

Chapter 4

Results of Data Analysis

This research is an analysis and development which includes the following objectives: (1) To synthesize standards and indicators of Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level (2) To construct and develop Internal Educational Quality Assurance Model for Bilingual Schools in Early Childhood Education Level and (3) To study the result of Internal Educational Quality Assurance Model for Bilingual Schools in Early Childhood Education Level. The researcher presents the data analysis results into three parts as the followings.

Part 1 Synthesis of resulting consequences of standards and indicators of internal educational quality for Bilingual Schools in Early Childhood Education Level.

1. Synthesis of the result of standards and indicators of internal educational quality for Bilingual Schools in Early Childhood Education Level.
2. Quality Checking of the result of standards and indicators of internal educational quality for Bilingual Schools in Early Childhood Education Level.

Part 2 Results of model construction and development of Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level

1. Result of construction and development of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level
2. Result of qualities analysis of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level

Part 3 The study of resulting trial of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

1. Results of the trial of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.
2. Results of concurrent validity analysis of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

Part 1 Synthesis of the result of standards and indicators of internal educational quality assurance for Bilingual Schools in Early Childhood Education Level.

1. Synthesis of the result of standards and indicators of internal educational quality assurance for Bilingual Schools in Early Childhood Education Level.

Researcher synthesized standards and indicators for Internal educational assurance in Early Childhood Education Level for Bilingual Schools from 10 country with possession of Top score on PISA'2009 including Finland, Korea, Shanghai China, Hong Kong China, Singapore, Canada, New Zealand, Japan, Australia and Netherlands. With UNESCO bilingual school, World Class bilingual school and Educational Standards of Thailand including ONESQA and OBEC. The synthesis result contains 5 part, 13 standards and 58 indicators as followings.

1) Standards of students quality bestow 4 standards 18 indicators including standard 1,2,3,4

2) Standards of educational administration bestow 4 standards 29 indicators including standard 5, 6, 7, 8

3) Standards according to government's policy bestow 3 standards 6 indicators including standard 9, 10, 11

4) Standards of students security bestow 1 standards 1 indicators including standard 12

5) Standards of general management bestow 1 standards 4 indicators including standard 13

(The detail shown in Appendix D, p 172)

2. Quality Checking result of standards and indicators of internal educational quality for Bilingual Schools in Early Childhood Education Level.

The quality checking of standards and indicators contains 2 steps 1) The quality checking of content validity of standards and indicators including comprehensiveness, consistency of standards and indicators and consistency of indicators and evidence or resources that show result of implementation in each indicators and also appropriateness of the language used by experts. 2) The quality checking of structure validity and consistency between standards and indicators model with empirical data. The researcher was shown as the followings.

2.1 The result of content validity of standards and indicators conspired by 20 experts includes Item Objective Congruence Index (IOC) which has value between 0.80 to 1.00 and consistency of indicators and evidence/resources that display resulting consequences of implementation in each indicators done by 4 experts includes Item Objective Congruence Index (IOC) which has value between 0.75 to 1.00. Afterward the experts provided 2 suggestions: 1) Addition of indicators according to description of standards including standards 1, 4, 5, 9, 10, 11, 12 2) Separation of indicators which have different issue on measurement including indicator 2.1, 3.1, 3.2, 3.4, 3.5, 5.10. Then, the last result has 13 standards and 76 indicators as followings.

Table 4.19 The revision result of standards and indicators base on suggestion from experts.

Standards/ indicators	The revision result of standards and indicators base on suggestion
Stand 1	Indicator 1.5 Students have no illness/condition that affects their development.
Indicator 2.1	Indicator 2.1 Students are cheerful. Indicator 2.2 Students feel good about themselves. Indicator 2.3 Students are confident and assertive.
Indicator 3.1	Indicator 3.1 Students have discipline and responsibility to the task assigned. Indicator 3.2 Students obey to the instruction of parents and teachers.
Indicator 3.2	Indicator 3.3 Students are honest. Indicator 3.4 Students are generous and munificent.
Indicator 3.4	Indicator 3.6 Students interact with each other equally. Indicator 3.7 Students have respect for cultural differences.
Standard 4	Indicator 4.7 Students have appropriate problem solving skills.
Indicator 4.3	Indicator 4.3 Students have appropriate Thai language skills efficient for their ages. Indicator 4.4 Students have appropriate English language skills efficient for their ages.

Table 4.19 (Continued)

Standards/ indicators	The revision result of standards and indicators base on suggestion
Indicator 5.2	Indicator 5.2 Teachers make lesson plans according to the childhood Bilingual curriculum. Indicator 5.3 Teachers are able to provide various learning experience corresponding to students differences.
Indicator 5.10	Indicator 5.11 Teachers have ethics and responsibility in their duty. Indicator 5.12 Teachers accept cultural differences.
Indicator 9.1	Indicator 9.1 The school improvises a method/procedure to encourage participation in learning management. Indicator 9.2 The school is able to represent a place to develop learning of students and personnel.
Indicator 10.1	Indicator 10.1 The school sets up educational management process. Indicator 10.2 The school organizes projects and activities to achieve the goal, philosophy, and vision of childhood education.
Standard 11	Indicator 11.3 The school gives opportunities to related person in setting promoting standards . Indicator 11.4 The school receives standard certification from the education committee.
Indicator 11.1	Indicator 11.1 The school sets policy and developmental guideline according to the policy and educational reform guideline based on social context. Indicator 11.2 The school organizes projects and activities that support the policy of childhood education.
Standard 12	Indicator 12.3 The school arranges location, tools, equipment and materials based on the safety of students. Indicator 12.4 School staffs have knowledge and skills to provide health services and security to students.
Indicator 12.1	Indicator 12.1 The school has plans concerning safety of students. Indicator 12.2 The school has process and management concerning safety and welfare of students.

2.2 The result of structure validity and consistency between standards and indicators model with empirical data

The checking of structure validity and consistency between standards and indicators model with empirical data has 2 steps including:

1) The factor extraction of standards and indicators that were constructs validly by Exploratory Factor Analysis (EFA) then set hypothesis model 2) The checking of consistency standards and indicators of the model with empirical data by Second-Order Confirmatory Factor Analysis (2nd. Order CFA). The results are shown as the followings.

2.2.1 The result of factor extraction of standards and indicators that were constructs validly by Exploratory Factor Analysis (EFA) to set hypothesis model on Internal quality assurance for Bilingual Schools in Early Childhood Education Level

The result of Exploratory Factor Analysis (EFA) from the first 380 data samples for analyzing of data by means of Principal Component Analysis technique which found Communality value of each indicators are between 0.538 to 0.804. Moreover, Orthogonal Rotation by Varimax found out that 76 indicators can be separated into 8 factors and the cumulative percent of variance equals to 70.117 (details shown in Appendix D, p. 172).

Table 4.20 **Eigen Value**, Percent of variance and Cumulative percent of variance in each factor.

Factor	Eigen Value	% of variance	Cumulative % of variance
1	38.740	50.974	50.974
2	4.577	6.022	56.996
3	2.135	2.809	59.805
4	2.094	2.755	62.560
5	1.709	2.249	64.809
6	1.513	1.991	66.800
7	1.320	1.737	68.537
8	1.201	1.581	70.117

Table 4.20 shows that Eigenvalue is between 1.201 to 38.740 which is able to describe the percentage of variance to be between 1.581 to 50.974 and the cumulative percent of variance to be equal to 70.117 and from the information retrieved provides opportunity to set the name of standards according to all of observed variable (details shown in Appendix D, p. 172).

Researcher used result of EFA to construct the structure of Internal quality assurance for Bilingual Schools in Early Childhood Education Level in order to analyze the consistency of the model with empirical data.

2.2.2 The result of consistency standards and indicators of the model with empirical data.

The result of consistency checking between standards and indicators of the model with empirical data by means of Second-Order Confirmatory Factor Analysis found out that it fits with the model in $\chi^2 = 2860.034$, $df = 2766$, $p\text{-value} = .1040$, $CFI = .998$, $TLI = .998$, $RMSEA = .008$, $SRMR = .051$ in which detail are shown on table 26 and figure 1 as the followings.

Table 4.21 The result from 2nd. Order CFA of Internal Educational Quality Assurance Model for Bilingual Schools in Early Childhood Education Level (The first level).

Variable (2nd. Order CFA in the first level)	Factor loading	SE	z	R ²
The educational management				
1. The school provides curriculum for childhood education that can lead to efficient practice.	0.824	0.014	60.569	0.679
2. The school has a system and a mechanism which engage all parties to understand educational management for childhood education.	0.815	0.014	60.165	0.664
3. The school has an effective management system in giving services.	0.813	0.014	60.044	0.661

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first level)	Factor loading	SE	z	R²
4. The school supports participation and cooperation with parents, society and local.	0.821	0.013	61.835	0.674
5. The school sets standards of childhood education.	0.798	0.015	54.388	0.637
6. The school prepares and proceeds according to educational development plan to meet the standards of education.	0.833	0.013	65.484	0.694
7. The school prepares an information system and uses it in management.	0.792	0.015	52.396	0.627
8. The school monitors and evaluates the internal quality assessment results based on standards of education by using participation concept.	0.830	0.012	67.188	0.689
9. The school successively uses internal and external quality assessment results in improving the quality of education.	0.834	0.012	69.035	0.695
10. The school prepares annual reports on the internal quality assessment.	0.834	0.012	68.488	0.695
11. The school provides efficient method/procedure to encourage participation in learning management.	0.848	0.011	76.529	0.719
12. The school represents a place to develop learning of students and personnel.	0.804	0.014	57.854	0.646
13. The school exchanges knowledge within the school, between families, communities, and related organizations.	0.761	0.017	44.896	0.578
14. The school sets up educational management process.	0.842	0.012	70.931	0.710
15. The school organizes projects and activities to achieve the goal, philosophy, and vision of childhood education.	0.836	0.012	68.040	0.699

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first level)	Factor loading	SE	z	R²
16. The school organizes projects and activities that support the policy of childhood education.	0.835	0.012	71.362	0.698
17. The school provides opportunities to related person in setting promoting standards.	0.823	0.013	62.815	0.678
18. The school receives standard certification from the education committee.	0.775	0.016	48.412	0.600
19. The school successfully achieves the objective.	0.804	0.015	54.916	0.646
The physical and intellectual development of students				
1. Students obtain standard and moderate weight and height.	0.627	0.025	25.283	0.393
2. Students have athletic skills according to their ages.	0.660	0.023	28.157	0.435
3. Students can appropriately control their emotion according to their ages.	0.693	0.023	30.282	0.480
4. Students have discipline and responsibility for the task assigned.	0.745	0.018	40.835	0.555
5. Students obey the instruction of parents and teachers.	0.790	0.016	50.513	0.624
6. Students are honest.	0.700	0.022	32.185	0.491
7. Students are generous and munificent towards other.	0.705	0.020	34.892	0.498
8. Students can play and work with others in unity.	0.711	0.021	33.592	0.506
9. Students have interest in learning.	0.705	0.021	32.980	0.497

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first of level)	Factor loading	SE	z	R2
10. Students have a concept from learning experience.	0.732	0.019	38.412	0.536
11. Students have appropriate Thai language skills according to their ages.	0.760	0.018	43.044	0.577
12. Students have appropriate English language skills for their ages.	0.682	0.022	30.578	0.465
13. Students have science and mathematics processing skills.	0.786	0.016	50.016	0.617
14. Students have imagination and creativity.	0.799	0.017	48.059	0.639
15. Students have appropriate problem solving skills.	0.750	0.019	40.258	0.563
The general management				
1. The school has a plan concerning safety of students.	0.745	0.018	41.262	0.555
2. The school has a process and management concerning safety and welfare of students.	0.815	0.014	59.887	0.664
3. The school arranges location, tools, equipment and materials based on the safety of students.	0.791	0.016	50.68	0.625
4. School staffs have knowledge and skills in providing health services and security to students.	0.804	0.014	56.516	0.646
5. Students are safe with health services and security received.	0.786	0.016	50.239	0.618
6. The school arranges facilities for development of students.	0.852	0.013	67.941	0.726

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first of level)	Factor loading	SE	z	R2
7. The school provides environment supporting the potential of self-discovery and learning through playing.	0.851	0.012	72.072	0.724
8. The school prepares activity and food that support the integrity of physical health.	0.855	0.011	74.966	0.731
9. The school arranges the premises suitable for giving services.	0.846	0.012	68.262	0.715
The teacher performance have efficient and effective				
1. Teachers understand the philosophy, principles, and nature of childhood education and are able to apply their experience into teaching.	0.745	0.019	40.093	0.555
2. Teachers make lesson plans according to the childhood bilingual curriculum.	0.755	0.018	42.994	0.570
3. Teachers can provide various learning experience corresponding to students differences.	0.790	0.016	50.851	0.623
4. Teachers manage classroom supporting positive discipline.	0.849	0.012	68.600	0.720
5. Teachers use media and technology appropriate in students' development related teaching.	0.815	0.013	61.072	0.665
6. Teachers assess students' development by a variety of measurement and evaluation.	0.825	0.013	63.340	0.681
7. Teachers provide suitable learning environment.	0.795	0.016	49.586	0.598
8. Teachers provide effective interaction with students and parents	0.808	0.015	55.489	0.632

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first of level)	Factor loading	SE	z	R2
9. Teachers are qualified and competent in the field of childhood education.	0.815	0.015	55.479	0.652
10. Teachers have ethics and responsibility in their duty.	0.799	0.015	53.122	0.664
11. Teachers accept cultural differences.	0.775	0.017	46.607	0.639
The administrators performance have efficient and effective				
1. The administrator understands the philosophy and principles of childhood education.	0.851	0.012	73.394	0.725
2. The administrator has vision, leadership, and initiatives in developing childhood students.	0.848	0.011	74.093	0.720
3. The administrator uses the principle of participatory management and uses data evaluation or research as bases to academics and management.	0.853	0.012	73.886	0.727
4. The administrator is able to manage education and achieving the goals of quality development plan.	0.855	0.011	74.388	0.731
5. The administrator supports and develops effective human resources.	0.901	0.009	101.342	0.812
6. The administrator gives academic suggestions and advices, and pays full attention to childhood education with potentials and time.	0.882	0.010	90.063	0.777
7. The administrator provides leadership in creating an organization of cultures and learning.	0.833	0.013	64.054	0.694

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first of level)	Factor loading	SE	z	R2
The students have self-care and interaction in multicultural society.				
1. Students have hygiene in their health care.	0.815	0.019	43.826	0.664
2. Students avoid conditions that might risks obtaining diseases, unfortunate accidents, and involving in drugs usage.	0.580	0.028	20.886	0.336
3. Students have no illness/condition that may affects their development.	0.615	0.028	22.317	0.378
4. Students interact with each other equally.	0.737	0.021	34.581	0.543
5. Students have respect for their cultural differences.	0.688	0.021	32.459	0.473
6. Students behave based on Thai cultures and their religions teachings.	0.737	0.021	34.888	0.543
The students' emotions and mentality development				
1. Students are cheerful.	0.698	0.023	29.876	0.487
2. Students feel good about themselves.	0.696	0.022	31.341	0.484
3. Students are confident and assertive.	0.697	0.024	29.097	0.486
4. Students appreciate art, music, movement, and nature.	0.741	0.023	31.741	0.549
The teacher quality promotion				
1. Teachers conduct researches and develop learning management.	0.774	0.022	34.712	0.598
2. The amount of Thai and foreign teachers is sufficient for students (The ratio is 1 Thai and 1 foreign teacher to 20 students).	0.584	0.029	19.833	0.341

Table 4.21 (Continued)

Variable (2nd. Order CFA in the first of level)	Factor loading	SE	z	R2
1. Teachers can academically communicate in their native and second languages.	0.651	0.026	25.15	0.423
Standard 1 The educational management	0.931	0.008	111.554	0.866
Standard 2 The physical and intellectual development of students	0.849	0.014	58.952	0.721
Standard 3 The general management	0.886	0.012	73.192	0.785
Standard 4 The teacher performance efficiency and effectiveness	0.924	0.009	104.974	0.854
Standard 5 The administrators performance efficiency and effectiveness	0.926	0.009	104.384	0.857
Standard 6 The students have self-care and interaction in multicultural society	0.749	0.023	33.136	0.561
Standard 7 The student have emotions and mentality development	0.836	0.020	42.742	0.699
Standard 8 The teacher quality promotion	0.925	0.019	50.002	0.856

Table 4.21 shows the result from Second-Order Confirmatory Factor Analysis found structural model of Internal Assurance model in Bilingual Schools on Early Childhood Education Level including 8 standards which has factor loading between 0.749 to 0.931, tolerances value between 0.008 to 0.023, Z value between 33.136 to 111.554 and R-Square value between 0.561 to 0.866.

Each standard has factor loading as follows.

1. Standard 1 The educational management including 21 indicators which had factor loading between 0.761 to 0.848, tolerances value between 0.011 to 0.017, Z value between 44.896 to 77.071 and R-Square value between 0.578 to 0.720

2. Standard 2 The physical and intellectual development of students including 15 indicators which has factor loading between 0.627 to 0.799 , tolerances value

between 0.016 to 0.025 , Z value between 25.283 to 50.513 and R-Square value between 0.393 to 0.639

3. Standard 3 The general management including 9 indicators which has factor loading between 0.745 to 0.855 , tolerances value between 0.011 to 0.018, Z value between 41.262 to 74.966 and R-Square value between 0.555 to 0.731.

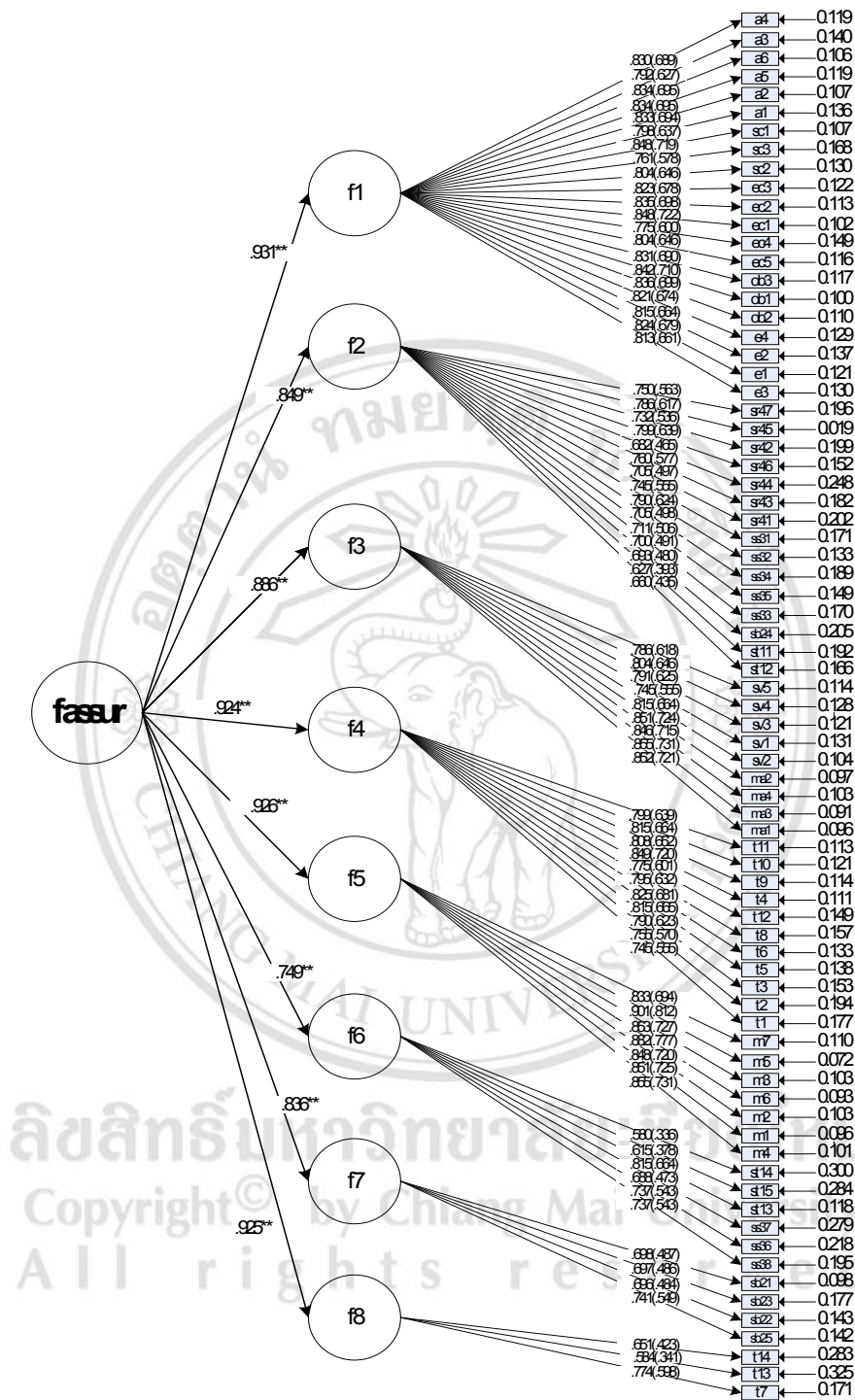
4. Standard 4 The teacher performance efficiency and effectiveness including 11 indicators which has factor loading between 0.745 to 0.849, tolerances value between 0.012 to 0.019, Z value between 40.093 to 68.600 and R-Square value between 0.555 to 0.720.

5. Standard 5 The administrators performance efficiency and effectiveness including 7 indicators which has factor loading between 0.833 to 0.901, tolerances value between 0.009 to 0.013, Z value between 64.054 to 101.342 and R-Square value between 0.694 to 0.812.

6. Standard 6 The students have self-care and interaction in multicultural society including 6 indicators which has factor loading between 0.580 to 0.815, tolerances value between 0.019 to 0.028, Z value between 20.886 to 43.826 and R-Square value between 0.336 to 0.664.

7. Standard 7 The student have emotions and mentality development including 4 indicators which has factor loading between 0.696 to 0.741, tolerances value between 0.022 to 0.024, Z value between 29.097 to 31.741 and R-Square value between 0.484 to 0.549.

8. Standard 8 The teacher quality promotion including 3 indicators which has factor loading between 0.584 to 0.774, tolerances value between 0.022 to 0.029, Z value between 19.833 to 34.712 and R-Square value between 0.341 to 0.598.



$\chi^2 = 2860.034, df = 2766, p\text{-value} = .1040, CFI = .998, TLI = .998, RMSEA = .008, SRMR = .051$

Figure 4.15 The Second-Order Confirmatory Factor Analysis (2nd. Order CFA) result of standards and indicators of Internal Assurance model in Bilingual Schools on Early Childhood Education Level

Part 2 The result of model construction and development of Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

1. The result of model construction of Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

The construction and development of Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level, researcher has synthesizes factors of internal educational quality from Dale concept, Murgatroyd & Morgan concept, OBEC, ONESQA and related researches. There are 4 factors as the followings. (Detail in Chapter 2, p.36)

1. The goal of Internal Educational Quality Assurance model for Bilingual Schools in Early Childhood Education Level
2. Standards and indicators of Internal Assurance.
3. The process of Internal Educational Quality Assurance model for Bilingual Schools in Early Childhood Education Level according to the standards and indicators including responsible coordination, quality control, quality audit, quality assessment and criteria of assessment.
4. The report and Development to Excellence

The factors of the Model are explain in Figure 4.16 and the detail of Model shown in Appendix E (Page 186)

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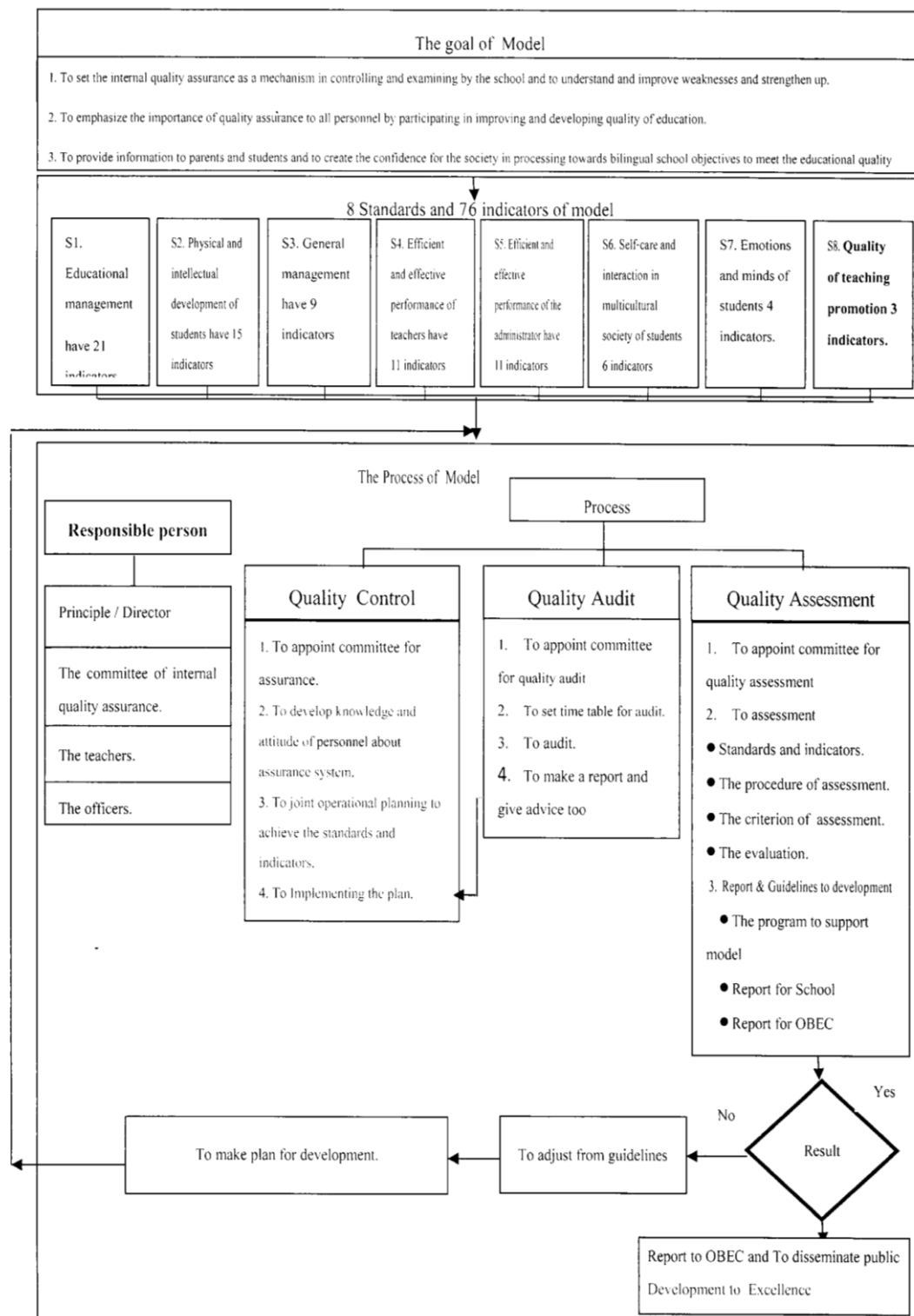


Figure 4.16 Internal Educational Quality Assurance model for Bilingual Schools in Early Childhood Education Level

2. Result of qualities analysis of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level

The qualities checking of the Model, researcher arranged brainstorming meeting by 7 experts separately: 2 experts on assurance, 2 experts on measurement and evaluation, 2 experts on teaching on bilingual school and a representative from parents.

2.1 The result of Brainstorming meeting for qualities checking of the Model.

The result of judgment on accuracy, propriety, feasibility and utility of model which is prepared by arrangement of an expert brainstorming meeting found all of issue were suitable and experts had suggestions as the follows.

1) The model should be able to achieve excellence due to Bilingual schools having good contexts and prosperity.

2) The similar model report with ONESQA should be exterminated due to having different criteria and objective that may cause confusion.

3) The model should change the name of indicators in order to specify Bilingual schools.

4) The model judgmental criteria should be revised due to each indicator having different importance according to factor loading.

5) The model factor loading should be revised according to each standard which correlate ratio of factor loading from the result of Second-Order Confirmatory Factor Analysis.

6) The model should be adding and revising the requirement of committees in group 3 in which having experience on education management and education quality assessment.

7) The model should be adding menu guideline for further development of the program. Although the school has treatable amount of score, they can still be searched and developed for better Excellency.

2.2 The result of judgment on Model quality by experts.

The result of judgment of the Model quality including accuracy, propriety, feasibility and utility are shown in table 4.22-4.25.

Table 4.22 Mean, Standard deviation and the level of experts' opinion upon utility of the Model.

Quality Items	Mean	SD.	Level
1. The data that we got from evaluation system was cover and met the user's demand.	4.43	0.53	high
2. The result of evaluation was useful and can apply to develop school's management.	4.57	0.53	highest
3. The result of evaluation was worth.	4.43	0.53	high
4. The model is useful for internal educational quality assurance system for kindergarten in bilingual school.	4.71	0.49	highest
5. The model can stimulate the stakeholders to understand the useful of internal educational quality assurance system and use it for improving school management.	4.57	0.53	highest
Total	4.54	0.12	highest

Table 4.22 The utility judgment result of Model in overall obtain highest level which include mean value of 4.54 and standard deviation value of 0.12. The judgment result of each item found out that 3 items were in the highest level with mean value between 4.57 and 4.71 but except the data that we acquired from evaluation system which covers the user's demand and the result of evaluation was worthwhile. Displaying in a high level and mean value of 4.43.

Table 4.23 Mean, Standard deviation and level of experts' opinion upon feasibility of the Model.

Quality Items	Mean	SD.	Level
1. The model has the possibility of being brought into practice.	4.14	0.69	high
2. The model is consistent with the actual real-time situation of the schools.	4.14	0.38	high
3. The model has the possibility of being accepted by those involved.	4.00	1.00	high
4. The assessment result can be used to develop Internal educational assurance system for bilingual schools in early childhood education level.	4.43	0.53	high
Total	4.18	0.18	high

Table 4.23 The feasibility judgment result of the Model overall were in high level which has mean value of 4.18 and standard deviation value of 0.18. The judgment result of each item found out that all of the items are in high level with mean values between 4.00 and 4.43.

Table 4.24 Mean, Standard deviation and level of experts' opinion upon propriety of the Model.

Quality Items	Mean	SD.	Level
1. The model is appropriate according to school's context.	4.43	0.53	high
2. The model is appropriate according to stakeholder's context.	4.29	0.76	high
3. The model is regarded for individuality of the person who was given the data and had been running the internal educational quality assurance system in school.	4.43	0.53	high
4. The model is appropriate for the implementation of Bilingual school.	4.43	0.53	high
5. The model has clear criterion of evaluation that show transparency of implementation.	4.29	0.49	high
6. The model is appropriate for improvement of internal educational quality assurance model for kindergarten in bilingual school.	4.57	0.53	highest
7. The data processing program is easily used in school system.	4.57	0.53	highest
8. The model manual is easy to understand and easy to use.	4.14	0.38	high
Total	4.39	0.15	high

Table 4.24 The propriety judgment result of Model are overall in high level which has mean value of 4.39 and standard deviation value of 0.15. The judgment result of each item found out that 6 items are in high level with mean value between 4.14 to 4.43 but except the model which is appropriate for improvement of internal educational quality assurance model for kindergarten in Bilingual school mean while the data processing programed is also easy to use. The model were in the highest level with mean value of 4.57.

Table 4.25 Mean, Standard deviation and level of experts' opinion upon accuracy of the Model.

Quality Items	Mean	S.D	Level
1. The model is improved from the very base of believable theories.	4.86	0.38	highest
2. The model specified the objectives of controlling, monitoring, and evaluating with clarity.	4.86	0.38	highest
3. The model specified the stakeholders, data resource, and implementation with clarity.	4.71	0.49	highest
4. The standards and indicators in controlling system are appropriate, and clear.	4.29	0.49	high
5. The standards and indicators in monitoring system are appropriate, and clear.	4.43	0.53	high
6. The standards and indicators in evaluating system is appropriate, and clear.	4.43	0.53	high
7. Criterion of evaluation is clear and easy to use in evaluation system.	3.86	0.90	high
8. The guidelines of using the evaluation result of internal educational quality assurance model can be used for improvement of school management.	4.29	0.49	high
9. The data processing programed is accurate.	4.43	0.53	high
10. The model manual has sufficient and clearly detailed and comprehensive.	4.57	0.53	highest
Total	4.47	0.30	high

Table 4.25 The result of accuracy judgment of the Model overall are in high level with mean value of 4.47 and standard deviation value of 0.30. The judgment result of each item found out that 6 items are in high level and with mean value between 3.86 to 4.43 but except the model which is improved from the very base of believable theories, The model specified the objectives of controlling, monitoring, and evaluating clearly, The model specified the stakeholders, data resource, and implementation clearly and The model manual has sufficient and clear detail also very comprehensive. These items are in highest level with mean value from 4.57 to 4.86.

Part 3 The study of results of the trial of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

The study of results of the trial of the model bestow 2 parts including 1) Results of the trial of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level and 2) Results of concurrent validity analysis of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level. The details are shown as followings.

1. Results of the trial of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

The study of results of the trial of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level in Internal Quality Assessment part were used 3 times in 3 types of Bilingual schools including medium school, large school and small school. This studied result on accuracy, propriety, feasibility, utility and suggestions to revise the model as the follows.

1.1 The result of 1st trial : medium school in 21-23 July 2015 a full model was tested. The researcher prepared every element including Participant Observation, facility, collecting data and revision of the model. Nine of users including director, head of, deputy of kindergarten section, teachers, staff and assessment committee. Three assessment committees include representative from original affiliation, director and representative of interested outsiders.

The result of brainstorming suggested revising the model on significant points as the follows.

1) The model should be differentiating indicators resource with similarity, according to suggestion of assessment committee involved in field information record.

2) Standards and indicators about physical and intellectual development of students' criteria should be set as percentage and in mean of percentage form in case there is more than one issue.

3) The report form should be representing results in 2 decimal forms.

Researcher then revised the model according the suggestion from users afterwards continues in second trial on big school.

1.2 The result of 2nd trial : big school in 27 August 2015. Researcher elucidates the model to director or teachers who are responsible for internal assurance of school and request the model to be used on the school by themselves. Then, submit the assessment report by program <http://202.28.25.120/> . The school then submits report on 11 September 2015. The suggestions from users on the model were adding suggestion in order to develop each standard in English version proficiency to be suitable for foreign teachers and can be used immediately.

Researcher revised the model according the suggestion of the users then upload data to <http://www1.edu.cmu.ac.th/inasmodel/home>. Later prepare it for the third trial in small school.

The result of 3rd trial : small school in 2 November 2015. Researcher elucidates the model to director or teachers who are responsible for internal assurance of school and requests the model to be used on the school by themselves. Then, submits the assessment report by program <http://www1.edu.cmu.ac.th/inasmodel/home>. The school then submits report on 2 November 2015.

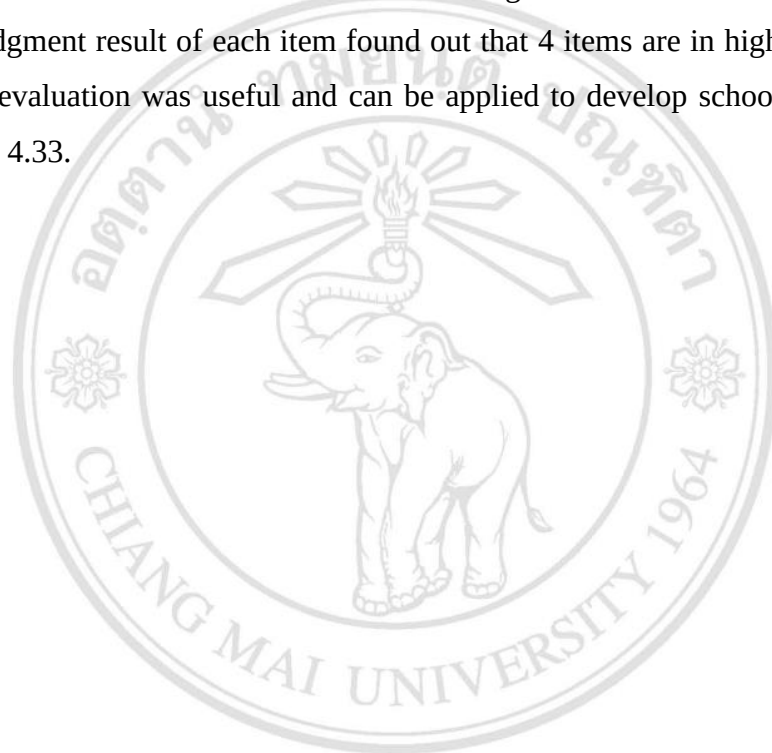
After the trial of the model, the users evaluated the quality of model in specific points including accuracy, propriety, feasibility and utility, the results are as follows.

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Table 4.26 Mean, Standard deviation and level of sample group opinion about utility on the Model.

Quality Items	1 st time			2 nd time			3 rd time		
	Mean	SD.	Level	Mean	SD.	Level	Mean	SD.	Level
1. The data that acquired from evaluation system covers the user's demand.	4.78	0.44	highest	4.67	0.58	highest	5.00	0.00	highest
2. The result of evaluation was effective and able to be applied in order to develop school's management.	4.78	0.44	highest	4.33	0.58	high	4.67	0.58	highest
3. The result of evaluation was worthy.	4.78	0.44	highest	4.67	0.58	highest	4.67	0.58	highest
4. The model usefulness for internal educational quality assurance system for kindergarten in bilingual school.	4.78	0.44	highest	5.00	0.00	highest	5.00	0.00	highest
5. The model can stimulate the stakeholders to understand the use of internal educational quality assurance system and use it for improvement of school management.	4.78	0.44	highest	4.67	0.58	highest	5.00	0.00	highest
Total	4.78	0.00	highest	4.67	0.24	highest	4.87	0.18	highest

Table 4.26 The utility judgment result of Model overall are in highest level with mean value of 4.67 to 4.87 and standard deviation value of 0.00 to 0.18. The judgment result of each item found out that 4 items are in highest level and with mean value between 4.67 and 5.00 but except the result of evaluation was useful and can be applied to develop school's management in which stays in high level on the 2nd trial with mean value of 4.33.



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Table 4.27 Mean, Standard deviation and level of sample group opinion about feasibility on the Model.

Quality Items	1 st time			2 nd time			3 rd time		
	Mean	SD.	Level	Mean	SD.	Level	Mean	SD.	Level
1. The model has the possibility of being brought into practice.	4.78	0.44	highest	4.67	0.58	highest	5.00	0.00	highest
2. The model is consistent with the actual real-time situation of the schools.	4.89	0.33	highest	4.67	0.58	highest	4.67	0.58	highest
3. The model has the possibility to be accepted by those involved.	4.78	0.44	highest	4.67	0.58	highest	4.67	0.58	highest
4. The assessment result can be used to develop Internal educational assurance system for Bilingual schools in early childhood education level.	4.89	0.33	highest	5.00	0.00	highest	4.67	0.58	highest
Total	4.83	0.06	highest	4.75	0.17	highest	4.75	0.17	highest

Table 4.27 The feasibility judgment result of Model overall are in highest level with mean value of 4.75 to 4.83 and standard deviation value of 0.06 to 0.17. The judgment result of each item found out that all of the items were in the highest level with mean value between 4.67 and 5.00.

Table 4.28 Mean, Standard deviation and level of sample group opinion about propriety on the Model.

Quality Items	1 st time			2 nd time			3 rd time		
	Mean	SD.	Level	Mean	SD.	Level	Mean	SD.	Level
1. The model is appropriate to school's context.	4.78	0.44	highest	4.67	0.58	highest	5.00	0.00	highest
2. The model is appropriate to stakeholder's context.	4.78	0.44	highest	4.67	0.58	highest	4.67	0.58	highest
3. The model is regarded for individuality of the person who were given the data and who had been running the internal educational quality assurance system in school.	4.78	0.44	highest	4.67	0.58	highest	4.67	0.58	highest
4. The model is appropriate for the implementation of Bilingual school.	4.78	0.44	highest	4.67	0.58	highest	5.00	0.00	highest
5. The model has clear criterion of evaluation that show the transparency of implementation.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
6. The model is appropriate for improving internal educational quality assurance model for kindergarten in bilingual school.	4.78	0.44	highest	4.67	0.58	highest	5.00	0.00	highest
7. The data processing programed is easily used in school system.	4.89	0.33	highest	4.67	0.58	highest	4.67	0.58	highest

Table 4.28 (Continued)

Quality Items	1 st time			2 nd time			3 rd time		
	Mean	SD.	Level	Mean	SD.	Level	Mean	SD.	Level
8. The model manual is easy to understand and easy to use.	4.89	0.33	highest	4.67	0.58	highest	4.33	0.58	high
Total	4.82	0.06	highest	4.67	0.00	highest	4.79	0.25	highest

Table 4.28 The propriety judgment result of Model overall are in highest level with mean value of 4.67 to 4.82 and standard deviation value of 0.00 to 0.25. The judgment result of each item found out that 7 items are in highest level and had mean value between 4.67 to 5.00 but except The model manual which is easy to understand and easy to use that are in high level in 3rd trial with mean value of 4.33.

Table 4.29 Mean Standard deviation and level of sample group opinion about accuracy on the Model.

Quality Items	1 st time			2 nd time			3 rd time		
	Mean	SD.	Level	Mean	SD.	Level	Mean	SD.	Level
1. The model is improved from the very base of believable theories.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
2. The model specified the objectives of controlling, monitoring, and evaluating clearly.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
3. The model specified the stakeholders, data resource, and implementation clearly.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
4. The standards and indicators in controlling system are appropriate, and clear.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
5. The standards and indicators in monitoring system are appropriate, and clear.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
6. The standards and indicators in evaluating system are appropriate, and clear.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
7. Criterion of evaluation is clear and easy to use in evaluation system.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest

Table 4.29 (Continued)

Quality Items	1 st time			2 nd time			3 rd time		
	Mean	SD.	Level	Mean	SD.	Level	Mean	SD.	Level
8. The guidelines of using the evaluation result of internal educational quality assurance model can be used for improving school management.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
9. The data processing programed is accurate.	4.89	0.33	highest	4.67	0.58	highest	5.00	0.00	highest
10. The model manual is sufficient and detailed with clarity and comprehensive.	4.78	0.44	highest	4.33	0.58	high	4.67	0.58	highest
Total	4.88	0.03	highest	4.64	0.11	highest	4.97	0.10	highest

Table 4.29 The accuracy judgment result of Model overall are in highest level with mean value of 4.64 to 4.97 and standard deviation value of 0.03 to 0.11. The judgment result of each item found out that 9 items were in highest level with mean value between 4.67 and 5.00 but except the model manual sufficiency, clarity and comprehensiveness in which are in high level in 2nd trial with mean value of 4.33.

2. Results of concurrent validity analysis of the model on Internal Educational Quality Assurance for Bilingual Schools in Early Childhood Education Level.

The concurrent validity checking of the model according to the scores of internal quality checking from all 8 indicators from the total result are related to the model by Pearson Product Moment Correlation Coefficient which was used by researcher.

Statistic Hypothesis

H_0 : The scores of internal quality checking from all 8 indicators according to the total result are not related to the model original affiliation. ($\rho = 0$)

H_1 : The scores of internal quality checking from all 8 indicators according to the total result were related to the model original affiliation. ($\rho \neq 0$)

The detail of analysis are shown in table 4.30

Table 4.30 The correlation between original affiliation assessment score and the model assessment score from sample group.

Assessment score	Original affiliation	
	Coefficient of Correlation	Level of correlation
The model	0.999**	highest

** $p < .01$

Table 4.30 The concurrent validity checking of the model according to the scores of internal quality checking from all 8 indicators from the total result are related to the model at coefficient .01 with relation score at 0.999.