

The many emerging selves of the student teacher:
Idiographic and nomothetic perspectives on learning, teaching and
performing.

Lawrence A. Roche
Herbert W. Marsh

University of Western Sydney, Macarthur

Abstract

Students in primary teacher education courses can hold - and be influenced by - self-conceptions related to their roles as students, as teachers, and as performers in a number of different domains, such as the various subject areas (Eg., Maths, English).

This paper explores the nature and structure of these self-conceptions among student teachers, through two studies. Study 1 investigates the content of idiographic (open-ended) self-descriptions of a small sample of first-year student teachers. In the second study, a large sample of student teachers in first and second year responded to a questionnaire designed to distinguish between self-conceptions related to the different roles and domains.

Potential implications for teacher education and for teaching and learning generally are discussed.

Paper presented at the AARE Annual Conference, Newcastle, NSW,
November, 1994

Emerging selves of the student teacher p.

Introduction

Recent research on teaching has emphasised the need to consider teacher thought processes and their impact on the learning situation (Clark and Peterson, 1986). Teacher attributions, efficacy and/or locus of control as related to student outcomes have begun to receive the attention of researchers (Eg., Dembo and Gibson, 1985; Woolfolk and Hoy, 1990). However, there has been no systematic study of multifaceted teacher self-conceptions -- expectations, descriptions and

prescriptions attributed to themselves, regarding the range of domains and roles which are relevant to their performance as teachers. Teacher self-concept is, therefore, a largely unexplored realm, with potentially significant implications for students, teachers, and teacher educators. Not only are teachers' beliefs, attitudes and self-appraisals likely to influence students' own appraisals (Ashton & Webb, 1986; Greene, Anderson & Loewen, 1988; Midgely, Feldlaufer & Eccles, 1989), but they may also have a more direct influence on how much and how well particular subjects or activities are pursued - both by students and by teachers themselves (Guskey, 1988). Such ramifications take on even greater significance when the aims of the subject or course material in question place explicit emphasis on developing personal and interpersonal skills aimed at understanding oneself and others.

As a case in point, Personal Development, Health, & Physical Education (PDHPE) is one of the six Key Learning Areas (KLA's) in the NSW primary curriculum. The first of its three aims is to develop self-esteem, social responsibility and well-being, with the intention of encouraging an understanding and valuing of self and others (NSW Department of School Education, 1992). Since PDHPE may be seen as requiring a more participative, "ego-intensive" approach than other KLA's from a teacher's perspective (using one's own body and physical skills as central teaching resources) it is likely that teachers' own feelings about themselves and their physical skills would have a significant impact on their ability and inclination to teach the KLA, as well as on their students' attitudes towards themselves and PDHPE.

Given this posited link, it is rather distressing to note that many students (particularly females) leaving high school appear to have intensely negative attitudes towards their experiences and competencies in Physical Education or PDHPE (Kirk, 1993). Furthermore, the physical abilities self-concept for girls becomes significantly depressed relative to that of boys during the school years (Marsh, 1990). Since prospective primary teachers are predominantly female, this empirical finding supports anecdotal professional observations by PDHPE programme coordinators that first-year students are often reluctant to participate in PDHPE classes, and show an aversion to the prospect of teaching this Key Learning Area in schools. Similar concerns are expressed by teacher educators in other areas (such as mathematics, English, and the Arts). There is an urgent need for systematic research aimed at identifying, measuring and (where appropriate) enhancing these students' self-concepts.

A common weakness in research involving self-concept is a reliance on global measures of self-concept or esteem, rather than multifaceted self-concept measures related to the particular domain of interest -- Eg., physical, social or academic domains (Marsh, 1990; 1993a). The importance of taking a multidimensional approach is illustrated by relevant research showing that objective measures of physical fitness and involvement in athletics are substantially related to Physical Ability self-concept, weakly related to Physical Appearance self-concept, and nearly unrelated to other areas of self-concept

(Marsh and Peart, 1988; Marsh, Richards, Johnson, Roche & Tremayne,

1993). Moreover, an intervention designed to enhance girls' physical fitness and self-concept using a cooperative training program was successful in enhancing fitness and physical self-concept, but did not have a significant influence on other domains, including general esteem (Marsh and Peart, 1988).

The Nomothetic/Idiographic Debate

A clear distinction is traditionally maintained in self-concept research (and personality research generally) between highly structured, nomothetic measures of "universal" traits or characteristics and more open-ended, idiographic measures of individualised, or idiosyncratic characteristics (Allport, 1962). Nomothetic measures like the Self Description Questionnaires (Marsh, 1988a; 1990) consist of a fixed set of items that are assumed to be generally appropriate and relevant to all respondents. An implicit assumption is that the underlying structure of self-concept is similar across individuals. In marked contrast, idiographic techniques emphasised in phenomenological approaches assume that the structure of self-concept is idiosyncratic to each individual. Advocates of this approach (Eg. Runyan, 1983) argue that the "items" or "constructs" (cf. Kelly, 1955), or at least the way such items are scored should be specific to each individual.

The two approaches are typically viewed as incompatible, generally involving quite disparate research methodologies and objectives (Eg., Eysenck, 1954). Over recent years, however, there has been an increasing awareness that the two approaches should be viewed as complementary (Hermans, 1988; Marsh, 1990; Pelham, 1993; Roche & Marsh, 1993). Quite apart from the perception that idiographic and nomothetic techniques are appropriate for two distinct kinds of research goals, it is likely that both approaches can contribute to general questions about the structure of self-concept (or other aspects of personality). The contrasting implicit assumptions referred to above may both be "correct" in that very narrowly defined dimensions may be idiosyncratic to individuals, whereas common dimensions emerge when the stimulus situations are more broadly defined. Psychometric properties and methodological rigour have typically been regarded as critical elements favouring the use of nomothetic measures (Paunonen and Jackson, 1985; Wylie, 1989) and this has led to a general decline in the use of idiographic measures.

To avoid the potentially restrictive imposition of preconceived notions regarding self-concept structure and content, various open-ended, idiographic techniques have been developed. In the least structured, (or most projective) formats, respondents are asked to give 20 answers to the question "who are you?" (Bugental and Zelen, 1950), or to respond to incomplete statements such as "I am ..." or "The person I would like to be ..." (Smith, 1992). A popular content analysis scheme developed to interpret or score such responses is to evaluate the

favourability or unfavourability of each response. Apart from a lack of support for the reliability and validity of such methods, the evaluation of favourability by the researcher instead of the respondent is not consistently phenomenological (Wylie, 1989).

The waning popularity of idiographic approaches seems to stem largely from a lack of methodological rigour and psychometric soundness, in contrast to the nomothetic measures which became available during the 1980's (Paunonen and Jackson, 1985). It is also ironic to note that idiographic approaches predominantly focus on providing measures or predictions of general self-concept that have failed to take into account the multidimensionality of the construct that has been emphasised in the nomothetic approach. Hattie (1992) presented evidence from the completely open-ended idiographic research itself which supported a multidimensional approach. A central aspect of the rationale for such completely open-ended formats is to avoid imposing a

restrictive structure. It is likely, however, that providing too few overt cues or guidelines about the kind of information sought by the researcher will itself produce restrictions from less tangible sources (which are therefore also less assessable and containable). Such sources of restriction include situational cues and the respondent's expectations, motivations, mood and creativity. While these influences are potential contaminants regardless of the level of structure provided, their effect is likely to be considerably exaggerated in the absence of other relevant cues or guidelines.

Re-emergence of Idiographic Paradigms

Renewed interest in idiographic measures incorporating actual/ideal discrepancies (e.g., Higgins, 1987; Markus and Nurius, 1986), and the certainty and importance of self-conceptions (Pelham and Swann, 1989) has been spurred by the resurgence of cognitive approaches to dynamic self-processes (Markus and Wurf, 1987). Higgins' (1987) self discrepancy theory provides conceptual advances over previous research.

He used an expanded typology of discrepancy scores, by contrasting the "actual" self from one's "own" standpoint, with "ideal" and "ought" selves from the standpoints of one's "own" self and significant "others" (ie., own/actual (the person we think we are), is compared to: own/ideal (the person we would ideally like to be); own/ought (the person we feel obliged to be); other/ideal (the person a relevant other would ideally like us to be); and other/ought (the person a relevant other feels we should or ought to be)). Higgins also introduced new approaches to inferring discrepancies based on an idiographic format. Subjects are asked to list up to ten attributes describing each different standpoint/self combination (e.g., attributes, or characteristics describing who you actually are -- own/actual; who your mother would ideally like you to be -- other/ideal). Discrepancy is inferred from the number of mismatching attributes (antonyms) minus the number of matching (same or synonymous) attributes in two different lists when the lists are compared by external scorers. While the use

of similar discrepancy scores has received frequent criticism on psychometric and methodological grounds (Eg. Hattie, 1992; Marsh, 1993b), this technique appears to avoid some of the typical problems, and provides potential links between idiographic and nomothetic measures.

In a unique preliminary investigation of these potential links, Roche & Marsh (1993) expanded Higgins' (1987) idiographic approach to incorporate specific domains of self-concept (Eg., physical, social, mathematics), and used multitrait-multimethod analysis (Marsh, 1988b) to establish whether such an idiographic approach would exhibit convergent and discriminant validity (correlating with corresponding measures, and not correlating with measures of different domains) when compared with nomothetic discrepancy ratings specifically developed to match the idiographic measures. Responses to the SDQ III were also included and compared with idiographic measures of actual-self desirability. The Macarthur Individualised Self (MISELF) Description Package was primarily developed to refine and evaluate Higgins' paradigm with respect to three basic issues: Firstly, to investigate the validity of the domain-specific compared to "context-free" or completely open-ended idiographic measures; secondly, to maintain the integrity of the idiographic paradigm by allowing subjects to evaluate their own self-descriptive attribute lists for the "matches" and "mismatches" used to compute the idiographic discrepancy scores; and finally to evaluate whether the idiographic self-ideal discrepancy score contributed to the prediction of general self-esteem beyond the contribution of an idiographic measure of actual self-concept desirability.

The results provided reasonable support for the validity of both the general (completely open-ended) and domain-specific facets of

self-concept discrepancy as measured by the different idiographic standpoint/self combinations. In line with predictions, the more domain-specific measures demonstrated stronger validity. Generally good support was also found for the convergent and divergent validity of the domain-specific idiographic measures of actual self and actual-ideal self-discrepancy in relation to the corresponding nomothetic measures (including the SDQ III) available in the MISELF package. The superior validity exhibited by the more specific facets further strengthens the claim that greater domain-specificity in open-ended measures can improve their validity in self-concept research. In relation to the "subject self-evaluation" approach to evaluating their own matches and mismatches, the results generally appeared to vindicate this procedure empirically, apart from being more consistent with the ethos of the idiographic paradigm being used. No formal analysis of the actual content of open-ended responses was conducted by Roche & Marsh (1993) as part of the study. As the subjects were predominantly first year student teachers, the content of their self-descriptions should provide important insights into how student teachers perceive themselves. As mentioned earlier, however, such an

analysis, while providing an enlightening depth, lacks the psychometric rigour of a carefully constructed questionnaire. Keeves (1988) argues that there is no sound basis for the division between humanistic, qualitative inquiry which seeks to interpret or understand (Verstehen) and neo-positivist, quantitative paradigms seeking explanation in causal terms (Erklären). The potential for both idiographic and nomothetic approaches to contribute usefully to different aspects of a research question needs to be acknowledged and more vigorously explored.

The Present Investigation

The research on which this paper is based aims to investigate, from both an idiographic and nomothetic perspective, the nature and structure of self-conceptions among student teachers, using a multidimensional model of self-concept. It is hypothesised that domain- and role- specific facets of self-concept will be identified. That is, student teachers will hold distinct views of themselves both within specific domains (such as learning areas - PDHPE/Physical Ability; Human Society and its Environment (HSIE); Mathematics; and English), as well as in specific roles (self-as-participant; self-as-student; and self-as-teacher).

Study 1

The study summarised here uses the idiographic (open-ended) self-concept descriptions from the MISELF collected as part of an earlier study (Roche & Marsh, 1993), applying a content-analysis approach to investigate the nature of self-descriptions provided by student teachers near the end of their first year of study towards the Bachelor of Teaching degree. A more detailed account of the content analysis is available in Roche (1994, in progress).

Methodology

Subjects & Materials

Subjects for the analysis reported here were 30 first-year Bachelor of teaching students who volunteered to complete the MISELF (Roche & Marsh, 1993). The data to be analysed consisted of up to 10 attributes, or self-descriptive statements, from each of 3 'selves' (actual, ideal and ought self), within each of 4 domains (general, mathematics, reading and verbal, sports and physical ability). The 30 students were selected from a total pool of 42 in the original study on the basis of

having the most complete lists of attributes in each of these self-domain combinations, most particularly for the 'actual' self.

Procedures

The overall content analysis involved a gradual development of suitable categories, and a considerably more fine-grained analysis than can be

presented here (see Roche, in progress, for more detail). For the purposes of this study, several specific categories were predefined: Statements describing the student in the role of teacher (Eg., "Teach maths well", or "Good at explaining difficult concepts"); and statements describing the student in the role of student (Eg., "Fast Learner", "Freak out in exams"). Such descriptions accounted for relatively few of the attributes listed. In addition, several general categories were formed which appeared to provide a good summary of the remaining self-descriptions: Competency-related, or evaluative descriptions (Eg., "Smart", "Practical", "Good at (sport)"); Affective or emotional descriptions (Eg., "Sensitive", "Shy", "Anxious when performing in public"); and Other-directed attributes or qualities (Eg., "Loyal", "Friendly", "Pushy"). Coding and counting of responses according to these guides was done for each domain separately.

Results and Discussion

A summary of the results is provided in Table 1. The number of statements made related to teaching, and also to the role of student, was surprisingly small, although it should be noted that there were, of course, no specific instructions to students regarding what they should include, apart from the structure provided by the domains (maths ability, etc) and the self-perspective (actual, ideal or ought). Furthermore, the "Competency" category includes many statements that may have been intended to refer to the student's role as student in particular, or to a teaching role, but without providing sufficient information to warrant coding as such. Higgins (1987) claimed that the descriptions provided in an open-ended format tend to be those most relevant or "accessible" to people in forming cognitive representations of themselves which then influence emotions and courses of action (see also Markus & Nurius, 1986). Thus, while student teachers at this stage in their course appear to have clear and "accessible" conceptions of their competencies in different domains, there is some evidence that these competencies in relation to the role of teacher are, understandably, less well-defined or articulated. Since these students are, indeed, still studying, and are a long way from actually beginning in the role of full-time teacher, it is not surprising that there are approximately twice as many self-descriptions referring to the role of student than to the role of teacher. Similarly, while the number of references to teaching increases in 'ideal self' and 'ought self' lists, there are also a greater number of student-related attributes. It is interesting to speculate about, and potentially useful to investigate, how these results would compare with students in other professional disciplines, or in different settings. Note that the number of attributes in a particular category (such as a teaching role as an attribute of 'ideal self') is typically greater than the number of students expressing them (because the same student is sometimes responsible for more than one such description). For example, the 9 references to teaching in the mathematics domain of the 'ideal self' were produced by only 5 respondents. While this represents

20 percent of the sample, it raises the question of whether perhaps more could or should be done to encourage student teachers to think of themselves as teachers, and to develop valued goals in relation to their teaching careers.

The clearly different patterns of responding in relation to "competency" (or evaluative) descriptions versus "affective" (or emotional) attributes between the different domains is also of

interest. The mathematics domain elicited the most affective responses (predominantly unfavourable, as rated by the students themselves) while reading/verbal ability was described most often in terms of competency (both favourably and unfavourably). This qualitative shift in focus between domains, which certainly appears to be worthy of further investigation, is a good example of a finding that could only have been made using such an open-ended idiographic technique.

Should it be concluded, however, that the great majority of student teachers have little or no self-conception of themselves as teachers? In the second study, a more 'direct' approach was used to ask student teachers about their teacher- and student-related selves.

Study 2

A questionnaire was developed to explore distinct facets of self-concept from a nomothetic perspective, which may be described as representing both specific domains (PDHPE/Physical Ability; Human Society and its Environment (HSIE); Mathematics; and English), and specific roles (self-as-student; and self-as-teacher). These domains and roles have been chosen partly as being representative of facets relevant to performance as a primary teacher. The role-specific facets are included to allow what appears to be a unique examination of the relationships between them. Previous research has largely focussed on self-concept within a particular role or without specifying any specific role. While an extensive analysis of this issue is beyond the scope of this paper, some preliminary results will be provided. As described in the next section (methodology), the questionnaire was based on established existing instruments measuring different domains of self-concept.

Methodology

Subjects

The sample consisted of students enrolled in the primary teaching program at UWS-Macarthur who were present at the lecture sessions when testing was conducted. 97 first year students and a second group of 78 second year students completing a compulsory unit were surveyed to provide a comparison (for purposes of another study) and to reach a sample size sufficient to conduct confirmatory factor analysis (CFA). There were 169 completed surveys.

Questionnaire Design

The accurate measurement of multiple facets of teaching self-concept required the development of a new, psychometrically grounded questionnaire. The Domain- & Role-Specific Self Reflection Exercise (DRSSRE) contains multiple-item subscales for each of the domain x role

combinations of interest (Eg., PDHPE as a student and as a teacher; Mathematics as a student and as a teacher, etc). Items for these subscales were based on items from other psychometrically strong instruments, such as the SDQ III (Marsh, 1990) and the Academic Self Description Questionnaire (ASDQ: Marsh, 1993). The questionnaire was kept relatively short (36 items will be considered here) and employed a 9-point response scale. Sample items include:

Compared to others, as a student I am good at (PDHPE) classes:
(Physical domain; role as-student).

I can modify my teaching in (English) lessons to meet my pupils' needs:
(English domain; role as-teacher).

Six stems were used in the teacher-role questions which were intended to provide measures of self-concept for particular aspects of teaching (Planning; Methods/strategies; Motivating students; Flexibility; and a General teaching ability). A major focus of the analysis was to determine whether students distinguish between their perceived abilities in these different aspects of teaching. A listing of the item stems used with each domain are presented in Table 2, along with scale means and reliabilities from initial analyses.

Analysis

Data was analysed using the SPSS mainframe program. Reliability

analyses and Confirmatory factor analyses using LISREL (Joreskog & Sorbom, 1988) were conducted to evaluate the validity and reliability of the structure of the self-concept facets posited to emerge as latent constructs from the questionnaire items. The results presented here are provided in greater detail elsewhere (Roche, 1994, in progress).

In CFA, the researcher posits an a priori structure, indicating which items (or indicators) should load onto which factors (or latent variables). The ability of a solution based on this hypothesised model to fit the data is then tested. Goodness of fit indices are used to assess how closely a matrix reproduced from parameter estimates for the posited model correspond to the input correlation or covariance matrix based on the data. A more detailed introduction to the conduct of CFA is available elsewhere (Byrne, 1989; Marsh, Hau, Roche, Craven, Balla & McInerney, 1994; Pedhazur & Schmelkin, 1991).

Results and Discussion

Reliabilities of the scales were consistently over .9 apart from the scales relating to teaching Human Society and its Environment (HSIE, $r=.85$) and teaching PDHPE ($r=.88$).

A number of Confirmatory Factor Analyses were conducted to assess the fit of alternative models. Goodness-of-fit indices are provided for several models for comparative purposes in Table 3. The Tucker-Lewis Index (TLI) and Relative Noncentrality Index (RNI) are used to assess fit, as well as the parsimony index based on the RNI (McDonald & Marsh, 1990). The TLI and RNI vary along a 0-1 continuum, with values greater than .9 typically taken to represent a good fit (Byrne, 1989; Pedhazur & Schmelkin, 1991).

Several models that were to be tested did not converge to a proper solution, (including a five factor model based on the aspects of teaching that were used to generate equivalent stems for each domain). The best fit overall was provided by a model which allowed correlated uniquenesses between these "Aspect of teaching" items (RNI=.954, TLI=.934). Since most of the significant correlated uniquenesses were associated with stem no. 4 (the teaching "Methods" items), an alternative model was tested in which only these items were allowed correlated errors. While RNI (.926) and TLI (.911) were lower than for the previous model, there is a substantial improvement in parsimony, resulting in a higher PRNI (.775 compared to .673). This model is summarised in Table 4. A simple 4 factor model, in which only the domain-specific item factor loadings are constrained, showed slightly less than optimal fit indices (RNI=.899; TLI=.883), but benefited from greater parsimony (PRNI=.776).

These results suggest that student teachers do distinguish between domain-specific self-perceived competencies in relation to their teaching, but that relative competence in different aspects of teaching is not differentiated.

Conclusion

Apart from the conceptual and empirical significance of this linking of idiographic and nomothetic paradigms for the study of self-concept in educational psychology and research on teaching, such research has important potential implications for the teaching of particular subjects (such as PDHPE) in teacher education programs - both undergraduate and inservice). Competitive orientations to physical skill development tend to have adverse effects on physical self-concept. If such adverse effects also relate to self-concept regarding teaching PDHPE, and if this intervention can be shown to alleviate this concern, then many primary PDHPE programs may require significant reorientation.

References

- Allport, G. W. (1962). The general and the unique in psychological science. *Journal of Personality*, 30, 405-422.
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.
- Bugental, J., & Zelen, S. (1950). Investigations into the self-concept. The W. A. Y. technique. *Journal of Personality*, 18, 483-498.
- Clark, C. M., & Peterson, P. L. (1986). Teachers' Thought Processes. In M. Wittrock (Ed.), *Handbook of Research on Teaching* (3rd ed., pp. 282-341). New York: MacMillan
- Dembo, M. H., & Gibson, S. (1985). Teachers' Sense of Self Efficacy: An important factor in school improvement. *Elementary School Journal*, 86, 173-184.
- Eysenck, H. J. (1954). *The science of Personality: Nomothetic!*

Psychological Review, 61, 339-342.

Greene, M. L., Anderson, R. N., & Loewen, P. S. (1988, April). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, 32(3), 44-51.

Hattie, J. (1992). *Self concept*. Hillsdale, NJ: Lawrence Erlbaum.

Hermans, H. J. M. (1988). On the integration of nomothetic and idiographic research methods in the study of personal meaning. *Journal of Personality*, 56, 785-812.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319-340.

Joreskog, K. G., & Sorbom, D. (1988). *LISREL 7: A guide to the program and applications*. Chicago: SPSS, Inc.

Keeves, J. (1988). The unity of educational research. *Interchange*, 19(1), 14-30.

Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.

Kirk, D. (1993, November). Constructing adolescent bodies: Some problems for health promotion through physical education. Paper presented at the AARE National Conference, Fremantle, WA.

Markus, H., & Nurius, P. (1986). Possible Selves. *American Psychologist*, 41, 954-969.

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology*, 38, 299-337.

Marsh, H. W. (1988a). *The Self Description Questionnaire (SDQ): A theoretical and empirical basis for the measurement of multiple dimensions of preadolescent self-concept: A test manual and a research monograph*. San Antonio, TX: The Psychological Corporation.

Marsh, H. W. (1988b). Multitrait-multimethod analyses. In J. P. Keeves (Ed.), *Educational research methodology, measurement and evaluation: An international handbook* (pp. 570-580). Oxford: Pergamon.

Marsh, H. W. (1990). A multidimensional, hierarchical model of self concept: Theoretical and empirical justification. *Educational Psychology Review*, 2, 77-172.

Marsh, H. W. (1993a). Academic self-concept: Theory, measurement and research. In J. Suls, (Ed.), *Psychological perspectives on the self* (vol. 4). Hillsdale, NJ: Lawrence Erlbaum.

Marsh H. W. (1993b). Relations between global and specific domains of self: The importance of individual importance, certainty and ideals. *Journal of Personality and Social Psychology*, 65, 975-992.

Marsh, H. W., & Peart, N. (1988). Competitive and cooperative

physical fitness training programs for girls: Effects on physical fitness and on multidimensional self-concepts. *Journal of Sport and Exercise Psychology*, 10, 390-407.

- Marsh, H. W., Hau, K. T., Roche, L., Craven, R., Balla, J., & McInerney, V. (1994). Problems in the application of structural equation modeling: Comment on Randhawa, Beamer and Lundberg (1993). *Journal of Educational Psychology*, 86, 457-462.
- Marsh, H. W., Richards, G. E., Johnson, S., Roche, L., and Tremayne, P. (1993). Physical Self Description Questionnaire: Psychometric properties and a multitrait-multimethod analysis of relations to existing instruments. Manuscript submitted for publication.
- McDonald, R. P. & Marsh, H. W. (1990). Choosing a multivariate model: Noncentrality and Goodness of fit. *Psychological Bulletin*, 107, 247-255.
- Midgely, C., Feldlaufer, H., & Eccles, J. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology*, 81, 247-258.
- Paunonen, S. V., & Jackson, D. N. (1985). Idiographic measurement strategies for personality and prediction: Some unredeemed promissory notes. *Psychological Review*, 92, 486-511.
- Pedhazur, E. J. & Schmelkin, L. P. (1991). *Measurement, design and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum.
- Pelham, B. W. (1993). The idiographic nature of human personality: Examples of the idiographic self-concept. *Journal of Personality and Social Psychology*, 64, 665-677.
- Pelham, B. W., & Swann, W. B., Jr., (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*, 57, 672-680.
- Roche, L. A., & Marsh, H. W. (1993, November). Comparison of nomothetic and idiographic measures of multifaceted self-concepts. Paper presented at the AARE National Conference, Fremantle, WA.
- Roche, L. A. (1994, in progress). Emerging perspectives on the self among student teachers: A study of critical competencies using nomothetic and idiographic paradigms. Ph.D Thesis in progress.
- Runyan, W. M. (1983). Idiographic goals and methods in the study of lives. *Journal of Personality*, 51, 413-437.
- Smith, I. D. (1992). Measuring student self concept. Paper presented at the Australian Association for Research in Education annual conference, Geelong.
- Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, 82, 81-91.
- Wylie, R. C. (1989). *Measures of self concept*. Lincoln: University of Nebraska Press.

Table 1 Summary of content analysis focusing on attributes describing role as teacher and role as student

(Number of descriptions)

Miscl	TOT	Teacher role			Student role			Compcy	Affect	O-Ori
		Actual	Ideal	Ought	Actual	Ideal	Ought	Actual	Actual	Actual
Actual DOMAIN										
Genl	300	3	6	8	7	13	20	65	112	48
65										
Maths	296	6	9	10	14	15	18	98	136	0
42										
Read/Vb	298	7	8	10	10	11	13	141	89	0
51										
Sport/Ph	296	3	5	5	12	9	11	108	84	18
71										

(As percentages of total traits listed for each domain-self combination):

Genl	1.0	2.0	2.7	2.3	4.3	6.7	21.7	37.3	16.0
21.7	100%								
Maths	2.0	3.0	3.4	4.7	5.1	6.1	33.1	45.9	0
14.2	100%								
Read/Vb	2.3	2.7	3.4	3.4	3.7	4.4	47.3	29.9	0
17.1	100%								
Sport/Ph	1.0	1.7	1.7	4.0	3.0	3.7	36.5	28.4	6.1
24.0	100%								

Note: Compcy = Competency/Evaluative; Affect = Affective/Emotional; O-Ori= Other-oriented attributes; Miscl = Other miscellaneous descriptions.

Table 2: Item stems and domains used to make up items for the present study

"Aspects of teaching"

Item stems -each of four domains inserted at ():	Items	Scale		
		mean	sd	alpha
T_()G1 I can teach () well				
T_()G2 I am a very effective teacher in ()	12	71.69	11.13	.89
T_()3 I can plan & prepare appropriate activities for () lessons	6	37.44	5.79	.78
T_()4 I understand well the different methods used in teaching ()	6	34.16	6.63	.77

T_()5 I can motivate my students so that they are interested in ()	6	38.89	5.43	.81
T_()6 I can modify my teaching in () lessons to meet my pupils' needs	6	38.30	5.70	.80

Teaching role domains

T_HS Human Society and its Environment (HSIE)	6	34.86	5.88	.85
T_PE Personal Devt., Health & Phys. Ed.(PDHPE)	6	36.90	6.30	.88
T_EN English	6	38.22	7.56	.96
T_MA Mathematics	6	37.17	7.45	.95

Student Role stems

1. Compared to others I am good at ()
2. I get good marks in ()
3. Work in () is easy for me
4. I am hopeless at () (reverse scored)
5. I learn things quickly in ()
6. I have always done well in ()

S_HS Human Society and its Environment (HSIE)	6	38.20	6.03	.90
S_PE Personal Devt., Health & Phys. Ed.(PDHPE)	6	37.38	8.75	.95
S_EN English	6	40.04	7.48	.95
S_MA Mathematics	6	38.00	9.06	.97

Note: Two additional domains were included on the survey which have not been discussed in the present paper. Music & General teaching items have been ignored except that they contribute to the "Aspects of teaching" scales.

Table 3: Goodness-of-fit indices for confirmatory factor analyses

MODEL	CHISQ	DF	CHI/DF	RNI	TLI	PRNI
Null	2875.05	190	15.132	.000	.000	.000
CU(All)	258.38	134	1.928	.954	.934	.673
CU(Met)	358.85	159	2.257	.926	.911	.775
4Domain	434.09	164	2.647	.899	.883	.776

Note: CHISQ=Chi-square; CHI/df= Chi-square/degrees of freedom ratio;
RNI=Relative Noncentrality Index; TLI=Tucker-Lewis Index;
PRNI=Parsimony Index for RNI
Null = Null model
CU(Met) = 4 factor domain-specific model with "methods" aspect of
teaching items as correlated uniquenesses

CU(All) = 4 factor domain-specific model with all "aspects of teaching"
scales as correlated uniquenesses
4Domain = 4 factor domain-specific model

Table 4: Confirmatory factor analysis of DRSSRE responses: Four domains
with correlated uniquenesses between "teaching methods" items
(correlated uniquenesses omitted)

Factor Loadings (LAMBDA X)

	T_HS	T_PE	T_EN	T_MA
T_HSG	0.833	0.000	0.000	0.000
T_HS3	0.677	0.000	0.000	0.000
T_HS4	0.528	0.000	0.000	0.000
T_HS5	0.811	0.000	0.000	0.000
T_HS6	0.727	0.000	0.000	0.000
T_PEG	0.000	0.905	0.000	0.000
T_PE3	0.000	0.782	0.000	0.000
T_PE4	0.000	0.593	0.000	0.000
T_PE5	0.000	0.626	0.000	0.000
T_PE6	0.000	0.814	0.000	0.000
T_ENG	0.000	0.000	0.959	0.000
T_EN3	0.000	0.000	0.892	0.000
T_EN4	0.000	0.000	0.854	0.000
T_EN5	0.000	0.000	0.894	0.000
T_EN6	0.000	0.000	0.901	0.000
T_MAG	0.000	0.000	0.000	0.956
T_MA3	0.000	0.000	0.000	0.922
T_MA4	0.000	0.000	0.000	0.776
T_MA5	0.000	0.000	0.000	0.866
T_MA6	0.000	0.000	0.000	0.889

Factor Correlations (PHI)

	T_HS	T_PE	T_EN	T_MA
T_HS	1.000			
T_PE	0.557	1.000		
T_EN	0.643	0.498	1.000	
T_MA	0.420	0.397	0.477	1.000

Note:

T_HS = Teaching HSIE
T_PE = Teaching PDHPE
T_EN = Teaching English
T_MA = Teaching Mathematics

Each factor is measured by 5 indicators (2 paired general items form one indicator for each scale: T_HSG, T_PEG, T_ENG & T_MAG; and 4 specific aspect of teaching items)
Maximum Likelihood solution.