

SELF-CONCEPT OF CHILDREN IN SPECIAL AND REGULAR EDUCATION

Anu Leminen

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Department of Special Education
University of Jyväskylä

ABSTRACT

Previous studies have reported inconsistent findings about the relationship between learning disabilities and self-concept. Students with learning disabilities are commonly assumed to have poorer self-concepts than normally achieving students. A number of studies have examined students with learning disabilities in various settings of special education in order to determine whether special education placement has an effect on children's self-concept.

The present study was designed to measure and compare several aspects of self-concept of special and regular education class students in Finland and in Holland. The participants for this study were 140 Finnish and 126 Dutch comprehensive school children. The sample consisted of three different groups of students: 1) regular education students, 2) special class students in regular schools, and 3) special schools students. Finnish special education students were drawn from so called EMU-classes on the basis of forming the largest group entitled to and referred to special education services in Finland. All Dutch special education students attended special schools. The participants were asked to complete the Piers-Harris Children's Self-Concept Scale, which is a self-report instrument for measuring global self-concept.

The Finnish children attending special education settings did not differ significantly from the students in regular education in terms of global self-concept. Surprisingly children in special classes were consistently more positive. Combining Finnish and Dutch samples revealed that special school students scored the highest in self-concept, followed by special class students, and then regular class students. Dutch children were more positive than Finnish children, although national results resembled each other. Only sex-stereotypical differences were found between genders.

The results are discussed in the light of a multidimensional theory of self-concept, and in terms of how educational placement and learning disabilities effect children's self-concept.

Keywords: self-concept, learning disability, educational placement, special class, labelling, social comparison process

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1 INTRODUCTION

It is widely held that self-concept is centrally involved in learning process, either as a contributing cause or as in itself an important outcome (Leondari, 1993; Wylie, 1974, 321). A large body of research evidence indicates a significant relationship between the self-concept and academic achievement (Chapman, 1988a; Hattie & Marsh, 1996; Rothman & Cosden, 1995; Ulvinen, 1998). Although the issue of causal importance between self-concept and achievement has not been settled (Byrne, 1984), most educators and researchers agree that the relationship is at least two-way. Hence a growing number of studies are carried out to examine the effects of class placement on the self-concept (Beltempo & Achille, 1990; Butler & Marinov-Glassman, 1994; Elbaum, 2002; Morvitz & Motta, 1992).

How children feel about themselves during school years can have important consequences for their later development and psychological well-being (Elbaum & Vaughn, 2001). Thus, it can be said that school represent the most critical context outside of the family for the development of self-perceptions (Purkey, 1970, 40). A positive self-concept is considered not only a valued state for its own sake, but evidence suggests that it is significantly related to how individuals will approach and react to future achievement demands (Byrne, 1984; Grolnick & Ryan, 1990). Strong support has also been provided to propose that self-concept plays an important role as a mental health variable (Prout & Prout, 1996).

Burns (1982, 9-14) speaks about the importance of self-concept in explaining behaviour. First, self-concept maintains the inner consistency of behaviour. Psychologically strong motivation for continuity drives a person the act according to manners which he thinks are consistent with how he sees himself. Second, it determines and shapes the personal interpretations of experience. Individuals give meanings to all experiences. Similarly experiences are usually interpreted in ways which are consistent with personal views. Third, self-concept provides a set of expectations, which determine how an individual is going to act. Therefore, Burns (1982, 15) argues that the way self-concept directs expectancies and behaviours may lead to a self-fulfilling prophecy.

1.1 Definition of self-concept

In the research literature terms like “self-concept”, “self-perceptions”, “self-esteem”, “self-image”, “self-evaluations”, “self-understanding”, “self-worth”, and “self-regard” have been used to refer to an individual’s cognition and feelings about the self (e.g., Bear & Minke, 1996; Damon & Hart, 1986; Grolnick & Ryan, 1990; Morvitz & Motta, 1992; Stone & May, 2002). These terms can be and are often used interchangeably, since they overlap, but still referring to and describing different aspects of the more general self-concept (Byrne, 1996, 2-7). Elbaum and Vaughn (2001), in their meta-analytic review, pointed out that a large body of research over the past three decades has demonstrated that self-concept is far from a unitary construct.

Self-concept is the perception of ourselves involving our attitudes, feelings, and knowledge about our skills, abilities, appearance, and social acceptability (Byrne, 1984). Through the impressions of the subject, the phenomenological approach in psychology attempts to understand how the individual views himself (Burns, 1982, 19). This approach believes that the reality of the individual is always a perceived reality. According to one phenomenological theorist Rogers (1986, 501), the self-concept, or self-structure, may be thought of as an organised configuration of perceptions of the self which are entirely conscious. He proposes that the self-concept (1951, cited in Burns, 1982, 8) “is composed of such elements as the perceptions of one’s characteristics and abilities; the perceptions and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and the goals and ideals which are perceived as having positive or negative valence.” For Rogers, self-concept is thus a learned, conscious sense of being separate and distinct from other people and things (see Ewen, 1988, 380). Also in Piers’ (1984) definition the role of the conscious self-concept in determining a person’s behaviour is stressed. This conscious self-concept is sometimes called the phenomenal self (Wylie, 1974, 4).

By self-esteem Coopersmith (1967, 4-7) means the evaluation which the person makes and maintains with regard to himself: it implies an attitude of approval or disapproval, and indicates the extent to which the person believes himself to be capable, significant, successful, and worthy. Coopersmith assumes self-appraisals and estimates

relatively enduring and resistant to change because of the psychological need of individuals for consistency. However, quantitatively the self-esteem may vary significantly across different areas of experience and according to gender, age, and other conditions. Coopersmith distinguishes “self-evaluation” term which refers to a judgmental process during which the individual examines his abilities, performance and attributes according to his own personal standards and values. Like other attitudes, self-attitudes are also expected to carry both positive and negative connotations, and have a bearing on intellectual and motivational processes. (Coopersmith, 1967, 7.)

1.2 Developmental features

According to Purkey (1970, 7) the self is “a complex and dynamic system of beliefs which an individual holds true about himself, each belief with a corresponding value.” By this definition Purkey highlights two characteristics of the self: it is (a) organised, and (b) dynamic. First, it is organised since beliefs one possesses about oneself may be divided into categories (e.g., pupil, learning disabled, Finnish, football player) and attributes (e.g., strong, good at math, easy to get along with, pretty) and then organised according to relevance to the self. Secondly, each concept has its own negative or positive value. Thirdly, Purkey believes that success and failure are generalised throughout the system. In other words, the success of personally crucial and highly rated ability raises the self-evaluation of other, seemingly unrelated abilities. Furthermore Purkey (1970, 10) argues the researcher points out that like fingerprints, no two people ever hold identical beliefs about themselves. This dynamic character springs, according to Purkey from, the fact that everything is perceived and comprehended from the personal self-referent point of view. We evaluate the world and its meanings in terms of how we view ourselves. Modern field of psychology widely holds assumption that we all are constantly pursuing to maintain, protect, and enhance the self. Therefore the experience is perceived in terms of its relevance to the self, and following action determined by these perceptions. That is to behave in ways which are along the line with ones self-interpretation. We express our self-concept with our behaviour. Thus, self-concept plays a key role in motivation. (Purkey, 1970, 7-13.)

Rogers (1986, 517) states that it is clear that self-concepts change in the ordinary development of the individual in response to environmental and developmental changes. In his work Rogers has focussed more on the conditions that facilitate the progress of self-concept than the origins of its development. He strongly believes (1980, 301; Ewen, 1988, 378) that the self-concept is formed in social interaction, and that it reflects the judgments, preferences, shortcomings, and limitations of a particular environment (e.g. family, school, and cultural settings). By interacting with his environment, the infant gradually builds up concepts about himself, about the environment, and about himself in relation to that environment. Rogers continues to argue that an accepting atmosphere which cherishes free expression of ideas and emotions enables the individual to get to know and accept himself (see Coopersmith, 1967, 34-35). Central argument of Rogers' theory is the need for social support in form of positive regard. Without it the self-concept can not develop. A growing child must pay close attention to reactions and demands of those significant others, such as parents, teachers and peers. Only they can satisfy the crucial need for positive regard. (Ewen, 1988, 378; Rogers, 1980; 1986, 497-499; Stangvik, 1979, 80-81.) Although shaped by biological (e.g., physical characteristics), social (e.g., socio-economic status) and cultural (e.g. values) factors, these perceptions are formed primarily through the interaction of the individual with his or her environment during childhood, and by the attitudes and behaviours of others (Piers, 1984, 43).

Coopersmith (1967, 20) defines the self as "an abstraction that an individual develops about the attributes, capacities, objects, and activities which he possesses and pursues. This abstraction is represented by the symbol "me," which is a person's idea of himself to himself. This concept is formed in the course of experience by the same process of abstraction employed in the other areas of experience." Coopersmith (1967, 21) explains that as young children have little experience and only limited capacity to comprehend, they tend to have only a vague idea of themselves. This idea is associated with highly localised and specific parts of the body. With expanding experience and knowledge that give more perspective upon the events, feedback, success, and recognitions, and with an increased ability to abstract, the child's "symbolic representation becomes more precise and complex"(Coopersmith, 1967, 21). The emerging individual attaches more attributes and experiences with "self", while at the same time becomes more

selective as to which observed features of these experiences are assumed to be self-referring (review Purkey, 1970).

Burns (1982, 53) summarised that for young, pre-school children, the main component of self-concept seems to be body image. Later on the significant others, family and peer relationships, skills, beliefs and attitudes become more crucial components in shaping the self-concept. Burns (1982, 47) continued by suggesting that according to research findings (e.g., Marsh, 1989) self-concept becomes increasingly differentiated as children grow older (see Table 1). On the other hand, the gap between real and ideal self swells up by age. This might be due to cognitive development, specially the ability to estimate possibilities for success and failure, and realistically evaluate any personal imperfections. (Burns, 1982, 50.) Examining conceptions of ability Pomerantz and Ruble (1997) cited research which suggests that children progressing through elementary school increasingly perceive ability as constant (at 7 to 9 years of age) and as capacity (at 11 to 13 years of age). Longitudinal data from Damon and Hart's (1986) study strongly supported the regular and predictable nature of self-concept transformations during the ages of 4 through 18. Thus, age appears to have a bearing on children's perceptions of abilities, although the common opinion suggests that not the age per se causes the changes in self-evaluations but rather cognitive maturation and increased life experience that allows children access to broader external feedback in performance evaluation in different areas (Crain, 1996).

Moreover, Marsh (1989) reported systematic age effect in self-concept responses: the scores decline from early preadolescence to middle adolescence, then increase again through early adulthood. Also Damon and Hart's (1986) study indicated only limited stability in the self-scheme scores in respect to age. It has been demonstrated that gender differences in self-concept are relatively stable and follow the sex stereotypes (Marsh, 1989). Burns (1982, 124) concluded that girls generally display lower global self-concept than boys, but score higher than boys in the academic domain of self-concept. For example, Chapman's (1988a) findings were consistent with Burns' suggestions. However, Wylie (1974) founded no evidence that boys and girls differ in their global self-concept at any age level. The inconsistent results of the influence of age and gender call for further

research and may, as Crain (1996) and Piers (1984) suggested, indicate that specific domains of self-concept differ as the function of age and gender.

TABLE 1 Developmental Changes in Self-Descriptions (according to Brown, 1998, 97) and Competence Self-Concept (according to Novick, Cauce, & Grove, 1996, 235)

Stage of Development	Dominant Self-Description	Examples	Achievement
Early childhood (2-6 years)	Observable characteristics Specific interests and activities	I am a girl. I have brown hair. I like playing basketball.	Specific competence judgments of peers. Undifferentiated, inaccurate competence self-judgement.
Middle childhood (7-11 years)	General interests Use of social comparison Interpersonal qualities	I like sports. I'm smarter than Sarah. I am nice.	Self-perceptions become more accurate. Competence self-judgments become domain-specific.
Adolescence (12-18 years)	Hidden, abstract "psychological" qualities	I am moody. I am self-conscious.	Continuing differentiation of competence self-judgments.

1.3 Structure of self-concept

The term *self-concept* is often used incorrectly, implying that there is a unitary, single self-concept that each person possesses. Rather, individuals have not one but number of self-concepts which are multidimensional or multifaceted (Elbaum & Vaughn, 2001). Aho (1996, 15) divided general self-concept into three dimensions:

1. *Real self-concept* portrays the ways an individual perceives and describes himself. It consists of both categories and attributions.
2. *Ideal self-concept* portrays the image of what kind of person the individual wants to or hopes to be. It present a standard for comparison or a goal to reach for. Ideal self-concept is an internal pressure to change and develop. (Burns, 1982, 47-49; Harter, 1996, 13-16).
3. *Normative self-concept* portrays an individual's own perception of how he is evaluated and described by other people and what the others expect from him. Normative self-concept is an external pressure to conform, adjust and develop according to expectations. (Aho, 1996, 15; Burns, 1982, 25; Stangvik, 1979, 366-367.)

Self-concept is viewed as having both *global* and *specific* components. Following four domains are commonly included in more general self-perception (see Aho, 1996, 18):

1. *Academic self-concept* includes first and foremost the cognitive aspect of self-concept. A person evaluates his academic competence against other people' achievements. Similarly he makes comparisons within his own skills and achievements in different fields.
2. *Social self-concept* consists of person's ideas of his roles and positions in different social environment. An individual forms a overall picture of himself in relation to the significant others. It refers to people's perceptions of how liked and admired they are, but also to their social competence and social skills (Berndt & Burgy, 1996).
3. *Emotional self-concept* portrays person's ideas of his inner self, his emotions, characteristics etc. Emotional self-concept tells whether an individual sees himself as emphatic, fair, weak, reliable, emotional etc.

4. *Physical self-concept* includes person's ideas of his appearance, body-image, physical competence, strength and health. (Burns, 1992, 24; Shavelson, Hubner, & Stanton, 1976.)

Previously Shavelson, Hubner, and Stanton (1976), and Shavelson and Bolus (1982) had reviewed the state of self-concept research and called for uniformity among self-concept definitions. They ended up suggesting following seven characteristic critical to defining the construct of self-concept:

1. Organised, in that people categorize the information they have about themselves and relate the categories to one another.
2. Multifaceted, and the particular facets reflect the category system.
3. Hierarchical, with perceptions of behaviour at the base, moving to inferences about self in subareas, then to inferences about self in academic and non-academic areas, and finally to inferences about self in general.
4. Stability, as general self-concept is stable, but as one moves down in the hierarchy self-concepts become less stable and more situationally specific.
5. Progressive, becomes more multifaceted as one develops from infancy to adulthood.
6. Evaluative and descriptive features.
7. Differentiated from other constructs such as academic achievement.

Originally Shavelson et al. (1976) divided general self-concept into two components: academic and non-academic (social, emotional, and physical) self-concepts. For example, within the academic domain of self-concept, individuals hold separate self-concepts for each academic area, such as reading, math, and problem solving, which combine to create a more general concept of their academic abilities. Later Marsh, Byrne, and Shavelson (1988) however proved the hierarchy more complicated since they found verbal and math self-concepts nearly uncorrelated. They argue that general academic self-concept cannot adequately reflect the diversity of specific academic facets. Shavelson et al.'s (1976) also assumed situation-specific of self-concept at the base of the hierarchy. For example, young children perceive they social self differently among peers than at home among family. Situations and social contexts can prompt great variety in self-perceptions, although general self-concepts are considered as stable and resistant to change (Brown, 1998, 108). Similar to Shavelson et al.'s (1976) notions about the nature of self-concept have been proposed by Piers (1984, 43-44).

1.4 Measuring self-concept

The instruments of measuring the self-concept have strong roots in the study of self-concept in the field of psychology and other social sciences (see, e.g., Coopersmith, 1967; Wylie, 1974). The importance of self-concept as a desirable outcome and as a mediating variable have been recognised by many educators and researchers (Purkey, 1970, 14-15). As noted earlier, there are several definitions of self-concept. Over the decades, the research has also used several theoretical models of self-concept. According to Byrne (1996, 9), there are two main theoretical frameworks of self-concept: unidimensional perspective and multidimensional perspective. Hence, as Byrne (1996, 8) emphasises, the researchers need to clarify the adopted theoretical framework and to match the appropriate self-concept measuring instrument accordingly. Self-concept as a multidimensional and hierarchical behavioural construct, based on Shavelson et al.'s (1976) model, is the most extensively validated and referred model (Byrne, 1996, 23).

The assessment methodology has developed and taken forms like semantic differential techniques (e.g., “happy-sad”), adjective checklists, cards sorting tasks, “actual-ideal” techniques, projective tests, third-party (e.g., teacher, parent) reports, human figure drawings, and self-report questionnaires (Keith & Bracken, 1996). Self-concept measuring instruments can also be grouped according to their purpose of use (e.g., individual evaluation, research, clinical diagnosis and assessment, intervention planning), target population, or the level of specification (e.g., general, academic, social, competence, physical, or family self-concept) (review Byrne, 1996; Keith & Bracken, 1996). A body of literature has supported the presumption that at preadolescence (8-12 years) the multidimensionality of self-concept is more explicit than for younger children due to the increasing ability to differentiate and describe one's behaviour in relation to the varied life domains (e.g., Burns, 1982, 43-47; Byrne, 1996, 53; Ojanen, 1996, 87; Pomerantz & Ruble, 1997; Raviv & Stone, 1991). Ability to use trait labels, sensitivity to the opinions of others and the use of social comparison in self-evaluation are also characteristics for this age (Byrne, 1996, 85.) From about 30 instruments described in the literature I have selected six instruments designed for preadolescents and individuals with learning disabilities (LD) for further introduction.

Byrne (1996, 221-231) described two self-report scales for the use with children with learning disabilities. The Self-Perception Profile for Learning Disabled Students (SPPLD) by Renick and Harter (1988; according to Byrne, 1996) can be used with normally achieving children as well. It covers 10 subscales out of which one measures perception of global self. The creators of SPPLD have included normative data in the manual. In Byrne's (1996, 231) opinion the potential value of SPPLD lies on its strong theoretical foundation and its appropriateness for use with population with LD.

The Perception of Ability Scale for Students (PASS) by Boersma and Chapman (1992; according to Byrne, 1996) measures multidimensional academic self-concept. The evidence supporting the fact that it is discriminating and can be used appropriately with both learning disabled and non-disabled, makes it highly valuable in research where these two groups are compared (e.g., Chapman, 1988a; Stanovich, Jordan, & Perot, 1998). Since originally developed in the late 1970s, Byrne (1996, 90) states that PASS is well-established measure on a solid foundation of psychometric research. Target population of this instrument is 8-12 -year-old children, and it can be used in various settings and for several purposes from identifying high-risk students to overall psychological assessment of academically handicapped children. However, construct validity needs more evidence and strengthening. (Byrne, 1996, 90-95, 222-224.) Similar instrument like PASS linked to the Shavelson et al. (1976) model is Marsh's Academic Self Description Questionnaire I (ASDQ-I) from 1992 (according to Byrne, 1996, 86-89) measuring multiple subject-area facets of academic self-concept.

One of the multidimensional measures of self-concept is Self-Description Questionnaire, I (SDQ-I) designed by Marsh (1988; according to Keith & Bracken, 1996) for group and individual assessment. The manual includes standardised sample, but fails to provide evidence that this data can be generalised to other countries. It also lacks integrated interpretation guidelines. However, Keith and Bracken (1996) point out that SDQ-I contributes significantly to the development of self-concept instrumentation by testing and strongly supporting Shavelson et al. (1976) model. It has served as a prototype for subsequent instruments (see Byrne, 1996, 111). Since its construct validity has been proved strong (Marsh & Holmes, 1990) and other psychometric properties firmly established, Byrne (1996, 117) sees SDQ-I as the most validated self-concept measure

available for preadolescents. A strong concurrent validity was found between SDQ-I and Harter's (1985; according to Byrne, 1996, 117-124) Self-Perception Profile for Children (SPPC). Even though used in a number of studies involving children with LD (e.g., Hay, Ashman, & Kraayenoord, 1998; Bear & Minke, 1996), neither Byrne nor Keith and Bracken mention this aspect for possible use of SDQ-I or SPPC.

First published in 1969, the Piers-Harris Children's Self-Concept Scale (PHCSCS; Piers, 1984) is "a unidimensional measure of self-concept with items reflecting content from the behaviour, intellectual/school, physical appearance/attributes, anxiety, popularity, and happiness/satisfaction domains" (Keith & Bracken, 1996, 105). Contributing significantly to the field of self-concept instrumentation and research, the central purpose of PHCSCS was to measure directly children's conscious self-perception in stead of analysing third-party reports and observations. Even though one of the most widely used instruments for children (see Elbaum, 2002), PHCSCS fails to fulfill the current criteria of measurement for multidimensional self-concept. (Keith & Bracken, 1996; Shavelson et al. 1976.) Byrne (1996, 13) argues that self-concept cannot be adequately understood unless its multidimensionality is taken into account. However, PHCSCS provides reliable quantitative self-reported scores for research and screening purposes (Byrne, 1996, 103). The Piers-Harris Scale will be further discussed in the section 3 (METHOD), part 3.2 (Instrument).

2 SELF-CONCEPT OF CHILDREN WITH LEARNING DISABILITIES

2.1 Learning disability

There are several definitions for learning disability (see e.g., Hammill, 1990). Since the needs, purposes, and disciplines vary in research and practise, Lerner (1993, 12) emphasised the need for several definitions of learning disabilities. She found (1993, 12-15) common nominators among several existing definitions: a) neurological dysfunction, b) uneven growth pattern, c) difficulty in academic and learning tasks, d) discrepancy between potential and achievement, and e) exclusion of other causes. *Learning disabilities*, according to one of the definitions Hammill (1990, p. 77) discussed, is “a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematic abilities.---. Problems of self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities, but do not by themselves constitute a learning disability.---.” Additionally there might be problems in attention, motor abilities, perception, or cognitive strategies for learning. Thus, it can be argued that learning disability is not a single condition but highly individual, and displayed in a variety of behaviours and characteristics. (Lerner, 1993, 11, 30.)

2.2 Self-concept and learning disability as a risk factor

For a number of reasons, one might expect that children referred to special class would have negative global, social, and, especially, school-related, academic self-concepts (see e.g., Lerner, 1993, 519). First of all, it is generally the case that children classified as learning disabled have at some point experienced considerable failure and negative competence feedback at school. These experiences are likely to be internalised and represented in a more negative view of self (Cooley & Ayres, 1988). Prout, Marcal, and Marcal (1992) concluded from the findings of their meta-analysis that children and adolescents with LD self-report in more negative directions when compared to non-LD children. However, it is important to remember that not all students with learning

difficulties demonstrate low self-worth (Lerner, 1993, 520). Second, many researches have suggested that the very fact of being labelled may negatively affect self-concept directly, as well as indirectly affecting it through the mechanism of the self-fulfilling prophecy (Moberg, 1979; Jordan & Stanovich, 2001). Third, as Grolnick and Ryan (1990) suggested, the transfer of students from regular classrooms for special programs may produce social stigma, interrupt class activities and relationships (teacher-student, student-student), and accordingly, highlight a sense of difference from others.

Students with LD are commonly assumed to demonstrate more negative self-concepts than non-disabled, normally achieving students. The self-concept of children with learning difficulties has been an extensively researched topic, particularly since the ideas of integration and inclusion started gaining wider support in schooling policies (Stanovich, Jordan, & Perot, 1998). However, the findings from this broad body of research indicate both controversial and inconsistent conclusions (see Chapman, 1988b). Leondari (1993) suggested that the discrepancy of findings may result from a failure to consider self-concept as a multidimensional concept and also from the inherent weaknesses of the measuring instruments. Earlier Cooley and Ayres (1988) considered the same problem and suggested that lower academic self-concept is the very source of differences found between students with LD and normal achievers and that controversial findings stem from the fact that global measures of self-concept contain items referring to academic self-concept. They argued that when the academic component of self-concept was removed, the differences between the global self-evaluations of subject with LD and normally achieving subjects disappeared. Therefore, as Chapman (1988b) recommended, the only way to clarify this discrepancy is to make the distinction between academic self-concept and global self-concept. He reminded that some children are capable of compensating or diminishing for the effect of lack of success in school with nonacademic skills and pursuits. Additionally, heterogeneity of LD group and the definition of LD varying between studies further complicates interpretation and generalisation of results.

Leondari (1993) compared self-concept ratings of normally and low achieving third to sixth graders in regular classes with those students facing academic difficulties and attending special education classes. Findings showed that special class students rated themselves significantly lower than their normally achieving peers on both academic and

global self-concept. No differences existed between special class and low achieving students on global self-concept. From the results the researcher hypothesised that negative self-perceptions in the academic sphere generalises to the overall self-evaluations. Similarly Priel and Leshem's (1990) results indicated that young first- and second-grade (6 to 7 years of age) children with LD had lower self-perception in the cognitive and physical competence domain than their normally achieving peers. Regardless of the fact that children's with LD sociometric scores were significantly lower, they perceived themselves as accepted by peers as normal achievers, . The results confirmed other findings about domain specificity of lowered self-perception in population with learning difficulties (Grolnick & Ryan, 1990; Sabornie, 1994; Vaughn, Haager, Hogan, & Kouzekanani, 1992).

The self develops in social interaction therefore social comparison plays an important role in the development of child's self-concept (Ojanen, 1996, 125). As children spent most of the daytime in school and are exposed to number of challenges, it is easy to expect school environment inevitably emphasizing social comparison. Renick and Harter (1989) examined this perspective: the influence of social comparison processes on LD students' scholastic self-perceptions. They found that 84 % of the participating 86 children with LD spontaneously compared their performance with normally achieving peers in the regular room rather than with the equally competent in the resource room. The major finding of Renick and Harter (1989) suggested the influence of social comparison being strong. Students perceived themselves to be much more academically competent in the resource room than compared with normally achieving peers. The global self-worth showed no significant difference from one frame of reference to another.

2.3 Self-concept, social competence, and peer acceptance

Vaughn, Haager, Hogan, and Kouzekanani (1992) speculated that, since peer relations are an important aspect of social functioning of school-age children, social relations serve as a particularly good indicative prognosis of future social competence. One important aspect of social competence is positive self-concept. Several researches have documented the ways in which students with LD compare with non-LD students on the extend they are

liked and accepted by their peers (e.g., Larrivee & Horne, 1991; Rothman & Cosden, 1995). The lack of self-worth has been associated with developmental, behavioural, and clinical problems like depression and learned helplessness (Aho, 1996; Brown, 1998; Ojanen, 1996). It has been suggested that psychosocial problems and social skill deficits are characteristics which distinguish many students with LD from student with other types of problems in learning (Lerner, 1993, 516; Prout, Marcal, & Marcal, 1992). If accepted the multidimensional nature of self-concept, the social domain ("Popularity" in Piers, 1984) deserves to be examined more closely.

A longitudinal (4- to 5-year) study by Vaughn, Haager, Hogan, and Kouzekanani (1992) was conducted to examine the peer acceptance, self-perception, and academic achievement of students with LD, low-achieving, and average/high-achieving students. Children with LD received special educational services approximately 2 hr per day in a special education resource room. All children were assessed prior to and following their possible identification as learning disabled on both the peer ratings of acceptance scale and the measure of self-concept. No differences between groups were obtained on the global self-concept measure. Despite lower peer acceptance among students with LD, they maintained academic and social self-perception on par with better peer-accepted students. These findings challenge Chapman's (1988a) conclusions that negative school-related attitudes develop at early age in case of children with LD. Vaughn et al. (1992) concluded that when achievement is controlled, there are very few differences between LD and non-LD students on peer acceptance.

Distinguished from most research in this field Sabornie (1994) examined social-affective characteristics (e.g., loneliness, self-concept and integration) and teacher-rated social competence in early adolescence across groups identified as either learning disabled or non-disabled. The results demonstrated significant group differences with regard to loneliness and integration. However, the groups did not differ significantly in self-concept regardless of teachers consistently rating learning disabled student's social behaviour lower than that of non-disabled. Among students with LD, integration was positively correlated with student's in-school and out-of-school participation level (clubs, sport, or activities), and negatively correlated with victimisation. Referring to similar self-concepts among participants, the examiner makes a notion that non-school-based perceptions of self

among students with LD are not consistently negative. For example, Rothman and Cosden (1995) found that students with less negative view of their learning disability conceived themselves as being more behaviourally competent and more socially accepted.

Children with learning difficulties have also been observed in full time inclusive environments. Stanovich, Jordan, and Perot (1998) addressed the important domains of social competence and academic self-concept which are often, as they argued, ignored in the assessment of students' progress. These domains should also serve as central source for information in evaluating the effectiveness of educational practises. For these purposes the researchers assessed academic self-concept and social integration of four student groups identified as being at risk for school failure, having a disability, using English as a second language, and non-categorised. According to Stanovich, Jordan, and Perot (1998) the first three groups of children may be considered as key participants in today's heterogeneous classroom. The existing literature is however lacking a comparative description of these three groups of children across previously mentioned domains. One part of the study was to complete a sociometric rating scale, where participants were asked to nominate peers in their own class. Larrivee and Horne (1991) reminded that children with LD in inclusive classrooms rarely get nominated on such measures. The results confirmed previous studies (e.g., Vaughn, Haager, Hogan, & Kouzekanani, 1992) indicating very low correlation between academic self-concept and social integration. Therefore it can be assumed that they are quite separate and incongruous constructs. The first three groups scored equally lower than the non-categorised group on academic self-concept scale. Similar pattern was found in social integration scores, the mean of non-categorised being significantly higher. Surprisingly the students with disabilities differed significantly from the group of students who were at risk, displaying the lowest social integration score. At the same time the disabled scored higher academic self-concept scores than at risk students regardless of similar competence profile within these two groups. Stanovich, Jordan, and Perot (1998) suggested that this controversy is due to the fact that students with disabilities have had their school related problems officially identified and labelled. Thus, they are perhaps receiving more specific instruction and differential feedback from they teachers. Yet at the same time they might have been stigmatised as different in the eyes of the non-handicapped counterparts. All in all, Elbaum

(2002) reminded that more attention should be paid to potential social outcomes in making decisions about educational placement.

2.4 Self-concept, attributions, and achievement

Lerner (1993, 524) explained how, according to the attribution theory of motivation, good learners believe that it is their own effort and actions which contribute to the academic success and failure. In contrast, students with learning disabilities tend to attribute their success to uncontrollable external factors like random luck or the teacher. For failures they often blame their lack of abilities or the difficulty of the task. Several studies have portrayed children with LD as lacking confidence in their ability to influence learning outcomes, and as showing poor task orientation (e.g., Ayres, Cooley, & Dunn, 1990; Bender, 1987; Hay, Ashman, & Kraayenoord, 1998). Research findings support attribution theory, showing that students with LD tend to explain their success and failure differently from their peers believing that the control of outcomes rests in the hands of powerful others (e.g., Grolnick & Ryan, 1990). Pomerantz and Ruble (1997) argued that children who conceive ability as uncontrollable are more vulnerable to academic failure because they believe there is nothing they can do to improve their low ability, and thus feel threatened.

In a longitudinal study Chapman (1988a) investigated links between ongoing academic failure and cognitive-motivational development. Over a 2-year period Chapman studied unlabelled children who were, although identified as learning disabled, receiving no remedial support, and compared them with normally achieving students. The results showed that academic self-concept appeared as a significant predictor of academic achievement for both groups. Additionally, the grades affected ability perceptions in students with LD, whereas for non-LD the case was vice versa. The findings of Chapman (1988a) also revealed that students with LD hold fairly stable but more negative ability perceptions and expectations than the control group. The notion that children with LD have more external control orientation received relative support. The study confirmed that children with LD have a distinctive set of affective characteristics in comparison with normally achieving peers. In contrast, Cooley and Ayres (1988) reported no group

differences in attributions regarding the locus of control but argued that attributions are related to self-concept and not to learning disabilities per se. For example, students with low self-concept are more likely to attribute failures to ability.

Already Black (1974) demonstrated a connection between achievement and self-concept. The results of his study clearly indicated that poor readers had significantly lower self-concept than normal readers of a similar age, sex, and intellect. In addition, the study revealed that among the poor readers there was a significant decrease in self-concept with increasing age. This suggests that learning difficulties and problems in self-concept are linked in a circular fashion. Respectively Grolnick and Ryan (1990) found that children with LD saw themselves as less competent in the cognitive domain than matched-IQ counterparts even though there were no group differences in general perception of competence. The authors suggested that areas other than school may function as the source of self-worth for these students.

In an exceptional but significant study Rothman and Cosden (1995) examined if the meaning children give to their learning disability explains the variations in their self-concept. Interesting findings revealed that children with less negative perceptions of their learning disability did better at math tests, had more positive global self-concept, and saw themselves as intellectually and behaviourally more competent than those with more negative perception. According to Rothman and Cosden (1995) this confirmed the suggested idea that some children with LD tend to generalise specific academic weakness to more general self-concept, and that generalisation is related to their perceptions of their disability. Correspondingly Ulvinen (1998) found that adolescents who reported experiencing learning difficulties had poorer self-concepts than subjects who did not experience difficulties. In addition, Raviv and Stone (1991) and Stone (1984, cited in Prout & Prout, 1996) proposed that parental expectations and attitudes may affect the self-concept more than the actual learning difficulty.

2.5 Self-concept and educational placement

Beck, Roblee, and Hanson (1982) conducted a study to determine if any significant difference in respect to self-concept existed between student assigned to special education

classes and students in regular classes. They addressed the primary concern of many parents and educators: Whether the student's self-concept is effected by being placed in special education class? They used the Piers-Harris scale and found no significant differences between regular and special class students. Limitation of this study was that it did not control the length of time spend in special education program. Respectively, Vaughn et al. (1992) found no significant differences in global self-concept between students with LD and normal achievers. In they longitudinal study neither the placement into special services after the first measurement, nor the amount of years the resource room was attended, were significant in terms of general self-concept or academic self-perceptions. This suggested that neither identification nor labelling negatively affected the self-concept of children with LD.

However, there has been mixed findings and considerable controversy in the literature about the merits and downsides of special class placement (e.g., Chapman, 1988b; Moberg, 1979; Purkey, 1970; Stangvik, 1979). One might expect that the stigma of special education class placement would have a harmful effect on child's perception of general competence and also on other areas unrelated to school achievement due to a generalisation effect and self-fulfilling prophecy. Leondari (1993) interpreted her results indicating that special class children generalise negative self-perceptions in the academic domain to the more global evaluation. In contrast, a number of studies have shown that no such generalisation takes place but students display domain-specific self-concepts (e.g., Bear & Minke, 1996; Westling Allodi, 2000). Additionally, Moberg (1979, 114) showed that teachers play an important role in labelling the students, attach unanimously certain affective meanings to these labels and hold stereotyped views of labelled children. The perceptions of students' school achievement taken as a variable in teacher's descriptions also influences the perceptions and evaluations of performance (Moberg, 1979, 116). Similarly Jordan and Stanovich (2001) noted that teachers held different beliefs about the responsibility for students' difficulties with learning, and that these attitudes and beliefs were related to their instructional discourse strategies with different kinds of learners.

A number of studies have assessed students with LD in various settings of special education in order to determine whether and what kind of special education placement has an effect on children's self-concept. Beltempo and Achille (1990) hypothesised that

children with LD in partial placement would have higher self-concept due to a multiple reference group than students with LD but without placement and in turn, this group would obtain higher scores than the students in maximum special education setting. The results proved the hypotheses correct. Researchers stated that when children with LD isolated into special classes for at least 70 % of the week are compared to those placed in regular classes, measures can obtain differences which are due to placement effects. However, children who were assessed prior and after a year in maximum special class did not display decrease in self-concept scores. In other words, the placement does not have a serious effect. Heyman (1990), on the other hand, found no effect of educational setting on self-concept among 9 to 11 years of age children with LD. Beltempo and Achille (1990) proposed that low self-concept may be closely related to the origins of learning disabilities. Since the LD group reported lower self-concept scores at the beginning of the academic year, one would expect that low self-concept is closely related to low academic performance which would eventually lead to the identification process and remedial action for learning disabilities per se. They emphasised that all students with LD had shown low self-concept, regardless of special or regular class placement.

Perceived competence among children with LD attending special schools or special classes in regular school, and non-identified low-achievers in regular classes was examined by Butler and Marinov-Glassman (1994). They hoped to shed light on the effects of both placement and grade level (grades 3, 5, and 7) on the self-perceptions. There are claims that self-perceptions among students with LD, as among people in general, depend mainly on the targets with whom they compare themselves (e.g., Beltempo & Achille, 1990; Grolnick & Ryan, 1990; Morvitz & Motta, 1992). Butler and Marinov-Glassman argued, that in this case, one would indeed expect children with LD who attend self-contained frameworks, where their most important reference group consists of others with disabilities, to feel more positive about themselves than those attending regular classes, and comparing themselves primarily with more competent others. As expected, the results demonstrated that children in special schools perceived themselves more favourably than did those attending special classes in regular schools. Furthermore, perceived competence was high and similar in all groups at grade 3, but decreased by the grade 5 among the special class students in regular schools and low-

achieving students. According to researchers the most striking findings indicated that the effects of educational placement on self-perceptions differed with age in ways consistent with developmental trends of self-appraisal and *social comparison*. As supported by the very different pattern in self-concepts scores at grade 5, the self-perceptions significantly depend on child's reference group once social comparison becomes a major source of self-appraisal. These results cast some doubt on arguments (e.g., Beltempo & Achille, 1990) that children with LD exposed to both disabled and non-disabled peers, are able to make conscious selective use of multiple reference groups in ways that will protect and boost their self-esteem.

In the summary from several studies of placement effects on self-concept Chapman (1988b) concluded that educational framework was not systematically associated with differences in self-concept. Segregated settings did not automatically lead to lower self-concept than mainstream settings. However, unidentified and unplaced 'learning disabled' (low-achieving) children consistently showed lower self-concept than their counterparts receiving remedial assistance. In a recent study, Westling Allodi (2000) reported that children with LD without support were on a par with students with support in global self-concept, thus contrasting Chapman's (1988b) conclusions. More specifically Chapman showed that students with LD in mainstreamed frameworks had relatively lower academic self-concept than those in segregated environments. Similar results were gained by Stangvik (1979, 430), who illustrated special class placement's positive effect on slow learners' personal evaluation of his basic abilities, creativity, and cognitive functioning. Moreover, in Westling Allodi's (2000) study, those receiving remedial support scored lower in academic domain than children without support, but seemed to compensate this threat against self-esteem by placing more importance to peer relations and having more positive image of peer relations at school (also Renick & Harter, 1989). The author interpreted results supporting the compensatory model of self-concept (see Byrne 1996, 17-18) and confirming domain specific tendencies in self-perception demonstrated in the studies of Leondari (1994) and Montgomery (1994). It's been suggested that rather than affecting the general self-concept, the effect of the placement may be located to specific dimensions of the self-concept like academic competence, peer acceptance, or ideal self-image (Stangvik, 1979, 436).

Taken together, the research has offered two contrasting views on the effect of educational placement on self-concept: (1) potential negative effects of labelling, grouping, and segregating children; (2) effects of social comparison processes in different settings from special schools to fully integrated framework (Prout & Prout, 1996). Secondary abnormality (learned helplessness; poor self-esteem) is created by the social reaction (labelling; expectancies) to primary deviation (LD; special class placement) (Moberg, 1979, 18). The later perspective, according to Festinger's (1954) social comparison theory, argues that people have a drive to evaluate themselves and they use significant others in their environment as frames of reference in forming self-perceptions. Commonly, reference groups are those of which individuals are members, which they admire, or to which people aspire. In Festinger's opinion we choose the significant others according to how similar they are to us in traits which we personally value high, and how close to our own abilities or opinions they seem. Elbaum (2002) synthesised 38 empirical studies from this field and found no systematic association between the self-concept and educational placement. The only reliably different placement comparison Elbaum's meta-analysis revealed was between self-contained classroom in a regular school and placement in a special school, students displaying more positive self-concepts in the more restrictive environment. Some evidence were gained to cautiously suggest that those receiving special support within regular class may have higher self-concept than those receiving part-time resource room instruction.

2.6 Purpose of the study

More Finnish research is needed about the relationship between learning disabilities, special education placement and self-concept. Knowledge of academic and social self-concepts of students in special education environments is central in evaluating the effectiveness, influences and benefits of educational practises. On classroom level, teachers want to support their students' performance and progress. This is possible when a student sees himself as capable, has faith in his abilities, and believes in his own potential.

The purpose of the present study is to investigate the level and quality of the self-concept of regular and special education class students. Various comparisons between and within these two groups are made and the differences reported. The following questions were addressed:

1. Do special education students differ from regular education students in terms of self-concept?
2. Is there a difference in self-concept between special class and special school students?
3. Is there a relationship between gender and self-concept?
4. How the findings of this empirical study relate to results from previous research?

Bregje Nonhebel, an exchange student of special education from Holland, collected similar data for her master thesis by using the same instrument to measure self-concept. The opportunity to compare the Finnish students with equivalent Dutch students gives rise to further questions:

5. Are there differences between Finnish students' and Dutch students' self-concept?
6. What can explain the possible differences?

3 METHOD

3.1 Participants

Participants were 140 (85 males and 55 females) Finnish comprehensive school students ages 9 to 11 years (mean age 9.94 years). Data were collected from 12 schools (2 regular, 2 special for students with LD, and 8 regular with self-contained special classes). The headmasters of the two regular schools I knew personally and they agreed on behalf of the teachers to take part in this study. Special classes and schools were searched from the Internet by using keywords “special school” and “special class”. From the list of possible schools I selected those which had EMU-students and phone numbers to contact. Over the phone I asked 12 schools to participate, out of which 2 refused. The participating schools are located across Finland. 83 of the participants (47 males and 36 females; mean age = 10.33, SD = .63 years) were referred to special education and placed in self-contained special classes either in special schools (15 students) or in regular schools. They were compared with 57 students (38 males and 19 females; mean age = 9.39, SD = .59) drawn from four regular education classes. This age group was chosen in order to secure sufficient reading level especially among students in special classes and because it is believed “...that a general self-concept factor does not exist in children younger than 8 years of age” (Crain, 1996). Also Piers (1984) concluded that self-attitudes are reasonably stable by the age of 8.

Participating Finnish special education class students were all attending so called EMU-classes regardless that officially this category of special education does not exist anymore in Finland. Numerous learning difficulties and general slowness in learning, however, are typical characteristics in students referred to EMU-class. EMU-special classes enable the learning goals and teaching to be adjusted according to the needs of these otherwise often underachieving children. (Runsas, 1991, 65-72.)

In addition, 126 children from regular (74; 31 males and 43 females) and special (52; 33 males and 19 females) education classes in Holland took part in the study and completed the same questionnaire collected by a Dutch student Bregje Nonhebel for her

master thesis. Children were of the same age as the Finnish counterparts, mean age = 10.04 years. Due to the national system of education in Holland, all participating children receiving special education were placed in separate special schools for students with LD. This contributed the major background difference between the Finnish and the Dutch group, since most of the participating Finnish children with LD attended special classes integrated into regular education schools. The Dutch schools were mostly located close to Utrecht.

All children meeting the criteria were included in the study, provided that their parents had signed a permission letter consenting to their child to participate in this study. In the letter the parents were told that no names were asked and each questionnaire was handled with absolute confidence.

3.2 Instrument

The measuring of self-concept was conducted by using the Piers-Harris Children's Self-Concept Scale (Piers, 1984). The instrument consists of 80 first-person statements, "I have good ideas," "I give up easily," and so on. The Piers-Harris is a self-report questionnaire where children are asked to indicate whether each statement applies to them. Answers appear in a dichotomous "Yes" or "No" form, allowing the scale to be easily understood by participants. The statements are worded in both positive and negative direction to control for social desirability response sets (Piers, 1984). Since the items tend to be declarative statements, they try to avoid negative connotations or given values, and contribute clarity. The original questionnaire was translated from English into Finnish in the department of special education in the university of Jyväskylä.

The possible total self-concept scores range between 0 and 80, and indicate the number of individual items which were responded to in the direction of positive self-concept. According to Piers (1984) the total score is a single most reliable measure for the Piers-Harris. Additionally the Piers-Harris provides six cluster scales which reflect different aspects of self-concept (Piers, 1984): (1) Behaviour suggests the extent to which the child acknowledges and admits or denies problematic behaviours; (2) Intellectual and School Status indicates the child's self-perceptions of his or her abilities with respect to

academic tasks; (3) Physical Appearance and Attributes reflect child's self-image in terms of physical characteristics and leadership attributes; (4) Anxiety reflects general emotional disturbance and moods; (5) Popularity demonstrates child's own assessment of his or her popularity with classmates; (6) Happiness and Satisfaction taps a general feeling of being a happy person who feels satisfied with one's own life. The six subscales include 65 of the 80 items calculated into the total score, although some of the 65 items contribute to more than one scale. The validity of cluster scales has been subjected to considerable debate (e.g., Byrne, 1996, 110; Chapman, 1988). Piers (1984, 38) herself stressed that these scales may only suggest areas of relative strength and vulnerability in individual children, and cluster scores should always be interpreted with caution and never independently. There is a general consensus in the research literature that the Piers-Harris Scale presents a moderately valid measure of children's overall perspective of self, but that the reliability and validity of its cluster scales are questionable.

Piers (1984) reported that the test-retest reliability (stability coefficients) of the total scale of the Piers-Harris ranged from .42 to .96. It is suggested that the lower long interval test-retest reliability is due to the changing nature of self-concept over time though it is a stable construct (Piers, 1984). The median test-retest reliability was .73. Internal consistency of the total scale of the instrument ranges from .88 to .93 (.77 mean for subscale coefficient) and the validity is at acceptable levels. Keith and Bracken (1996) stated that several factor analyses have provided reasonable evidence of construct validity, but still call for caution when interpreting cluster scales. Intellectual / School Status cluster has been reported $r = .78$ correlation with the total scale (Piers, 1984). In the manual Piers (1984) reported results from the normative sample consisted of 1183 school children from 9 different grade levels. For the total score, mean was 51.84 and $SD = 13.87$.

Internal consistency reliability levels $>.90$ and $>.80$ are considered adequate for total scores and subscales, respectively (Keith & Bracken, 1996). In this study Cronbach's alpha for total scale ranged from .91 (Holland and combined data) to .92 (Finland). For the subscales the alpha ranged from .68 to .82 in the Finnish sample. Only "Behavior", and "Physical Appearance and Attributes" subscales reached the adequate level of reliability. Thus, reliability is assumed sufficient for the total scale, but the subscales are interpreted

with caution. “Intellectual/School Status” ($r = .83$) and “Happiness and Satisfaction” ($r = .84$) clusters correlated with the total score at $p = .01$ level.

There are several limitations to the use, interpretation and applying of the Piers-Harris. First, due to the complex and academically demanding task of assessment of children’s self-concept, Piers (1984, 4) recommends the Piers-Harris solely as a screening instrument which should not be used simplistically or in isolation. Secondly, Piers (1984) reminds of the common tendency among children to respond in a conventional or socially desirable direction. Therefore the fact the scores are subject to conscious and unconscious distortions should be kept in mind when making inferences. The normative sample of the Piers-Harris is old (from late 1960's) and geographically restricted (Piers, 1984, 50).

As an instrument for this study, the Piers-Harris was selected for several reasons. It was standardized on a broad age range (grades 4 through 12, 8-18 -year-old) and large samples. It has been widely used with different populations and in a number of settings (see e.g., Elbaum & Vaughn, 2001; Piers, 1984). The manual provides examples of studies with mentally retarded, gifted and children and adolescents with LD (Piers, 1984, 87). Despite the fact, as Piers (1984, 5) pointed out, it is important to develop national and local norms for interpretation. Moreover, the theoretical background is reported in the manual, including a phenomenological view of self-concept where self-report serves as the best suiting measurement device (Piers, 1984, 43-44). Finally, the Piers-Harris was chosen because it provides an effective measure of overall self-concept, which is the main target of interest in the present study.

3.3 Data collection and analysis

Data collection took place during the second month (late September) of the academic year 2002. The Piers-Harris was administered in each of the classes in groups. Teachers were provided with instruction letter and requested to explain the idea and the purpose of the present study to their students emphasising the confidence of individual responses. All subjects were asked to respond honestly to each statement. Further, they were told that the results would not be shared with anyone in the school. Children read the test items to themselves and circled the respond. Classrooms that contained significant numbers of

pupils with reading difficulties had the items read to them as a group. Throughout the assessment children were encouraged to ask questions about any unknown words or unclear instructions. The classroom teachers were told to use as many sessions as needed to fill in the questionnaire.

All together 163 questionnaires were sent to the schools according to how many children teachers estimated would be able to participate. From the total 155 returned questionnaires, all 8, 12, and 13 years of age were removed regardless of what grade level these children attended leaving 140 for further analysis. The data was analysed by using the SPSS 10 - statistic calculation program. To start of with, the data was recoded in away that all items were mark in the direction of positive self-concept. The manual gave instructions how to do it. The total self-concept score (also global, general, or overall) and the six cluster scores were calculated for each child. Item number 76 had to be removed from the total score due to a mistake in the translation of the questionnaire. The removal did not affect cluster scores. In order to obtain the total scale score or any of the cluster scores a child must have responded to all items includes in the subscale. Since not all had completed the questionnaire appropriately, there were missing data as follows: Total score 14; Behavior 6; Intellectual and School 8; Physical 5; Anxiety 5; Popularity 6; Happiness 5. Due to the scoring system, a participant who did not obtain the total score, may have scored on cluster scales if he or she had completed all the needed items.

Mean group scores were used as the primary data source of analysis. "..., the cluster scale scores should be used only as a guide in identifying areas of particular concern for purposes of intervention program planning." (Byrne, 1996, 110) The limitations were kept in mind when interpreting cluster scores. T-tests were conducted to study differences between the means of each educational group and the genders.

4 RESULTS

4.1 Self-concept of children in regular and special education in Finland

An analysis of the data indicated that children attending special education classes did not differ from regular class students in respect to global self-concept. Means and standard deviations for both groups, and *t* test values appear in Table 2. Contrary to most self-concept studies comparing students with and without LD, in the present study the special education group reported higher global self-concept scores (mean = 59.61, SD = 12.05) than regular class children (mean = 56.17, SD = 11.73) although the difference was not significant. The special class students had evenly but non-significantly higher scores on five out of six subscales. Only “Behavior” cluster was non-significantly higher for regular class students.

TABLE 2 Means, Standard Deviations, and *T*-test Values on Piers-Harris Scale Scores for Finnish Groups

Scale	Special education			Regular education			<i>t</i>	p
	<i>n</i>	mean	SD	<i>n</i>	mean	SD		
Total	72	59.61	12.05	54	56.17	11.73	-1.61	.111
Behavior	79	13.10	3.42	55	13.35	2.53	0.45	.653
Intellectual and School	76	12.22	3.66	56	11.48	3.05	-1.23	.219
Physical Appearance and Attributes	78	7.56	3.47	57	6.75	3.20	-1.38	.169
Anxiety	79	11.61	2.47	56	10.77	2.53	-1.93	.056
Popularity	79	9.10	2.04	55	8.35	2.63	-1.79	.076
Happiness and Satisfaction	78	8.21	2.02	57	7.79	2.08	-1.17	.246

Difference between boys and girls for the total Finnish sample on the global scale was not significant (see Table 3). Contrary to previous research girls scored slightly more positive (mean = 59.62, SD = 10.61) than boys (mean = 57.25, SD = 12.73) on the total scale. The only cluster scale that yielded a significant difference was “Physical Appearance and Attributes” ($t(133) = -2.11, p < .05$) favouring girls. The same and only difference was found between boys and girls in the group of regular class students ($t(55) = -2.44, p < .05$). No differences were found between boys and girls from special education classes.

TABLE 3 Means and Standard Deviations of Total Scale Scores for Boys and Girls in Special and Regular Education in Finland and Holland

		Finland		Holland		
Gender	<i>n</i>	Mean	SD	<i>n</i>	Mean	SD
Special education						
Boys	43	59.81	13.13	19	62.47	8.20
Girls	29	59.31	10.48	15	65.20	5.28
Regular education						
Boys	36	54.19	11.69	18	59.83	14.71
Girls	18	60.11	11.09	28	59.36	11.80
All participants						
Boys	79	57.25	12.73	37	61.19	11.73
Girls	47	59.62	10.61	43	61.40	10.33

Comparison were also made between children with learning disabilities attending special education classes in regular schools (LDRS) and those attending special schools (LDSS). The findings were analysed with great caution since the group of special school students (15) was too small for reliable results. There were no differences between the groups. When separate comparison were made to children from regular education, LDRS-group scored significantly more positive than regular class students on “Anxiety” cluster,

($t(118) = -2.38, p < .05$). LDSS-group displayed higher, but non-significant scoring pattern on all scales compared to regular class students. The question of the effect of placement on self-concept is further analysed using both the Finnish and Dutch data.

4.2 Self-concept of Finnish and Dutch children

In general the Dutch children (mean = 61.30, SD = 10.93) scored more positive on the global self-concept scale than the Finnish children (mean = 58.13, SD = 11.99). The regular class students in Holland and Finland showed no significant differences, but discrepancies were found between children in special education. Dutch children with LD had higher general self-concept than the Finnish children with LD (see Table 4). *T* test revealed the difference on the total scores significant at $p < .05$ level. More detailed analysis revealed the main effect was “Physical Appearance and Attributes” ($t(118) = 2.85, p < .01$) cluster favouring the Dutch children from special education classes. The reader should be aware that all Dutch children with LD attended special schools whereas most Finnish children had their special class integrated into a regular school.

TABLE 4 Means, Standard Deviations, and *T*-test Values for Special Education Students in Finland and Holland

Scale	Finland			Holland			<i>t</i>	<i>p</i>
	<i>n</i>	mean	SD	<i>n</i>	mean	SD		
Total	72	59.61	12.05	34	63.68	7.10	2.17	.032*
Behavior	79	13.10	3.42	43	13.86	2.02	1.54	.126
Intellectual and School	76	12.22	3.66	45	12.87	2.45	1.16	.250
Physical Appearance and Attributes	78	7.56	3.47	47	9.11	2.55	2.85	.005*
Anxiety	79	11.61	2.47	44	11.95	1.78	0.90	.370
Popularity	79	9.10	2.04	46	8.89	1.91	-0.57	.571
Happiness and Satisfaction	78	8.21	2.02	46	8.72	1.28	1.73	.086

The main result of the Dutch sample replicated the Finnish finding in that the special education students (mean = 63.68, SD = 7.10) did not differ significantly from the regular education students (mean = 59.54, SD = 12.86) in respect to global self-concept. They, however, constantly scored higher on both the total scale and all the cluster scales than the regular education group (Table 5). This also resembled the Finnish findings and contrasted most of the previously reported self-concept comparisons between children with and without LD. Interestingly, in the Dutch sample, three out of six cluster scores yielded significant difference between the two groups, although interpreted with caution. The three subscales were “Intellectual and School Status” ($t(102) = -2.31, p < .05$), “Physical Appearance and Attributes” ($t(105) = -2.25, p < .05$), and strongest “Happiness and Satisfaction” ($t(113) = -2.62, p = .01$), all favouring special class students.

TABLE 5 Means, Standard Deviations, and *T*-test Values for Groups in Holland

Scale	Special education			Regular education			<i>t</i>	<i>p</i>
	<i>n</i>	mean	SD	<i>n</i>	mean	SD		
Total	34	63.68	7.10	46	59.54	12.86	-1.83	.071
Behavior	43	13.86	2.02	63	13.75	2.97	-0.24	.814
Intellectual and School	45	12.87	2.45	59	11.54	3.39	-2.31	.023*
Physical Appearance and Attributes	47	9.11	2.55	60	7.78	3.35	-2.25	.027*
Anxiety	44	11.95	1.78	65	11.18	3.15	-1.63	.107
Popularity	46	8.89	1.91	60	8.45	2.61	-1.00	.318
Happiness and Satisfaction	46	8.72	1.28	70	7.87	2.20	-2.62	.010**

The relationship between self-concept and gender was slightly different among the Dutch children compared to findings from Finland (see Table 3) although no significant gender differences were found in overall self-concept. However, for the special education

group, the “Popularity” cluster yielded a difference. LDSS girls reported higher popularity and interpersonal skill scores than LDSS boys, ($t(44) = -3.56, p = .001$).

When the Finnish and the Dutch data were combined and LDRS and LDSS groups compared, no differences were revealed either on total scale or on any of the cluster scales. However, the average scores indicated that special school students (mean = 62.91, SD = 8.38) showed more positive general self-concept than LDRS children (mean = 59.38, SD = 12.27). The scores for LDSS were slightly higher on all scales apart from “Anxiety” than for LDRS. Using the combined data and comparing all LDRS students with regular education students, no difference was found concerning overall self-concept. On the subscale level, LDRS children were more content with themselves and showed less signs of emotional problems than the comparison group, “Anxiety” ($t(163) = -2.11, p < .05$). Also combined LDSS students’ group was compared with all regular class students. This grouping revealed several significant differences. LDSS children had significantly higher general self-concept than non-LD group, ($t(123) = -2.98, p < .01$). Same three clusters which discriminated Dutch LDSS students from students without LD were significant here, however now all at $p < .01$ level. These results were expected as most LDSS students are from the Dutch sample. These last comparisons further pointed out that some differences may exist between educational placements.

In addition, children with LD in both the countries scored consistently higher on total and cluster scales than the normative sample reported in the manual (Piers, 1984, 50-51). Both the Finnish and the Dutch children attending regular education classes displayed similar patterns except failed to reach the normative means of “Physical Appearance and Attributes”, and “Happiness and Satisfaction” clusters. Chapman’s (1988b) review indicated the same: generally scores of students with LD were within the reported normal range. These discrepancies may come down to cultural factors since the normative sample is outdated, and geographically and culturally limited.

5 DISCUSSION

5.1 Validity and reliability of the study

Wylie (1974, 174) assumed that the clear structure of the Piers-Harris -scale and simple wording favourable influence construct validity. Those items which include a frequency modifier like 'often' and 'usually' are, however, subject to a variety of interpretations and unnecessary ambiguity bearing negative influences on construct validity. I tried to diminish this effect by asking the teachers to instruct students to answer according the way they *generally* feel. This might have proved difficult for children of this age, and particularly for those who fall behind in maturity and hold separate, context-specific self-concepts (e.g., school / home / peer). Across the various analyses used to evaluate the construct validity of the Piers-Harris, Marsh and Holmes (1990) stated, that findings only weakly supported the scale. The researchers further argued that responses are apparently affected by a negative item bias, as it is been proved that preadolescents have difficulty responding appropriately to negatively scored items, and that this difficulty is related to age and academic ability. Judging from written comments like "I don't know", "sometimes", it was apparent that some of the participants found the dichotomy of the scale very disturbing. Byrne (1996, 110) summarised research concerning the present scale and advised to use PHCSCS only as a measure of general self-concept rather than as a measure of multidimensional self-concepts.

It was the responsibility of the teachers to hand out, supervise, and finally collect the questionnaires. Therefore is was impossible for the researchers to control the reliability of responding in a appropriate manner. There remains the possibility that a lack of motivation for and understanding of the task at hand, and inability to read and fully understand the items may have caused random responding and thus affect the reliability and consistency of results. Stangvik (1979, 113) reminded that low ability students may be more eager to place themselves in a favourable light than average or high ability child, due to previous experiences of failure. They might have greater tendency to agree with items, "faking good". Respectively, it is difficult to know how the participants felt about the

confidentiality of the present study, and if they were able to give responds according the way they really felt. The questionnaires were completed anonymously.

The measurements for the present study took place at schools. Therefore school environment represents the context in which the participants most likely perceived and evaluated themselves. In respect to ecological validity this study and chosen method measured self-concept in a particular setting, school. For example, “Popularity” scores are interpreted primarily within school context. Thus this study does not necessarily give a whole picture of self-concept, but gives valid information for teachers and parents concerned about the well-being and state of development of these children.

The sample represents Finnish school-age children well. Participants were drawn from several schools, classrooms, and settings. Both small and bigger places of residence all round Finland were included. Unfortunately the number of children with LD attending special schools was low, since the question about the effects of placements was not in the original design for the present study. Also the number of boys in the group of regular class children was a surprise to the researcher. Thus, the LD- and non-LD-group are not matched in gender. Even though it is difficult to define learning disabilities, it is clear who are attending special education classes on a regular base and who are not. Since the participants were typical members of the two groups under comparison, the results can reasonably be generalised to the populations from which they were drawn.

5.2 Group and gender differences

This study comparing regular class and special class students on the basis of their general self-concept found no differences between the groups. Several researches, reviews, and meta-analysis have, however, reported that students with LD have lower self-concepts than their counterparts without LD (e.g., Beltempo & Achille, 1990; Chapman, 1988b; Elbaum & Vaughn, 2001; Leondari, 1993; Prout, Marcal, & Marcal, 1992). There are various possible explanations for the inconsistency of present findings in relation to documented research. First one concerns the qualities and sensitivity of the measurements used. If the difference between the groups occurs especially in the academic domain, like Chapman (1988b) discovered, rather than in general self-concept, instruments having a valid

academic scale are more likely to reveal discrepancies. The studies using the Piers-Harris are confusing, since some of them suggest differences and some not (see Cooley & Ayres, 1988). In the present work, the special class students exhibit similar self-concepts than regular class students in the “Intellectual and School Status” scale (academic domain) as well as in all other subscales of the Piers-Harris. In Bender’s (1987) view the Piers-Harris is a more general measure.

Leondari (1993) argued on the basis of her own results that the reason behind children’s with LD poor self-concept lies in the negative self-perceptions in the academic sphere which generalises to the overall self-evaluations. She presents a logical conclusion in a sense that school is one of the few contexts where children are under constant evaluation and receive feedback on a daily base about how they are performing and behaving. Since all the seven counted self-concept scores for the special class students in Finland were consistent and high, it can be interpreted to indicate generalisation of one positive domain (academic in this case) over all other domains and finally adding up to a positive global self-concept.

A second possible explanation is the selection of participants for self-concept studies. Many of the studies interested in the self-concepts, peer acceptance, or success-failure attributions of students with learning disabilities are assessing students receiving part-time special education instruction from one to four hours a day in a resource room or learning centre (e.g., Cooley & Ayres, 1988; Jordan & Stanovich, 2001; Rothman & Cosden, 1995; Sabornie, 1994). In other words the participating children with LD are in fact from regular education classrooms. Geographically and culturally most of this research is done in the English-speaking countries, where inclusion and mainstreaming are more common educational practices than in Finland. Therefore, the present study is not directly comparable which may for some parts explain the controversies between findings. Also Chapman’s (1988b) review summarised that students with LD in mainstreamed frameworks had relatively lower academic self-concept than those in segregated environments.

One of the interests of this study was to examine the impact of different placements on elementary school students’ self-concept. None out of the three educational placements (regular class, special class, special school) proves significantly better or worse than the

others when student's self-concept scores were compared. In a recent meta-analysis Elbaum (2002) examined whether education placement of students with LD can be associated with the level of self-concept children self-report. Four out of five placement comparisons were proved non-significant. She emphasised that the only significant placement was special school where students reported remarkable higher self-concept than students in self-contained classrooms in regular schools. Elbaum's finding is moderately confirmed by the present study where results indicate that the students with LD attending special schools exhibit more positive self-concept than any other participating group. Even though the discrepancy between special school students and self-contained special class students is not significant, it is still consistent in that LDSS students score higher on every part of the Piers-Harris self-concept scale. However, the majority of the special school students are from Holland, and therefore the result can not be generalised directly to Finnish students. It can be interpreted as pointing a direction of the relationship between placement and self-concept. Furthermore, these results clearly demonstrate that special class placement does not directly lead to a lowered self-concept in children with special needs.

According to Stangvik's (1979, 134) rather harsh opinion the main characteristics of the LD-group as a whole are that they have all been defined as failures in regular classes and they all share the social definition of this failure by being a member of the special class. Assuming that the special class child is exposed to a far greater amount of labelling than the low ability child in regular class due to referral and placement processes, the labelling paradigm seems a valid tool in the analysis of differences between educational environments (Stangvik, 1979, 145). In the present study the average global self-concept score for the special class group is slightly higher than the average of regular class students. It can therefore be assumed that neither the identification of learning difficulties nor the transfer to special education class or school negatively affects the overall self-concept. This supports Elbaum's (2002) results which showed that contrary to predictions based on the stigmatisation perspective, students with LD placed full-time in regular classrooms did not, overall, exhibit higher self-concept than students placed in either part-time or full-time special education classroom. My research did not control the number of academic years children with LD had attended special education programs, nor the point in their schooling history when they had been identified and referred to special class.

However, both timing of transfer and years spent in special class are important variables in experiencing labels and thus in the development of self-concept. Differential reactions to placement may spring from differences in amount of experienced failure and in attitudes towards special class placement. What kind of meanings early identification and intervention bear upon the level of adjustment and acceptance of one's own limitations and special traits?

As children mature, the social relations and significant others become the most crucial components in forming and shaping the self-concept (Burns, 1982, 50). The main purpose of my work was to compare two separate groups of children. The group is an important frame of reference in setting the standards for self evaluation (Festinger, 1954). School expands a child's social environment and the number of possible reference groups. It is commonly believed that an individual is mostly attracted to groups comparable to his own opinions and abilities (Stangvik, 1979, 77), and that children start concerning themselves with social comparisons around the age of eight (Burns, 1982, 179). Thus, I assume that the ten-year-old children in this study are already using the social comparison effectively in their self-evaluation. The effect of social comparison greatly depends on who the performing others are and how similar they are to us (Festinger, 1954). According to Butler and Marinov-Glassman (1994), those students with LD whose reference group consists entirely of similarly classified others see themselves most positive and competent. At the same time, in a recent meta-analysis by Elbaum (2002) contrasted the predictions based on the social comparison perspective. She discovered that students with LD in full-time special classes did not have higher self-concept than students with LD in regular classrooms. Although the role of social comparison process was not directly examined in this study, it can be assumed as one of the main effects on the obtained results. The most important reference group for all the participating students with LD consists of others with disabilities. As a result of social comparison in a special class, children see themselves as equally academically competent and socially accepted as the others in the classroom regardless of the experienced difficulties in learning. Everyone is the same, everyone has some weaknesses but also some strengths. Thus the social comparison process here is expected to support the development of positive self-concept, and account for the positive scores of the students from special classes.

Third possible explanation for inconsistent finding within the field of self-concept research concerns developmental aspect of the self-concept of children with LD. Research strongly indicates that, as a group, students with LD have lower, especially academic, self-concept (see Elbaum & Vaughn, 2001). Bender (1987) suggests that as these children grow older, they develop more positive and realistic self-images, which may be independent of school abilities and experiences. That is to say, the differences compared to non-LD students even out with age. The 10-year-old participants from special classes in this study are as positive about themselves as the regular education students. This pattern may continue throughout school years or changes may occur with next stages of development, or when children move from primary school to secondary.

Byrne (1996, 53-54) argued that in the light of developmental factors, measures of self-concept for children 8 to 12 years of age using a questioning technique which may require social comparison with others can reliably tap multiple perceptions of self related to specific competencies, as well as perceptions of general self-worth. The work of Renick and Harter (1989) found that self-concept decreased with increasing age for children with learning disability in regular classrooms. My study concentrated on one age group only having the average age 10. The grade level was not controlled. Although interesting, it was not possible within the limited resources of this study to investigate the effect of age/grade on self-perceptions.

The tendency to keep students with learning difficulties in regular classes or in other special educational services before recommending them for special class may result in great age differences in special classes, and the supposed homogeneity of the special class group on general intelligence tests may conceal differences in abilities and skills which may be extremely relevant as components of self-perceptions (Stangvik, 1979, 126). I should have controlled the level of performance of the participating students, since it has been demonstrated by a number of studies that achievement and self-concept are related to one another (e.g., Hay, Ashman, & Kraayenoord; Purkey, 1970). In this case the control group would have been the low achieving, learning difficulties experiencing students in regular education classes. This comparison would have revealed the real effects of educational placements on the self-concept of children with identified or non-identified learning disabilities. The present study has primarily examined if a learning disability,

which is associated with special class placement, is a risk factor for the development of self-concept.

The relationship between self-concept and achievement has prompted a considerable amount of debate and research (see e.g., Ayres, Cooley, & Dunn, 1990). Shavelson and Bolus (1982) study demonstrated the causal predominance of self-concept over achievement. My research did not measure academic achieving, but judging from the relatively high average “Intellectual and School Status” scores (see Table 2 and Table 5) children have confidence in their intellectual and academic abilities regardless that some of them have had school related problems officially identified as learning disabilities. On basic way in which academic achievement influences self-concept is through the process of social comparison. Thus, it matters who are functioning as the others, others with LD or normally achieving classmates. Achievement rates tend to correlate higher with academic self-concept than with the general self-concept (Shavelson & Bolus, 1982).

In the light of research, there are real concerns that learning disabilities and special class placement may affect children’s social self-concept and peer-acceptance (e.g., Stanovich, Jordan, & Perot, 1998). The present work provides no evidence that students from special education would feel less popular or accepted among their own group than regular class students. Special class students are much more positive on “Anxiety” scale, thus not feeling of being left out of things and worrying less than regular class students. Students from special schools self-report being significantly happier in general and easier to get along with than the comparison group. Contrary to Sabornie (1994) who believed students with LD being lonelier, Wenz-Gross and Siperstein’s (1997) results provided a picture of the child with LD as having a social network that is not different in size or composition from that of the child without LD. Social domain may function as the area where children with LD feel themselves stronger and see themselves more potential than in the academic sphere. Among others Grolnick and Ryan (1990) have suggested that areas other than school may function as the source of self-worth for these students. Westing Allodi (2000) reported than children with low academic self-concept placed more importance to peer relations. However, developing peer relationships depends on the child’s level of social skills, area where children with LD often have difficulties. Since peers take increasingly crucial roles in shaping identity, classroom interventions focussing

on enhancing self-concept should strongly emphasise social skills (see Wenz-Gross & Siperstein, 1997).

Gender as a sociological variable is thought to influence self-perceptions. The present study replicates several earlier studies using the Piers-Harris (in Piers, 1984, 71) in that finding no significant gender differences on total scale scores. Results indicate that the only relationship between self-concept and the gender of students in “Physical Appearance and Attributes” cluster favours girls. This confirms previous findings and the notion that differences in self-concepts mirror cultural sex-stereotypes and appear to be specific in nature (Crain, 1996). Contrary to Beltempo and Achille (1990) who used the Piers-Harris and suggested that girls with LD show a much lower overall self-concept and thus are more vulnerable to placement effects than boys with LD, this study fails to produce any differences. There are also strong evidence that girls have higher academic self-concept than boys (e.g., Chapman, 1988a). This was not confirmed by the present study either, which may be due to the problems in the construct validity of the used instrument as the separate scales lack discriminant validity (see Byrne, 1996, 108).

Marsh and Holmes (1990) investigated psychometric properties of three instruments (SDQ-I, PCS, and PHCSCS) which all are claimed to measure multiple dimensions of self-concept (e.g., physical, academic, and social) and concluded that physical ability and physical appearance could not be adequately incorporated into a single higher order dimension. They argued that the Piers-Harris physical cluster scale is primarily a physical appearance scale. In this case, it is not surprising than 10-year-old girls in this study rate themselves more positive than boys of the same age. According to Crain (1996) it is not until adolescence that boys start showing higher physical appearance self-concept than girls, who become more dissatisfied with the way they look by increasing age. Perhaps it is socially more acceptable for a young girl to see herself as nice-looking with pretty eyes than for a boy. Physical appearance might also be more important source of self-esteem at this state of development for girls than for boys who, in the light of research, tend to appreciate physical abilities and skills more (e.g., Brown, 1998, 208). The finding agrees with the notion by Crain (1996) of domain-specific differences in self-concepts of boys and girls.

5.3 Conclusions and the future research

There are several possible reasons why the special education students in this study exhibit such competitive self-concepts regardless that a number of odds are assumed to be against it. A body of literature has proved clearly that learning disabilities are a risk factor for the development of psychological and behavioural problems (see Bender, 1987; Lerner, 1993; Ulvinen, 1998, for reviews). Has the referral to special class managed to protect and help to maintain the self-esteem of these children with, however, substantial difficulties in learning? One could also ask why the regular class, presumably normally achieving students fall behind in the self-concept scores. The growing amount of immigrant students in both regular and special classes in Finland has to be taken into consideration too. Not only it is a question of language in this kind of research but more so a question of values and preferences which come with the cultures of the assessed children. The western understanding of the self, and what we hold as signs of positive self-concept are not necessarily agreed by everyone. For example, in the Piers-Harris there are no items concerning hospitality, reputation, or looking after the family and friends. More information about the level of achievement and ethnic background of students should have been available. On the other hand, it is reasonable to ask, whether the results would have looked different if the measuring had taken place somewhere else than at school.

As Stangvik (1979, 145) suggested, special classes may have certain characteristics which may contribute to the positive self-concepts of the students. Stanovich, Jordan, and Perot (1998) also proposed that children with LD are perhaps receiving more guidance and differential feedback from their teacher after their difficulties in learning have been identified. For example, positive reinforcements, academic success experiences, less competitive atmosphere, individual attention and close student-teacher relationships, which often are associated with special education environments, may bear an effect on students' affective characteristics like self-concepts. Special education teachers in Finland are trained to evaluate a child's progress only against his previous level of performance, not against average rates or standards. Therefore one can assume that teachers possess strategies which support the instruction and evaluation of the multidimensional ability of learners. Teacher, as a very significant other for a primary school child, can influence

students' self-perceptions considerably with accurate feedback and reasonable expectations. In the light of the obtained results, I believe that there is a different kind of culture in a special class which supports and emphasises the importance of positive self-concept, whereas in a regular class the learning goals and comparison of achievements are more central.

It is clear that children come to school with all sorts of ideas about themselves and their abilities. As school plays a critical role in the socialisation process of children, it also considerably influences and shapes the picture children have about themselves, thus building and marking the self-concept in a numerous ways. Most educators and most curriculums state that one of the main aims of school education is a positive self-concept together with or in relation to the academic and social outcomes. In respect of the results from the present study, there is a reason to ask have the special education facilities in Finland lived up to the expectations set for them. Have they been able to create an environment and atmosphere which helps the students to develop a positive, healthy self-concept? The most important finding of this study is that there are no notable differences between regular and special education in terms of self-concept. It seems like special education classes have served their purpose in securing the development of positive self-concept for all students. This is a positive finding in relation to concerns of many parents about stigmas from special classes, and for those who support the idea of separate classes to meet various needs of students.

Raviv and Stone (1991) proposed that parental expectations and attitudes may affect the self-concept more than the actual learning difficulty. This is consistent with Harter's (1996) view that high support from parents increases student's self-concept. One possible area of research in the future would be to study how persistent effect parental expectations have on children's self-concept. What kind of meanings children give to their own parents attitudes and opinions toward learning disabilities or special education placements? How parents support their children who experience learning difficulties? Emotional support from people in the home seems to protect both children with and without learning problems from negative classroom environments and negative aspects of their friendships (Wenz-Gross & Siperstein, 1997).

On the grounds that Shavelson et al.'s (1976) model is widely accepted, it is important in future to measure multiple domains of self-concept for children with learning disabilities. For example, Chapman (1988b) reported more consistent results when multidimensional instruments (e.g., PASS, SDQ-I, SPPC; see Byrne, 1996) were used to measure self-concept. Chapman (1988b) and Renick and Harter (1989) concluded the Piers-Harris Children's Self-Concept Scale (Piers, 1984) to be an inadequate measure of academic self-concept, and therefore not being a multidimensional instrument. Chapman continued by arguing that research should focus more on the structure and content rather than on the level of these students' self-perception, and look into how motivational, social, and classroom factors are related to the development of self-concept. More attention needs to be paid to methodological issues and to definitions and accuracy of terms such as learning disability in order to specify and focus research better. More caution must also be exercised in selection of comparison groups.

Thirty years ago Purkey (1970, 40) argued that the child is expected to adjust to school, rather than the school adjusting to the child. Does his claim still hold true? Not should we only assess the children but also the environments where these children grow up, collect most of their experiences, and have their most significant relationships. What kinds of schools, classrooms, group composition, and interaction atmosphere support the development of positive and realistic self-concept? Also the social comparison process and its role in the development of self-concept deserves to be investigated more profoundly in the Finnish school system.

In respect to future research it is important to follow how the self-concept of the children develops and changes over time. Only longitudinal studies can reveal how different risk factors such as learning difficulty, special class placement, labels, teaching strategies, or parental support may affect the self-concept. What kind of strategies children with LD use in building up a healthy self-esteem and realistic self-image? How do they compensate for the lack of success in the academic field, and where do they draw the self-worth from? The aspect of self-concept is particularly important in decisions concerning where children with learning difficulties receive the best education.

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