

Scales for Coping Strategy Perception and an Implementation Scheme of “Tuition-Free Enrollment for Vocational High School Students”

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Abstract—His research aims to develop scales for coping strategy perception and the implementation scheme of “Tuition-free Enrollment for Vocational High School Students”. To make sure that the scales have rigorous constructive reliability and validity, the trial test questionnaires are analyzed by statistical software for factor analysis, item analysis and Cronbach’s α to determine the questionnaire’s reliability and validity; the data will be used as reference for selecting questions in the formal questionnaire. The questionnaire includes 33 questions to measure six dimensions: “strategic alliance”, “exquisite teaching”, “feature management”, “professional development”, “innovative teaching” and “resources deployment”.

Index Terms—Tuition-free enrollment for vocational high school students, perception, coping strategy.

I. BACKGROUND AND OBJECTIVES

A. Background

Education is of vital and lasting importance. Since the implementation of nine-year mandatory education for citizens in 1968, Taiwan has experienced many changes in educational reforms and related degrees. Making education more accessible to the general public not only helps our country to cultivate elites in various fields, but also sustains Taiwan’s economic miracle.

However, the “knowledge economy” of the 21st century has precluded the nine-year mandatory education from meeting the demands of society. Children need to possess more abilities, including the ability to solve questions, the ability to successfully handle communication and negotiations, creative abilities, the ability to cope with conflicts, high EQ, and so on. The Ministry of Education (MOE) initiated many reform plans to meet these demands [1]. As early as 1983, Taiwan proposed the concept of “elongating the period of education for citizens, with an emphasis on vocational education.” This concept was continuously changed or adjusted until 2011, when the President announced, in his New Year’s Day proclamation that the “12-year fundamental education” for citizens was to be launched and gradually implemented in several phases.

To lower the financial burden for economically disadvantaged families concerning education, it was

announced that vocational education started to pilot “tuition-free enrollment for Vocational High School students”. It is estimated that in 2014 tuition fees will be waved in all Vocational High Schools, and entrance exams omitted in a majority of schools, in order to make Taiwan a country with “evenly distributed wealth and justice” [2]. In addition, on Sep. 20, 2011, the Executive Yuan certified the “plans for implementing 12-year fundamental education for citizens” (Taiwan Educational No. 1000103358), which will be implemented in 2014 [3].

Difficulties facing the implementation of “tuition-free enrollment for Vocational High School students” may involve financial or legal problems. For example, believes that a healthy financial structure needs to be built [4]. As citizens’ income continues to increase, the government should strengthen financial subsidies and assistance for upper secondary education holds that the educational funding for the prolonged education of citizens can proceed by raising funds from grassroots or corporations [5], by increasing taxes from corporations or for-profit organizations, through government-issued educational bonds, by educational banks established by the government, or through annual savings with a fixed rate. Both scholars emphasize that the financial and legal resources should be legalized to ensure a complete and sustainable system. Another problem concerns the principle of fairness. As Li, Shin-Shing expressed [6], when it comes to the fairness of tuition-waving in Vocational High Schools, recipients of subsidies should exclude families that possess three or more real estate properties, families whose real estate value is more than 6,500,000 NTD in total, families with an annual interest of 100,000 or more, or students who have received public educational subsidies or reduced tuition. In this regard, tuition-free enrollment for vocational high students would not overlap with related tuition subsidies that are currently available, thereby, conforming to the principle of fairness in the distribution of resources.

Waving tuition for Vocational High School students causes quite a lot of confusion and conflict. As a result, this research will propose some coping strategies and implementation schemes concerning this topic. Moreover, this research will define coping strategies via researching scales. We expect that these scales will be used as reference for relevant competent authorities that care about this topic.

B. The Research Purpose

This research aims to develop coping strategy for tuition-free enrollment for Vocational High School students, as well as scales for the implementation scheme. Based on the

Manuscript received March 8, 2014; revised May 15, 2014.

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research background stated above, the research has the following objectives:

- 1) Discussing the current conditions for the coping strategies and implementation scheme for scales concerning tuition-free enrollment for Vocational High School students.
- 2) Analyzing the scale content of the coping strategies and implementation scheme concerning tuition-free enrollment for Vocational High School students.
- 3) Developing the scales of the coping strategies and implementation scheme concerning tuition-free enrollment for Vocational High School students.

II. RESEARCH DESIGN AND IMPLEMENTATION

This research is a survey research. To achieve the purpose of this research, we first collected related data by conducting a literature review, then sorted out, modified and compiled a "Questionnaire on the Perception of Coping Strategies and Implementation Scheme of Tuition-Free Enrollment for Vocational High School Students", to serve as the research tool used in this research, based on the layout for this research.

In accordance with the purpose of the research, the coping strategy perception and the perception regarding tuition-free enrollment for Vocational High School students are discussed; the problem is exacerbated by Taiwan's low birth rate. The questionnaire in this research uses a Likert five-point scale; 5 points signifies "agree very much"; 4 points, "agree"; 3 points, "no comment"; 2 points, "disagree"; and 1 point, "disagree very much".

This research concerns the Vocational High School teachers' thoughts, observations and feelings about the tuition-free enrollment for Vocational High School students. This research contains three dimensions: supporting measures, target and content. The higher the research subjects score in the perception section on the questionnaire compiled by the researchers, the better the research subjects comprehend the content of this scheme.

The procedures of compiling this questionnaire are described as follows:

A. Steps of Research

To effectively achieve its purpose, this research established systematic steps and has proceeded accordingly, as follows:

- 1) Propose a research direction and purpose: After conducting a literature review, determine that the theme of the research is Vocational High School teachers' coping strategies and perception of tuition-free enrollment for their students.
- 2) Collect and discuss the literature: collect and read related materials and research reports, synthesize and analyze the literature for establishing the theoretical foundation of this research.
- 3) Establish the research structure: This research determines the relationship between the independent variables and dependent variables, so as to establish the research structure according to the literature review.
- 4) Design a draft for the questionnaire: This research uses the

questionnaire as a tool. After collecting the literature on the purpose of research, propose and then decide on a draft for the trial test questionnaire.

- 5) Peer review and modifications: Send the draft of the trial test questionnaire to experts in related fields for reviewing the trial test questions. Modify the questions based on the experts' opinions. After the questionnaire draft is compiled, establish the content validity of the questionnaire and modify the inappropriate questions.
- 6) Conduct the trial test with the trial test questionnaire and modifications:

Conduct the trial test with the trial test questionnaire among Vocational High School teachers in central Taiwan. Conduct factor analysis and item analysis on the responses, to modify and finalize the questionnaire.

B. Research Structure

In accordance with a literature review on related foreign and domestic literature, this research determines the related factors concerning Vocational High School teachers' coping strategy perception of tuition-free enrollment for their students, sorts out the relationship among the variables, and establishes the research structure to achieve the research purpose. The research involves two parts: dependent variables (including a tuition-free enrollment scheme and coping strategy perception) and independent variables (including school environment and teacher background). The related variables are described as follows:

1) Dependent variables

- 1) Variables concerning teachers' personal background: including gender, age, subjects, length of service, position, education, and so on;
- 2) Variables concerning school background: including school district and school affiliation.

2) Independent variables

- 1) Teachers' perception can be classified as:
 - Supporting measures
 - Content
 - Target
- 2) Teachers' coping strategies can be classified as:
 - Strategic alliance
 - Exquisite teaching
 - Feature management
 - Professional development
 - Resources deployment

C. Research Subjects

The main research subjects for this study are the full-time vocational teachers in public or private Vocational High Schools in Taiwan in 2011. A trial test was carried out after the experts had reviewed the validity of the questionnaire. The trial test questionnaires were issued from Apr. 1, 2012. The trial test subjects were selected from 4 Vocational High Schools, following the principle of purposive sampling, and 158 copies of trial test questionnaires were issued for the trial test, with the response rate about 98.75%.

D. Research Instruments

This research is a survey research. To achieve the purpose of the research, the related literature is first collected, and

then the materials are sorted out and modified in accordance with the research structure, to compile “Questionnaire on the Coping Strategy Perception and Implementation Schemes for Tuition-free Enrollment for Vocational High School Students”, as the research tool. The procedures of compiling a questionnaire are described as follows:

1) *Determining the structure of the questionnaire and compiling a draft*

In order to objectively analyze Vocational High School teachers’ perception of a tuition-free enrollment scheme for Vocational High School students and coping strategy, this research discusses the theoretical foundation of this study by conducting a literature review, and develops a draft of the questionnaire, showed as Table I. The questionnaire contains three parts: the first part contains basic information of the respondents, including teachers’ personal background variables (gender, subject, age, education, length of service, position), as well as two variables about school environment (including school district and school affiliation); the second part is the questionnaire about teachers’ perception of a tuition-free enrollment scheme, including three dimensions: supporting measures, target and content; the third part is the Questionnaire on Teachers’ Perception of Coping Strategy of Tuition-Free Enrollment; it includes six dimensions: “strategic alliances”, “exquisite teaching”, “feature management”, “professional development”, “innovative teaching” and “resources deployment”.

TABLE I: DIMENSIONS OF TEACHERS’ PERCEPTION OF TUITION-FREE ENROLLMENT SCHEME AND COPING STRATEGY

Dependent Variables	Dimensions	Number of Questions	Total
Teachers’ Perception of Tuition-free Enrollment Scheme	Supporting measures	4	21
	Content	6	
	Target	11	
Teachers’ Coping Strategy Perception of Tuition-free Enrollment	Strategic alliance	6	33
	Exquisite teaching	5	
	Feature management	5	
	Professional development	6	
	Innovative teaching	5	
	Resources deployment	6	
Total			54

III. RESULT ANALYSIS AND DISCUSSION

A. *Establishing Content Validity*

When the draft of the questionnaire is completed, five professionals are invited to fill out Vocational High School Teachers’ Perception of Tuition-free Enrollment Scheme and Teachers’ Coping Strategy Perception of Tuition-free Enrollment—in Proceeding (Expert Review). The experts provide revision comments regarding the appropriateness and wording of the questions establish the content validity of the research instrument and use the content validity as an important reference for constructing the formal questionnaire. The experts and scholars examine the applicability one question after another. They check out one of these items under each question: usable, usable after modification, comments on modification, and delete. They also write out their modification comments in blanks, in order to establish the content validity of the research instrument and to use it as

a reference for constructing the formal questionnaire.

B. *Conducting the Trial Test and Analyzing the Results*

In order to understand the applicability and usability of the questionnaire, the trial test questionnaires were gradually issued from Apr. 1, 2012, when the draft was completed. The trial test subjects were selected from 4 Vocational High Schools, following the principle of purposive sampling. One hundred and fifty-eight copies of the trial test questionnaires were issued and the trial test was conducted. The response rate was about 98.75%.

In order to establish more rigorous construct validity and reliability for the research instrument, statistical software was used to conduct factor analysis, item analysis and Cronbach’s α on the responses when trial test questionnaires were collected. The reliability and validity of the questionnaires thus established are used as reference for selecting questions when constructing the formal questionnaire. The explanations are as follows:

1) *Item analysis*

In accordance with the criteria for deleting a question, the questionnaire on Vocational High School Teachers’ Perception of Tuition-Free Enrollment for Their Students, which was used in this research, contains a total of 21 questions, covering three dimensions: supporting measures, target and content, respectively. Results of the statistical analysis using SPSS are displayed in Table II; question 12 has a cumulative α smaller than .4, with a significance level higher than .05, indicating that question 12 should be deleted for its lack of homogeneity with the overall scale, while the rest of questions should be kept.

TABLE II: ITEM ANALYSIS OF THE QUESTIONNAIRE ON VOCATIONAL HIGH SCHOOL TEACHERS’ PERCEPTION OF TUITION-FREE ENROLLMENT FOR THEIR STUDENTS

Question	CR value	Pearson’s Correlation Coefficients between Question and Scale Total Score	Cronbach’s α after the question is deleted	Remark
1	4.640	.414(**)	.912	Kept
2	6.657	.528(**)	.910	Kept
3	6.855	.582(**)	.909	Kept
4	9.135	.652(**)	.907	Kept
5	8.628	.619(**)	.908	Kept
6	7.864	.643(**)	.907	Kept
7	9.733	.701(**)	.906	Kept
8	7.446	.634(**)	.907	Kept
9	7.270	.578(**)	.909	Kept
10	8.426	.639(**)	.907	Kept
11	8.364	.612(**)	.908	Kept
12	3.849	.350(**)	.914	Deleted
13	8.061	.477(**)	.911	Kept
14	7.941	.520(**)	.911	Kept
15	11.809	.702(**)	.905	Kept
16	11.060	.710(**)	.905	Kept
17	9.767	.694(**)	.906	Kept
18	1.088	.745(**)	.904	Kept
19	9.017	.621(**)	.908	Kept
20	9.244	.655(**)	.907	Kept
21	6.106	.583(**)	.908	Kept

The value of Cronbach’s α (Internal consistency) is .912 for the overall scale before deleting that question.

Note: N=158; * means significant correlation at $p < .01$ (two-tailed).

In accordance with the criteria for deleting a question, the questionnaire on Vocational High School Teachers’

Perception of Tuition-free Enrollment for Their Students, which was used in this research, contains 33 questions, covering six dimensions: “strategic alliance”, “exquisite teaching”, “feature management”, “professional development”, “innovative teaching” and “resources deployment”, respectively. Results of the statistical analysis using SPSS are displayed in Table III; in accordance with the criteria for deleting a question, questions 29 and 32 have cumulative α that are smaller than .4, with a significance level higher than .05, indicating that both questions should be deleted for their lack of homogeneity with the overall scale, while the rest of questions should all be kept.

TABLE III: ITEM ANALYSIS ON THE QUESTIONNAIRE ON VOCATIONAL HIGH SCHOOL TEACHERS’ PERCEPTION OF TUITION-FREE ENROLLMENT FOR THEIR STUDENTS

Question	CR value	Pearson’s Correlation Coefficients between Question and Scale Total Score	Cronbach’s α after the question is deleted	Remark
22	8.313	.632(**)	.929	Kept
23	6.126	.609(**)	.929	Kept
24	7.806	.686(**)	.928	Kept
25	6.685	.554(**)	.930	Kept
26	9.100	.715(**)	.928	Kept
27	7.193	.644(**)	.929	Kept
28	6.047	.553(**)	.930	Kept
29	4.115	.384(**)	.933	Deleted
30	4.450	.455(**)	.932	Kept
31	4.389	.440(**)	.932	Kept
32	2.613	.309(**)	.934	Deleted
33	8.759	.619(**)	.929	Kept
34	9.277	.619(**)	.929	Kept
35	7.298	.541(**)	.930	Kept
36	1.110	.612(**)	.929	Kept
37	7.851	.625(**)	.929	Kept
38	9.513	.633(**)	.929	Kept
39	7.963	.619(**)	.929	Kept
40	7.732	.601(**)	.929	Kept
41	6.667	.565(**)	.930	Kept

42	4.939	.492(**)	.931	Kept
43	7.632	.558(**)	.930	Kept
44	7.379	.553(**)	.930	Kept
45	8.603	.664(**)	.929	Kept
46	7.256	.564(**)	.930	Kept
47	9.564	.664(**)	.928	Kept
48	9.001	.651(**)	.929	Kept
49	8.598	.661(**)	.929	Kept
50	8.443	.665(**)	.929	Kept
51	6.511	.579(**)	.929	Kept
52	6.766	.606(**)	.929	Kept
53	6.395	.562(**)	.930	Kept
54	9.257	.671(**)	.929	Kept

The value of Cronbach’s α (Internal consistency) is .932 for the overall scale before deleting that question, Note: $N=158$;

* means significant correlation at $\alpha = .01$ (two-tailed).

2) Factor analysis

In the results of the first analysis, X^2 value in Bartlett’s Test of Sphericity is 1597.450, $KMO = .875$ ($df=190$), $p < .05$, indicating that common factors exist in the relation matrix in the sample, and that it is appropriate to use factor analysis on the responses to this questionnaire. Three factors are extracted with characteristic values of 5.590, 3.062 and 2.696, respectively. The bigger a characteristic value, the more important that factor is in explaining variable constructs. These three factors account for 27.952%, 15.308% and 13.482% of the variance, respectively. The three factors cumulatively explain 56.742% of the variance, as displayed in Table IV and Table V.

TABLE IV: KMO AND BARTLETT’S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.875
Bartlett’s Test of Sphericity	Approx. Chi-Square	1597.450
	df	190
	Sig.	.000

TABLE V: FACTOR ANALYSIS ON TEACHERS’ PERCEPTION OF TUITION-FREE ENROLLMENT

Question # in the trial test questionnaire	Factor 1	Factor 2	Factor 3	Question # in the formal questionnaire
17	.755	.239	-.021	1
15	.734	.213	.076	2
18	.731	.339	.044	3
9	.730	.030	-.034	4
6	.683	.229	-.011	5
7	.683	.211	.171	6
16	.674	.201	.239	7
4	.667	.064	.277	8
8	.640	.022	.322	9
5	.606	-.103	.530	10
10	.511	.299	.234	11
13	-.003	.726	.294	12
20	.436	.652	.023	13
21	.283	.592	.219	14
14	.317	.564	-.060	15
19	.476	.553	-.032	16
11	-.082	.525	.345	17
2	.132	.205	.840	18
1	.092	.053	.816	19
3	.179	.364	.687	20
Characteristic value	5.590	3.062	2.696	
% of variance explained	27.952%	15.308%	13.482%	
Cumulative % of variance explained	39.002%	49.261%	56.742%	

After factor analysis, some questions are kept, as displayed in Table VI.

TABLE VI: QUESTIONS KEPT AFTER FACTOR ANALYSIS ON THE SCALE OF TUITION-FREE ENROLLMENT SCHEME

Factor	Factor Name	Question # in the trial test questionnaire	Number of questions
1	Supporting measures	2, 1, 3	3
2	Content	13, 20, 21, 14, 19, 11	6
3	Target	17, 15, 18, 9, 6, 7, 16, 4, 8, 5, 10	11
Total			20

In the results of the first analysis of Coping Strategy in the trial test questionnaire, χ^2 value in Bartlett's Test of Sphericity is 3345.483, KMO = .886 ($df = 465$), $p < .05$, indicating that common factors exist in the relation matrix in the sample, and that it is appropriate to use factor analysis on the responses to this questionnaire. Six factors are extracted from factor analysis on Coping Strategy, and factor No. 6 includes questions 31 and 30, and includes fewer than 3 questions; therefore, questions 31 and 30 are deleted before the second Coping Strategy factor analysis is conducted. When factors No. 5 and 6 are combined, the characteristic values are 5.381, 4.392, 4.287, 3.094, 2.335 and 1.835, respectively. The bigger a characteristic value is, the more important that factor is in explaining variable constructs. These six factors account for 17.359%, 14.166%, 13.829%, 9.979%, 7.532% and 5.920% of the variance, respectively. Six factors cumulatively explain 68.785% of the variance, as displayed in Table VII, Table VIII, TABLE IX and TABLE X.

TABLE VII: KMO AND BARTLETT'S TEST FOR THE QUESTIONNAIRE ON VOCATIONAL HIGH SCHOOL TEACHERS' COPING STRATEGY PERCEPTION OF TUITION-FREE ENROLLMENT

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.892
Bartlett's Test of Sphericity	Approx. Chi-Square
	3173.658
	df
	406
	Sig.
	.000

TABLE VIII: SECOND FACTOR ANALYSIS ON VOCATIONAL HIGH SCHOOL TEACHERS' COPING STRATEGY PERCEPTION OF TUITION-FREE ENROLLMENT

(A)	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	(B)
50	.781	.232	.131	.015	.153	.130	21
51	.762	.055	.229	.098	-.058	.124	22
54	.752	.148	.135	.192	.193	.112	23
49	.734	.161	.205	.158	.178	.017	24
52	.681	.063	.155	.258	.152	.018	25
47	.681	.174	.077	.433	.137	-.032	26
48	.669	.167	.093	.386	.235	-.102	27
53	.609	.162	.131	-.003	.282	.071	28
45	.566	.162	.141	.408	.370	-.085	29
23	.106	.838	.148	.068	.079	.116	30
24	.156	.812	.272	.071	.159	.095	31
22	.183	.796	.154	.103	.135	-.024	32
27	.196	.665	.268	.147	.022	.193	33
25	.217	.658	.385	-.247	.056	.076	34
26	.225	.624	.399	.174	.058	.179	35
28	.044	.536	.147	.331	.042	.190	36
34	.220	.197	.806	.146	-.012	.053	37
36	.249	.173	.805	-.023	.206	.022	38
37	.123	.256	.773	.130	.179	.046	39

(A) Question # in the trial test questionnaire; (B) Question # in the formal questionnaire

TABLE IX: SECOND FACTOR ANALYSIS ON VOCATIONAL HIGH SCHOOL TEACHERS' COPING STRATEGY PERCEPTION OF TUITION-FREE ENROLLMENT

(A)	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	(B)
33	.204	.237	.717	.052	.039	.239	40
35	.093	.268	.710	.042	.200	-.061	41
38	.129	.298	.608	.193	.320	.028	42
44	.270	.060	.054	.800	.002	.178	43
43	.217	-.003	.250	.717	.165	.089	44
42	.170	.126	-.022	.688	.265	.093	45
46	.305	.340	.109	.615	-.003	-.265	46
39	.383	.125	.243	.120	.787	.009	47
42	.341	.147	.243	.147	.712	.009	48
41	.313	.108	.255	.252	.649	-.108	49
31	.065	.239	.103	.006	-.011	.849	Deleted
30	.116	.186	.077	.158	-.043	.845	Deleted
(C)	5.381	4.392	4.287	3.094	2.335	1.835	
(D)	17.35%	14.16%	13.82%	9.979%	7.532%	5.920%	
(E)	17.35%	31.52%	45.35%	55.333%	62.86%	68.785%	

(A) Question # in the trial test questionnaire

(B) Question # in the formal questionnaire

(C) Characteristic value

(D) % of variance explained

(E) Cumulative % of variance explained

TABLE X: QUESTIONS KEPT AFTER FACTOR ANALYSIS ON COPING STRATEGY SCALE

Factor	Factor Name	Question # in the trial test questionnaire	Number of questions
1	Strategic alliance	50, 51, 54, 49, 52, 53, 47, 48, 45	9
2	Exquisite teaching	39, 40, 41	3
3	Feature management	34, 36, 37, 33, 35, 38	6
4	Professional development	44, 43, 42, 46	4
5	Resources deployment	23, 24, 22, 27, 25, 26, 28	7
Total			29

3) Reliability analysis

The value of the overall scale for the "perception" in this research is .914. The values for internal consistency in three subscales are .905, .751 and .823, respectively, as displayed in Table XI. The values for the overall scale and subscales are all above .70. The values confirm scholars' opinions. Therefore, it can be inferred that the internal consistency among the overall scale and its subscales is pretty good after certain questions are deleted.

TABLE XI: RELIABILITY ANALYSIS OF QUESTIONNAIRE ON VOCATIONAL HIGH SCHOOL TEACHERS' PERCEPTION OF TUITION-FREE ENROLLMENT SCHEME

Factor number	Factor name	Question #	Cronbach's α of each factor	Cronbach's α of the overall scale
1	Supporting measures	11	.823	.914
2	Content	6	.751	
3	Target	3	.905	

The value of the overall scale for the "coping strategy" in this research is .942. The values for internal consistency in five subscales are .918, .894, .901, .802 and .852, respectively, as displayed in Table XII. The values for the overall scale and subscales are all above .70. The values

confirm scholars' opinions. Therefore, it can be inferred that the internal consistency among the overall scale and its subscales is pretty good after certain questions are deleted.

TABLE XII: RELIABILITY ANALYSIS OF QUESTIONNAIRE ON VOCATIONAL HIGH SCHOOL TEACHERS' COPING STRATEGY PERCEPTION OF TUITION-FREE ENROLLMENT FOR THEIR STUDENTS

Factor Number	Factor Name	Number of questions	value for each factor	value for the overall scale
Factor 1	Strategic alliance	9	.918	
Factor 2	Exquisite teaching	7	.852	
Factor 3	Feature management	6	.901	
Factor 4	Professional development	4	.802	
Factor 5	Resources deployment	3	.894	

C. Completing the Formal Questionnaire

Professionals and scholars provide revision comments on the trial test questionnaire used in this research; we then modify it based on factor analysis, item analysis and reliability analysis, delete questions that are not appropriate, rearrange question numbers, and compile the formal questionnaire. The questionnaire contains three parts: basic information about tuition waving and about the teacher who fills out the questionnaire, as well as a section on teachers' coping strategy perception of the tuition waving.

IV. CONCLUSION

According to its purpose, this research examines the scale used, and the results of analysis are as follows:

- Analyze the content of Coping Strategy Perception and Implementation scheme of "Tuition-free Enrollment for Vocational High School Students"
 - Teachers' perception of tuition-free enrollment: Perception refers to a person's understanding of things, and does not include his or her emotions. Put simply, the perception is based on what facts are observed by a person, what thoughts that person develops concerning those facts, and the emotions that person has. Perception in this research refers to Vocational High School teachers' observations, thoughts and emotions about tuition-free enrollment for their students. This research includes three dimensions: supporting measures, target and content. Our researchers compile a questionnaire on these dimensions, and use numbers to evaluate the degree of perception. The higher a respondent scores on the perception section, the higher the teacher's level of perception of tuition-free enrollment.
 - Vocational High School Teachers' Coping Strategy of Tuition-free Enrollment: Coping strategy is the reaction a person has when facing stress. Everyone feels differently about stress, and adopts different ways of coping with stress. When an individual is troubled, he

or she has to adopt appropriate coping strategies to relieve stress. This research measures Vocational High School teachers' level of perception of tuition-free enrollment for their students.

- Developing scales on the perception of coping strategy and implementation scheme of "tuition-free enrollment for Vocational High School students"

The formal questionnaire contains two parts: the first part includes independent variables (including variables about teacher background, school environment); the second part includes dependent variables (including scheme and coping strategy perception). The teachers' perception of scheme can be classified into: 1) Supporting measures; 2) Content; 3) Target.

Teachers' perception of Coping Strategies can be classified into: 1) strategic alliance; 2) exquisite teaching; 3) feature management; 4) professional development; 5) resources deployment

The scales above, according to reviews from experts and scholars, have achieved professional levels of content validity; in terms of the reliability test, the value for the overall scale about "perception" is .914, and the values for internal consistency of three subscales are .905, .751 and .823, respectively; the value for the overall scale is .942, and the values for internal consistency of five subscales are .918, .894, .901, .802 and .852, respectively, as displayed in Table xii.

The values of the overall scale and subscales are all above .70, and the reliability confirms the opinions of scholars'. Therefore, it can be inferred that the internal consistency for the overall scale and its subscales is pretty good after some questions are deleted.

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