reformation development & school strategic alliance, strengthening school marketing & enrollment strategy and adjusting department & exquisite education, teachers who are in different duties have significant differences, among them, teachers are in the position of an administrative manager have positive responses than others.

D. Regarding reformation development & school strategic alliance, strengthening school marketing & enrollment strategy, adjusting department & exquisite education and idle campus resource planning, teachers who are in the aspect of different education have significant differences, among them, teachers who have Master Degree or above show positive responses than others.

F. Regarding reformation development & school strategic alliance, strengthening school marketing & enrollment strategy, adjusting department & exquisite education and idle campus resource planning, teachers who are with different years of service have significant differences, among them, teachers who are with 6-10 and 16-20 years of service show positive responses than those with below 5 years of service, and teachers who are with 16-20 years of service show positive responses than those with over 21 years of service. The results conform to the study of Wu, 2008.

| Table 3 Teacher Individual Background and Their Corresponding Strategy |
|--------------------------|-------|-------|-------|-------|--------------------------|
| Variable | Gender | Age | Duty | Education | Year of Service |
| Reformation Development & School Strategic Alliance | (2),(3) > (1) | (2) > (3) | (3) > (2) | (2),(4) > (1) |
| Strengthen School Marketing & Enrollment Strategy | (2), (3),(4) > (1) | (1) > (2) | (3) > (2) | (2),(4) > (1) |
| Adjusting Department & Exquisite Education | (2), (3),(4) > (1) | (1) > (3) | (1), (3) > (2) | (2), (3),(4) > (1) |
| Developing New Market | (2), (3),(4) > (1) | * | * | |
| Idle Campus Resource Planning | (2), (3),(4) > (1) | * | (3) > (2) | (4) > (1),(5) |
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Overall Corresponding Strategy 
-
N=501; * represents significant level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Attribute</th>
<th>Location</th>
<th>Scale</th>
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</thead>
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<tr>
<td>Indefinite School Orientation</td>
<td>(1) &gt; (2)</td>
<td>(1), (2) &gt; (3)</td>
<td>(3) &gt; (2)</td>
</tr>
<tr>
<td>Enrollment Issue</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Idle Campus Resource</td>
<td>(2) &gt; (1), (3)</td>
<td>(1) &gt; (4)</td>
<td></td>
</tr>
<tr>
<td>Teacher Stress</td>
<td>(1) &gt; (2)</td>
<td>(2) &gt; (1), (3)</td>
<td>(3) &gt; (4)</td>
</tr>
<tr>
<td>Overall Managing Difficulty</td>
<td>(1) &gt; (2)</td>
<td>(2) &gt; (1)</td>
<td>(1), (2) &gt; (4)</td>
</tr>
</tbody>
</table>

N=501; *p<.05, represents significant level

School Attribute: (1) Public, (2) Private; Location: (1) the North of Taiwan, (2) the Middle of Taiwan

(5). The Relationship between Teacher School Background and School Managing Difficulties with Low Birthrate are Shown on Table 4.

A. Regarding indefinite school orientation, teacher stress and overall managing difficulty, teachers who are with the different school attribute have significant differences, among them, teachers who work in the public schools have higher awareness than those work in the private schools.

B. Regarding idle campus resource, teacher stress and overall managing difficulty, teachers who are from the different school locations have significant differences, among them, teachers who work in the middle of Taiwan have higher awareness than those work in the east and south of Taiwan. The results conform to the study of Shue, 2008.

C. Regarding indefinite school orientation, teacher stress and overall managing difficulty, teachers who come from the different school scale have significant differences. Having less than 6 classes and 7-15 classes of schools, teachers have higher awareness than those come from having over 25 classes of schools. The results conform to the study of Shue, 2008.
Taiwan, (3) the South and the East of Taiwan; Scale: (1) below 6 classes, (2) 7-15 classes, (3) 16-24 classes, (4) over 25 classes

(6). The Relationship between Teacher School Background and the Corresponding Strategies Owing to Low Birthrate are Shown on Table 5.

A. Regarding strengthening school marketing & enrollment strategy, teachers who are with the different school attribute have significant differences. Teachers who work in the private schools have positive responses than those work in the public schools. The results conform to the study of Shue, 2008.

B. Regarding strengthening school marketing & enrollment strategy and developing new market, teachers who are from the different school locations have significant differences, among them, teachers who work in the east and the south of Taiwan have positive responses than those work in the north of Taiwan.

C. Regarding reformation development & school strategic alliance, teachers who come from the different school scale have significant differences. Having less than 6 classes of schools, teachers have positive responses than those come from having 7-15 classes and 16-24 classes of schools. The results conform to the study of Shue, 2008.

Table 5 Teacher School Background and the Corresponding Strategy with Low Birthrate

<table>
<thead>
<tr>
<th>Variable</th>
<th>Attribute</th>
<th>Location</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reformation Development &amp; School Strategic Alliance</td>
<td>(2)&gt;(1), (3)</td>
<td>(1)&gt;(2)</td>
<td>(2)&gt;(3)</td>
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<tr>
<td>Strengthen School Marketing &amp; Enrollment Strategy</td>
<td>(2)&gt;(1)</td>
<td>(3)&gt;(1)</td>
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<td>Adjusting Department &amp; Exquisite Education</td>
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<tr>
<td>Developing New Market</td>
<td></td>
<td></td>
<td>(3)&gt;(1), (2)</td>
</tr>
<tr>
<td>Idle Campus Resource Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Corresponding Strategy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N=501
School Attribute: (1) public, (2) private; Location: (1) the north of Taiwan, (2) the middle of Taiwan, (3) the east and the south of Taiwan; Scale: (1) below 6 classes, (2) 7-15 classes, (3) 16-24 classes, (4) over 25 classes

(7). The Correlation Situation between Teachers and School Managing Difficulty & the Corresponding Strategy with Low Birthrate

A. The highest correlation item is enrollment issue and reformation development & school strategic alliance. Indefinite school orientation and strengthening school marketing & enrollment strategy appear negative correlative. Teacher
stress and idle campus resource planning appear negative correlative as well.

B. Overall managing difficulty and overall corresponding strategy show low correlation.

4. CONCLUSIONS AND SUGGESTIONS

(1). Conclusions

A. Managing difficulties of Continuing Education of Vocational High School & Senior High School, teacher stress and enrollment issue show higher awareness.

B. The corresponding strategies of Continuing Education of Vocational High School & Senior High School, strengthening school marketing & enrollment strategy gain the most active responses.

C. Teachers who are aged over 41 with 11-15 years of service have higher awareness to managing difficulties of Continuing Education of Vocational High School & Senior High School owing low birthrate.

D. Teachers are in the position of an administrative director aged over 31, with an educational background of graduate school, having 6~10 or 16~20 year experiences, their attitudes about corresponding strategies to low birthrate are the most active and positive.

E. Having less than 15 classes in public school in the middle of Taiwan, teachers feel higher awareness to school managing difficulties with low birthrate.

F. Having less than 6 classes in private school in the east and the south of Taiwan, teachers show higher active responses to school corresponding strategies with low birthrate.

G. Teachers who have the higher awareness on school managing difficulties have the more active and positive responses to school corresponding strategies.

(2). Suggestions

A. for Education Authorities

(A). Plan to reduce student number per class for Senior High School and Vocational High School year-by-year. Reducing student number per class make teachers have more time to take care of students fully and provide appropriate education for student’s individual differences and enhance learning effects of students and release teacher’s stress further.
(B). Expand strategic alliance of Technical Colleges and Continuing Education of Vocational High School & Snior High School, except students of Continuing Education have a vertical depth learning connecting and offer a powerful propaganda for recruiting students of schools.

(C). Increase expense allowance of remote Continuing Education Schools and make policies for their exit mechanism as soon as possible in order to reduce the burden of education cost.

B. for Schools and Teachers

(A). Schools should create teachers a centripetal force and consensus to schools, building an emotional communication of being proud of school. Make good use of elder teachers to pass down their legacy of experiences to drive academic exchanges among teachers and work out the good corresponding strategies to school managing difficulties.

(B). Schools should encourage teachers to pursue continuing education actively to enhance their own professional competence and absorb the knowledge of innovation & marketing to make themselves have the ability to implement corresponding strategies owing to low birthrate. Schools can be sustainable development as well finally.

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