Chapter III

Identification of Competencies and Development of Instrument

Introduction

The present investigation as stated in the first chapter aims at 4 objectives as the following :

(i)   identifying the administrative competencies,

(ii) developing the instrument for measuring the administrative competencies,

(iii) studying relationships between administrative competencies and personal attributes and other relevant variables,

(iv) developing a set of criteria for selection and promotion the primary school administrators.

In order to achieve these objectives, the methodology used in the present investigation for the objective (i) and (ii) mentioned above is discussed in this chapter. Methodological details regarding the indentification of administrative competencies and development of instrument subsequently are presented in the sections to follow.

Identification of Administrative Competencies

The competencies necessary for effective performance can logically be derived from the job itself. Competence results when the job tasks, the appropriate know-how, and the appropriate theoretical understandings present, are purposefully identified and combined cognitively and acted upon appropriately. Such an interaction produces the behaviour required in a accomplishing tasks in a given situation. Therefore, the problem of competent behaviour basically refer to the ideal concept, which might be thought of as a law of behaviour. If simply states that a person will be most competent when the tasks he is to do have been clearly identified and defined, when he brings to these tasks an adequate amount of relevant `know-how'-personal-equipment in the form of knowledge, skills, methods, tools, understandings, and develops insights to combine them for effective utilization.

The Procedure of Identification of Administrative Competencies

The process of the identification of administrative competencies for primary school administrators was started form the careful examination of the actual tasks which they perform and the abilities required to perform them effectively. Accordingly the first activity carried out by the investigator was the job analysis of the administrator's job. The actual job performed by administrators in primary schools was analysed by observing

administrators' in different educational settings, discussing with them specific tasks they perform, and attempting to discuss the kinds of abilities and skills they needs for performing them. The discussions were held with other administrators like Directors of the Office of the Provincial Primary Education (OPPE) regarding primary school administrators' job. Also studied for this purpose were regulation laid down by the ONPEC regarding the job performance of administrators in primary school. From all these sources a pooled set of competencies was arrived at. As clarified in Chapter 1, the competencies consisted of administrative abilities and administrative behaviours. This pool was further examined by the investigator in the light of his insights into the matter, developed through the study of related literature and his own judgement, and in consultation with the guide. Through this process a list of competencies was finalised which included the following:

1. Administrative Abilities

    (i)   Planning

   (ii)   Organizing

  (iii)   Controlling

   (iv)   Finance ?

    (v)   Leadership

   (vi)   Budgeting

2. Administrative Behaviours

    (i)   Academic Affairs

   (ii)   Personnel

(iii)	Pupil Activities
(vi)	Management and Finance $\langle\dot{w}\rangle$ $\ell\langle X\rangle$
(v)	Facilities
(vi)	School-Community Relations
(vii)	School Plant
(viii)	Transportation
(ix)	Introduction ?.
(x)	Finance

After the finalisation of the tentative list, it was considered necessary to get it scrutinised by knowledgeable persons for the appropriateness, and relevance of the administrative abilities and administrative behaviours listed in that. For this purpose a sample of 20 experts was taken. The experts were from the following four areas :

(i) the 7 experts from administrative theory area,

(ii) the 5 experts from administrative experience area,

(iii) the 5 experts from research area,

(iv) the 3 experts from language area.

This group of experts was selected through the technique of purposive sampling. Details regarding these experts, addresses, qualifications, positions, institutional affiliations are given in the Appendix A.

The tentative list was mailed to all the experts with a

request to scrutinise the list of administrative abilities and
administrative behaviours individually for their relevance
appropriateness and also the coverage through these of
administrator's work. Personal contacts were made after the list
was mailed and discussions held with the experts by the
investigator. All the 28 experts gave their comments.

The comments given by experts were analysed by the
investigator. They mainly pertained to the following points:

(i) with respect to the administrative behaviours,
researcher must take into consideration the tasks
determined by the ONPEC through regulations,

(ii) the overlapping should be avoided for example finance
and budgeting in the administrative abilities,

(iii) certain aspects which are not relevant for Thailand
primary school administrators like transportation
should be removed,

(iv) the leadership need not be a separate component in the
administrative abilities as it is reflected in the
actual behaviours and the abilities of an
administrator.

In consideration to comments by experts and the discussion of
the investigator with them as well as his guide, the list was
further modified. The finally included administrative abilities

and administrative behaviours were as given hereunder :

1. Administrative Abilities

(i)   Planning

(ii)   Organizing

(iii)   Controlling

2. Administrative Behaviours

(i)   Academic Affairs

(ii)   Personnel

(iii)   Pupil Activities

(iv)   Management and Finance

(v)   Facilities

(vi)   School-Community Relations

Development of Items

The first task in developing the instrument was to operationalise the administrative abilities and administrative behaviours in terms of work situation and generate items. The items were written by the investigator himself for both competents viz, administrative abilities and administrative behaviours.

The first part of the instrument concerned with administrative abilities. The items were written covering all the three aspects of this component, viz., planning, organizing and controlling. In addition to the relevance of items, the adequacy in coverage of the

component dimensions and clarity of language were kept in mind. The items were of multiple choice type, each one representing a problematic work situation in the stem followed by four alternatives to solve the problem. The alternatives were so constructed, that, each one could solve the problem, but each solution would differ in quality. Thus, selection of a particular alternative on the part of respondent would represent his administrative abilities to deal with the problematic situation. The alternatives in the items are given the weightage according to the quality of administrative abilities reflected. Specific items from this pool are given hereunder.

A Specific items for planning ability

No.	Situation	Choices
1	Sompcom was asked by the Director of the Office of the Provincial Primary Education (OPPE) to take responsibility for `Suggestions for Improving Academic Tasks in Primary School`. He has 3 days to decide whether to accept working or not. What should he do?	...a. Discuss it with the teachers in his school within 3 days, then say `yes` or `no`. ...b. Refuse and also tell the director that he's busy. ...c. Suggest that OPPE should set up a program for a practical seminar. ...d. Ask the director for one more week to think about it carefully.

A specific item for organizing ability

No.	Situation	Choices
11.	Wipak found that the basic problems are no systematic in the school, the teachers have low morale. They look on him as an enemy. What should he do first ?	...a.Call heads of each group meeting them discuss how to solve the problems within the next 2-3 months.
		...b. Meet everyone in the School to introduce himself and tell them that within 2-3 months problem will be solved.
		...c. Stick a notice on the board announcing that he has been appointed to be the administrator here, and is ready to work with everyone.
		...d. Know more active teachers and ask them frankly how to solve the problem.

A specific item for controlling ability

No.	Situation	Choices

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21 When Chalee reaches his office, There are 3 items on his table. The first is a note to call back to his friend who is a principal, the second is a complaint from the teachers in his school cluster and the third is a note from the Province Primary School Office asking him to solve some problems. What should he do?

...a. Study the information in the complaint because he is their representative.

...b. Call back to his friend because the last time his friend voted for him.

...c. Study the problem in the director's note because it is most likely an important.

...d. Go over and revise the paper he prepared to present in the meeting.

In all 30 items were developed for this component with a following distribution.

        Planning   10 items

        Organising   10 items

        Controlling   10 items

The other component in the instrument is administrative behaviours which was delineated in terms of six aspects, viz., academic affairs, personnel, pupil activities, management and finance, facilities and school-community relations. These aspects were further operationalized by the investigator in the form of items representing work situations as faced by administrators in primary schools of Thailand. For each item, there is a theme pertaining to a task an administrator is required to manage in schools, which is provided in the stem. The stem is followed by a number of specific behaviours required to accomplish the task. These behaviours are derived from the 'regulations' regarding administrator's work as laid down by the ONPEC. The respondent may tick mark any of the behaviours which he actually performs. In this way, 50 items in all were generated for this component covering adequately each of its aspects. Specific items for each aspect are given hereunder :

A specific item for academic affairs

    I manage the school academic policy as follow :

    ... have a school academic committee.

    ... have a written academic policy for the school.

    ... implement all the school's academic policy.

    ... ask school teachers to follow the established plan.

    ... have a follow-up briefing of the plan every semester.

A specific item for personnel

I made a school personnel administrative chart and work handbook as follows:

... have a chart showing the school administrative structure.

... have a handbook describing work activities.

... have a meeting outlining work directions.

... monitor school work according to the administrative chart.

... have a clear and well-defined delegation of responsibility.

A specific item for pupil activities

I promote student disciplines as follows:

... have students participate in setting school disciplines.

... have a student committee monitor the school disciplines.

... have an orientation for students every week.

... praise and/or reward good students.

... arrange activities to support school disciplines.

A specific item for management and finance

I manage the school business and equipment requisitions as follows:

... have officially appoint personnel for each section.

... have qualified personnel working for each section.

... have a clear and well-defined work system for each section.

... have a training program for office staff for each section.

... have a checking for each section.

A specific item for facilities

I provide access to school building and facilities as follows:

... allow full use of the buildings.

... allow access to school building after official time.

... permit public and outside community to use of all facilities.

... permit to use of school buildings for both school and community activities.

... have the record of the use of the school building.

A specific item for school-community relations

I support the relationship between the school and community as follows:

... have a work plan with the community.

... have a good work plan and co-operation.

... have a good public relation program for good understanding.

... have close co-operation.

... have regular project activities with the community.

The distribution of items in respect of the six aspects is as
follows:

Academic Affairs	12 items
Personnel	10 items
Pupil Activities	8 items
Management and Finance	8 items
Facilities	6 items
School-Community Relations	6 items

Thus, draft instrument had two sets of items, 30 for
administrative abilities and 50 for administrative behaviours.

Tryout of the Instrument

The tryout of the instrument consisted mainly two research
tasks; one seeking experts opinion the relevance and
appropriateness of the items, and second, gathering empirical
support for the items.

Scrutiny by Experts

For the tryout purpose a group of same 20 experts, who were
consulted at the stage of identifying competencies, were approached
to scrutinise the items for their suitability in respect of

relevance of the content represented by the items, adequacy of the coverage of behaviour, and the clarity of language. All the 20 experts sent in their comments which included mainly the following points.

i) some items were specifically pointed out for being rendered to educational climate in Thailand,

ii) certain specific comments were to increase communicability by replacing difficult words by simple ones,

iii) a suggestion was made to add space for giving any other behaviours not listed in the draft item.

After considering these comments by experts the investigator decided to meet and hold discussion with those four experts who had made comparatively more serious and strong suggestions. Thereafter the points for effecting the modification in the draft were considered and incorporated appropriately. The modified form of the instrument is given in the Appendix B.

Empirical Tryout

The modified draft instrument was tried out empirically on a sample of 100 administrators from primary school in Thailand. These administrators were from schools in Muang, Nakornsawan district, Nakornsawan province. Of the 200 administrators in the

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district, every alternate administrator was selected starting with one.

The instrument was mailed to 100 administrators to give their responses in respect of each item in both the parts as per instructions which were provided in the beginning of each part in the instrument. In all 98 administrators returned the filled instrument. However, 5 of them were incompleted. Therefore, these were discarded. The data for remaining 93 respondents were utilised for further analysis.

The analysis of these empirical data were carried out to study the suitability of items, to see the feasibility of the instrument and study its reliability. For these purposes item-analysis and reliability study were made, details about which are given in the next section.

Scoring Procedure for Administrative Abilities

The answer for each item were scored in 4, 3, 2 or 1 according to the degree of ability reflected in the alternative selected by the respondent. The scoring key for different alternatives for each item is given in Appendix B. the maximum score for this part of the instrument is 120, and minimum of 30.

Scoring Procedure for Administrative Behaviours

For each item there is a task requiring specific administrative behaviours to accomplish it. These administrative behaviours are listed under each task. The tick marked administrative behaviours are to be scored according to the total number of tasks ticked in the item. If a respondent specifies any other behaviours in the space provided at the end of the list of administrative behaviours and if that is considered relevance, that would be counted towards the number of behaviours and given due scoring. The scoring proceduring would thus become as under;

If ticked 5 or 6 behaviours, it is 5 scores.

If ticked 4 behaviours, it is 4 scores.

If ticked 3 behaviours, it is 3 scores.

If ticked 2 behaviours, it is 2 scores.

If ticked 1 behaviour, it is 1 score.

If no behaviour is ticked, it is 0 score.

Items in each part were scored as per the scoring procedure described. The scores for 93 individual administrators thus arrived were utilised to carry out item analysis and for estimating the reliability for the instrument.

Item Analysis

In order to judge the suitability of items for both the parts

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of the instrument, it was decided to carry out the item analysis for all the items. For this purpose the script of all the 93 respondents were scored by applying the keys for scoring for the two parts as per details given earlier. On the basis of individual scores rank list was prepared. And top 25 per cent cases and bottom 25 per cent cases were selected as upper and lower groups. The t-test was used to calculate the discriminative power of each item. The formula used for this purpose was;

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{S_H^2/nH + S_L^2/nL}}$$

Thus for each item t value was calculated which are given in Table 4 and 5.

Table 4 : DISCRIMINATION ITEM ANALYSIS SPECIFIED BY THE ITEMS OF THREE ASPECTS OF ADMINISTRATIVE ABILITIES

Aspect/item	low group		high group		
	X_L	S_L^2	X_H	S_H^2	t
Planning					
1	3.17	0.88	3.69	0.59	2.07[*]
2	3.04	0.77	3.30	0.22	1.26
3	2.26	1.20	3.35	1.05	3.47[*]
4	2.09	1.17	3.57	0.44	5.58[*]
5	2.91	0.99	3.13	0.75	0.79
6	2.78	1.91	3.61	0.70	2.45[*]
7	2.65	1.42	3.13	1.57	1.33
8	3.74	0.20	3.87	0.39	0.81
9	2.48	0.62	3.04	0.32	2.79[*]
10	2.48	1.90	3.43	1.35	2.55[*]
Organising					
11	2.78	0.81	3.00	0.91	0.79
12	2.17	1.42	2.17	0.33	0.00
13	1.70	0.95	2.61	1.88	2.60[*]
14	2.87	1.03	2.78	0.63	0.32
15	2.74	0.66	3.22	0.45	2.18[*]
16	2.13	0.39	2.52	0.90	1.65
17	2.09	0.81	2.35	0.96	0.94
18	1.70	0.95	2.65	1.05	3.24[*]
19	2.56	0.80	3.04	0.13	2.37[*]
20	3.26	1.20	3.83	0.24	2.26[*]

Table 4 : (Continued)

Aspect/item	low group		high group		
	X_L	S_L^2	X_H	S_H^2	t
Controlling					
21	1.74	1.38	2.96	1.95	3.20[*]
22	2.56	1.35	2.30	1.04	0.81
23	1.61	1.07	2.48	2.08	2.35[*]
24	2.39	1.98	3.26	1.29	2.31[*]
25	2.96	1.95	3.61	0.88	1.86
26	2.70	1.59	3.22	1.00	1.56
27	2.65	1.33	3.52	0.90	2.80[*]
28	2.48	1.17	3.13	0.75	2.25[*]
29	2.43	1.62	3.43	1.07	2.92[*]
30	2.96	1.41	3.56	0.35	2.20[*]

Note :

1. Computer t-test analysis above compare to critical t-value from t-table ($t_{0.05(44)}$ = 2.02)

2. [*] Showed the items which had significant difference.

3. Significant difference are 1, 3, 4, 6, 9, 10, 13, 15, 18, 19, 20, 21, 23, 24, 27, 28, 29 and 30.

4. There are 18 items out of 30 items had significant difference.

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Table 5 : DISCRIMINATION ITEM ANALYSIS SPECIFIED BY THE ITEMS OF SIX ASPECTS OF ADMINISTRATIVE BEHAVIOURS.

Aspect/item	low group		high group		
	X_L	S_L^2	X_H	S_H^2	t
Academic Affairs					
1	1.83	0.97	4.69	0.31	12.16[a]
2	2.56	2.17	4.91	0.08	7.51[a]
3	2.17	1.69	4.17	0.68	6.32[a]
4	2.43	1.98	4.87	0.12	8.05[a]
5	2.30	1.31	4.83	0.15	10.00[a]
6	1.96	0.68	4.83	0.24	14.34[a]
7	2.17	1.33	4.74	0.29	9.65[a]
8	1.87	1.03	4.56	0.62	10.07[a]
9	1.52	0.53	3.69	1.31	7.67[a]
10	1.30	0.31	3.09	1.63	6.14[a]
11	1.78	0.45	4.56	0.53	13.48[a]
12	1.61	0.52	4.35	0.96	10.77[a]
Personnel					
13	2.00	1.00	4.87	0.12	13.01[a]
14	2.43	1.62	4.95	0.04	9.37[a]
15	2.30	2.04	4.81	0.33	7.85[a]
16	2.30	0.77	4.35	0.69	8.11[a]
17	1.48	0.26	3.09	0.99	6.89[a]
18	1.91	0.99	4.09	0.81	7.76[a]
19	1.69	0.67	4.22	0.90	9.62[a]

Table 5 : (Continued)

Aspect/item	low group		high group		
	X_L	S_L^2	X_H	S_H^2	t
20	1.78	1.09	4.83	0.33	12.25[a]
21	1.78	0.90	4.09	1.26	7.50[a]
22	2.61	2.61	4.96	0.04	6.91[a]
Pupil Activities					
23	2.30	1.49	4.74	0.29	8.74[a]
24	2.22	0.81	4.43	0.44	9.50[a]
25	1.74	0.47	4.26	1.02	9.89[a]
26	2.30	1.40	4.96	0.04	10.57[a]
27	2.78	1.81	4.78	0.27	6.64[a]
28	1.56	0.35	4.52	0.53	15.10[a]
29	1.74	0.56	4.61	0.43	13.79[a]
30	1.26	0.38	3.91	1.26	9.91[a]
Management and Finance					
31	2.81	1.80	4.93	0.04	7.37[a]
32	2.13	1.21	4.61	0.34	9.55[a]
33	3.52	2.53	5.00	0.00	4.45[a]
34	2.61	1.25	4.83	0.24	8.71[a]
35	2.04	1.32	4.91	0.08	11.63[a]
36	3.26	1.75	4.61	1.34	3.68[a]
37	3.26	2.47	5.00	0.00	5.30[a]
38	2.52	1.62	4.61	1.34	5.81[a]

Table 5 : (Continued)

Aspect/item	low group		high group		
	X_L	S_L^2	X_H	S_H^2	t
Facilities					
39	2.26	1.84	4.96	0.04	9.42[1]
40	2.48	1.68	4.26	1.02	5.90[1]
41	2.22	0.99	4.61	0.52	9.31[1]
42	2.36	1.13	4.91	0.08	11.36[1]
43	1.78	1.60	4.87	0.21	13.48[1]
44	2.78	2.69	5.00	0.00	7.36[1]
School-Community					
Relations					
45	2.30	1.67	5.00	0.00	9.99[1]
46	1.87	1.12	4.00	1.00	7.02[1]
47	2.00	0.91	4.61	0.43	10.81[1]
48	1.91	0.81	4.39	0.88	9.13[1]
49	1.69	0.77	4.52	0.90	10.51[1]
50	1.87	0.94	4.35	0.96	8.62[1]

Note: 1. Computing t-test analysis above compare to critical t-value from t-table ($t_{0.025(44)}$ = 2.02).

2. [1] Every item had significant difference.

Selection of Items

For selection of items t values for individual items were considered. Those items which had significant t value (2.02) were selected. Thus 18 items from part one of the instrument i.e. administrative abilities and 50 items for the second part i.e. administrative behaviours were selected for inclusion in the final form of the instrument. It may be noted here that for the first part of instrument 12 items were discarded. Thus only 18 items remained in part one, the final form namely for administrative abilities. These are given in Appendix C. However, for the part two of the instrument namely for the administrative behaviours, all the 50 items, which were tried out, had been found suitable and retained for the final form.

Validity

The validity of this instrument can be seen in terms of the basic logic involved at each stage of the development of the instrument. The procedures adopted at various stages were such that the systematisation and due rationale for each step have been followed. The experts opinions and empirical support had been gathered to the decisions at each stage. Also, the final form also was once again got scrutinised by 20 experts for its conceptual comprehensiveness and the adequacy of measuring devices developed in the form of two parts of the instrument. They unanimously

opined that the instrument could be considered as valid enough for use.

Reliability

For this purpose the scripts of these 93 respondents were rescored for the 18 items selected for the final form of the instrument. These scores were used for computation of the reliability estimate. The Cronbach reliability coefficient was calculated and the formula used was:

$$\alpha = n \,/\, (n - 1) \, (1 - \textstyle\sum S_i^2 \,/\, S_t^2)$$

where, α = Reliability Coefficient

n = Number of items

S_i^2 = Variance of total score in each item

S_t^2 = Variance of grand total score in each section of instrument.

$$\alpha = 18/17 \, (1 - 21.75/49.1627)$$
$$= 0.5904$$

The reliability coefficient was found to be 0.5904.

Similarly the reliability was estimated for the second part of the instrument by using the scores of 93 respondents on 50 items

about administrative behaviours. The reliability coefficient was found to be 0.984 as shown hereunder;

$$\alpha = 50/49 \; (1 - 83.338/2361.72)$$
$$= 0.9844$$

It was this instrument finally used to measure administrative competencies for the study of relationships with personal attributes and other relevant variables. The details of that study are presented in Chapter 4.