

CHAPTER III

METHODOLOGY

This study used the descriptive method approach. It employed a continuous development and validation of the proposed method under study. Three kinds of validation were used namely: face validation, content validation, and predictive validation. In between these validation procedures, constant revisions of the proposed method were made.

Methodology

Standards of principal performance were developed from a study of writings concerning educational administration and management. Behavioral evidences to illustrate and support the standards were compiled from nine instruments for evaluating principals, managers, and supervisors used here and abroad. With the help of five experienced teachers, performing semi-administrative functions in a local school, the behavioral evidence was categorized under the different standards of performance. The list of trait-actions were assembled, then translated or grouped under fewer number of different traits, which were selected to represent all of the trait-sections. Finally, the numbers were reduced to the main categories by combining (telescoping) those which seemed to be necessarily similar. The number of main categories and subcategories were selected arbitrarily to provide a

sufficiently detailed list for practical purposes. Statements which do not apply to Thailand setting were immediately separated. Of the 637 behavioral evidences or trait actions to be categorized only ninety-four were included on the first draft of the proposed method. They were distributed among the different standards as follows: conceptual skills-decision making and differentiating-seven, establishing priorities and posteriorities for actions - seven, anticipating consequences-nine, conflict management-eleven, technical skills - planning - seven, community assessment-six, group processes and communication skills-twelve, and managing change-five, human skills - interpersonal perception-eight, morale development-seven, and interpersonal relations-seven.

The preliminary standards with the ninety-four statements were sent to a group of experts for review and criticism. The experts were composed of two professors of educational administration, two practising principals, and two teachers with teaching experience of more than five years. With due consideration for the ratings and comments of these experts, the number of performance statements was reduced to seventy-four with slight modification in some statements.

The revised method was formulated into a questionnaire and copies were personally distributed to thirty six CECT - member schools of Bangkok. Together with the questionnaire were the letters of the researcher and of the CECT General Secretary. The same questionnaires were personally retrieved by the researcher after two weeks. The results were statistically computed and interpreted. Special attention was given the comments and recom-

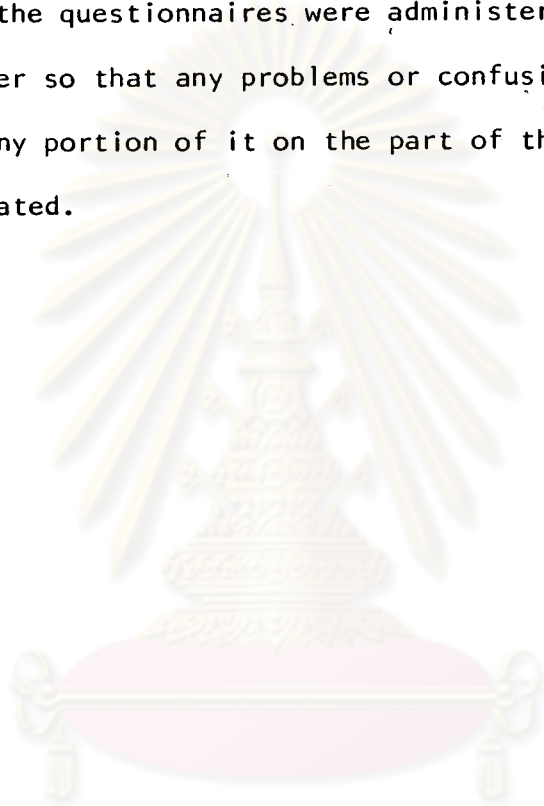
recommendations received from the respondents.

Another revision of the questionnaire was made. The questionnaires contained fifty-eight statements. This method which would appraise the actual performance of the principals, was personally distributed to the principals and teachers of the CECT school members in Bangkok. Included were the letter of request from the researcher and the letter of endorsement from the General Secretary of the CECT. The questionnaires were retrieved after a week. After twelve weeks, the same questionnaires together with another letter from the researcher were distributed to the respondents. Their rating of the performance of their principal would be used in the predictive validation of the proposed method. The two sets of ratings were tabulated and subjected to the student t-test of difference. Interpretation of the results followed.

The principals and teachers of CECT member schools in Bangkok were selected as subjects for the predictive validation of the method for two reasons: (1) the method had been content-validated by CECT member schools of Bangkok. Normally, the Catholic schools of Bangkok share many things in common, (e.g. organizational set-up, curriculum, finances, etc.) and these commonalities serving as frame of reference would be helpful in the continuation of the validation process. (2) the principals and teachers of CECT member schools in Bangkok are educationally culturally and socially more aware and better prepared than other CECT member schools.

It should be of interest to note that the respondents

were instructed to assess the performance of their principals based on the fifty-eight statements. The researcher appealed to and requested the respondents to answer the questionnaires as honestly and accurately as possible with the assurance that the information they would provide would be kept strictly confidential. Some of the questionnaires were administered personally by the researcher so that any problems or confusions regarding the method or any portion of it on the part of the respondents would be eliminated.



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SUBJECTS OF THE RESEARCH

Principals and teachers of the following catholic schools in Bangkok were subjects for the research :

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|---------------------------------|----------------------------|
| 1. อัสสัมชัญศึกษา | 19. พระแม่มาลีหญิง |
| 2. อัสสัมชัญบางรัก | 20. พระแม่มาลีชาย |
| 3. อัสสัมชัญบางแค | 21. พระแม่มาลีสาธุประดิษฐ์ |
| 4. อัสสัมชัญคอนแวนต์ | 22. พระแม่มาลีพระโขนง |
| 5. เซนต์คาเบรียล | 23. กุหลาบวิทยา |
| 6. เซนต์คอมินิก | 24. กุหลาบวัฒนา |
| 7. เซนต์โยเซฟคอนแวนต์ | 25. แม่พระประจักษ์ |
| 8. เซนต์โยเซฟบางนา | 26. บัญจทรัพย์ |
| 9. เซนต์ฟรังซิสซาเวียร์คอนแวนต์ | 27. คอนเซ็ปชันคอนแวนต์ |
| 10. ซางตาครูสคอนแวนต์ | 28. พระหฤทัยคอนแวนต์ |
| 11. ซางตาครูสศึกษา | 29. แม่พระฟาติมา |
| 12. เซนต์หลุยส์ศึกษา | 30. เปรมฤดีศึกษา |
| 13. เซนต์เทเรซา | 31. ลาซาล |
| 14. มาแตร์เคออีวิทยาลัย | 32. มารดานฤมล |
| 15. วาสูเทวี | 33. ศรีมิตรวิทยา |
| 16. มาเรียลัย | 34. วรสารวิทยา |
| 17. มหาไถ่ศึกษา | 35. สารสาสนพัฒนา |
| 18. พระแม่สงเคราะห์ | 36. สารสาสนพิทยา |

Treatment of Data

After the questionnaires for content validation were properly turned over to the researcher, a frequency count of the responses to each statement under the three categories (conceptual, technical, and human) was made. The results were tabulated and their mean values computed.

The following table was used in the interpretation of the result of the content validation. For the statements, a mean value of

4.50 - 5.00 means VERY or HIGHLY DESIRABLE

4.00 - 4.49 means DESIRABLE

3.50 - 3.99 means SLIGHTLY DESIRABLE

3.00 - 3.49 means NOT DESIRABLE

2.99 - or below means HIGHLY UNDESIRABLE

The following formula was used in the computation of the mean:

$$M = \frac{\sum X}{N}$$

where M = arithmetic mean

Σ = "the sum of"

X = each of the scores or measurements in turn

N = the number of measurements scores

The mean is preferred because it is generally the most reliable or accurate measure of central value. By this, it means that, from sample to sample from the same population, the mean ordinarily fluctuates less widely than either the mode or the median.

For the predictive validation, the standard deviation and the t-test were computed using the following formulas:

The hypothesis is that $\bar{X}_1 = \bar{X}_2$. A common hypothesis is whether two sample means could have come from the same normal population, in other words, that $\bar{X}_1 = \bar{X}_2$, regardless of what the variance of the population is. Under these conditions,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{X}_1 - \bar{X}_2}}$$

where $S_{\bar{X}_1 - \bar{X}_2}$ is the estimate of the standard deviation of the differences of pairs of arithmetic means $\bar{x}_i - \bar{x}_j$. If there is no correlation between x_i and x_j , then

$$\frac{\sum \bar{x}_1^2}{n_1} + \frac{\sum \bar{x}_2^2}{n_2} = \frac{\sum x_1^2}{n_1} + \frac{\sum x_2^2}{n_2}$$

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¹ J.P. Guilford, Fundamental Statistics in Psychology and Education (4th ed.; New York: McGraw Hill Book Company, 1965), pp. 44, 56.

but by hypothesis

$$\sigma^2_{\bar{x}} = \sigma^2_{x_1} = \sigma^2_{x_2}.$$

$$\text{Hence } \sigma^2_{x_1 - x_2} = \sigma^2_{\bar{x}} \left(\frac{1}{n_1} + \frac{1}{n_2} \right) = \sigma^2_{\bar{x}} \left(\frac{n_1 + n_2}{n_1 n_2} \right)$$

An estimate of $\sigma^2_{\bar{x}}$ is obtained by pooling the sums of the squares of the deviations from the sample means of the two samples and dividing by the number of degrees of freedom, which in this case is $n_1 + n_2 - 2$ since two estimates, \bar{x}_1 and \bar{x}_2 , have been made from the sample:

$$s^2_{\bar{x}} = \frac{\sum (x_1 - \bar{x}_1)^2 + \sum (x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

Hence

$$t = (\bar{x}_1 - \bar{x}_2) \sqrt{\frac{(n_1 n_2) (n_1 + n_2 - 2)}{(n_1 + n_2) \left[\sum (x_1 - \bar{x}_1)^2 + \sum (x_2 - \bar{x}_2)^2 \right]}}$$

The value of the probability of getting a value larger than t , both plus and minus, is found by entering a t table with the calculated t value and $n_1 + n_2 - 2$ degrees of freedom. If the value of t obtained from the sample data is larger than that at the predetermined level of significance, the hypothesis that $\bar{x}_1 = \bar{x}_2$ is rejected.

² A.C. Rosenden, Elementary Principles of Statistics (3rd printing; New Delhi; Affiliated East-West Press Pvt., Ltd., 1951), p. 470.