

MEASURING STUDENT SELF-CONCEPT

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Paper presented at the Annual Conference of the Australian Association for Research in Education, Deakin University, November, 1992.1. Self-concept as an Educational Aim
Enhancing student self-concept has long been recognised as an important educational aim. It is both intrinsically and instrumentally important. A positive self-concept, in the sense of a perception that one is a worthwhile individual with personal qualities and abilities of value to himself/herself and to society, is vital to each individual's mental health. Schools and teachers, in particular, are concerned with the intrinsic worth of each student and with promoting that self-perception. Furthermore, it is widely believed that enhancing a student's self-concept will lead to increased student effort and learning, which ultimately result in higher educational achievement. Conversely, negative feelings of self-worth reduce student motivation and learning, leading to the phenomenon known as "learned helplessness" (Dweck, 1975). Self-concept enhancement, then, is commonly conceived as an instrumental goal, as well as an intrinsic goal, of great importance to the individual student, to families and to the wider society.

2. The Measurement of Self-concept

Despite the educational significance of the construct, the measurement of student self-concept has proved difficult and fraught with methodological problems. One of the main reasons for these problems is that the self-concept is essentially a subjective construct: it is the individual as known to the individual. While significant others, such as parents, siblings, peers and teachers, may get to know a person well, even intimately, in the final analysis an individual's self-concept is a highly personal phenomenon, formed after many years of interpreting feedback from others, classifying it into multiple dimensions of self-awareness and judging one's behaviour according to one's perceived profile of strengths and weaknesses. After the excesses of Nineteenth Century introspection, behaviourists such as Watson and Skinner had great difficulty with such terms as "self-concept", "self-esteem" "ego" and

"identity". Fortunately, such great thinkers as William James (1890), George Herbert Mead (1934), Gordon Allport (1961), Harry Stack Sullivan (1953) and Carl Rogers (1951) realised that the construct of self-concept is central to the development of an individual's personality and more recently its links with social cognition have been recognised (e.g., Shavelson, Hubner and Stanton, 1976; Cole, 1991).

Most measures of self-concept have used a self-rating format. Individuals are asked to rate themselves by answering a series of questions about their personal qualities and abilities. Aspects of the self vary from specific self-concept dimensions such as perceived ability at sports and games to general self-concept questions like "Overall I'm a happy person". Respondents are typically asked to rate themselves along a five point Likert-type scale from "strongly agree" to "strongly disagree". One widely used scale, the Coopersmith Self-esteem Inventory, developed for primary-age children, used a simple two-category scale, "like me" and "unlike me" (Coopersmith, 1967). The major problem with the early self-concept measures is that while they claimed to measure self-concept multidimensionally, factor analytic studies (e.g., Marsh and Smith, 1982) demonstrated that they were in fact omnibus instruments measuring general self-concept only.

Some self theorists have conceptualised the self-concept as a unitary construct, arguing that the self-system is an integrated whole that is greater than the sum of its parts (Maslow, 1970; Rogers, 1951). The alternative theoretical view is that the self-concept is multidimensional, based on self-evaluations of behaviour in an increasingly wide range of situations as development occurs. Just as an individual's interests and abilities diversify as he/she is exposed to new experiences and

matures cognitively, so does his/her perceptions of interests, personal qualities and abilities become more differentiated with development. It is argued that perceived strengths in academic abilities, for instance, may be relatively independent of perceived strengths and weaknesses in physical abilities. The relative independence of the various self-concept dimensions has been demonstrated in recent studies of self-concept (e.g., Harter, 1985; Marsh, 1989).

Even if one accepted the view that the self-concept is a unitary construct, its educational significance is questionable. A meta-analysis of over one hundred studies of the relationship between self-concept and educational achievement found that general self-concept and academic achievement were correlated on average about .2, a very low positive relationship, indicating that general self-concept accounts for only 4 per cent of the variance in academic achievement (Hansford and Hattie, 1982). The more specific dimension of academic self-concept, on the other hand, was correlated on average around .4 with educational achievement. Furthermore, Shavelson and Bolus (1982) reported that school grades in English, mathematics and science were more positively correlated with matching self-concept dimensions than with general self-concept. A multidimensional model of self-concept, then, has been demonstrated to possess greater validity than conceiving self-concept is a unitary construct.

Multidimensional measures of self-concept such as Harter's Perceived Competence Scale for Children and Marsh's Self Description Questionnaire (SDQ I, II and III) have been used widely over the past decade as evidence of their reliability and validity has increased. I myself have been involved with some of this research, administering the SDQ in the UK and Thailand (Thai version), as well as in Australia (Smith, 1990; Marsh, Smith, Marsh and Owens, 1988; Marsh and Smith, 1987). I have become

increasingly concerned at the extremely high levels of internal consistency reliability obtained for various scales of the three SDQ measures, designed for preadolescents (SDQ I), adolescents (SDQ II) and young adults (SDQ III). Table 1 illustrates my concern. It contains the internal consistency coefficients for the eight SDQ I scales, eleven SDQ II scales and thirteen SDQ III scales based on the responses of a total normative sample of 12 266 students. The coefficient Alphas range from a low of .74 to a high of .95 with an average of .88. These very high levels of internal consistency were obtained from scales which included only a small number of items, ranging from eight to twelve. These internal consistency coefficients indicate that the items are highly reliable with respondents answering the various items on each scale in a very similar way. When the

items are inspected they are worded very similarly. In fact, during administration of the SDQ students often ask the question "Why are we answering this question again when we were asked it before?" I am not alone in my concern about measurement scales whose reliability is extremely high. This issue was also raised by Kline (1979), who argued that too high a level of internal consistency is a sign of a narrow operational definition of the variable being measured. It tends to cast doubt on the face validity of the instrument as respondents complain that the measure is unnecessarily repetitive or too long. Of course, adherents to the position that high internal consistency coefficients are desirable in any measure will reply to my criticism that highly reliable scales are necessary precursors to their validity. They will point to the increased construct validity of data based on their instruments. Nevertheless, the suspicion remains that the SDQ could be made a more psychologically significant instrument and more enjoyable for respondents if it cut down on unnecessary items and/or included a wider variety of item content.

3. Projective Technique Measures of Self-concept

Another type of self-concept measure is the projective technique, in which the student responds to an open-ended question, such as "Who am I?" or completes a sentence beginning, "I am ...". According to Gordon (1968) this technique was first used by Bugental and Zelen in 1950. Gordon reviewed the results of research using this technique and included a coding manual containing 30 categories of self statements. Content analyses of the responses of two US college samples are summarised in Figure 1. It shows interesting similarities and differences in the percentage of Harvard and Los Angeles City College students who referred to a particular category at least once in their responses to the open-ended question, "Who am I". Harvard students, at least in the 1960s, appeared to be less concerned with their occupational role than Los Angeles City college students and more interested in their student role, as well as being more opinionated. It would make an interesting study to compare these findings with current US and Australian student responses.

The projective technique, then, provides the opportunity for collecting a particularly rich lode of ideas and responses of concern to students about themselves. It allows respondents carte blanche in expressing their ideas in their own words, rather than adopting the forced-choice format of most self-concept questionnaires. The projective technique measure of self-concept, like all projective techniques, assumes that respondents will project or express on paper their inner

thoughts, feelings beliefs and idea about themselves. This assumption is more likely to be upheld if the measure may be

answered anonymously, if the respondent believes that his/her responses' confidentiality is respected and if the administrator achieves good rapport with the respondent.

The strength of the projective technique is that it does not constrain the respondent to answer questions that are deemed important to the researcher/administrator. It allows freedom to express self-perceptions in a way that encourages uniqueness rather than conformity. Its major weakness is that the individual's self-perceptions which are expressed may be momentary and not stable. This is an empirical question which remains to be tested. There is evidence that self-concept is relatively stable over time (Shavelson, Hubner and Stanton, 1977). A second weakness is the subjectivity of the responses which require considerable interpretive skills by the coder who conducts the content analysis. One Australian study conducted by Mary Fahey and Shelley Phillips (1981) content analysed a random sample of 200 from an original sample of 2 610 primary children's responses to the question "Who Am I", using a modified version of Gordon's (1968) categories. They reported an inter-rater reliability coefficient of .96 which indicates that there is a high level of agreement between independent coders of student responses.

Recently, I have collected responses to the sentence completion task "I am..." from 47 Sydney demonstration school grade 6 students and 84 6th and 9th grade Thai demonstration school students. While I have not yet content analysed their responses, some interesting cross-cultural differences are emerging from a preliminary analysis of the responses. The Australian children are typically mentioning their grade, sex, age, academic abilities, temperament, physical abilities, relationships with parents, siblings and peers, ethnicity if they are a member of a minority group, physical appearance and school. The Thai children are mentioning these aspects of their self and , in addition, typically talk about helping others such as their family, friends and people poorer than themselves. They also talk about contributing to the development of their country by choosing a career in the helping professions such as doctor, nurse or teacher, as well as in engineering, in order to participate in infrastructure projects designed to improve the standard of living of Thai people. Appendix A contains two responses from the Australian and Thai sample.

Within the Thai sample of 34 students two schools were represented. One was an inner-city demonstration school attached

to a university, while the other was an outer suburban boarding school. A Thai psychologist provided the following statement in summarising the two patterns of projective technique responses, indicating interesting differences within the Thai sample:

General observations after looking at the papers

In terms of handwriting, children at the suburban school have much better handwriting, spelling, grammar, and express their ideas more clearly. In terms of ideas, the suburban school children express more ideas concerning their work experience at home, social awareness and contribution, while urban demonstration school children have expressed ideas and themselves more or less in a style reflecting a different kind of environment and stimulation (especially from the media).

Both urban and suburban female children have expressed themselves in a more structured fashion than male children who vary much more in their expression. Ideals seem to play more of a role in self-expression of the higher grade (i.e., 9th grade).

However, children of both sexes and both grades (6th and 9th) show social concern and awareness and tie these to their self-expression descriptions.

4. Conclusion

This paper has drawn attention to limitations of the traditional, most widely used type of self-concept measure, the forced-choice self-rating questionnaire. It has suggested that an alternative approach is the open-ended projective technique. It has the distinct advantage of offering respondents the opportunity of raising issues of personal concern, issues which may be ignored by forced-choice measures. These responses may generate hypothesis about student self-concept and its relationship to educational achievement, as well as test hypotheses about the perceived importance of these self-concerns to students at different ages and in different contexts. Its main limitation is that the concerns raised may be temporary ones which are not mentioned six or twelve months later. This empirical question may be tested by a test-retest reliability study. The projective technique for measuring student self-concept may be useful in clinical, as well as a research settings. It may highlight a client's particular problems as the basis for counselling or therapy. This technique is worth of further use in a variety of contexts in order to elucidate the fascinating world of student self-concept.

Appendix A

Two examples of 6th grade student responses to the statement "I am ..."

(i) Australian girl

I am a girl of the age of 11. I am a nice person most of the time but can be very bossy at stages. I am a pretty mature year six and am approximately 145cm in height. I am pretty bright in school subjects such as Mathematics, Addition, Subtraction, Division, Multiplication, Spelling (one of my best subjects), language, social studies and science.

I am not so good at school subjects such as handwriting as I can be very messy.

I am a great dancer if I say so myself and have been dancing accelerated learning Jazz for quite a while. I am also a great gymnast as I have spent most of my life training. I am good at Drama which is an after school thing that I do with friends.

I am so much a country girl as I lived in the bush with Aboriginals for 7 to 8 years and moved up to live with my Dad and Stepmum 2 to 3 years ago. I am the eldest of my brothers and sisters (step or half) whose ages are 6, 7, and 8.

I am a well organised person and can not stand being untidy. I am also an easy person to make friends with.

ii) Thai girl

I am a student sometimes happy, sometimes sad. When I'm happy I smile. When I'm sad I feel frightened. I have a problem with asthma. I have difficulty breathing. I like to play and run. I hate studying. I like listening to tales. I'm afraid of the dark, I like brightness. I like reading cartoons, but I don't laugh when it's funny. When people make jokes I laugh. I love my parents but not my brother/ sister, because they always

trick me. We fight nearly every day. I don't like to be punished. I like to talk. I don't like to be alone, with no friends. I feel lonely, I want to keep pets, but my mum does not allow me to do so. I like dogs, cats and birds. When I walk, run or stand for a long time I feel tired and can hardly breath. I cough many times. I like poetry, I like Thai. I cannot memorise many lessons at once I like school because I have lots of friends. It's good to come to school.

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Table 1

Coefficient Alpha Estimates of Reliability and the Number of Items (in parentheses) For Scales From Each of the SDQ Instruments

SDQ Instruments

Scales

SDQ I

SDQ II

SDQ III

Physical Abilities

Physical Appearance

Peer Relationships

Opposite Sex Relationships

Same Sex Relationships

Honesty/Trustworthiness

Parent Relationships

Spiritual Values/Religion

Emotional Stability

General

Reading/Verbal

Math

School

Problem Solving

.85 (8)

.90 (8)

.86 (8)

.86 (8)

.83 (8)b

.92 (8)

.92 (8)

.88 (8)

.85 (8)

.90 (8)

---a

.90 (8)

.86 (10)

.84 (10)

.87 (8)

.83 (10)

.88 (10)

.86 (10)

.90 (10)

.87 (10)

.94 (10)

.90 (10)

.92 (10)

.87 (10)

.74 (12)

.89 (10)

.95 (12)

.89 (10)

.93 (12)

.86 (10)

.94 (10)

.92 (10)

.84 (10)

a The "---" indicates that the scale was not included on this instrument. b The General scale of just the SDQI was only included on the most recent revision and so responses to it are only available for a subset of the total number of respondents.

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