

Extending the internal/external frame of reference model to social studies: Self-concept and achievement in history and politics

A. Katrin Arens^{a,*}, Jens Möller^b, Rainer Watermann^c

^a German Institute for International Educational Research, Germany

^b Kiel University, Germany

^c Freie Universität Berlin, Germany

ARTICLE INFO

Article history:

Received 23 January 2016

Received in revised form 22 August 2016

Accepted 27 August 2016

Available online xxxx

Keywords:

Academic self-concept

Academic achievement

Dimensional and social comparisons

I/E model

Social studies

ABSTRACT

Two studies with German secondary school students extend the internal/external frame of reference (I/E) model to multiple school subjects, by including history and politics as social studies subjects. Study 1 assessed students' self-concepts and achievements related to math, German, history, English (students' first foreign language), and physics. The cross-paths leading from history self-concept to math and verbal achievements and those leading from math and verbal achievements to history self-concept were non-significant arguing against the operation of dimensional comparison processes between math and verbal achievements in the formation of history self-concept. Study 2 included measures for students' self-concepts and achievements in math, English, physics, and politics as well as a history achievement. Politics achievement and self-concept were unrelated to math, English, and physics achievements and self-concepts. History achievement was positively related with politics self-concept. This finding indicates dimensional comparison processes leading to assimilation effects within the domain of social studies.

© 2016 Elsevier Inc. All rights reserved.

1. The domain specificity of academic self-concept

1.1. The internal/external frame of reference model

In the classic self-concept model proposed by Shavelson, Hubner, and Stanton (1976), academic self-concept was conceptualized as a global factor encompassing self-concepts for different school subjects. However, subsequent empirical research has consistently found a low or even near-zero correlation between math and verbal self-concepts implicating a strong domain specificity of academic self-concepts (Marsh, 1986, 1990a; Möller, Pohlmann, Köller, & Marsh, 2009). This observation was surprising since math and verbal achievements are highly correlated which was expected to lead to a similarly high correlation between math and verbal self-concepts as the subjective perceptions of these achievements.

The internal/external frame of reference (I/E) model was established to offer a theoretically and empirically testable framework to explain the formation of separate math and verbal self-concepts (Marsh, 1986, 1990a; Marsh & Hau, 2004; Marsh et al., 2015; Möller et al., 2009).

* Corresponding author at: German Institute for International Educational Research, Department of Education and Human Development, Center for Research on Individual Development and Adaptive Education of Children (IDeA), Schloßstr. 29, D-60486 Frankfurt am Main, Germany.

E-mail address: arens@dipf.de (A. Katrin Arens).

According to this model, the formation of domain-specific academic self-concepts relies on the simultaneous operation of two types of achievement comparison processes, i.e., social and dimensional achievement comparison processes. In a social comparison process, students compare their own achievement in one subject with their classmates' achievement in the same subject. In the dimensional comparison process, students compare their own achievement in one subject (e.g., math) with their own achievement in another subject (e.g., language; Möller & Marsh, 2013). Methodologically, empirical tests of the I/E model encompass a regression model estimating the paths leading from domain-specific (math, verbal) achievements to domain-specific (math, verbal) self-concepts while controlling for the other relations (Fig. 1a). Given the high relation between math and verbal achievements, social comparison processes result in a high correlation between math and verbal self-concepts and in positive paths between achievements and self-concepts of matching domains (e.g., math achievement and math self-concept). The dimensional comparison process results in negative cross-paths between math and verbal achievements and self-concepts. As such, high levels of math (verbal) achievement lead to lower levels of verbal (math) self-concept. Moreover, the dimensional comparison process invokes a negative correlation between math and verbal self-concepts which balances the positive correlation resulting from the social comparison process, thus leading to the consistently found low or near-zero correlation between math and verbal self-concepts.

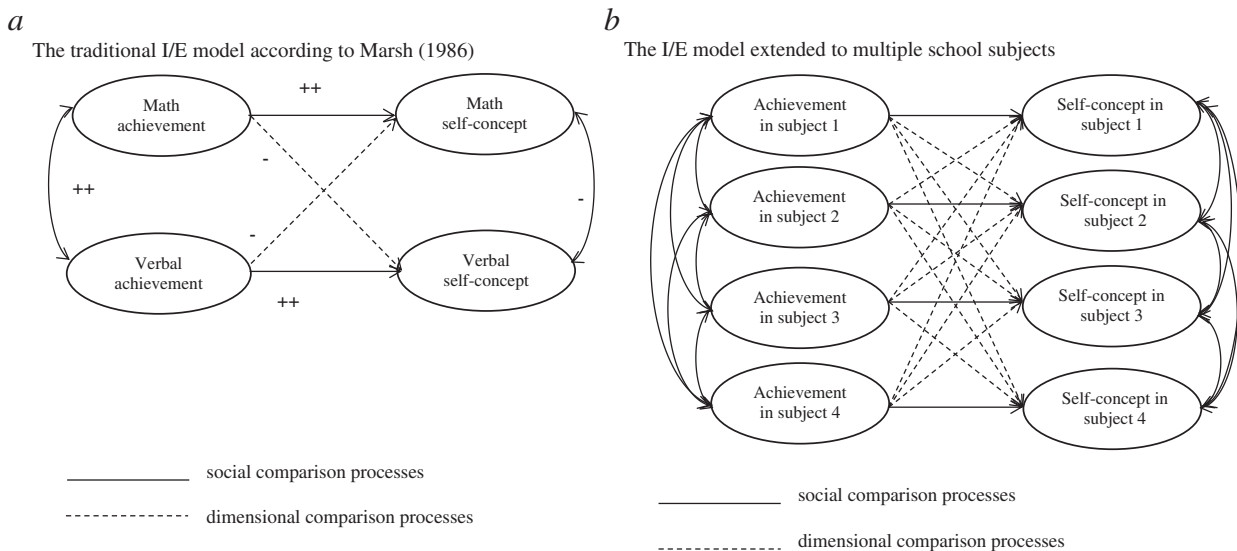


Fig. 1. a The traditional I/E model according to Marsh (1986). b The I/E model extended to multiple school subjects.

1.2. Assimilation and contrast effects

Originally, the I/E model only included math and verbal achievements and self-concepts in order to respond to the consistently found negligible correlation between math and verbal self-concepts despite a substantial correlation between math and verbal achievements (Marsh, 1986, 1990a; Möller et al., 2009). In this case, the operation of dimensional achievement comparison processes becomes obvious in the negative cross-paths between achievements and self-concepts of non-matching subjects (e.g., between math achievement and verbal self-concept).

Recently, the I/E model has been extended to multiple school subjects (Jansen, Schroeders, Lüdtke, & Marsh, 2015; Marsh et al., 2014, 2015; Marsh & Yeung, 2001; Möller, Streblov, Pohlmann, & Köller, 2006; Fig. 1b). When including multiple school subjects in the I/E model, cross-paths between self-concept and achievement measures of non-matching domains (depicting dimensional achievement comparison processes) have been found to be negative as well as positive. Hence, dimensional achievement comparison processes can lead to contrast effects (negative cross-paths) or to assimilation effects (positive cross-paths). In the case of contrast effects, dimensional comparison processes evoke positive consequences for one subject (e.g., high math self-concept given high math achievement) and negative consequences for the contrasted subject (e.g., low verbal self-concept given high math achievement). In the case of assimilation effects, dimensional comparison processes induce positive consequences for both subjects concerned (e.g., high math and physics self-concepts given high levels of math and physics achievements, Jansen et al., 2015; Marsh et al., 2015).

1.3. Self-concepts in social studies

History and politics constitute two commonly taught school subjects in the domain of social studies at least in secondary school and students are found to exhibit domain-specific self-concepts in history (Brunner et al., 2010; Schilling, Sparfeldt, & Rost, 2006) and politics (Krampen, 1990, 1998). Although recent studies have extended the I/E model to multiple school subjects, these studies have paid little attention to the inclusion of history and politics. Respective studies would, however, provide insight into whether dimensional achievement comparison processes are involved in the formation of students' history and politics self-concepts.

So far, only one study (i.e., Study 2 by Marsh et al., 2015) has presented an I/E model extended to six school subjects including history.

The findings of this study demonstrated a substantial positive relation between history achievement and history self-concept, supporting the construct validity of history self-concept and replicating positive within-domain relations between self-concept and achievement (Huang, 2011; Marsh & Craven, 2006; Swann, Chang-Schneider, & Larsen McClarty, 2007; Valentine, DuBois, & Cooper, 2004). History self-concept was further found to be negatively affected by math and biology achievements indicating contrast effects. The paths leading from the other domain-specific achievements (i.e., German, English, and physics achievements) to history self-concept were not statistically significant. History achievement, in turn, did not demonstrate any significant relations to non-matching domain-specific self-concept facets (i.e., German, English, biology, math, and physics self-concepts). Hence, based on these findings, the role of dimensional comparison processes involving history remains unclear and should be subject to further research. However, other studies on history self-concept (Brunner et al., 2010; Schilling et al., 2006) only considered correlations among self-concepts or correlations between self-concept and achievement measures and are thus not adequately suited to provide insights into dimensional achievement comparison processes at play in the formation of history self-concept. Hence, there seems to be a need for further studies extending the I/E model to history in order to replicate the findings from Marsh et al. (2015) when using other student samples and self-concept measures.

To our knowledge no study has so far integrated politics into an I/E model. The few studies on political self-concept examined its construct validity and mean level changes and stability across adolescence (Krampen, 1990, 1998). The relations of politics self-concept to other domain-specific academic self-concept and achievement measures were not examined; thus the role of dimensional achievement comparison processes in the formation of political self-concept has yet remained unresolved.

1.4. The Marsh/Shavelson model of academic self-concept

The Marsh/Shavelson model of academic self-concept (Marsh, 1990b) depicts the internal structure of domain-specific academic self-concepts. According to this model, math and verbal self-concepts represent the endpoints of a continuum of academic self-concepts. Self-concepts for other school subjects (e.g., physics, biology, foreign language) are assumed to be located somewhere between these two endpoints. Hence, self-concepts for different school subjects can be

Download English Version:

<https://daneshyari.com/en/article/4940102>

Download Persian Version:

<https://daneshyari.com/article/4940102>

[Daneshyari.com](https://daneshyari.com)