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## Towards the measurement of the perception of the responsibilities of the primary school deputy principal

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# EDITH COWAN UNIVERSITY

PERTH WESTERN AUSTRALIA

## TOWARDS THE MEASUREMENT OF THE PERCEPTION OF THE RESPONSIBILITIES OF THE PRIMARY SCHOOL DEPUTY PRINCIPAL

Michael Harvey and Barry Sheridan

**RESEARCH REPORT No: 5**

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# **Towards the Measurement of the Perception of the Responsibilities of the Primary School Deputy Principal**

## **Abstract**

The deputy principalship remains one of the least understood roles in the schools of contemporary education systems. Research which contributes to theory building about the deputy principalship has been hampered by the lack of survey instruments with known psychometric properties. This paper reports an exploratory study which uses latent trait theory to construct a variable which describes and conceptualises practitioner perspectives of the deputy principalship in the self managing school. The logic of constructing the variable is explained in terms of the requirements of the measurement model employed. A sample of 403 deputy principals, 179 principals and 138 teachers in government primary schools in Western Australia provided data for analysing the actual and ideal perceptions of these practitioners in terms of the variable as conceptualised. In this way, the variable provided the knowledge base for describing the 'professional horizon' of school practitioners with respect to the traditional and emergent facets of the deputy principalship. The outcomes of the analysis are considered for further research about mapping the responsibilities of the deputy principal in a changing environment.

*Key words: Deputy Principals, Educational Policy, Primary Schools, Rasch Model*

# **Towards the Measurement of the Perception of the Responsibilities of the Primary School Deputy Principal**

## **Introduction**

The study reported in this paper investigates the perceptions that different members of the teaching profession have of the responsibilities of the primary school deputy principal and of the contribution of this role to school effectiveness. While all but the smallest schools in most education systems have one or more deputy principals, the way in which the deputy principal (assistant principal, vice-principal, or deputy head-teacher) contributes to school effectiveness is little understood.

Within contemporary education systems, deputy principals typically have a broad range of responsibilities which are decided by the principal. Historically, the deputy principalship has centred on delegation to a senior teacher by the principal of unwanted administrative tasks and responsibility for student discipline (Greenfield, 1985; Marshall, 1992). In the hierarchical authority structures of education systems and schools, as Austin and Brown (1970) and Pellicer, Anderson, Keefe, Kelley and McLeary (1988b) have noted, the work of deputy principals has been defined by 'what the principal wants' or the range of responsibilities that are open to negotiation 'in conference with the principal'. Reed and Himmler (1985) conceptualised the work of the secondary school assistant principal as focusing on the supervision of staff and students through monitoring, supporting and remediating activities. Here the deputy principal contributes to the maintenance of organisational stability rather than school level change. There is evidence in the research literature (Cantwell, 1993; Gorton & Kattman, 1985; Harvey, 1991; Savery, Soutar & Dyston, 1992) that deputy principals are seeking to broaden their range of responsibilities beyond the maintenance of organisational stability. There is also a growing expectation by deputy principals that they should contribute to instructional effectiveness (Marshall, 1992) and educational leadership (Smith, 1987).

In a review of the literature, Marshall (1992) concludes that the work of assistant principals is ill defined and contains contradictions, leaving the practitioner vulnerable to criticism when being assessed. The deputy principalship has been characterised by a lack of effective job descriptions which fail to make clear the full range of responsibilities (Downing, 1983; Marshall, 1992). A more fundamental concern, according to Dimmock (1991), is that deputy principals are expected to perform an *ad hoc* set of tasks that are not grounded in a clear conceptualisation of the purpose of the role in the school as a place of learning. A review of how the deputy principal should contribute to school effectiveness is thus long overdue. Educational reform has typically centred on the roles of the teacher and the principal. Greenfield (1986), Golanda (1986), Marshall (1992) and Wyles (1983) are of the view that

the deputy principalship has been ignored, forgotten or even maligned by educational policy makers, system level administrators, principals, researchers and academics. Greenfield (1985) notes that there has been a lack of critical or creative thinking about the deputy principalship. The onset of the era of devolution (in Australia), of school-based management (as in the United States of America and Canada), or of local school management (in the United Kingdom), has transferred new administrative functions to schools. The resulting transformation of work roles and professional relationships has made the deputy principalship even more problematical.

While much of this research is non-cumulative, the overall findings illuminate the significance of the deputy principal as performing a broad range of tasks which contribute to the stability and order of the day-to-day operation of the school. One factor which has contributed to the uncertainty surrounding the future of the deputy principalship in this era of devolution is the absence of a critical mass of research relating to what deputy principals do, or should do, in the evolving self managing school. The massive research literature about educational administration is remarkable for the neglect of the deputy principalship. In reviewing this literature, Greenfield (1986, p 108) found that

With few exceptions the literature on the vice-principalship is not empirical or informed by theory, and contributes little to increasing the field's knowledge about the role or work of the vice-principal, the administrative career in education, or the social dynamics of working in or of administering schools.

Many of the field studies reported are anecdotal and have not been used to build theory. Almost all of the surveys employed to investigate the responsibilities of deputy principals are not guided by a theory of the school as an organisational phenomenon and use instruments whose psychometric properties are unclear.

In a theoretical treatment of the future of the deputy principalship in the context of educational restructuring, as well as national education agendas and work organisation reforms, Harvey (1993) has proposed a traditional and an emergent facet of the deputy principalship. The traditional facet of the role is anchored in responsibilities which maintain the organisational stability of the school as proposed by Reed and Himmler (1985). Here the emphasis is on supporting the principal and the teachers as well as the control of student behaviour. The emergent facet focuses on educational leadership which empowers teachers to improve student learning. In this facet the emphasis is on critical scrutiny of policy and practice, articulating shared professional perspectives, building culture and managing change which leads to programme improvement. Enhancing the legitimacy of the school in the community is also part of the emergent facet of the role. Harvey (1993) suggests that the

future of the role in the evolving self managing school requires deputy principals to focus their effort increasingly on the emergent facet of the role. Failure to make this transition will make the deputy principalship increasingly marginal to the central functions of the self managing school.

In Australia, review of the deputy principalship is urgent. Since 1987, education has been increasingly geared to economic restructuring (Knight, 1992). One component of the microeconomic reform agenda is the transformation of traditional patterns of work organisation to ensure greater national productivity. In this context it is to be expected that the work of educators, including deputy principals, will come under close scrutiny as educational policy makers and system level administrators seek to enhance educational productivity. It is essential that review of the deputy principalship is informed by theory and data as to how the role should contribute to the educational purposes of the school, especially as the deputy principalship is the point of embarkation for the principalship. This general lack of a sound conceptual base and adequate data analyses to support the findings and conclusions for these studies has not helped in the building of explanatory theory which would lead to an understanding of the role of the deputy principal.

### **The Western Australian Study**

In 1987 the government education system in Western Australia entered an era of what has proved to be continuous restructuring. The release of the report *Better Schools in Western Australia: A Program for Improvement* was a blue print for the restructuring of a large and highly centralised education system into a devolved network of self managing schools. This present paper reports an advanced analysis of data from a study investigating the actual and ideal expectations that are held for the deputy principalship by deputy principals, principals, and teachers from government primary schools in Western Australia. (See Harvey, 1991) The survey developed for the study was conducted by the Western Australian Primary School Deputy Principals' Association. The data were collected four years after the onset of devolution at a time when school management practices were being adjusted to the demands of the evolving self managing school.

The conceptual framework constructed to guide the study and to explain the responsibilities of deputy principals is based on the work of Wyles (1983) which evolved from the outcomes of a study reported by Austin and Brown (1970). In the present study, Wyles' functional analysis of the ideal and actual administrative responsibilities of deputy principals was reconceptualised using the following subgroups:



- *planning, policy making* - developing purposes, priorities and plans which contribute to organisational development including the management of financial resources;
- *staff management* - activities which relate to the professionalism and the welfare of teachers. This includes the supervision and the coordination of the activities of teachers, communication with teachers, motivation of colleagues and building effective work relationships;
- *curriculum management* - activities which influence the quality of teaching and learning in the school;
- *administrative routines* - daily or weekly or annual practical tasks which contribute to organisational effectiveness;
- *students* - tasks that relate directly to student services and welfare;
- *external relationships* - activities which are intended to link the school to the educational bureaucracy and the community; and
- *teaching* - activities relating to classroom teaching.

The functional classification of each administrative responsibility is not without problems. School participants may not use a functional or rational view of schools to 'make sense' of administrator behaviour. Both deputy principals and teachers may attach alternative meanings to administrative acts. A further difficulty which emerges from the capacity of school participants to interpret school practices is that any administrative act may have multiple functions. Reduction of administrative responsibilities using a rational perspective of the school inevitably reduces the validity of the data.

In order to complete the survey before the end of the school year the Wyles (1983) instrument was not adapted to sample all of the administrative responsibilities that are evident in contemporary primary schools in Western Australia. This limitation of the instrument would appear to have an effect on the construct validity as assessing preferences for planning and policy making activities are central to the self managing school. For this study, only three specific responsibilities are designated within this subgroup of the classification and, as a consequence, the instrument may underestimate preferences for planning and policy making. The instrument also appears to contain specific responsibilities in the subgroups of administrative routines and external relationships that may not correspond with the Western Australian context.

The approach adopted in this study to address the shortcomings already described in research methodology in the educational policy area draws on recent developments in latent trait measurement theory, with the emphasis on the production of objective measurement. To construct a variable designed to measure the perceptions of the role of the deputy principal, and to consider both the actual and ideal situations associated with this position, the conceptual framework based on Wyles is employed. This integration of theory and objective

measurement is a significant approach because research in educational administration has not taken advantage of the special qualities available for constructing measuring instruments using these techniques. Because of the dearth of such studies in the area of policy research, the present study is considered exploratory in nature and involves the measurement issue in a way that is not possible with the traditional procedures in current use. The emphasis in this paper, therefore, is on the logic of constructing a variable for explaining, in a meaningful way, the measures obtained and how these measures can be used to increase knowledge of the role of the deputy principal and the responsibilities associated with this position in a changing environment.

## **Methods and Techniques**

### **The Design**

As explained, the aim of this study is to examine the nature of the responsibilities of deputy principals in the context of both actual and ideal situations. For this aim to be realised, the research design must facilitate the construction of a meaningful variable capable of describing the nature of the responsibilities of deputy principals. Once constructed, such a variable would then provide the basis for deriving objective measures for making meaningful comparisons across the ideal and actual situations.

The technique employed for this study is to assess the degree to which the survey statements, or items, contribute to a measure of deputy principals' responsibilities in accordance with the requirements of the measurement model. By mapping each of these statements onto a continuum, or latent trait line, it is possible to derive a variable whose meaning can be determined from the wording of the statements in association with their location relative to each other. This statement order then provides the basis for assigning meaning to the amount of agreement with which a respondent ascribes to the set of statements comprising the variable. Statements that are relatively easy to agree with, those appearing to be least provocative, are located at the lower end of the continuum while the most provocative, those statements with which only persons possessing a high commitment to the variable will agree with, are located at the high end. The location of a respondent relative to the statement distribution along this line then provides the measure of that person's commitment to the amount of the variable possessed; that is, in terms of the statements exceeded starting from the lower end of the continuum.

Further insights into the nature of the variable under construction can be obtained by examining those statements that do not conform to the strict requirements of the model. The reason why these statements do not appear to belong to the main body of statements that do

conform can be assessed from the diagnostic information provided from the analysis. Such insights invariably add further meaning to an understanding of the variable.

### **The Measurement Model**

The measurement model employed in this study is the extended model of Rasch (Andrich, 1985a, 1985b, 1988). Rasch (1960/80) models provide for "separable person and item parameters and hence sufficient statistics ... which makes possible 'specifically objective' comparisons of persons and items and thus fundamental measurement" (Masters & Wright, 1984, p.529). This model is especially suitable for the present study because of its facility to handle multiple category items in a meaningful way and to address the behaviour of the thresholds located between the different item categories. A set of thresholds are conceptualised as boundaries between the response categories of an item and specify the change in probability of a response occurring in one or the other of two categories separated by the threshold. If the threshold estimates for a particular item do not appear in a sequential, ordered, manner then this is evidence of misfit to the construction of the model (Andrich, 1985a; Sheridan, 1993). Threshold disorder can often provide valuable insights into the meaning and nature of the variable under construction.

### **The Instrument**

The instrument employed in this study contains 43 statements involving a functional classification of the responsibilities of the Deputy Principal. A listing of these statements appears as Appendix 1 to this paper. The statements are arranged into seven subgroups and designated as: (a) Planning Policy Making (containing 3 statements); (b) Staff Management (8 statements); (c) Curriculum Management (4 statements); (d) Administrative Routines (5 statements); (e) Students (4 statements); (f) External Relationships (7 statements); and (g) Teaching (1 statement). Each statement contains two five-category response formats, one for rating the ideal situation and one for rating the actual situation as perceived in the practitioner's school. With the ideal situation, practitioners were asked to rate each statement according to the importance a Deputy Principal should IDEALLY place on each of the 43 responsibilities, using a classification ranging in order from NEVER, through SELDOM, SOMETIMES, FREQUENTLY to ALWAYS. For the actual situation, the importance a Deputy Principal ACTUALLY places on each responsibility was rated using the same classification range as for the ideal situation. Each category was scored from 1 to 5 respectively for each of the two classification ranges in accordance with the familiar Likert type format. Following the Wyles' study, additional contextual information was also collected on the class of school, based on both school size and location, with which each respondent was associated at the time of the survey.

### **Sample and Data Collection**

All primary school deputy principals, and principals of schools with a deputy principal, located within the government education system of Western Australia were invited to participate in the survey of the responsibilities of the deputy principal. One teacher located in each primary school with a deputy principal was also invited to participate. Data were collected from 403 deputy principals (which represented 58.5 per cent of deputy principals surveyed), 179 principals (60.0 per cent response) and 138 teachers (46.2 per cent response). The design of the research around three groups of practitioners provided data which enabled assessment of the extent to which expectations for the deputy principalship were common to all groups. Previous research investigating administrative responsibilities has identified some differences between deputy principals and principals (Austin & Brown, 1970; Cantwell, 1993; Pellicer et al., 1988a). Phenomenological and interpretive theories of organisational behaviour would suggest that the professional perspectives of school participants are shaped by situational factors. Historically, deputy principals have had little discretionary power over the responsibilities that are delegated by the principal.

In expressing a preference for the 'ideal' performance of each administrative task, respondents were asked to anticipate the evolution of the self managing school as proposed by the education authority. Respondents were to consider how educational restructuring could provide opportunities for practitioners to perform the role by 1994 after further consideration of each of the following:

- school planning;
- school decision making;
- school financial management
- school accountability; and
- school human resources.

A possible validity problem could arise here due to the varying capacity of respondents to envision the characteristics of the self managing school.

## **Results**

### **The Variable**

The results reported in this paper will concentrate on an examination of the variable constructed and the meaning ascribed to the measures obtained for both the actual and ideal situations examined. Before continuing with this presentation it is important to note that the calibration of the statements comprising the perception of the deputy principal responsibilities variable was undertaken using the responses for the actual aspect only, and that these calibrations were then used to obtain the measures for both the actual and ideal aspects of the

variable. Additional investigations were undertaken to examine the validity of this procedure and hence establish the presence of commensurate measures for comparing change both across and between the three groups of respondents employed in the study. An account of the analysis details involved in the assessment of the psychometric properties of the instrument constructed for the study is beyond the scope of this paper and therefore will not be considered here.

The analysis revealed that 39 statements conformed to the requirements of the measurement model. Accordingly, these statements contribute to the construction of a variable whose meaning is interpretable in the context of a measure of the responsibilities of deputy principals. To determine such meaning, the statements need to be placed on a continuum in order from least to most provocative. The location of each statement corresponds to the calibration value estimated from the model, and accords with the order of the ease with which the respondents can agree to the statement. In Figure 1, the statements are located in order along the line such that the least provocative appear at the bottom and the most provocative at the top. The measurements on the scale provided here range in value from approximately 3 to 7 units. These units are created by the model and are arbitrary in the same way that inches and centimeters as measures of length are ultimately arbitrary, but the latter are more familiar through constant use and having been defined in terms of an agreed standard for ease of communication. The important feature of the units provided for the present situation is that they specify the distribution of the statements relative to each other and that they, the units, are really a means of determining the size of the differences between statements. In terms of the standard errors associated with the statement calibration estimates located on this continuum, a difference of 0.2 units would be significant. This means that the level of intensity, or the power to provoke, of statements on a particular line in Figure 1 can be interpreted as a significant increase, or decrease, compared to the level of intensity of statements located on an adjacent line.

For the variable to be defined in terms of the statements, the location of such statements is critical. Thus, 'Student discipline' (represented by the subgroup code *Stu1*, and located at the 3.4 unit mark on the continuum) is the most important responsibility for a deputy principal as respondents find this statement the easiest with which to agree. At the other extreme, 'Liaison with youth serving agencies of the community' (*Ext6*, at 6.4 units) is the least important responsibility for a deputy principal as this statement is the most difficult for a respondent to accept as a priority. Because of their respective locations, these two statements define the extent, or range, of the variable. Conversely, 'Teacher duty schedules' (*AD02*), 'School morale' (*Sta2*) and 'Assemblies' (*AD03*) represent statements of equivalent sensitivity or power to provoke responses as both have the same location value of 4 units.

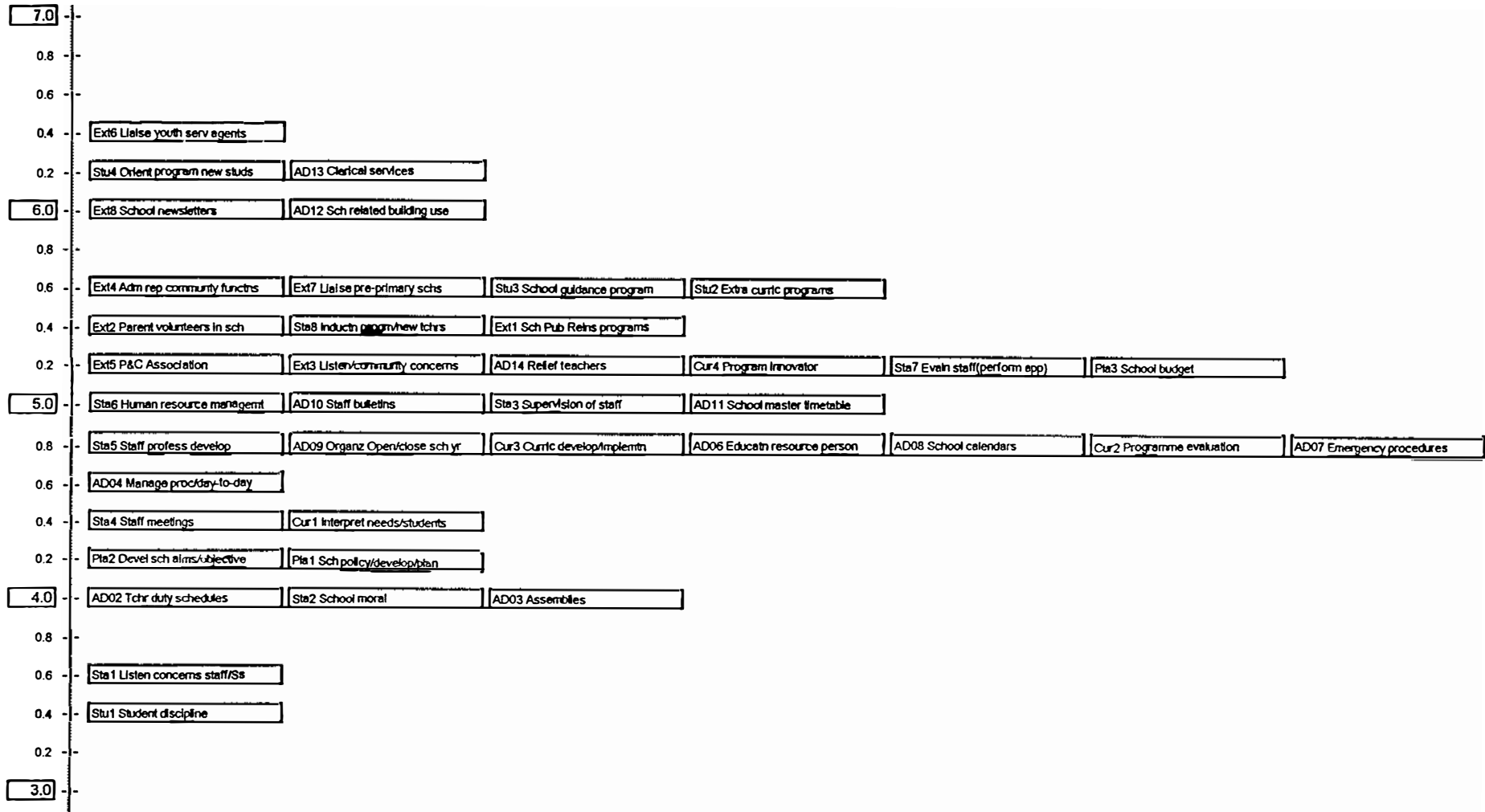
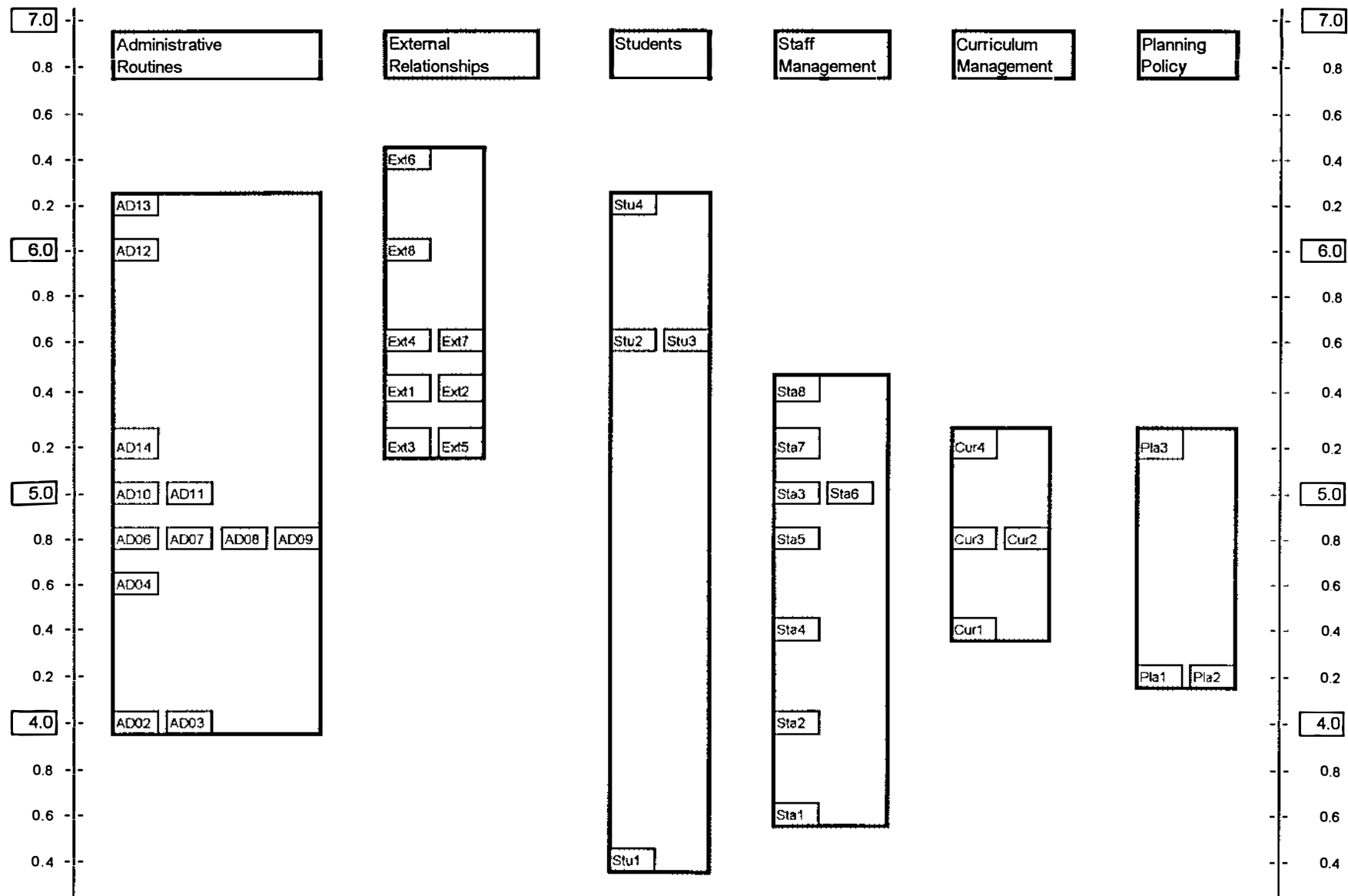


FIGURE 1 Responsibilities of Deputy Principals variable as defined by the 39 statements fitting the Measurement Model

However, a statement on the next line, for example 'Developing school aims and objectives' (*Pla2*, at 4.2 units) is a more difficult statement with which to agree than any of *AD02*, *Sta2* or *AD03*. A further observation of Figure 1 reveals that the variable is undefined at both the 3.8 units and 5.8 units mark. Future research would need to address this omission to further knowledge of the meaning of the variable overall.

Greater clarity, and hence meaning, can be obtained if the statements are re-arranged according to the seven subgroups as conceptualised in the original functional classification of the responsibilities. (See listing in Appendix 1) In Figure 2, the statements have been grouped in boxes and arranged in columns under their respective subgroup title. Note that the location of the statements along the continuum (as displayed in Figure 1) has not changed and that the short codes only are retained from Figure 1 to identify each statement. Thus, the least provocative statement, identified earlier as 'Student discipline', appears as code *Stu1* at the same location of 3.4 units on the line but is now contained within the subgroup box designated as 'Students'. Similarly, the statement 'Liaison with youth serving agencies of the community' is designated by its code *Ext6* at the same location (6.6 units) specified in Figure 1 but now contained within the subgroup designated as 'External Relationships'.

Of the four statements that did not conform to the strict requirements of the measurement model, three were from the Administrative Routines subgroup and the other was the 'Classroom Teaching' (*Tch1*) statement located in the Teaching subgroup. Since the latter was the only statement for the Teaching subgroup, this subgroup therefore does not appear as a component of Figures 1 or 2. 'Equipment and supplies' (*AD01*), 'Student attendance' (*AD05*) and 'Relief teachers' (*AD14*) are three responsibilities for which significant inconsistencies were present in the responses to the different categories across all three respondent groups. In addition, low discrimination was noted for statements *AD01* and *AD05*, which meant that they contributed very little knowledge to the meaning of the variable under construction. For the remaining statement, *Tch1*, it would appear that a qualitatively different responsibility is perceived for this statement in the presence of the other statements whose focus is essentially on administrative functions. As classroom teaching is required of primary deputy principals in Western Australia, this may explain the disparity observed for this statement. Therefore, respondents are reacting to the 'Teaching' statement quite differently from the remaining statements that do fit the model. This statement would appear to be measuring something quite different from the variable identified for this study. When these four statements were omitted from the analysis, the remaining 39 statements fitted the construct of the measurement model and thus formed the basis for the construction of the variable of Responsibilities of Deputy Principals.



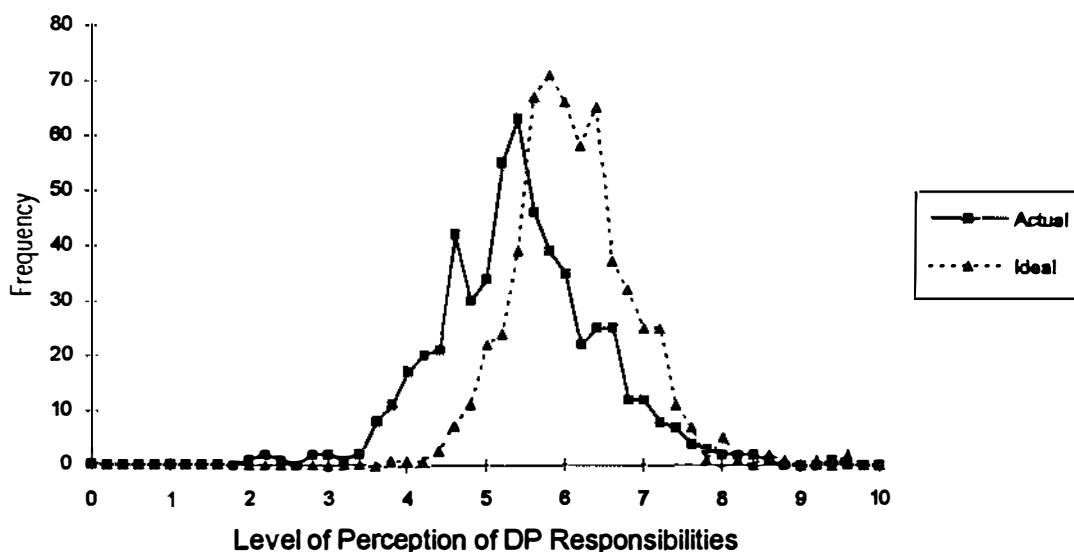
**FIGURE 2:** Responsibilities of Deputy Principals variable with statements arranged by Subgroups



### Measure of Actual and Ideal Perceptions

Once the statements contributing to a meaningful interpretation of the variable have been identified, the calibration of the measuring instrument can be established in terms of these statements. Measures of the actual and ideal perceptions of the responsibilities of deputies are then obtained for each respondent. The same measuring instrument is employed to determine both sets of measures, an important requirement if comparisons between sets of measures are to be made. The measures obtained in this way then have a direct relationship to the statements that define them. Therefore, the units are important in locating respondents relative to the location of the statements, because the measurement model maps both statement calibrations and respondent measures onto the one continuum.

A comparison of the actual and ideal perceptions of deputy principal responsibilities revealed a bias in favour of the ideal aspect. The distribution of responses for the three groups combined, as displayed in Figure 3, shows that the actual situation has a mean value



*Figure 3: Distribution of Actual and Ideal perceptions of Deputy Principal Responsibilities for all three practitioner groups combined.*

around 5.5 units while that for the ideal set is between 6 and 6.5 units. Also, the spread of responses for the actual is greater than that for the ideal. To interpret what these numbers mean, reference to Figure 1 will indicate the position of the statements relative to a particular measurement value for the perception of deputy principal responsibilities. Thus, a mean of 5.5 units for the actual situation locates the distribution for these perceptions around the middle of the statement distribution. However, the mean value for the ideal situation, around 6 to 6.5 units, places this distribution closer to the higher end of the variable as defined. When the measures are subdivided into the three separate groups of Principals, Deputy

Principals, and Teachers, there is no obvious change in the basic shape of the distribution to suggest that one group is biased more than another towards the extent of deputy principal responsibilities. The implication of these outcomes is that a higher order priority for deputies' responsibilities is perceived with the ideal situation compared to that for the perception of the responsibilities for the actual school situation.

An alternate way of examining these data is to consider the actual and ideal situations separately. As Figure 4 and Figure 5 reveal, no apparent difference is evident between the overall distribution of responses for the three groups either for the actual or the ideal situation. However, the narrower spread observed in Figure 3 for the ideal compared to the actual situation is again in evidence. In addition, the mean response for the ideal situation is about one unit higher across all three groups compared to that for the actual situation.

To explore for possible differences between the groups it is necessary to examine the responses according to other factors that may influence perceptions of the deputy principal's responsibilities. This phase involves identifying the measures obtained for both the actual and ideal situations in association with the appropriate contextual information collected during the survey. A plot of the cell means across a specific context group for each practitioner group (Principals, Deputy Principals, and Teachers) would then reveal the nature of any differences that can be identified by using analysis of variance techniques. For these plots, the unit of measurement has been increased by a factor of 10 to eliminate decimals in the presentation. However, the location of the mean values relates directly to the statement locations presented in Figure 2 as, for example, a value of 60 in the plots displayed in Figure 6 refers to 6 on the statement continuum, and a plot value of 55 represents the same location value as 5.5 for the statement locations.

One factor likely to influence the perceptions of deputy principals' responsibilities is school location. When the mean perception scores for the three school location divisions, identified as Metro (metropolitan), Urban and Rural, are plotted for the three practitioner groups, two outcomes are evident as Figure 6(a) reveals. Firstly, a significant interaction effect is present for the Teachers group in the ideal situation, where a deputy's responsibilities is perceived by this group to be significantly more extensive in the rural setting than in schools located in the metropolitan area. This is in contrast to the perceptions of both Principals and Deputy Principals which are essentially unvarying across all three school locations. This same trend is also present for the Teachers group in the actual situation, accompanied this time by a slightly less, though still significant change, for the Principals group. Again, the Deputy Principals group does not reveal any significant change across the three school location types. Also, the

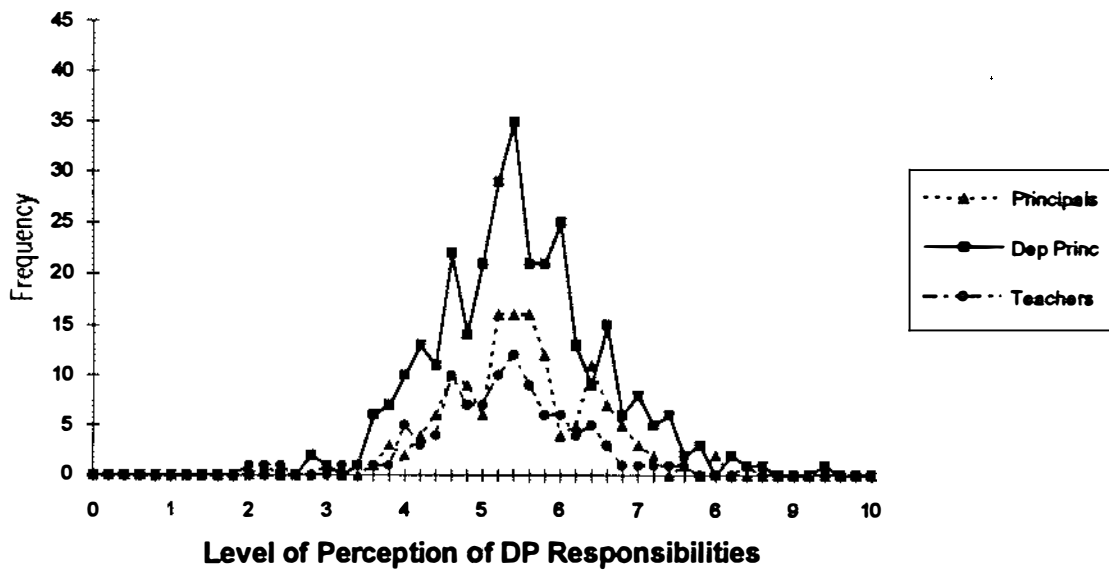


Figure 4: Distribution of Actual perceptions of Deputy Principal Responsibilities for each of the three practitioner groups.

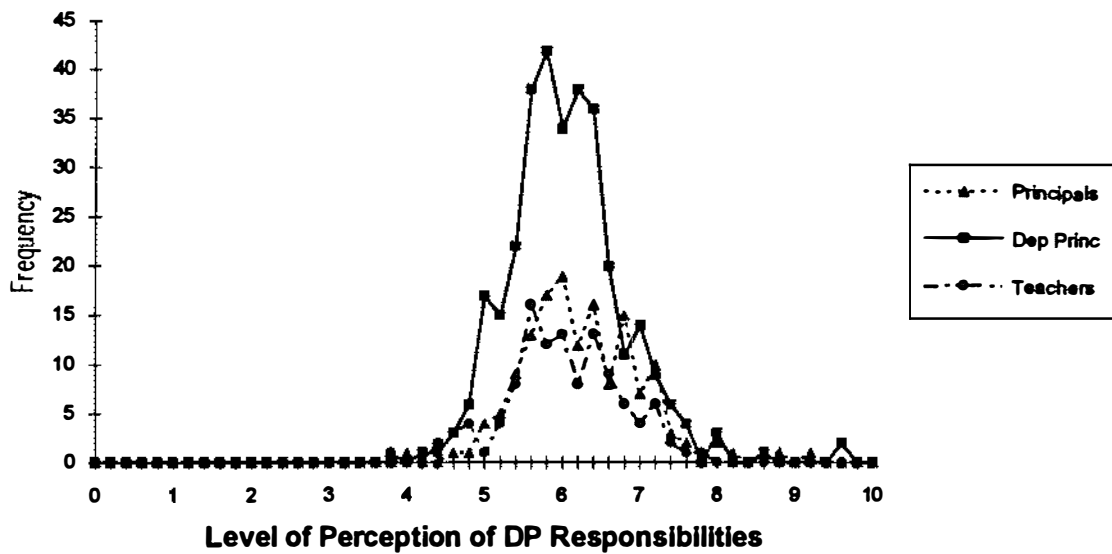
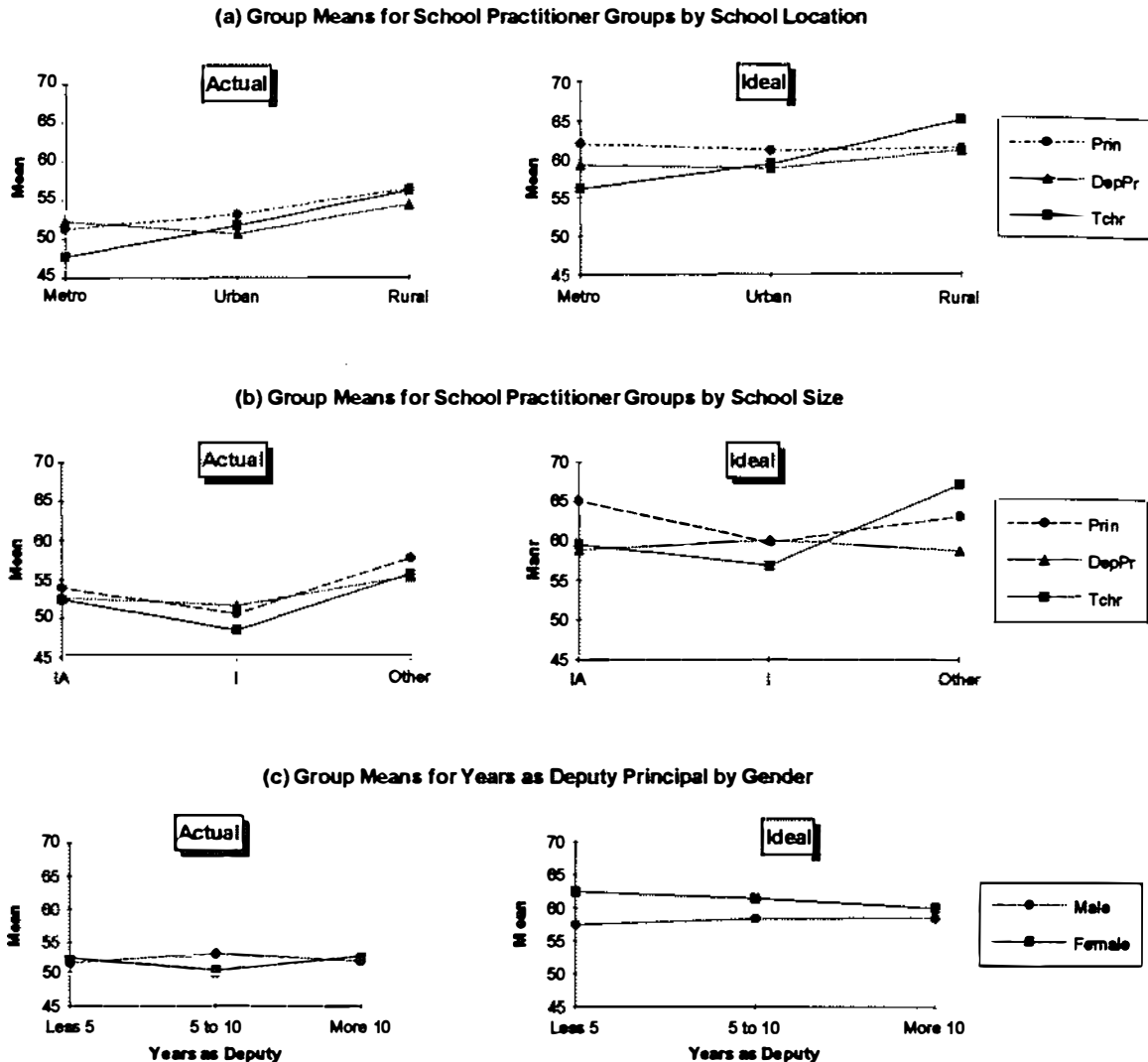


Figure 5: Distribution of Ideal perceptions of Deputy Principal Responsibilities for each of the three practitioner groups.



*Figure 6: Plots of Actual and Ideal perceptions of Deputy Principal Responsibilities for each of the three practitioner groups by (a) School Location and (b) School Size and for Years as Deputy Principal by Gender.*

mean values for the ideal perceptions are generally significantly higher than those observed for the actual situation.

Another factor considered in these analyses relates to the size of the school within which the three practitioner groups are located. School size has been classified in this analysis as Class IA (over 600 students), Class I (300 students) and Other (includes Class II, with between 100 and 299 students, and Class I and Class II District High Schools which has a mix of primary and secondary students). As with the previous case, a significant interaction effect is present for the ideal situation where, as Figure 6(b) reveals, the perceptions of the Teachers and Principals groups are involved. Teachers in Class IA schools perceive the ideal Deputy

Principal responsibilities as significantly less extensive or wide ranging compared to Principals of this type of school, but this view is reversed for these two groups when located in much smaller schools (or 'Other'). As before, no significant change is observed for the Deputy Principals. For the actual situation, no significant trends are apparent across either the groups or the school size, though the respective mean values are again significantly higher for the ideal situation than for the actual situation.

Further factors considered were gender, years of experience as a deputy principal and satisfaction with the job. With respect to gender, a significant interaction effect occurs for the ideal situation. Figure 6(c) shows that during the first five years of appointment female practitioners have higher ideal expectations than male practitioners. However, after ten year of appointment there is no difference in the level of expectations of females and males.

### **Discussion**

The advantage of the measurement model employed for this study is immediately evident from the foregoing presentation in that the level of perception of the practitioners can be mapped directly onto the same continuum as the variable defined by the statements located thereon. As a consequence of this, meaning can be ascribed to the measures obtained for the practitioners relative to the statements exceeded on the variable continuum. Any analyses that arise from these measures can therefore be interpreted directly in terms of the statements involved and so contribute to knowledge of the variable and the original conceptualisation of deputy principal responsibilities.

From the results presented earlier, four main outcomes are evident for this study. Firstly, the creation of a variable to measure perceptions of deputy principal responsibilities has provided a meaningful framework for understanding the nature of the problem investigated and to provide guidelines for future investigations. The construction of the Perception of Deputy Principals Responsibilities Scale (PDR) as shown in Figure 1 and Figure 2 describes, and consolidates the original conceptualisation on, how the deputy principal is expected to contribute to school effectiveness during an era of profound educational restructuring. Various schemas from the research literature are used to interpret the scale. Review of the inter-relationships between the subgroups provides a broad outline of the work priorities of deputy principals as perceived by the three main practitioner groups within the school system.

The order of the statements along the continuum is an indicator of the priority level, or order of importance, of the responsibilities as perceived by the three significant practitioner groups within the school system. In this context, the most important subgroups are Planning and Policy Making, Staff Management, Curriculum Management and Administrative Routines.

Of lesser importance to the deputy principalship are the subgroups of responsibilities relating to Students and External Relationships. The broad outline of the deputy principalship reflects both the historical expectations for the role as well as the new administrative functions that have been transferred to schools as a consequence of educational restructuring.

In accordance with the traditional and emergent facets of the deputy principalship schema as described by Harvey (1993), administrative routines and staff management tasks are seen as components of the traditional facet for which there remain strong expectations by school practitioners. It can be concluded from the data analysis that responsibilities relating to planning and policy making and also curriculum are the most institutionalised components of the emergent facet of the role. As Figure 2 reveals, these subgroups have a higher priority level accorded them than any other aspect of the emergent facet of the deputy principalship. External relationships, on the other hand, is a subgroup of the emergent facet of the deputy principal role for which the lowest priority level is observed for the importance of these responsibilities in the self managing school. By comparison with deputy principals in the United States of America, the Western Australian deputy principals are not yet expected to link the school to the community (See Austin & Browne, 1970; Pellicer, et al., 1988a).

The contribution of the deputy principal is further illuminated by the relative importance on the PDR scale of the specific responsibilities within each subgroup. Three of the subgroups are characterised by a discontinuous range of responsibilities. Administrative Routines comprises three distinct sets of responsibilities which cover a range of 2.2 units. Cantwell (1993) distinguishes between clerical duties (such as 'Student attendance') and organisational duties (like 'School master timetable'). The responsibilities for which a lower priority level is evident tend to be the more demanding organisational duties. The Students subgroup, which contains statements whose locations cover a range of nearly 3 units, include activities which Wyles (1983) recognised as student welfare (such as 'Student discipline') and the non-classroom activities of students (like 'Orientation programme for new students'). The former represents one of the traditional responsibilities which school practitioners expect from deputy principals. The lower priority level of student services could reflect the extent to which school practitioners perceive a need for effective procedures for managing student behaviour. Many deputy principals have typically become preoccupied with student discipline to the extent that there is little time to improve the level of supports for students. Both Administrative Routines (such as 'Clinical services', 'School related building use') and Planning and Policy Making ('School budget') include new administrative responsibilities that were once the work of the principal. The responsibilities identified here also have lower priority levels on the continuum. This could indicate a re-assessment by principals of their own role in the self managing school. Specific responsibilities within Staff Management (such as

'Induction programmes for new teachers', 'Human resource management', 'Staff professional development') and Curriculum Management ('Programme innovator') provide deputy principals with opportunities to promote school level change. Responsibilities such as these which contribute to the emergent facet of the deputy's role are located at the lower priority end of the continuum and therefore of less importance relative to the traditional responsibilities.

The construction of the PDR scale reveals the level of priority for practitioner perceptions regarding the importance of responsibilities for the deputy principalship. In the context of the changes in education it is possible that the scale can be used to identify responsibilities which will become increasingly important in the self managing school. The data for the ideal situation provide evidence that Western Australian deputy principals are expected to broaden their range of responsibilities beyond the traditional focus of maintaining the stability and organisational effectiveness of the school. They are expected to contribute to school level change through planning and policy making and through specific responsibilities relating to staff management and curriculum management. Although a lower priority level is accorded External Relationships, educational policy makers have an increasing concern about accountability to parents and the community during the era of educational restructuring. This development foreshadows that deputy principals and other school practitioners will have to allocate increased effort to school community relations. Expectations for school level change provide deputy principals with new opportunities to demonstrate educational leadership.

The PDR scale also provides information about the qualities of the research instrument that was used in the Western Australian study to assess the responsibilities of deputy principals. The instrument is a derivative of the Austin and Brown (1970) study and reflects the administrative demands of American high schools in the mid 1960s. Since then deputy principals have been encouraged to make a greater contribution to instructional improvement (Gorton & Kattman, 1985; Greenfield 1985). It is essential that a research instrument is developed that is informed by current theory about the nature of schools as organisational phenomena as well as school management and leadership so that the full range of responsibilities is considered. The Wyles (1983) instrument that was used in this study appeared to be deficient with respect to responsibilities for the subgroups of Planning and Policy Making, Staff Management, Curriculum Management and External Relationships. The instrument consisted of statements of duties. The functional classification of responsibilities was problematic in many cases as the nature of the perceived responsibility had to be inferred by the researchers. Also the statements lacked some sensitivity to the contribution of either the maintenance of organisational stability or the management of educational change. An instrument that is not grounded in a theory of leadership will reduce the capacity to assess the

contribution of, in the present case, the deputy principal. More basic research is needed, including 'thick' descriptions and observational studies, to produce a valid categorisation of the responsibilities of the deputy principal in the self managing school. Revision of the PDR scale would benefit from this research.

Two of three subgroups with a discontinuous range of responsibilities require further reconceptualisation. Administrative Routines, as a subgroup, reflects a disparate set of responsibilities which confirms that the work of the deputy principal encompasses all administrative activities that cannot be accomplished by either the principal or the teachers. Cantwell's (1993) distinction between clerical duties and organisational duties is promising as a starting point for refinement of the subgroup. The subgroup Students also requires further reconceptualisation. In many schools, deputy principals become preoccupied with the control of student behaviour rather than the preventative and the proactive aspects of promoting acceptable standards of behaviour. Further development of statements of responsibilities relating to students discipline should reflect both the preventative and the remedial aspects of the management of student behaviour. In addition, responsibilities relating to student services as proposed by Austin and Brown may require reworking as a separate sub category.

A second main outcome from this study relates to the meaning associated with the location of school practitioners along the variable identified as Perception of Deputy Principal Responsibilities. From the distribution of the level of perception noted for all three groups of respondents, and as presented in Figure 3 and Figure 4, a difference in the mean value of 1.0 to 1.5 units between the actual and the ideal perceptions of responsibilities is evident. This suggests that school practitioners expect deputy principals to shift the focus of their work. By considering the mean values of the respective distributions, this would require a shift from a concern with responsibilities (located around 5.0 to 5.5 units) such as 'School master timetable' (*Ad 11*), 'Listen to the concerns of community members' (*Ext 3*) and 'Evaluation of staff (performance appraisal)' (*Sta 8*) to responsibilities (located from 6.0 units and above) such as 'School newsletters' (*Ext 8*), 'Orientation programme for new students' (*Stu4*) and 'School related building use' (*Ad 12*). The shift in the level of responsibilities means that deputy principals would acquire new organisational duties that have been relinquished by principals or would perform more responsibilities that have opportunities for leadership.

The narrower range for ideal preferences, by comparison with the actual preferences, raises the issue as to whether or not deputy principals should continue to have responsibility for the administrative tasks located at the low end of the variable. This issue requires further investigation as traditionally the deputy principalship has been a repository for new administrative responsibilities to support the principal, the teachers and students. In the



current review of the patterns of work organisation in Australia it is possible that policy will emerge to support the delegation of lesser administrative tasks to education workers with lower levels of skill. Definition of what responsibilities are not part of the deputy principalship is a significant issue in reconceptualising the role so that occupants of the role contribute to the central functions of the self managing school.

To better understand the nature of the perceptions as revealed in a general sense from the discussion above, a third outcome for the study relates to perceptions across different context categories. The most notable outcome associated with school location, as displayed in Figure 6a, indicated that respondents from rural based schools perceived the level of deputy responsibilities as more wide ranging than those of their counterparts from metropolitan schools. In Western Australia, teachers in rural schools are more likely to be in their first appointment than are teachers in metropolitan or urban schools. It is to be expected that beginning teachers will seek a higher level of administrative and professional support than more experienced teachers. Ideally, teachers in rural schools prefer that deputy principals shift their focus to include responsibilities that are located more towards the higher end of the variable. This pattern is also evident in Figure 6b as nearly all schools categorised as 'Other' are in rural communities. Figure 6(c) suggests that female deputy principals take up appointment with higher ideal expectations than male deputy principals. However, the pattern suggests that after ten years of appointment female practitioners have developed a similar level of ideal expectations as male practitioners. A loss of idealism over time spent in the job for female deputy principals is therefore evident in Figure 6(c).

A fourth, and final, main outcome of the study reported in this paper relates to the measurement techniques employed as an overall strategy for guiding the conceptualisation associated with the role of deputies in the primary school. The analysis as presented was aimed specifically at defining a variable with the expressed purpose of obtaining measures that relate in a meaningful way to the original conceptualisation. If meaningful interpretations are to result from any recourse to empirical evidence then the measurement technique employed must consider how the person responses relate to the statements comprising the survey form. Unless this integration between the original conceptualisation and the measurement outcomes is achieved, attempts to build explanatory theory and thus increase knowledge of the discipline area will be, at best, superficial.

Recent investigations into the nature and structure of the scoring mechanism associated with the familiar Likert format for attitude data has revealed that the so called cumulative scoring strategy in common use may be masking the true nature of how the latent variable is actually constructed. A process called 'unfolding' (Andrich 1989) may reveal more than the present

investigation has uncovered regarding the conceptualisation involved. More specifically, this technique has the capacity not available to the familiar Likert scoring procedure for investigating the evolving nature of the deputies' role. This would mean that tasks considered essential in the past are now no longer important as the nature of the school process changes and different responsibilities assume control of the agenda. The unfolding strategy would provide a means of investigating this hypothesis as part of future investigations to be pursued for this ongoing study.

### **Conclusions**

The deputy principalship remains one of the least understood roles in the schools of the contemporary education system. This role has evolved to provide support originally for the principal, and subsequently, for teachers and students. There has been little understanding of how this diffuse role contributes to school effectiveness. Educational restructuring and the emergence of self managing schools emphasising capacity for programme development, self regulation and accountability provide new opportunities for the deputy principalship. Currently, there is a lack of both conceptual and field research to guide thinking about the purpose of the role. In the absence of theory building, the deputy principal role may become a wasted educational resource in the self managing school.

The Rasch measurement model is an integral part of theory building and is well suited for data analyses associated with the perceptions of school practitioners during a period of profound educational change. This exploratory study shows the potential of the model to specify the priority of perceptions of deputy principal responsibilities by mapping both responsibility statement values and measures of perception onto the one variable. The relative location of individual, or subgroups of, responsibility statements on this scale provides the facility for constructing a meaningful description of the variable. This technique then provides for the assessment of commensurate measures to investigate the evolution of the role over time. Such research would provide insights about the extent to which deputy principals are perceived to make use of opportunities to contribute to the self managing school. Similarly, profiles that emerge could help identify responsibilities that diffuse the professional contribution of the deputy principal.

Finally, despite the limitations of the Wyles' (1983) instrument, the data analysis undertaken for the present study has provided valuable information about the perceived focus of the deputy principalship in the primary school. The variable that emerged from this study describes the 'professional horizons' of practitioners. This information is essential for the planning of professional development that will facilitate further progress towards self management. Practising deputy principals would also benefit from the research as in the final

analysis it is the practitioners who must work to reconceptualise and transform the role so that it contributes to the essential functions of the self managing school.

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## APPENDIX 1

## A Functional Classification of the Responsibilities of the Deputy Principal

| Subgroup                | Responsibilities |  |
|-------------------------|------------------|--|
|                         | Code             | Statement  |
| Planning Policy Making  | Pla 1            | School policies (school development planning)  |
|                         | Pla 2            | Developing School aims and objectives  |
|                         | Pla 3            | School budget  |
| Staff Management        | Sta 1            | Listen to the concerns of staff and students   |
|                         | Sta 2            | School morale  |
|                         | Sta 3            | Supervision of staff   |
|                         | Sta 4            | Staff meetings   |
|                         | Sta 5            | Staff professional development   |
|                         | Sta 6            | Human resource management  |
|                         | Sta 7            | Evaluation of staff (performance appraisal)  |
|                         | Sta 8            | Induction programme for new teachers   |
| Curriculum Management   | Cur 1            | Interpret the needs of students  |
|                         | Cur 2            | Programme evaluation   |
|                         | Cur 3            | Curriculum development/implementation  |
|                         | Cur 4            | Programme innovator  |
| Administrative Routines | Ad 1             | Equipment and supplies   |
|                         | Ad 2             | Teacher duty schedules (includes timetabling of teaching facilities, e.g. computers, videos) |
|                         | Ad 3             | Assemblies   |
|                         | Ad 4             | Management procedures for day-to-day operations  |
|                         | Ad 5             | Student attendance   |
|                         | Ad 6             | Education resource person  |
|                         | Ad 7             | Emergency procedures   |
|                         | Ad 8             | School calendars   |
|                         | Ad 9             | Special arrangements for the opening and the closing of the school year                      |
|                         | Ad 10            | Staff bulletins  |
|                         | Ad 11            | School master timetable  |
|                         | Ad 12            | School related building use  |
|                         | Ad 13            | Clerical Services  |
|                         | Ad 14            | Relief teachers  |
|                         | Ad 15            | Building maintenance/cleaning  |
| Students                | Stu 1            | Student discipline   |
|                         | Stu 2            | Extra curricular programmes  |
|                         | Stu 3            | School guidance programme  |
|                         | Stu 4            | Orientation programme for new students   |
| External Relationships  | Ext 1            | School public relations programme  |
|                         | Ext 2            | Parent volunteers in the school  |
|                         | Ext 3            | Listen to the concerns of community members  |
|                         | Ext 4            | Administrative representative of the school at community functions                           |
|                         | Ext 5            | P & C association  |
|                         | Ext 6            | Liaison with youth serving agencies of the community   |
|                         | Ext 7            | Liaison with pre-primary schools   |
|                         | Ext 8            | School newsletters   |
| Teaching                | Tch 1            | Classroom teaching   |