

Understanding in School and Post-School Success of adolescents: An Integrative Perspective of Multidimensional Self-Concepts in Education and Career Development



*Lan Yang

Department of Curriculum and Instruction, The Education University of Hong Kong, Hong Kong

Submission: August 28, 2017; Published: September 06, 2017

*Corresponding author: Yang Lan, Department of Curriculum and Instruction, The Education University of Hong Kong; Email: yanglan@eduhk.hk

Abstract

A substantial body of research has tested the role of academic self-concept and found a positive link between academic self-concept and academic achievement through cross-sectional studies. Moreover, a growing body of studies have also found the reciprocal relationships between academic self-concept and academic achievement through longitudinal designs. While positive academic self-concept and academic achievement have been regarded as two important indicators of in-school success, little attention has been paid to students' development of career-related self-concept. Furthermore, the interplay among career-related self-concept, academic self-concept, academic achievement and post-school success deserves thorough investigations. Based on these concerns, this review synthesizes advances in the two research lines to propose an extended multidimensional model of self-concept. It also suggests that an extension from the current Reciprocal Effects Model (REM) that examines the reciprocal relationships between academic self-concept and academic achievement to include a domain of career-related self-concept is needed.

This review is remarkable. It sheds light on guiding future studies to test both academic and career-related domains of self-concept in understanding adolescent students' in-school and post-school success from the perspective of self-concept research. It is anticipated that future studies based on the two extended models will not only enrich self-concept research in education and career development, but also assist in developing enhancement interventions to cater for academic and career development needs of students with diverse abilities to help them make the most out of both in-school and post-school life.

Keywords: Academic self-concept; Career-related self-concept; The Hierarchical and Multidimensional model; the reciprocal effects model; In-school and Post-school achievements

Abbreviations: REM: Reciprocal Effects Model; CP: Career Planning; CE: Career Exploration; DM: Decision-Making; WW: World-Of-Work information; PO: Knowledge of Preferred Occupational Group

Introduction

Self-concept, according to Shavelson et al. [1], can be generally defined as a person's perceptions toward him- or herself. These self-perceptions can be determined and shaped by one's interaction with and interpretations of environment. With regard to the internal structure of self-concept, the seminal work of Shavelson et al. [1] initially proposed a multidimensional and hierarchical construct of self-concept consisting of general self-concept as a high-order factor followed by academic and non-academic dimensions as two second-order factors. Academic self-concept, according to this model, is an

overall factor encompassing self-concepts for different school subject domains (e.g., mathematics, reading). Basing on this model Marsh and his colleagues Marsh [2,3], Marsh, O'Neill [4] have developed a series of multidimensional measurement, via the Self-Description Questionnaires (SDQI, II, III for pre-adolescent students, adolescent students, and late adolescents, respectively) to tab self-concept.

The present review focuses on the domain of academic self-concept. Academic self-concept, which refers to students' self-perceptions in school domains, is an important construct

in educational research as it has been consistently found to be related to a wide range of expected educational outcomes. These outcomes including short-term and long-term academic achievements Marsh, Martin [5], Marsh, Seaton [6], Parker et al. [7], approaches of learning and perceived control Chen et al. [8], Platow et al. [9], Yang et al. [10], interest Marsh et al. [11], coursework selection Marsh, Yeung [12], and career aspirations Nagengast, Marsh [13].

To date, a substantial body of research has shown a positive relationship between domain-specific academic self-concept and matching domain of academic achievement (e.g., mathematics self-concept and mathematics achievement). However, the majority of them were conducted cross-sectional Marsh [14]. Aiming to explore the casual directions, a growing body of studies have found reciprocally causal directions from self-concept in academic domains to academic achievement in matching domains (and vice versa) by using strong methodological designs (e.g., longitudinal, multicohort-multioccasion studies) (Marsh [14], Marsh, Craven [15] for comprehensive reviews; see also Arens et al. 2016, Marsh et al. [16] for up-to-date research. These findings help researchers and practitioners develop self-concept enhancement interventions and skill-development programs to improve students' quality of learning Marsh, Martin [17], Yang, Watkins [18]. Given the importance of the mutually reinforcing effects (also known as the reciprocal effects) of academic self-concept and academic achievement on each other, the following paragraphs elaborates milestone studies that are important in defining the research development trend of the reciprocal effects.

Academic Self-concept and Academic Achievement: The Reciprocal Effects Model

Together with cross-sectional designs contributing to reveal the correlation patterns between multifaceted academic self-concepts and matching domains of academic achievement, a growing body of self-concept research has moved forward to test both the stability and the developmental trend of the relationships between the two constructs. More specifically, a series of studies on self-concept made use of longitudinal designs to test the reciprocal relationships between academic self-concept and academic achievement by using self-concept instruments with sound psychometric properties Guay et al. [19], Marsh, Craven [15]; Marsh et al. [20], Marsh, Köller [21], Marsh, O'Mara [22], Marsh, Yeung [12]. The following paragraphs elaborate key findings of these studies on REM across Western and Eastern countries.

For a purpose of fulfilling a sound investigation of the causal ordering between Australian high school students' academic self-concept and academic achievement, Marsh, Yeung [12] took the initiative to employ multiple indicators of academic self-concept and two indicators of academic achievement (school grades and teacher ratings). Based on this three-year's longitudinal study, Marsh, Yeung [12] found there was not only a reciprocal

relationship between high school students' academic self-concept and academic achievement, but also this relationship between the two variables appeared to be subject-specific (e.g., high English self-concept led to high English achievement, reciprocally high English achievement led to subsequently high English self-concept). Marsh, Yeung's [12] findings provided preliminary empirical support to the reciprocal effects model (REM) to three academic domains (English, science, and math) in high school students. Guay et al. [19] multicohort-multioccasion design of study also demonstrated that the REM can be generated to Canadian elementary students as well. In another cross-cultural longitudinal study, Marsh, Köller [21] also provided stronger evidence to support the generalizability of the REM to a large representative sample (N = 4047) of both East and West German secondary school students.

Marsh et al. [20] study extended the REM to a sample of Chinese students (N = 7,802 across 56 high schools) to test the generalizability of the REM in Hong Kong, a society grounded on Chinese culture. Consistent with previous REM studies in Western cultures, Marsh et al. [23] found significant effects of students' prior academic self-concept on subsequent academic achievement in the matching domain. This predictive pattern repeated for prior academic achievement and subsequent academic self-concept in the matching domain. This provided stronger cross-cultural evidence to support the generalizability of REM in a non-Western culture based on a 6-year longitudinal study in Hong Kong (compared to previous longitudinal REM studies less than six years). Another notable feature of Marsh et al. [20] study was that those scholars also found invariant reciprocal relationships between academic self-concept and academic achievement across high schools in Hong Kong with different mediums of instruction (i.e., Chinese and English instruction languages, respectively).

Two important reviews on existing REM studies across cultures Marsh, Craven [15], Marsh, O'Mara [22] summarized that the reciprocally reinforcing relationships between multidimensional academic self-concepts and matching domains of academic achievement have been supported by increasingly consistent evidence across Western and non-Western countries. From research to practice, Marsh, O'Mara [22] suggested that researchers who are interested in surveying students' self-concept should take not only the multidimensionality of academic self-concept in to account, but also the reciprocally causal directions between academic self-concept and academic achievement into full consideration in developing effective educational interventions.

A series of up-to-date studies on REM by controlling other personal-level and school-level factors, using multiple indicators of academic achievement and comparative groups of students demonstrated stronger empirical evidence to support the reciprocal causal relationships between academic self-concept and academic achievement Arens et al. [16], Marsh et al. [24], Seaton et al. [25], Seaton et al. [26]. A notable feature of these

updated studies on REM appears to be these researchers' closer examinations of the REM application in the domain of mathematics. Longitudinal designs by using longer periods of time compared to previous research were also key features of these updated studies on the REM.

Self-Concept Research in Career Development

Apart from self-concept research in education, researchers in the field of career counseling are also active in exploring the role of self-concept in career development. Among these scholars, Super was one of those founders who developed the self-concept theory in vocational development Super [27-29], Super et al. [30]. In Super's application of the self-concept theory in career development, he posited a construct called 'vocational self-concept'. Vocational self-concept was broadly defined as "the constellation of self attributes considered by the individual to be vocationally relevant, whether or not they have been translated into a vocational preference" Super et al. [30], p. 20. It is worth noting that, in Super's self-concept theory of career development, the two words 'career' and 'vocational' were used as synonyms (see his monographic chapter on 'self-concepts in vocational development, Super et al. [30], p. 1-16; see also Super [29], Super, Thompson [31], and updated reviews by Patton, McMahon [32], Pisarik, Currie [33]).

However, because of the definitional breadth and non-definitional specificity of Super's conceptualization of vocational self-concept, an early stage of measurement for assessing this construct was criticized as "both unwieldy and idiosyncratic" Betz [34]. In their development of self-concept theory of career development, Super and his colleagues also recognized the disadvantages of a broad definition of vocational self-concept and made attempts to define vocational self-concept relatively operational. With Super's continuous theoretical refinement to integrate a developmental perspective of self-concept in career development, Super and his colleagues in their later publications Super [27], Super et al. [35] specified the multidimensionality of individuals' self-perceptions of career development (instead of a broadly-defined vocational self-concept). The multidimensional and developmental self-concept of career development in Super's later work was implicitly regarded as a theoretical framework of self-concept research in career counseling.

Correspondingly, Super and his colleague developed the Career Development Inventory Super et al. [35] for its manual. The CDI includes multiple subscales to assess five dimensions: career planning (CP), career exploration (CE), career decision-making (DM), world-of-work information (WW), knowledge of preferred occupational group (PO). The whole CDI comprises of 120 items with 20 items for CP, CE, DM, and WW, respectively. There are 40 items for PO. Since its development, the CDI has been widely used and adapted to test not only adolescent career-related self-beliefs for making educational and career choices, but also other sub-areas of career counseling and career development across countries (for comprehensive reviews, see Oliver et al. [36], Patton, McMahon [32], Savickas, Hartung [37].

However, it is worth noting that, based on the CDI, recently-developed short forms in assessing these dimensions of self-concept in career development (e.g., Cardoso et al. [38], Hirschi et al. [39], Maggiori et al. [40], Negru-Subtirica, Pop [41], Negru-Subtirica et al. [42] have more feasibilities in both cross-sectional and longitudinal studies across cultures compared to the whole CDI. The above reveals that, although the construct of self-concept has been investigated in the two fields (education and career counseling), the multidimensional and hierarchical model of self-concept Shavelson et al. [1] that has been widely tested in education by using SDQs (see reviews by Marsh [14], Marsh, Seaton [6] has not yet been integrated with multifaceted self-concepts in the domain of career development Super [27], Super et al. [43].

Based on the above review of recent advances in theory, measurement and practice of self-concept research in education and the area of career development Marsh [14], Marsh, Martin [17], Marsh, Shavelson [44], Savickas [45], Super [29], an extended theoretical model of self-concept (Figure 1) was also developed to facilitate further research on not only academic, but also career-related self-concept. This may pave the way for helping both students' academic improvements and career development needs.

Summary and directions for future research

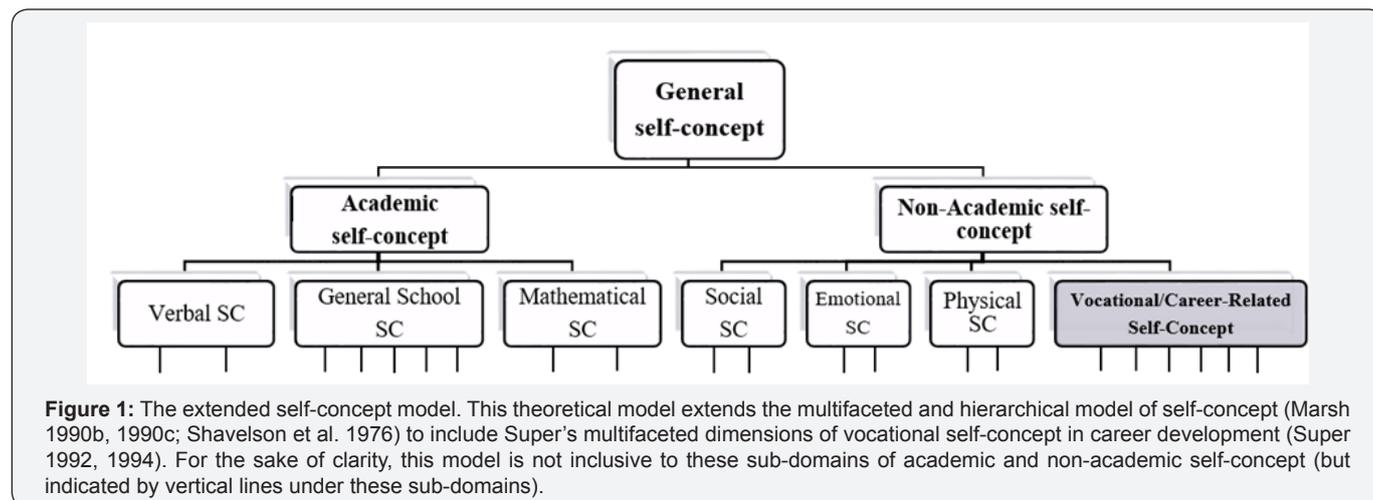
From a developmental perspective (from infancy to adulthood), individuals' self-concept becomes increasingly multifaceted Marsh [14], Shavelson et al. [1]. While students' academic self-concept matters to academic achievement in schooling Marsh, Seaton [6], their career-related self-concept that is associated with post-school outcomes also needs increasing attention and investigations Pajares, Schunk [46]; Super [29]. The present review integrated two lines of self-concept research (i.e., in research areas of education and career counseling), in which the pivotal role of self-concept in understanding students' in-school success and post-school success emerged. In this review to synthesize key literature in the two research lines, an extended multifaceted and hierarchical model to include both the domains of academic and career-related self-concept was proposed (Figure 1). This model is remarkable. It expands current self-concept domains to the career-related domain that matters to students' post-school outcomes. For future studies, at least three core themes are worth systematic investigations.

The first theme is about the internal structure of the extended self-concept model. Noteworthy, for the internal structure of self-concept in the two discussed domains, apart from the domain-specific level, the component-specific features of self-concept (i.e., a further separation between cognitive and affective components within each domain) found in an increasing body of studies (e.g., Arens et al. [47], Yang et al. [10] should also be considered in further research explorations. In doing so, researchers and practitioners would have much deeper understanding of the extended model of self-concept and the relationships among these variables reviewed in this paper. The

second theme is about the extended REM (by including career-related self-concept formed by students). The third theme is about personal and contextual influences on the relationships among academic, career-related self-concepts, in-school academic outcomes and post-school career-related outcomes.

Based on this extended multifaceted model of self-concept, it is important and meaningful to integrate advances in theories of academic self-concept and career-related self-concept to assess their joint effects on students' quality of learning in schooling and quality of life in a long run. Reciprocal relationships among

adolescents' academic- and career-related domains of self-concept, and academic achievement need future studies by using short-term and long-term longitudinal designs. Longitudinal studies will allow researchers and practitioners to test the stability of the relationships between the concerned variables. Similarly important, to enrich theoretical and empirical implications of self-concept research, comparative studies by using students with diverse abilities (e.g., Bear et al. [48]; Preckel et al. [49], Tabassam, Grainger [50], Yang et al. [10] will also be promising in understanding group invariance of the internal structure of the extended model (Figure 1).



In line with the extended model of self-concept, it is meaningful for future studies on the REM to include the domain of career-related self-concept Savickas [51], Savickas et al. [52], Super [29]. Currently, although the relationships between academic self-concept and academic achievement have been widely tested and well documented in the REM research in schooling (e.g., Arens et al. [16], Marsh, Martin [17], Marsh et al. [5], Seaton et al. [26], the reciprocally casual directions between academic achievement and the two domains of self-concept (academic and career-related) have not yet been tested. As such, future investigations seeking to test correlates of in-school and post-school success of adolescent students can integrate advances in:

- a. Self-concept research in education (see Marsh [14], Marsh et al. [21], for comprehensive reviews),
- b. Self-concept research in the field of career development Patton, McMahan [32], Super [53], [27], [29].
- c. Corresponding measures with good psychometrics properties in the two fields Marsh [14], Marsh et al. [23], Savickas, Hartung [37].

Based on the extended self-concept model and an extended REM to include the domain of career-related self-concept, future studies are anticipated to develop new knowledge of the hierarchical and multidimensional self-concept and yield important empirical findings of the REM extended to career-

related self-concept of students. These future endeavors may collectively contribute to researchers' and practitioners' in-depth understanding of the relationships among academic and career-related domains of self-concept, their matching domains of academic achievement and career-related achievement [54-56].

Acknowledgement

This review paper was partially supported by two research grants from the Education University of Hong Kong to Dr. Yang Lan (R3822 &RG 24/2017-2018R).

Reference

1. Shavelson RJ, Hubner JJ, Stanton GC (1976) Self-concept: Validation of construct interpretations. *Review of educational research* 46 (3): 407-441.
2. Marsh HW (1990a) Self-Description Questionnaire (SDQ) I: A theoretical and empirical basis for the measurement of multiple dimensions of preadolescent self-concept: A test manual and a research monograph, University of Western Sydney, Sydney.
3. Marsh HW (1992) Self-Description Questionnaire (SDQ) II: A theoretical and empirical basis for the measurement of multiple dimensions of adolescent self-concept: An interim test manual and a research monograph, University of Western Sydney, Faculty of Education, New South Wales, Australia.
4. Marsh HW, O'Neill R (1984) Self-Description Questionnaire III: The construct validity of multidimensional self-concept ratings by late adolescents. *Journal of Educational Measurement* 21(2): 153-174.

5. Marsh HW, Xu K, Martin AJ (2011) Self-concept: A synergy of theory, method, and application', in Harris KR; Graham S; Urdan T (ed.), APA educational psychology handbook, Vol 1: Theories, constructs, and critical issues, American Psychological Association, Washington DC, USA, pp. 427-458.
6. Marsh HW, Seaton M (2013) Academic self-concept. In Hattie J, Anderman EM (Eds.), International guide to student achievement, Routledge, New York, pp. 62-63.
7. Parker PD, Marsh HW, Ciarrochi J, Marshall S, Abduljabbar AS (2014) Juxtaposing math self-efficacy and self-concept as predictors of long-term achievement outcomes. *Educational Psychology* 34(1): 29-48.
8. Chen BH, Chiu WC, Wang CC (2015) The relationship among academic self-concept, learning strategies, and academic achievement: A case study of national vocational college students in Taiwan via SEM. *The Asia-Pacific Education Researcher* 24(2): 419-431.
9. Platow MJ, Mavor KI, Grace DM (2013) On the role of discipline-related self-concept in deep and surface approaches to learning among university students. *Instructional Science* 41(2): 271-285.
10. Yang L, Arens AK, Watkins DA (2014) Testing the twofold multidimensionality of academic self-concept: a study with Chinese vocational students. *Educational Psychology* 36(9): 1651-1669.
11. Marsh HW, Trautwein U, Lüdtke O, Köller O, Baumert J (2005) Academic self-concept, interest, grades, and standardized test scores: Reciprocal effects models of causal ordering. *Child Development* 76(2): 397-416.
12. Marsh HW, Yeung AS (1997) Coursework selection: Relations to academic self-concept and achievement. *American Educational Research Journal* 34(4): 691-720.
13. Nagengast B, Marsh HW (2012) Big fish in little ponds aspire more: Mediation and cross-cultural generalizability of school-average ability effects on self-concept and career aspirations in science. *Journal of Educational Psychology* 104(4): 1033-1053.
14. Marsh HW (2007) Self-concept theory, measurement and research into practice: The role of self-concept in educational psychology, British Psychological Society, Leicester, UK.
15. Marsh HW, Craven RG (2006) Reciprocal effects of self-concept and performance from a multidimensional perspective beyond seductive pleasure and unidimensional perspectives. *Perspectives on Psychological Science* 1(2): 133-163.
16. Arens AK, Marsh HW, Pekrun R, Lichtenfeld S, Murayama K, et al. (2017) Math self-concept, grades, and achievement test scores: Long-term reciprocal effects across five waves and three achievement tracks. *Journal of Educational Psychology* 109: 621-634.
17. Marsh HW, Martin AJ (2011) Academic self-concept and academic achievement: Relations and causal ordering. *British Journal of Educational Psychology* 81(1): 59-77.
18. Yang L, Watkins D (2013) The effectiveness of two treatments to enhance academic self-concept among low-achieving secondary school student in China. In Kashima Y, Kashima S, & Beatson (Eds.), *Steering the cultural dynamics*, Melbourne, International Association for Cross-Cultural Psychology, Australia pp. 160-166.
19. Guay F, Marsh HW, Boivin M (2003) Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of educational psychology* 95(1): 124-136.
20. Marsh H W, Hau KT, Kong CK (2002) Multilevel causal ordering of academic self-concept and achievement: Influence of language of instruction (English compared with Chinese) for Hong Kong students. *American Educational Research Journal* 39(3): 727-763.
21. Marsh HW, Köller O (2004) Unification of theoretical models of academic self-concept/achievement relations: Reunification of east and west German school systems after the fall of the Berlin Wall. *Contemporary Educational Psychology* 29(3): 264-282.
22. Marsh HW, 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(4): 542-552.
23. Marsh HW, Ellis LA, Craven RG (2002) How do preschool children feel about themselves? Unraveling measurement and multidimensional self-concept structure. *Developmental psychology* 38(3): 376-393.
24. Marsh HW, Pekrun R, Murayama K, Arens KA, Parker PD, et al. (2017) An integrated model of academic self-concept development: Academic self-concept, grades, test scores, and tracking over six years. *Developmental Psychology*.
25. Seaton M, Marsh HW, Parker PD, Craven RG, Yeung AS (2015) The reciprocal effects model revisited: Extending its reach to gifted students attending academically selective schools. *Gifted Child Quarterly* 59(3): 143-156.
26. Seaton M, Parker P, Marsh HW, Craven RG, Yeung AS (2014) The reciprocal relations between self-concept, motivation and achievement: juxtaposing academic self-concept and achievement goal orientations for mathematics success. *Educational psychology* 34(1): 49-72.
27. Super DE (1990) A life-span, life-space approach to career development. In D, Brown, L, Brooks, & Associates (Eds), *Career choice and development: Applying contemporary theories to practice*, San Francisco: Jossey-Bass, San Francisco, USA, pp. 197-261.
28. Super DE (1992) Toward a comprehensive theory of career development. In D. H. Montross & C. J. Shinkman (Eds.), *Career development: Theory and practice*, IL: Charles Thomas, Springfield, pp.35-64.
29. Super DE (1994) A life span, life space perspective on convergence. In M. L. Savickas & R. W. Lent (Eds.), *Convergence in career development theories*. Palo Alto, CA: CPP, pp. 63-74.
30. Super DE, Starishevsky R, Matlin N, Jordan JP (1963) *Career Development: Self-Concept Theory; Essays in Vocational Development*. Princeton, NJ: College Entrance Examination Board, New Jersey.
31. Super DE, Thompson AS (1979) A Six-Scale, Two-Factor Measure of Adolescent Career or Vocational Maturity. *Vocational Guidance Quarterly* 28(1): 6-15.
32. Patton W, McMahon M (2014) *Career development and systems theory: Connecting the theory and practice*. The: Sense Publishers, Netherlands.
33. Pisarik CT, Currie LK (2015) Recording and Interpreting Work-Related Daydreams: Effects on Vocational Self-Concept Crystallization. *The Career Development Quarterly* 63(3): 223-237.
34. Betz NE (1994) Self-concept theory in career development and counseling. *The Career Development Quarterly* 43(1): 32-42.
35. Super DE, Thompson AS, Lindeman RH, Jordaan JP, Myers RA (1981) *Career Development Inventory*. Palo Alto, CA: Consulting Psychologists Press, New York.
36. Oliver LW, Lent EB, Zack JS (1998) Career and vocational assessment 1995-1996: A biennial review. *Journal of Career Assessment* 6(3): 231-267.
37. Savickas ML, Hartung PJ (1996) The Career Development Inventory in review: Psychometric and research findings. *Journal of Career Assessment* 4(2): 171-188.
38. Cardoso P, Gonçalves MM, Duarte ME, Silva JR, Alves D (2016) Life Design Counseling outcome and process: A case study with an adolescent. *Journal of Vocational Behavior* 93: 58-66.

39. Hirschi A, Herrmann A, Keller AC (2015) Career adaptivity, adaptability, and adapting: A conceptual and empirical investigation. *Journal of Vocational Behavior* 87: 1-10.
40. Maggiori C, Rossier J, Savickas ML (2017) Career Adapt-Abilities Scale-Short Form (CAAS-SF) Construction and Validation. *Journal of Career Assessment* 25(2): 312-325.
41. Negru-Subtirica O, Pop EI (2016) Longitudinal links between career adaptability and academic achievement in adolescence. *Journal of Vocational Behavior* 93: 163-170.
42. Negru-Subtirica O, Pop EI, Crocetti E (2015) Developmental trajectories and reciprocal associations between career adaptability and vocational identity: A three-wave longitudinal study with adolescents. *Journal of vocational behavior* 88: 131-142.
43. Super DE, Savickas ML, Super CM (1996) The life-span, life-space approach to careers. In D. Brown & L. Brooks, (Eds.), *Career choice and development*, Jossey-Bass, San Francisco, pp. 121-178.
44. Marsh HW, Shavelson R (1985) Self-concept: Its multifaceted, hierarchical structure. *Educational psychologist* 20(3): 107-123.
45. Savickas ML (2013) Career construction theory and practice. In R. W. Lent & S. D. Brown (Eds.) *Career development and counseling: Putting theory and research to work*. Hoboken, John Wiley & Sons, New Jersey pp. 147-183.
46. Pajares F, Schunk DH (2001) Self-beliefs and school success: Self-efficacy, self-concept, and school achievement. In R. Riding & S. Rayner (Eds.) *Self-Perception*: Ablex Publishing, London, pp. 239-266.
47. Arens AK, Yeung AS, Craven RG, Hasselhorn M (2011) The twofold multidimensionality of academic self-concept: Domain specificity and separation between competence and affect components. *Journal of Educational Psychology* 103(4): 970-981.
48. Bear GG, Minke KM, Manning MA (2002) Self-concept of students with learning disabilities: A meta-analysis. *School Psychology Review* 31(3): 405-427.
49. Preckel F, Schmidt I, Stumpf E, Motschenbacher M, Vogl K, et al. (2017) A Test of the Reciprocal-Effects Model of Academic Achievement and Academic Self-Concept in Regular Classes and Special Classes for the Gifted. *Gifted Child Quarterly* 61(2): 103-116.
50. Tabassam W, Grainger J (2002) Self-concept, attributional style and self-efficacy beliefs of students with learning disabilities with and without attention deficit hyperactivity disorder. *Learning Disability Quarterly* 25(2): 141-151.
51. Savickas ML (2005) The theory and practice of career construction. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work*. Hoboken, Wiley, New Jersey, pp. 42-70.
52. Savickas ML, Nota L, Rossier J, Dauwalder JP, Duarte ME, et al. (2009) Life designing: A paradigm for career construction in the 21st century. *Journal of vocational behavior* 75(3): 239-250.
53. Super DE (1980) A life-span, life-space approach to career development. *Journal of Vocational Behavior* 16: 282-298.
54. Marsh HW (1990b) The structure of academic self-concept: The Marsh/Shavelson model. *Journal of Educational psychology* 82(4): 623-636.
55. Marsh HW (1990c) A multidimensional, hierarchical model of self-concept: Theoretical and empirical justification. *Educational psychology review* 2(2): 77-172.
56. Yang L, Watkins D, Mok MMC, Sin KF (2014) What matters to the achievement of academically disadvantaged students? An investigation of academic self-concept, perceived control and approaches of learning as predictors. *Journal of Special Education of Hong Kong* 16: 24-47.



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DOI: [10.19080/PBSIJ.2017.06.555688](https://doi.org/10.19080/PBSIJ.2017.06.555688)

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