UNDERACHIEVERS, OVERACHIEVERS AND STUDENT'S SELF-CONCEPT

Feliciano H Veiga
University of Lisbon
Associate Professor with Aggregation
at the Department of Education of Faculty of Sciences

Abstract

Research has related poor and good academic performance — underachievers and overachievers — to the students 'self-concept, so that subjects with high academic levels organize and express information concerning themselves in higher levels of competency. The sample of this study involved 7th-9th grade students, divided into two groups according to their performance in Math and Science, one with good achievers and the other with underachievers. Their self-concepts were assessed with two scales (the Self-Concept as a Learner Scale and the Piers-Harris Children's Self-Concept Scale), previously adapted to Portugal (Veiga, 1996, 2001). Analysis of the results concerning self-concept as a whole showed significant differences with higher results in students with a good performance; however, as regards the dimension "physical appearance", students with a low academic performance presented a better self-concept than the students with high performance; as for the dimension "popularity", no significant difference was found. In later variance analyses of the results regarding the dimensions of self-concept in function of (school and family) variables taken simultaneously into account, specific variations that corroborate previous studies were found, while others suggest the need for further research.

Key words: Overachievers; Giftedness; Underachievers; Self-concept.

Introduction

After presenting elements of the literature review regarding giftedness and self-concept, we shall look at what happened in our country in terms of school results (*). Within the literature reviewed, there are many studies (Ireson & Hallam, 2009; Marsh & Craven, 2006; Marsh & O'Mara, 2008; Pullmann & Allik, 2008; Swann, Chang-Schneider & McClarty, 2007), but with differential positions.

Achievement and self-concept. As regards the studies of self-concept as one-dimensional, three different sets of results are found. Some found positive correlations (or significant differences), with higher results for the gifted (Terman *et al.*, 1985; Coleman & Fults, 1985; Chapman & McAlpine, 1988), others highlight the lack of significant differences (Yong & McIntyre, 1992; Whalen & Csikszentmihalyi, 1989), and others stress inconsistent differences. In the studies regarding self-concept as multidimen-

UNDERACHIEVERS, OVERACHIEVERS AND STUDENT'S SELF-CONCEPT

sional, the various dimensions of self-concept are analysed separately in several studies: in some, academic self-concept is higher in gifted students (overachievers), while social self-concept is lower in the gifted than in the non-gifted students (Ross & Parker, 1980), the same happening with respect to physical self-concept (Brounstein *et al.*, 1991), while in terms of general self-concept no significant differences are found (Brounstein *et al.*, 1991). A study by Hoge & McSheffrey (1991) — who resorted to Harter's Self-Perception Profile for Children, which is based on a multidimensional definition of self-perception — concluded that although gifted students' academic self-concept was higher, their athletic and social self-concepts were not.

A recent study (Pullmann & Allik, 2008) showed that although self-reported academic self-esteem is a strong and accurate predictor of school achievement, additionally rather low, not high, general self-esteem is a significant predictor of superior school performance when academic self-esteem is controlled for. Two compensatory mechanisms — defensive pessimism and self-protective enhancement — may explain the paradox of low self-esteem: academically successful students have a more critical view of themselves and students with more modest academic abilities compensate for their academic under-achievement by elevating their general self-esteem. Children start to use self-protective enhancement but from age 12 to 14 they also start using defensive pessimism to protect themselves from the consequences of failure.

In a study conducted on 174 8th grade students (Ablard, 1997), the author found that these students had significantly higher academic self-concepts than their peers, but that their social self-concepts were similar. Another study (Pyryt & Mendaglio, 1994) evaluated 4 dimensions – academic, social, athletic and evaluative — of self-concept in 97 high school students, of which 45 were gifted and 52 were regular. The results showed that the gifted students were different from the others regarding self-concept, particularly with respect to academic self-concept. Hoge & Renzulli (1993) carried out a meta-analysis in order to understand whether gifted and non-gifted children's self-concepts were different, and they explored the effects on self-concept of "labeling/classifying" a child as being gifted and of placing him/her in special education programs. The studies reveal a significantly higher academic self-concept in gifted students. Academically intelligent students present a more positive academic self-concept because, due to their intelligence, they experience success in this field.

Another work (Peters, 1998) refers that the academic self-concept of students with a higher level of intelligence does not differ from that of students with an above-average intelligence, which seems to show that above a certain level of intelligence (above-average), more intelligence does not imply more self-concept. With respect to the relation between academic self-concept and general self-concept, a study was carried out by Van Boxtel, Herman & Mönks (1992), in which 79 teenage boys and 89 teenage girls participated, including 22 gifted and successful in several fields, 45 gifted and successful in one single field, 27 gifted and underachieving, and 74 control subjects. The results suggest than high school students', including the gifted ones', general self-concept is related to academic self-concept. Within another study (Goldberg & Cornell, 1998), 949 2nd and 3rd grade students were evaluated as regards their intrinsic motivation, perception of their own competency and school success. Analysis of the data indicated that the students' intrinsic motivation has an impact on the perception of their competency and that the last influences the student's future school performance.

In a longitudinal study by Mulcahy *et al.* (1991), 660 4th-7th grade students — gifted, non-gifted and with learning difficulties — were evaluated by measuring their perceived competency in cognitive ability and self-concept. It found that generally speaking, the evaluated competency and self-concept were higher in the gifted students, while for the other groups they remained stable for the period of the study's duration. The results of a study by Garzarelli *et al.* (1993), with 7th and 8th grade students, showed that although self-concept and academic performance are related in gifted students (N = 33), there is no relation between these two variables in academically weak students (N = 33). In another study (Veiga, 1996), the self-concept results were correlated to the marks in Science and Mathematics, grouping subjects according to their life contexts (socio-economic level, geographic zone, gender and

International Journal of Developmental and Educational Psychology
Contextos educativos escolares: familia, educación y desarrollo
INFAD, año XXI
Número 1 (2009 Volumen 2)
© INFAD y sus autores
ISSN 0214-9877

CONTEXTOS EDUCATIVOS ESCOLARES: FAMILIA, EDUCACIÓN Y DESARROLLO

age); results were also analyzed according to the number of years failed, dividing the subjects into school grades (7th, 8th and 9th grades). The differences in cultural pressure put on academic achievement justified analyzing the results according to the different groups the subjects integrated. The results showed that the variables *self-concept* and *school achievement* are usually associated, and they suggest a reconceptualisation of the Skaalvic's explanatory model (1983), besides valuing the promotion of specific dimensions of the self-concept of teenagers, particularly of those integrating sub-groups with less cultural stimulation towards school achievement.

In a recent study (Ireson & Hallam, 2009), the effects of ability grouping in schools on students' self-concept were examined in a sample of 23 secondary schools with a range of structured ability groupings. Measures of general self-concept, academic self-concept, and achievement were collected from over 1600 students aged 14–15 years and again two years later. Students' academic self-concept, but not their general self-concept, was related to the extent of ability grouping in the school attended. Subject-specific facets of academic self-concept were not related to the number of years of ability grouping students had experienced in English, mathematics and science; however, they were related to students' position in the grouping hierarchy, with students in high-ability groups having significantly higher self-concepts in all three subjects than students in low-ability groups. Students' intentions to learn in future were more strongly affected by self-concept than by achievement.

School performance. In the 2007 / 2008 year, the failure rate in tests of mathematics of the 12th grade fell to 7 per cent, against 18 percent last year, a proof which was made by 36,674 students in that the middle of notes was values 12.5. For intern students, the average value obtained was 14, above the 3.4 that occurred in 2007, the first year in which the average obtained by these students was higher than 10.

In 2003, with respect to Mathematics, the average mark in the first round of exams was 9,3. In the second round, the average was 7,4 only taking into account the internal students' marks. As for Science, namely Physics, of the 18 subjects whose national average exam marks were disclosed by the Ministry of Education in 2003, this was the subject with the worst results of all. One of the causes accountable for this fact is that only 30% of the secondary school teachers have the necessary qualifications, but a better knowledge of the students' specificities in learning Science should also be kept in mind.

Aims of research. The study intended to analyze the differences in self-concept between over-achievers and underachievers, talented students and delayed students, in Science and Mathematics. The operational definition of *talent* and *delay* was specified within the methodology. Based on the studies reviewed (Guay, Marsh, & Boivin, 2003; Marsh & Craven, 2006; Marsh & O'Mara, 2008; O'Mara *et al.,* 2006; Pullmann & Allik, 2008; Swann, Chang-Schneider & McClarty, 2007), we assumed the following suppositions: the dimension of academic self-concept would have higher results in academically gifted students; these students' general self-concept would be higher, if the academic dimension were very important in the general self-concept; the non-academic dimensions of self-concept would reveal no differences between gifted students and *delayed* students in Science and Mathematics, and there might even be cases where non-gifted students would have better results than gifted ones.

METHOD

In terms of the methodology used in this study, we present the subjects of the sample, specify the evaluation instruments and explain the variables under study.

Participants

The *sample* of this study involved 1032 7th-9th grade students, divided into two extreme groups with respect to their achievement in Mathematics and Science, one with high achievers and the other with underachievers, besides a group with average achievers in these subjects.

INFAD Revista de Psicología
International Journal of Developmental and Educational Psychology, Nº2, 2009. ISSN: 0214-9877. pp: 299-306

301

UNDERACHIEVERS, OVERACHIEVERS AND STUDENT'S SELF-CONCEPT

Instruments and variables

Self-concept was evaluated with two scales: the *Self-Concept as a Learner Scale* (*SCAL*) and the *Piers-Harris Children's Self-Concept Scale* (*PHCSCS*). These two scales had been previously adapted to Portugal and their full-scale *alpha* values were 0.89 and 0.88, respectively. The description of the adaptation study can be seen in previous work (Veiga, 1996, 2001). As regards the *variable giftedness*, the operational concepts of *talent* or overachievement and of *delay* or underachievement were established based on the average school marks, both in Science and Mathematics, achieved in the previous school year; using a 0-5 evaluation scale, in the case of talent these average marks were 4.00 or above; in the case of delay, on the same scale, they were 2.30 or below. In between these values, were the students with an average academic achievement. Thus, we defined the students placed at the top part of performance of Science and Mathematics as being talented, overachiever (5%), and those positioned in the lower part as being underachiever, *delayed* (10%). We now move on the present the results.

Results

Let us start by considering the contrasts between the *extreme groups* (low and high academic performance). The dimensions of *academic self-concept* (Table 1) revealed significant differences, with better results for the students with a high achievement, in the following dimensions: motivation (T = -7.16; gl. = 152; p<.001), task-orientation (T = -3.70; gl. = 152; p<.001), confidence in one's capacities (T = -8.83; gl. = 152; p<.001), relations with colleagues (T = -3.22; gl. = 152; p<.001), and total academic self-concept (T = -6.96; gl. = 152; p<.001).

As for the *non-academic self-concept*, the results showed there are significant differences in self-concept (*PHCSCS*), in that students with a high performance have better results in contrast with the lower achievement group, in the following dimensions: behavioural aspect (T = -3.84; gl. = 152; p<.001), anxiety (T = -3.98; gl. = 152; p<.001), intellectual status (T = -4.36; gl. = 152; p<.001), satisfaction-happiness (T = -3.42; gl. = 152; p<.001), general self-concept (T = -4.20; gl. = 152; p<.001). In terms of popularity no significant differences were found (T = -.75; gl. = 152; n.s.), and as regards physical appearance the results were better in the non-gifted students than in the gifted ones (T = 2.18; gl. = 152; p<.05).

Table 1. Results in academic self-concept (*SCAL*), according to performance (low, average, high) in Mathematics and Science.

Self-Con. / Perf..		N	Average	Standard deviation	Contrast	t	Sig
MO	low	102	56,4674	12,3266	b < m	-2,835	**
	medium	878	59,9820	11,2590	b < a	-7,159	***
	high	52	71,1111	8,2220	m < a	-6,456	***
OT	low	102	85,9239	11,6536	b = m	-1,199	Ns
	medium	878	87,3779	11,0266	b < a	-3,704	***
	high	52	93,3333	8,8523	m < a	-3,532	***
CC	low	102	34,9239	7,3413	b < m	-4,070	***
	medium	878	37,9576	6,7982	b < a	-8,825	***
	high	52	45,7778	4,4563	m < a	-7,544	***

International Journal of Developmental and Educational Psychology
Contextos educativos escolares: familia, educación y desarrollo
INFAD, año XXI
Número 1 (2009 Volumen 2)
© INFAD y sus autores
ISSN 0214-9877

CONTEXTOS EDUCATIVOS ESCOLARES: FAMILIA, EDUCACIÓN Y DESARROLLO

RC	low	102	49,6848	7,9655	b < m	-2,440	*
	medium	878	51,6697	7,3686	b < a	-3,215	***
	high	52	54,0000	6,1755	m < a	-2,060	*
STOT	low	102	172,6630	23,2224	b < m	-3,190	***
	medium	878	180,4704	22,3125	b < a	-6,963	***
	high	52	200,7778	17,4914	m < a	-5,967	***

Legend: OT (task-orientation), CC (confidence in one's capacities), MO (motivation), RC (relations with colleagues) and STOT (total academic self-concept).

Although the contrasts between the extreme groups (talented *versus delayed* students) showed, as expected, more significant differences than the *remaining contrasts* (low *versus* medium or medium *versus* high), the differences in self-concept, despite being smaller, were also visible in these comparisons of results. This way, in the contrasts low *versus* medium performance, we found only four situations with significant differences as regards academic self-concept (*SCAL*), and one in non-academic self-concept (*PHCSCS*), namely in the following dimensions: motivation (T = -2.84; gl. = 978; p<.01), confidence in one's capacities (T = -4.07; gl. = 978; p<.001), relations with colleagues (T = -2.44; gl. = 978; p<.05), and total academic self-concept (T = -3.19; gl. = 978; p<.001). In the contrasts medium *versus* high performance, the number of differences was very close to that mentioned in the contrasts low *versus* high, though with lower levels of statistical significance, apart from the fact that the dimension physical appearance had identical results for both, overachievers and underachievers, gifted and non-gifted students.

In short, considering the whole set of dimensions of the academic and non-academic self-concepts, the analysis of the results showed significant differences, with higher levels of self-concept in students with a high academic achievement. Even the general dimension of non-academic self-concept was higher in the overachiever students. Another interesting result is that the "relations with colleagues", a dimension of the academic self-concept, was higher in overachiever students, in all of the contrasts carried out; however, the dimension "popularity" of the non-academic self-concept showed no significant differences in any of the contrasts. As for the dimension "physical appearance", the underachiever students had better results than the overachiever ones (T = 2.18; gl. = 152; p<.05), although these results were only on the verge of statistical significance and only regarding the contrast between the extreme groups.

CONCLUSIONS

The results obtained meet our expectations, considering the theoretical and empirical literature reviewed (Baumeister *et al.*, 2003; Marsh & Craven, 2006; Marsh & O'Mara, 2008; O'Mara *et al.,* 2006; Pullmann & Allik, 2008; Swann, Chang-Schneider & McClarty, 2007). As expected, the overachiever students were superior as regards general self-concept, which may be attributed to the importance that the academic dimension has in the general self-concept. Results were consistent with other studies (Baumeister *et al.*, 2003; Coleman & Fults, 1985; Marsh & O'Mara, 2008; Mönks *et al.*, 1985; O'Mara *et al.,* 2006; Peters, 1998; Swann, Chang-Schneider & McClarty, 2007).

The most significant differences were found in the contrasts between extreme groups with respect to achievement in Science and Mathematics. The differences in self-concept found in the contrasts

INFAD Revista de Psicología
International Journal of Developmental and Educational Psychology, Nº2, 2009. ISSN: 0214-9877. pp: 299-306

303

UNDERACHIEVERS, OVERACHIEVERS AND STUDENT'S SELF-CONCEPT

medium and high performance are consistent with certain previous studies (Ketcham *et al.*, 1977; Ringness, 1961), but disagree with others (Peters, 1998). Some authors (Ketcham *et al.*, 1977; Ringness, 1961) found differences in the self-concept of elementary and middle school students, in which case the gifted students had a higher self-concept than the students with medium capacities. In Peters' study (1998), this difference is not constant for all levels of intelligence (4 levels were considered in the study): differences are scarce in terms of self-concept between students whose level of intelligence is medium, high and superior but, on the other hand, there is an enormous difference between these and students whose level of intelligence is lower. Defining as gifted only those individuals who are at the very top of the intelligence ladder (10%), evaluated with the *Raven Scale*, Peters' (1998) results are not consistent with those of other authors (Ketcham *et al.*, 1977; Ringness, 1961) nor with those found in the present study. One explanation for this inconsistency is related to the meaning of self-concept. Academically gifted students have a high academic achievement, perceiving themselves in a more positive manner in the academic domain. This does not necessarily mean that they have a positive general self-perception, for we must take into account the other dimensions involved in the general self-concept. Another reason concerns the success factor in giftedness. There is evidence (Van Boxtel, Herman, & Mönks, 1992) that gifted individuals who have a low level of success have a much less positive self-concept than gifted individuals with a high level of success. Therefore, the lack of significant differences in terms of general self-concept between gifted and non-gifted students may be due to the presence of low-success subjects in the gifted group.

As for the *popularity* dimension in the non-academic self-concept (*PHCSCS*), no significant differences were found between students with a low and with a high academic performance, or in any of the contrasts carried out. However, in the dimension *relations with colleagues* (*SCAL*), the results were significantly better in overachiever students than in underachiever ones, in all of the contrasts undertaken. This discrepancy can be partially explained by the contents of the items of these factors, in that popularity is located within the non-academic self-concept while the relations with colleagues have to do with the academic self-concept: as mentioned, differences are to be expected more in terms of academic self-concept. The fact that popularity is not related significantly to academic performance is consistent with other studies which underlined the autonomy between social self-concept and academic self-concept (Peters, 1998; Hoge & McSheffrey, 1991) and also the fact that we cannot predict the level of social and non-academic self-concept based on academic giftedness. Therefore, the results of this study stray from those reached by some researchers (Ross & Parker, 1980; Brounstein *et al.*, 1991) who found cases of gifted students with significantly lower levels of social self-concept than those of their non-gifted peers, at the same time as their academic self-concept was higher.

The present study showed that the underachiever students reached better results in terms of *physical appearance* than the gifted students. These results are consistent with those of another study (Brounstein *et al.*, 1991), in which the gifted students revealed a lower physical self-concept than the non-gifted students. Perhaps the affirmation of physical and athletic aspects is like a compensation mechanism for students with a poor academic performance during their teens; another possible explanation has to do with gifted students investing less in aspects of their own body, preferring to turn more towards academic aspects.

Although the contrasts between the extreme groups (overachiever *versus* underachiever students) presented the most significant differences in self-concept, there were also visible differences, despite being smaller, between students with medium and high performances. The results of our study are consistent with those of other authors (Ketcham *et al.*, 1977; Ringness, 1961), who found differences in the self-concept of elementary and middle school students in the sense that the gifted students had a higher self-concept than those with medium capacities; they are distant, however, from other studies (Peters, 1998) which stress the differences in self-concept between extreme groups of intelligence, but not between medium and superior groups of intelligence. This distance may have been due to the inclusion, in the medium group, of students with results in between limits that are too far apart (2.3 e 4.0).

International Journal of Developmental and Educational Psychology
Contextos educativos escolares: familia, educación y desarrollo
INFAD, año XXI
Número 1 (2009 Volumen 2)
© INFAD y sus autores
ISSN 0214-9877

CONTEXTOS EDUCATIVOS ESCOLARES: FAMILIA, EDUCACIÓN Y DESARROLLO

In short, the results are partially consistent with those of another study (Brounstein *et al.*, 1991) where, by using the *SDQ-II*, the author found that although there was no difference in overachiever and underachiever children's general self-concept, the gifted children had a higher academic self-concept and a lower physical self-concept. In our study, differences were also found in terms of the general self-concept, probably because of the proximity between the contents of the tool that was used (*PHCSCS*) and aspects of the teenagers' academic life.

As others studies underlined (Ireson & Hallam, 2009; Marsh & Craven, 2006; O'Mara *et al.,* 2006; Pullmann & Allik, 2008; Swann, Chang-Schneider & McClarty, 2007), the results suggest further investigations. Finally, and besides recommending a regard for the timetables of all students, both gifted and non-gifted, overachievers and underachievers, to include time specifically devoted to sports activities, the results of this investigation seem to include a plea from the underachiever students, as if to say: — "Teach us, too, so that we gain confidence in our capacities to learn and to be successful in school, and later on in life". When this happens, we shall be well on our way towards a good quality education. It's about time!

REFERENCES

Ablard, K. E. (1997). Self-Perceptions and Needs as a Function of Type of Academic Ability and Gender. *Roeper Review, vol. 20, n.º 2*, pp. 110-15.

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self- esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*, 1-44.

Brounstein, P. J., Holihan, W., & Dreyden, J. (1991). Change in Self-Concept. *Applied Social Psychology, n.º 21,* pp. 198-218.

Chapman, J. W., & McAlpine, D. D. (1988). Students' Perceptions of Ability. *Gifted Children Quarterly, n.º 32,* pp. 222-225.

Coleman, J. M., & Fults, B. A. (1985). Special-class placement, level of intelligence, and the self-concepts of gifted children. A social comparison perspective. *Remedial and Special Education, n.º 6,* pp. 7-11.

Garzarelli, P., *et al.* (1993). Self-Concept and Academic Performance in Gifted and Academically Weak Students. *Adolescence, vol 28, n.º 109,* pp. 235-37.

Goldberg, M. D., e Cornell, D. G. (1998). The Influence of Intrinsic Motivation and Self-Concept on Academic Achievement in Second and Third Grade Students. *Journal for the Education of the Gifted, vol. 21, n.º2,* pág.179-205.

Guay, F., Marsh, H.W., & Boivin, M. (2003). Academic self-concept and academic achievement: developmental perspectives on their causal ordering. *Journal of Educational Psychology, 95,* 124-136.

Hoge, R. D., & McSheffrey, R. (1991). An investigation of self-concept in gifted children. *Exceptional Children, n.º 57,* pp. 238-245.

Hoge, R. D., & Renzulli, J. S. (1993). Exploring the Link between Giftedness and Self-Concept. *Review of Educational Research, 63, 4*, pp. 449-465.

Ireson, J., Hallam, S., (2009). Academic self-concepts in adolescence: Relations with achievement and ability grouping in schools. *Learning and Instruction, Volume 19, Issue 3*, pp. 201-213.

Ketcham, R., & Snyder, R. T. (1977). Self-attitudes of intellectually socially advantaged students: Normative study of the Piers-Harris Children's Self-concept Scale.

Marsh, H. W., & Craven, R. G. (2006). Reciprocal effects of self-concepts and performance from a multidimensional perspective. *Perspectives on Psychological Science, 1,* 133-163.

Marsh, H. W., & O'Mara, A. (2008). Reciprocal effects between academic self-concept, self-esteem, achievement, and attainment over seven adolescent years: Unidimensional and multidimensional perspectives of self-concept. *Personality and Social Psychology Bulletin, 34,* 542-552.

UNDERACHIEVERS, OVERACHIEVERS AND STUDENT'S SELF-CONCEPT

Mönks, F. J., & Van Boxtel, H. W. (1985). Gifted Adolescents: A developmental perspective. In: Freeman, J. (Ed.) *The Psychology of Gifted Children,* pp. 275-295. Chichester: Wiley.

Mulcahy, R., e outros (1991). The Relationship between Affect and Achievement for Gifted, Average, and Learning Disabled Students. *Gifted Education International, vol 7, n.º 3,* pp. 123-25.

O'Mara, A. J., Marsh, H. W., Craven, R. G., & Debus, R. L. (2006). Do self-concept interventions make a difference? A synergistic blend of construct validation and meta-analysis. *Educational Psychologist, 41*, 181–206.

Peters, W. (1998). *The self-concept of able young adolescents in China and the Netherlands: a comparative study.* University of Nijmegen.

Pullmann, H., & Allik, J. (2008). Relations of academic and general self-esteem to school achievement. *Personality and Individual Differences 45*, 559–564.

Pyryt, M. C., & Mendaglio, S. (1994). The Multidimensional Self-Concept: A Comparison of Gifted and Average-Ability Adolescents. *Journal for the Education of the Gifted, vol 17, n.º 3*, pp. 299-305.

Ringness, T.A. (1961). Self-concept of children of low, average, and high intelligence. *American Journal of Mental Deficiency, n.º 65,* pp. 453-461.

Ross, A., & Parker, M. (1980). Academic and social self-concepts of the gifted. *Exceptional Children, n.º 47,* pp. 6-10.

Skaalvik, E. M. (1983). Academic achievement, self-esteem and valving of the school: Some sex differences. *British Jouranl of Educational Psychology, 53,* 299-306.

Swann, W. B., Chang-Schneider, C., & McClarty, K. L. (2007). Do people's self-views matter? Self-concept and self-esteem in everyday life. *American Psychologist, 62,* 84-94.

Terman, L. M., & Oden, M. H. (1985). *The gifted group at mid-life.* Stanford: Stanford University Press.

Van Boxtel, Herman, W., & Mönks, F. J. (1992). General, Social and Academic Self-Concepts of Gifted Adolescents. *Journal of Youth and Adolescence, n.º 21,* pp. 169-186.

Veiga, F. H. (1996). Autoconceito e Realização dos Jovens em Ciências e Matemática. *Revista de Educação, V(2)*, 41-53.

Veiga, F. H. (2001). Students´ Perceptions of their Rights in Portugal. *School Psychology International, Vol. 22(2),* pp. 174-189.

Whalen, S., & Csikszentmihalyi, M. (1989): A comparison of the self-image of talented teenagers with a normal adolescent population. *Journal of Youth and Adolescence, 18, 2*, pp. 131-146.

Yong, F. L., & McIntyre, J. D. (1992). Comparison of self-concept of students identified as gifted and regular students. *Percept Mot Skills, 73(2),* pp. 443-446.