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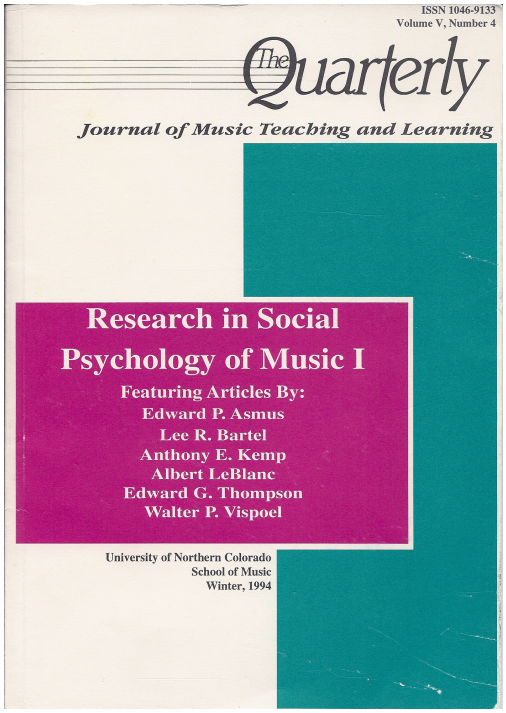

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It is with pleasure that we inaugurate the reprint of the entire seven volumes of The Quarterly Journal of Music Teaching and Learning. *The journal began in 1990 as* The Quarterly. *In 1992, with volume 3, the name changed to* The Quarterly Journal of Music Teaching and Learning *and continued until 1997. The journal contained articles on issues that were timely when they appeared and are now important for their historical relevance. For many authors, it was their first major publication.* Visions of Research in Music Education *will publish facsimiles of each issue as it originally appeared. Each article will be a separate pdf file. Jason D. Vodicka has accepted my invitation to serve as guest editor for the reprint project and will compose a new editorial to introduce each volume. Chad Keilman is the production manager. I express deepest thanks to Richard Colwell for granting VRME permission to re-publish* The Quarterly *in online format. He has graciously prepared an introduction to the reprint series.*

Integrating Self-Perceptions Of Music Skill Into Contemporary Models Of Self-Concept

By Walter P. Vispoel
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Self-concept is one of the most enduring and popular constructs in education and psychology, and it has been the focus of countless research studies in numerous disciplines. Interest in self-concept is largely due to the intuitive appeal of notions that positive self-regard is something desirable in and of itself, and that positive self-perceptions enhance motivation and achievement while negative self-perceptions have the opposite effect. Over the last 15 years, substantial progress has been made in our understanding of self-concept, but much of this progress has not transferred to the music domain. In this article, I briefly summarize important findings from recent self-concept research outside of music,[1] describe results from studies that integrate music self-concept into contemporary models of self-concept, and synthesize these findings into a tentative theoretical model to guide future investigations into music self-concept.

> ...substantial progress has been made in self-concept research methodology, theory, and instrument development due to the increasing recognition that self-concept is multidimensional, perhaps even hierarchically structured.

Self-Concept Research Outside of Music

Scholarly discourse about self-concept can be traced back to the time of Socrates and Plato, and continues unabated today. Until recently, however, our understanding of self-concept progressed slowly, due to an overemphasis on behavioral perspectives in psychology, inadequate research methodology, weak theoretical foundation, and flawed instrumentation (Burns, 1979; Fox & Corbin, 1989; Harter, 1986a; Hattie, 1992; Marsh, 1990a; Rosenberg, 1965, 1979; Shavelson, Hubner, & Stanton, 1976; Wells & Marwell, 1976; Wylie, 1974, 1979). For many years, self-concept was viewed as a unidimensional construct. General self-concept was measured in many popular inventories (e.g., Coopersmith, 1967; Piers, 1969; Sears, 1966) using a total score based on the sum of responses to a series of self-referenced items tapping a variety of content domains. Research studies based on these instruments frequently yielded conflicting findings, and

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the correlations among the instruments' total scores were sometimes disturbingly low. This approach to self-concept theory and instrument construction was criticized because it failed to take into account different weightings and relations among multiple facets of self that might influence one's overall self-regard.

Since the 1980s, substantial progress has been made in self-concept research methodology, theory, and instrument development due to the increasing recognition that self-concept is multidimensional, perhaps even hierarchically structured. Multidimensional models of self-concept have given rise to inventories that measure multiple facets of self-concept, and yield a series of domain-specific scores instead of, or in addition to, more global self-concept scores (see Table 1). The profile approach to self-concept inherent in these instruments acknowledges that an individual may have positive perceptions of self in some areas (e. g., academic) but not in others (e. g., social), and that these perceptions may interact in complex ways in forming global perceptions of self.[2] In general, these new instruments show

Table 1

Subscales, Grade/Age Levels, and Sources for Selected Multidimensional Self-Concept Inventories

Measure and Source	Grade/Age Level	Subscales
Comprehensive Self-Concept Inventories		
Self-Description Questionnaire-I; Marsh, 1988	Pre-adolescents (Grades 2 to 6)	Self-Esteem, Math Skills, Reading/Verbal Skills, General School Ability, Physical Ability, Physical Appearance, Peer Relations, Parent Relations
Self-Description Questionnaire-II; Marsh, 1990b	Adolescents (Grades 7 to 12)	Self-Esteem, Math Skills, Verbal Skills, General School Ability, Physical Ability, Physical Appearance, Same-Sex Relations, Opposite-Sex Relations, Parent Relations, Emotional Stability, Honesty/Trustworthiness
Self-Description Questionnaire-III;[a] Marsh, 1989	Late adolescents, college students and adults	Self-Esteem, Math Skills, Verbal Skills, General School Ability, Problem-Solving/Creativity, Physical Ability, Physical Appearance, Same-Sex Relations, Opposite-Sex Relations, Parent Relations, Emotional Stability, Honesty/Trustworthiness, Religion/Spirituality
Self -Perception Profile for Children;[a] Harter, 1985	Grades 3 to 8	Global Self-Worth, Scholastic Competence, Social Acceptance, Athletic Competence, Physical Appearance, Behavioral Conduct
Self -Perception Profile for Adolescents;[a] Harter, 1988	Grades 8 to 11	Global Self-Worth, Scholastic Competence, Social Acceptance, Close Friendship, Romantic Appeal, Athletic Competence, Physical Appearance, Behavioral Conduct, and Job Competence
Self -Perception Profile for College Students;[a] Neemann & Harter, 1986	College students	Global Self-Worth, Scholastic Competence, Intellectual Ability, Creativity, Social Acceptance, Close Friendship, Romantic Appeal, Parent Relations, Athletic Competence, Physical Appearance, Morality, Job Competence, and Sense of Humor.
Adult Self-Perception Profile;[a] Messer & Harter, 1986	Adults	Global Self-Worth, Job Competence, Adequate Provider, Household Management, Intelligence, Sociability, Nurturance, Intimate Relationships, Athletic Abilities, Physical Appearance, Morality, Sense of Humor

Table 1 (cont.)

Academic Self-Concept Inventories

Measure and Source	Grade/Age Level	Subscales
Academic Self Description Questionnaire-I; Marsh, 1990c	Grades 5 and 6	Computer Science[b], Spelling[b], Math[b], Reading[b], Science[b], Social Studies[b], Handwriting[b], General School Ability[b], Physical Education[c], Art[c], Music[c], Religion[c], Health[c].
Academic Self Description Questionnaire-II;[a] Marsh, 1990c	Grades 7 to 10	Computer Science[b], English Language[b], History[b], Math[b], English Literature[b], Science[b], Commerce[b], Geography[b], Foreign Languages[b], General School Ability[b], Physical Education[c], Art[c], Music[c], Industrial Arts[c], Religion[c], Health[c].

Artistic Self-Concept Inventories

Measure and Source	Grade/Age Level	Subscales
Arts Self-Perception Inventory (adolescent form);[a] Vispoel, 1993a	Grades 6 to 12	Dance Skill, Dramatic Art Skill, Visual Art Skill, Music Skill
Arts Self-Perception Inventory (adult/college form);[a] Vispoel, Wang, Bleiler, & Tzou, 1993	College Students and Adults	Dance Skill, Dramatic Art Skill, Visual Art Skill, Music Skill
Music Self-Perception Inventory (adolescent form);[a] Vispoel, 1993b	Grades 6 to 12	Overall Music Skill, Singing, Instrument Playing, Reading Music, Composing, Listening, Dance Movements
Music Self-Perception Inventory (adult/college form);[a] Vispoel, 1993c	College Students and Adults	Overall Music Skill, Singing, Instrument Playing, Reading Music, Composing, Listening, Dance Movements

[a]Scales for assessing domain importance also have been developed for these inventories.
[b]These are labeled as "core" areas.
[c]These are labeled as "non-core" areas

stronger linkages to theories of self-concept, demonstrate better evidence of construct validity, and are more psychometrically sound than their predecessors.

One of the most influential and extensively researched recent models of self-concept was first proposed by Shavelson, Hubner, and Stanton (1976). In this model, the researchers defined self-concept as an individual's perceptions of self formed through experiences with the world and interpretations of those experiences. These perceptions are assumed to be influenced by reinforcements, evaluations from other individuals, and causal beliefs about one's behavior. Shavelson et al. further hypothesized that

self-concept has seven key characteristics:

> (a) It is organized or structured, in that people categorize the vast amount of information they have about themselves and relate the categories to one another. (b) It is multifaceted, and the particular facets reflect the category system adopted by a particular individual and/or shared by a group. (c) It is hierarchical, with perceptions of behavior at the base moving to inferences about self in subareas (e.g., academic — English, history), then to inferences about self in academic and nonacademic areas, and then to inferences about self in general. (d) General self-concept is stable, but as one descends the hierarchy, self-concept becomes increasingly situation-specific and as a consequence less stable. (e) Self-concept becomes increasingly multifaceted as the individual develops from infancy to adulthood. (f) It has both a descriptive and an evaluative dimension such that individuals may describe themselves (e. g., I am happy) and evaluate themselves (e. g., I do well in school). (g) It can be differentiated from other constructs such as academic achievement. (Shavelson & Bolus, 1982, p. 3).

Although Shavelson et al. (1976) emphasized the multifaceted, hierarchical structure of self-concept more than the number, nature, and organization of particular self-concept categories, they proposed one possible structural model of self-concept, which is shown in Figure 1. Note that general self-concept is at the top level of this model, and it is divided into academic and nonacademic self-concepts at the next level. Academic self-concept is then divided into self-concepts in specific content areas (math, science, etc.), and nonacademic self-concept is divided into physical (ability and appearance), social (peer and significant other relations), and emotional self-concepts. Further subdivisions of these more specific aspects of self-concept also are depicted with components of self-concept becoming increasingly targeted to particular behaviors as one moves down the hierarchy.[3]

Over the last fifteen years or so, Herbert Marsh and his colleagues have evaluated the Shavelson et al. (1976) model in a comprehensive series of empirical investigations using the Self-Description Questionnaires (SDQs)— an age-graded series of multidimensional self-concept inventories derived from the Shavelson et al. model (see Table 1).[4] Of particular relevance here are studies in which Marsh used confirmatory and hierarchical confirmatory factor analysis techniques to evaluate the multifaceted, hierarchical structure of self-concept posited in the Shavelson et al. model (Marsh, 1987; Marsh & Hocevar, 1985; Marsh & Shavelson, 1985; Shavelson & Marsh, 1986). These studies provided strong support for the multifaceted nature of self-concept, in that children at very early ages reliably differentiated components of self in a wide variety of content domains.

The existence of a self-concept hierarchy also was supported in Marsh's research, but the hierarchy was different and weaker than the one originally proposed by Shavelson et al. (1976). Specifically, Marsh's studies showed that lower-order components of academic self-concept formed two higher-order factors (Math/Academic and Verbal/Academic) rather than just one; and that lower-order components of physical (abilities and appearance) and social (opposite-sex, same-sex, and parent relations) self-concepts were not clearly differentiated into separate higher-order Physical and Social self-concept factors. Marsh's findings also revealed that hierarchies were quite effective in accounting for the correlations among different facets of self-concept but still failed to account for much of the variability in many of the facets. As a result, Marsh cautioned researchers and practitioners against inferring lower-order facets of self-concept from higher-order facets and vice versa.

In addition to an inability to account for the variability in many lower-order facets of self-concept, hierarchical models have also been criticized on other grounds. Harter (1986a), for example, pointed out that the relationships between lower- and higher-order components of self-concept in such hierarchies do not reflect the importance that individuals ascribe to particular facets of self-concept. Citing the classic work of James (1892), she hypothesized that general self-esteem will be influenced by self-perceptions of skill only in those domains for which success is important to an individual. In Harter's model, for instance, low regard for one's musical abilities will have a negative impact on one's overall self-esteem only if one places a

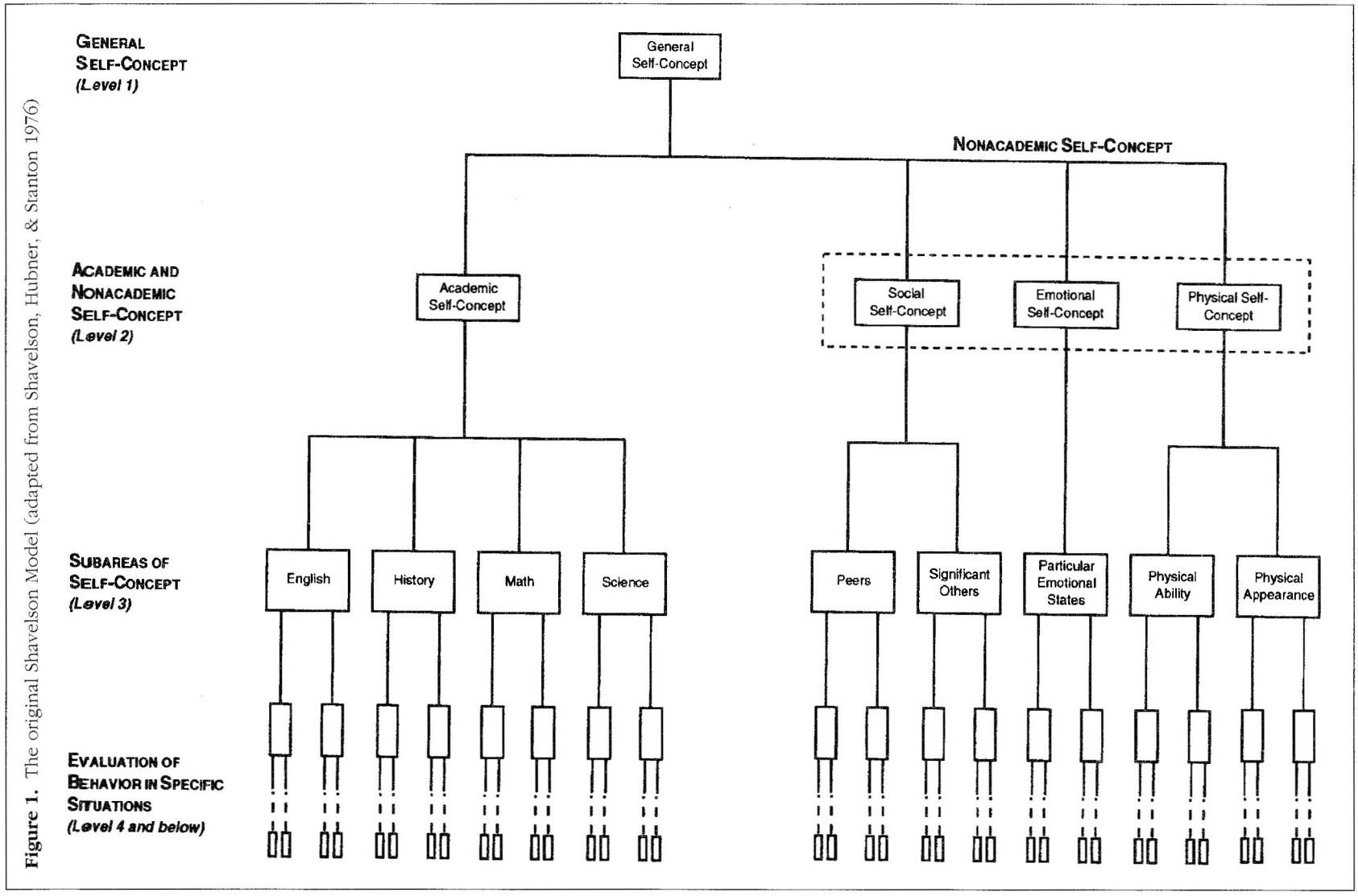


Figure 1. The original Shavelson Model (adapted from Shavelson, Hubner, & Stanton 1976)

high premium on having strong musical skills.

In evaluating an individual's self-concept profile from Harter's self-concept inventories (see Table 1), one first isolates domains that respondents rate as very important in determining how good they feel about themselves, and then looks for marked discrepancies between these ratings and self-concept in the corresponding areas (i.e., areas in which the importance rating greatly exceeds the self-concept rating). In Harter's view, these discrepancies are more relevant than domain-specific self-concept scores per se in understanding an individual's overall self-esteem. This view, although appealing to many theorists (e.g., Coopersmith, 1967; Harter, 1986a; Hoge & McCarthy, 1984; James, 1890/1963; Marsh, 1986; Rosenberg, 1965, 1979; Wylie, 1974, 1979), has not received strong empirical support (Hoge & McCarthy (1984); Marsh, 1986a, 1993a, 1994). Music, however, is one of the few areas in which the mediating role of domain importance has been supported empirically (Forte & Vispoel, 1995; Vispoel, in preparation a; Vispoel & Forte, 1994).

Self-Concept Research In Music

In many ways, the status of self-concept research in music today is similar to that of self-concept research outside of music prior to the 1980s. Music researchers by and large have not developed well-articulated theories of music self-concept, built measurement tools derived from such theories, or taken advantage of many methodological tools available for conducting self-concept research (confirmatory factor analysis, hierarchical confirmatory factor analysis, path analysis, time series analysis, confirmatory multitrait-multimethod analysis, etc.). The most frequently used music self-concept scale, for example, is Schmitt's (1979) *Measure of Self-Esteem of Musical Ability*, which the author modeled after inventories such as Gordon's (1966) *How I See Myself Scale*, Sears's (1966) *Self-Concept Inventory*, Coopersmith's (1967) *Self-Esteem Inventory*, and the *Piers-Harris Children's Self-Concept Scale* (Piers, 1969). Not surprisingly, Schmitt's measure also inherited flaws from some of its predecessors, including an uneven balance of negatively- and positively-phrased items, a theoretical foundation that is largely out of date, and a total self-concept score derived by summing all item scores even though the underlying structure of the measure is multidimensional.[5]

Over the last several years, I have addressed some shortcomings in music self-concept research by developing self-concept inventories for artistic domains based on contemporary models of self-concept (see Table 1). Specifically, these inventories measure self-perceptions of artistic abilities at both general and specific levels. Like Harter's inventories, they also assess the perceived importance of each measured facet of self-concept in determining how respondents feel about themselves in general.[6] To date, I have constructed two forms (adolescent and adult/college) of two inventories: the *Arts Self-Perception Inventory* (ASPI; Vispoel, 1992a, 1992b, 1993a; Vispoel, Wang, Bleiler, & Tzou, 1993) and the *Music Self-Perception Inventory* (MUSPI; Vispoel, 1993a, 1993b, 1993c).

The ASPI instruments have subscales to assess self-perceptions of overall skill in four artistic domains—music, visual art, dance, and dramatic art. These subscales are targeted at a level of generality similar to that of the General School Ability and Physical Ability subscales from the Marsh's Self-Description Questionnaire (SDQ) instruments and the Scholastic Competence and Athletic Competence subscales from Harter's instruments (see Table 1). The MUSPI instruments focus exclusively on skills in the music domain, but at both general and specific levels. Each MUSPI instrument has one subscale similar to the ASPI Music scale that assesses perceptions of general music ability, and six additional subscales that assess perceptions of skill in the music subdomains of singing, instrument playing, reading music, composing, listening, and creating dance movements.

To date, I have administered these instruments to over 2,000 respondents from 6th grade through college and have obtained strong evidence supporting their reliability and construct validity. Specifically, alpha-reliability estimates for the ASPI and MUSPI subscales have ranged from .91 to .96. Confirmatory factor analyses have shown that respondents can reliably differentiate each of the

measured components of self-concept, and subscale scores have formed logical patterns of relationships with external criteria consistent with the constructs they are purported to measure. These analyses confirm that the ASPI and MUSPI instruments measure a clearly defined and distinguishable set of constructs. Moreover, they provide evidence that supports the use of these instruments in enhancing our understanding of how music self-concept relates to other facets of self-concept, and how music self-concept might be integrated into contemporary models of self-concept.

Relations Between Music and Other Facets of Self-Concept

Table 2 shows the correlations between music and other facets of self-concept measured by the ASPI and SDQ instruments based on data from four separate studies involving 1,823 respondents. Although most of the correlations between music and other self-concept scores are statistically significant, many are weak and of limited practical significance (in absolute value, minimum r = .00, maximum r = .43, median r = .20). Music self-concept is more strongly correlated with artistic self-concept facets (Dance, Dramatic Art, Visual Art; median r = .305), verbal-academic self-concept facets (Verbal Skill, General School Ability; median r = .345), and self-esteem (median r = .265) than with other non-artistic self-concept facets (median r = .14). These results highlight the uniqueness of music self-concept and its relative inde-

Table 2
Correlations between Music and Other Facets of Self-Concept as Measured by the ASPI and SDQ Instruments

SDQ/ASPI Subscale	ASPI Music Subscale			
Math Skills	.07	.21*	.19	.18**
Verbal Skills	.19**	.43**	.33**	.37**
General School Ability	.20**	.36**	.36**	.29**
Problem-Solving/Creativity	.16**			
Physical Ability.	.01	-.14	.02	.16
Physical Appearance.	.11**	.16	.23	.28**
Same-Sex Relations	.10**	.14	.20	.15
Opposite-Sex Relations	.14**	.08	.12	.29**
Parent Relations	.07	.17	.23	.16
Religion/Spirituality	.17**			
Honesty/Trustworthiness	.12**	.29**	.31**	.25*
Emotional Stability	.08	.00	.14	.20*
Dance Skill	.31**	.27**	.32**	.30**
Dramatic Art Skill	.34**	.34**	.42**	.43**
Visual Art Skill	.28**	.24**	.25**	.10
Self-Esteem	.23**	.30**	.43**	.22*
Alpha Reliability	.96**	.92**	.94**	.91**
Source	Vispoel (1995)	Vispoel (1993a)	Vispoel & Forte (1994)	Forte & Vispoel (1995)
Grade Level	College	Junior High	Junior High	Mid Sch.
Sample Size	831	205	619	168

*p < .01, ***p < .001 (two-tailed)

Table 3
Correlations between MUSPI Scores and SDQ-II and ASPI Scores from Vispoel (1994a, N = 482)

SDQ-II or ASPI Subscale	MUSPI Subscale						
	Singing	Instrument Playing	Reading Music	Composing	Listening	Dance Movements	Overall Music Skill
Math Skills	.05	.21**	.20**	.10	.13*	.07	.15**
Verbal Skills	.24**	.38**	.38**	.34**	.33**	.16**	.45**
General School Ability	.15**	.38**	.39**	.23**	.28**	.06	.39**
Physical Ability.	.06	.09	.07	.11	.12*	.12*	.11
Physical Appearance.	.23**	.23**	.23**	.29**	.27**	.18**	.25**
Same-Sex Relations	.06	.13*	.15**	.12*	.13*	.10	.14*
Opposite-Sex Relations	.17**	.13*	.12*	.25**	.15**	.27**	.18**
Parent Relations	.09	.17**	.10	.07	.08	.07	.15**
Honesty/Trustworthiness	.12*	.21**	.18**	.11	.16**	.07	.22**
Emotional Stability	.06	.23**	.19**	.18**	.21**	.05	.21**
Dance Skill	.37**	.20**	.14*	.30**	.21**	.76**	.29**
Dramatic Art Skill	.32**	.27**	.26**	.37**	.28**	.30**	.30**
Visual Art Skill	.17**	.24**	.20**	.32**	.23**	.15**	.25**
Music Skill	.43**	.78**	.78**	.59**	.67**	.22**	.83**
Self-Esteem	.17**	.33**	.30**	.23**	.26**	.09	.35**
Alpha Reliability	.96**	.96**	.96**	.95**	.95**	.95**	.95**

*p < .01, ***p < .001 (two-tailed)

pendence from most other components of self-concept. Table 3 shows the correlations of MUSPI scores with SDQ-II and ASPI scores for a sample of 482 7th- and 8th-grade students. Consistent with the pattern of correlations for the ASPI Music subscale scores (see Table 2), MUSPI scores are more highly correlated with artistic self-concept, verbal-academic self-concept, and self-esteem than with the other facets of self-concept represented.

Fitting Music Self-Concept into Contemporary Models of Self-Concept

Although the correlations shown in Tables 2 and 3 provide important evidence of linkages between music self-concept and other facets of self-concept, they do not explicitly show how music self-concept fits into the Shavelson et al. (1976) hierarchy. Marsh (1990c) suggested one possible position for music self-concept in a self-concept hierarchy. He measured self-perceptions of skill in a wide variety of core and non-core school subject areas, including music, using the Academic Self-Description Questionnaire (ASDQ) instruments (see Table 1). Hierarchical confirmatory factor analyses of responses to the ASDQ instruments from 758 students at two different grade categories (5-6 and 7-10) revealed that higher-order Verbal/Academic and Math/Academic factors were reasonably effective in accounting for relations among core area self-concepts, but not among non-core area self-concepts. Hierarchical models with two additional higher-order factors labeled "Art" (which included art, music, and some other subject areas) and "Physical Education" (which included primarily physical education and health) improved model fit but, as in Marsh's SDQ studies, much of the reliable variance in many lower-order factors

Music researchers by and large have not developed well-articulated theories of music self-concept, built measurement tools derived from such theories, or taken advantage of many methodological tools available for conducting self-concept research...

(subject area self-concepts in this case) was unexplained by the higher-order factors. Marsh cautioned researchers and practitioners against inferring subject area self-concepts in physical education, music, and art from higher-order Math/Academic and Verbal/Academic self-concept factors, and he concluded that academic self-concept is much more subject-area specific than previously recognized. His findings are important for music researchers because they imply that a separate higher-order "Artistic Self-Concept" factor, distinct from higher order Math/Academic and Verbal/Academic factors, may be needed to account for relations among self-concepts in artistic domains.

More recently, I examined further the possible position of music self-concept in the Shavelson et al. (1976) hierarchy by administering the SDQ-III and the adult form of the ASPI to 831 college students (Vispoel, 1995). I used hierarchical confirmatory factor analysis techniques to evaluate the effectiveness of 15 different self-concept hierarchies. In line with Marsh (1990c), I found that music self-concept was integrated most effectively into the hierarchy as a component of a second-order Artistic Self-Concept factor that was distinct from other second-order factors (Math/Academic, Verbal/Academic, Physical/Social, and Moral). The final and best fitting third-order hierarchical model from my study is reproduced in Figure 2. The values in the boxes for the self-concept facets depicted are residual variance terms; values embedded in the lines between facets are standardized regression coefficients. Because indices are corrected for unreliability, the residual terms represent systematic variance unique to a given self-concept facet that is unexplained by the higher order facets to which it is linked. Subtracting the residual term from one and multiplying the result by 100 indicates the percentage of variance or variability in the lower-order facets that is explained by higher-order facets.

The overall goodness of fit indices for the model depicted in Figure 2 showed that it represented the data well (Tucker Lewis Index = .930, Relative Noncentrality Index = .934), and that the hierarchy accounted for 87% of the covariance/correlation among lower-order self-concept facets. There were, however, weaknesses in this hierarchy, as revealed by the residual terms in the figure. Note that higher-order factors accounted for less than half of the variability in nine out of the seventeen first-order facets of self-concept, including three out of the four first-order artistic facets (music, dance, and visual art). These results indicate that self-concepts in different artistic domains overlap, but that they are more different than similar. The results also serve to caution one against inferring self-concept in a given artistic domain from self-concept in another artistic domain (e.g., music from dramatic art), or inferring overall artistic self-concept from self-concept in a particular artistic domain.

Most recently, I examined the interrelations among the subdomains of music self-concept measured by the MUSPI instruments (Vispoel, in preparation b). Table 4 shows the correlations among MUSPI scores for a sample of 531 junior high school students. These correlations reveal that students associate overall music ability more strongly with skill in reading music (r = .82), playing an instrument (r = .81), listening (r = .74), and composing (r = .66) than with skill in singing (r = .51) and creating dance movements to music (r = .32). In addition, Instrument Playing, Reading Music, Listening, and Composing subscale scores are more highly correlated with each other (median r =.665) than they are with the Singing and Dance Movement subscales (median r = .325). These results provide some evidence that the facets of music self-concept measured

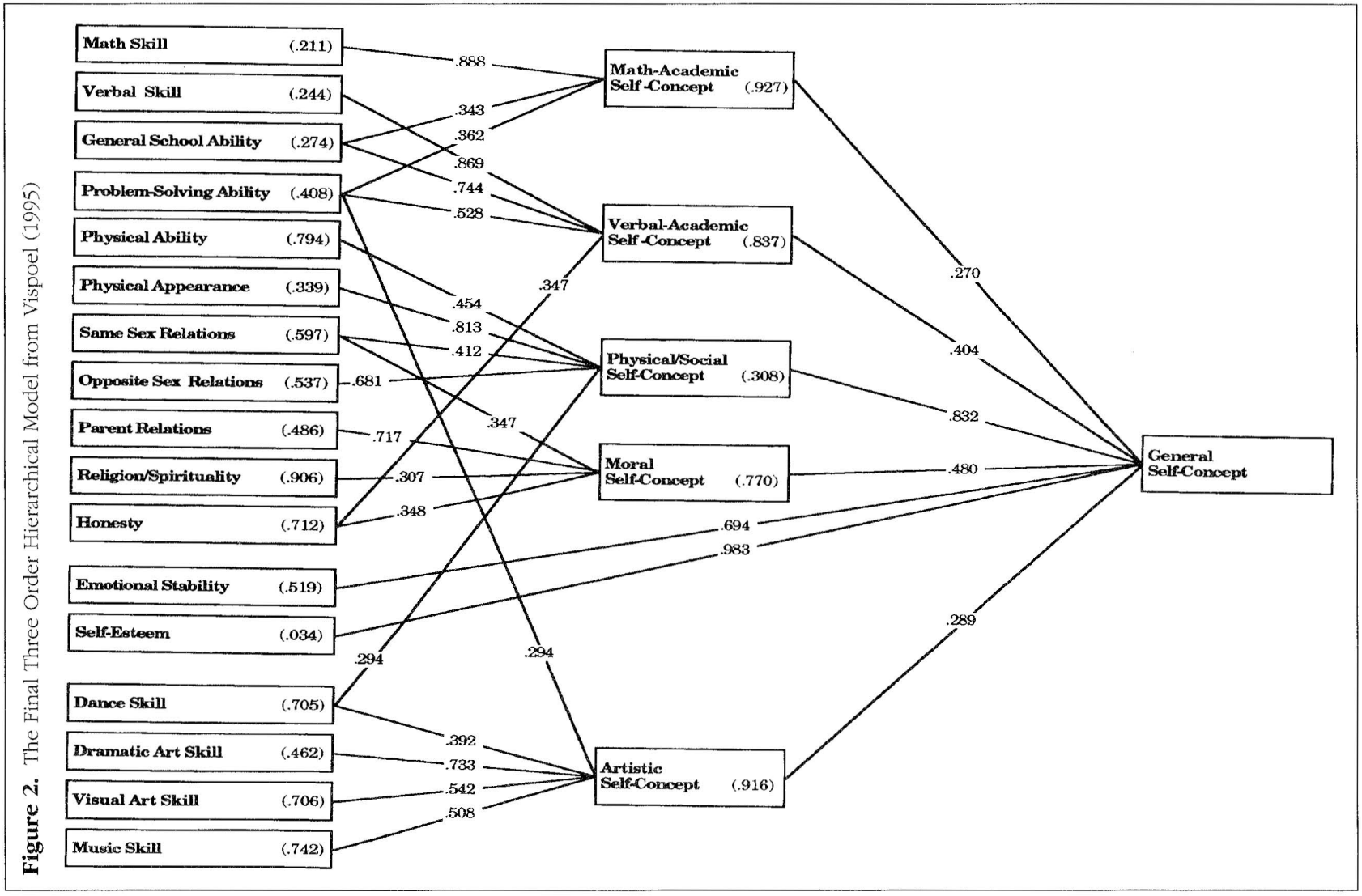


Figure 2. The Final Three Order Hierarchical Model from Vispoel (1995)

Table 4

Correlations Among MUSPI Subscales from Vispoel (in preparation b) n = 531

		1	2	3	4	5	6	7
1	Instrument Playing	.96						
2	Reading Music	.81	.96					
3	Singing	.29	.36	.96				
4	Dance Movements	.22	.16	.44	.96			
5	Composing	.62	.60	.43	.36	.95		
6	Listening	.64	.71	.45	.24	.69	.95	
7	Overall Music Skill	.81	.82	.51	.32	.66	.74	.96

Note: Diagonal entries in the matrix are alpha-reliability coefficients. All correlations are statistically significant beyond the .001 level (two-tailed).

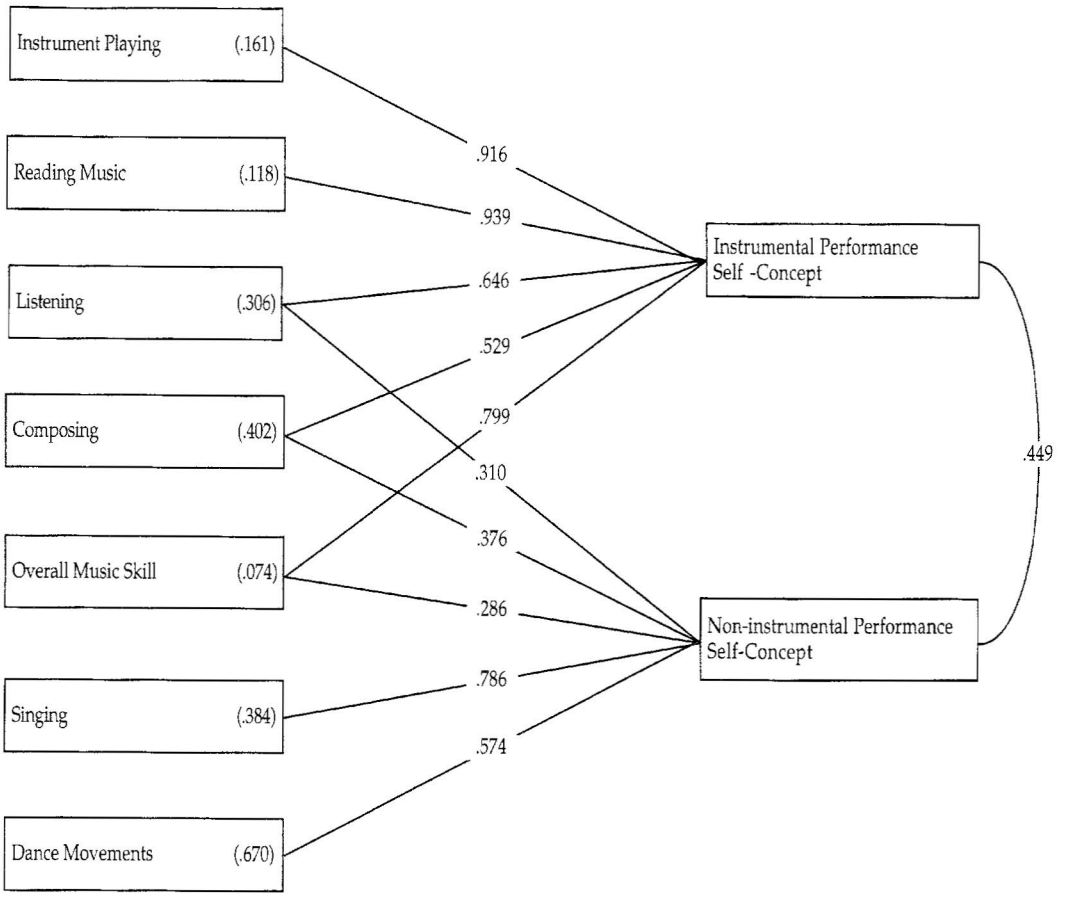
by the MUSPI may define at least two higher-order factors in a music self-concept hierarchy, with one factor representing instrumental performance skills and the other representing non-instrumental performance skills.

Figure 3 shows a hierarchical factor model that fits the data from Table 4 reasonably well (e.g., Tucker Lewis Index = .931, Relative Noncentrality Index = .941). Note that the seven first-order components of music self-concept measured by the MUSPI are represented by two second-order factors (Instrumental Performance Self-Concept and Non-instrumental Performance Self-Concept). Instrumental Performance Self-Concept is most directly linked to Instrumental Playing (β = .916) and Reading Music (β = .939), whereas Non-instrumental Performance Self-Concept is most directly linked to Singing (β = .786) and Dance Movements (β = .574). Listening, Composing, and Overall Music Skill are significantly correlated with both second-order factors, but these first-order factors are more strongly linked to Instrumental Performance than to Non-instrumental Performance. The higher-order Instrumental Performance and Non-instrumental Performance factors account for 96% of the covariance/correlation among the first-order factors and for the majority of variance in all first-order factors except Dance Movements (see the residual terms in Figure 3).[7]

These results support a hierarchical theory of music self-concept and a separation of instrumental and non-instrumental skills within that hierarchy. I emphasize, however, that the model shown here is only one conceptualization of the structure of music self-concept and that alternative models might represent music self-concept as well or even better than this model (see Vispoel, in preparation b).

Besides examining the possible position of music skills in a self-concept hierarchy, I have also looked at the role that domain importance may play in mediating relations between lower- and higher-order self-concept factors in such hierarchies. I noted earlier that most research studies have not supported the mediating role of domain importance but that exceptions to these results have occurred in my recent studies of music self-concept (Forte & Vispoel, 1994; Vispoel, in preparation a, Vispoel & Forte, 1995). Part of the reason that I have found stronger support for the "domain importance hypothesis" is that I have used several methods for assessing domain importance. In addition to traditional importance scales, I have used scales that assess actual and ideal level of involvement in a domain, and level of interest in participating in activities within the domain. For music domains,

Figure 3. One Possible Model Representing the Hierarchical Structure of Music Self Concept



actual involvement and level of interest sometimes elicit significant results when traditional importance ratings do not.

Consistent with the ideas of James, Harter and others, I have found that low self-concept in a given domain has a negative impact on self-esteem when one is highly involved or interested in the domain or when one places great importance in doing well in that domain. To date, I have found support for the domain importance hypothesis using self-concept scales that assess global music skills, instrument playing ability, music reading ability, and listening ability. On the basis of these results, I encourage music researchers to pay close attention to domain importance, involvement, and interest when developing new music self-concept instruments and also when interpreting relationships between self-esteem and components of music self-concept.

Implications of Recent Research Findings for a Theory of Music Self-Concept

On the basis of results from the studies reviewed here, and from the work of Shavelson, Marsh, and Harter in particular, I have formulated a theoretical framework that may prove useful in organizing future research into music self-concept. In this framework, music self-concept is broadly defined as self-appraisals of one's competence in music that are formed through experiences with the environment and interpretations of those experiences. These appraisals are influenced in part by evaluations from others, reinforcements, and causal beliefs about one's performance and accomplishments in music. Music self-concept has five important attributes:

1. It is *organized* and *multifaceted* in the sense that individuals code their experiences with music into categories or facets that facilitate their understanding of themselves and their environment. Facets of music self-concept, however, are not necessarily universal or context-free; they may be specific to an individual and/or shared by a group. Studies cited here show that individuals aged 12 years and up can differentiate self-perceptions of skill in instrument playing, reading music, composing, listening, singing, and creating dance movements. Facets of music self-concept, however, are not necessarily limited to these facets, and differentiation among these facets may occur at even younger ages. On the basis of the Shavelson et al. (1976) model, I hypothesize that music self-concept becomes increasingly multifaceted as one grows older and gains more experience with music. The specific age levels at which such differentiation occurs among music self-concept facets, however, has yet to be established empirically, and the pattern of differentiation in music may differ from that in other self-concept domains.[8]
2. Music self-concept is *hierarchically structured* in that individuals differentiate their perceptions of music skill according to levels of abstraction that move from specific to general and vice versa. In one possible music self-concept hierarchy, shown in Figure 3, music self-concept is represented by two higher-order factors, Instrumental Performance Self-Concept and Non-instrumental Performance Self-Concept. Instrumental Performance Self-Concept is defined primarily by self-concepts in instrument playing and reading music, whereas Non-instrumental Performance Self-Concept is defined primarily by self-concepts in singing and creating dance movements. Instrumental and non-instrumental self-concepts are also correlated with music listening, composing, and overall music self-concept. This self-concept hierarchy is hypothesized to extend further downward, focusing on increasingly more specific skills at each successive level. It is emphasized, however, that the music hierarchy described here is only one of many possible hierarchies that might represent music self-concept and that such hierarchies may vary across individuals and/or groups.
3. Music self-concept is *part of a larger and more comprehensive self-concept hierarchy* (see Figure 2). In this hierarchy, music self-concept is part of a higher-order artistic factor. Music self-concept's linkage to this hierarchy is weak, however, in that artistic self-concept accounts for only a modest proportion of the variability in music self-concept scores.
4. Music self-concept's relations with overall self-concept are *mediated* by involvement and interest in music, and by the importance ascribed to doing well in music. To date, based on samples of middle and junior high school students, I have found evidence supporting the mediating role of domain importance, involvement, and interest for perceptions of instrument playing, music reading, listening, and overall music skills. These relations and interpretations, however, need to be verified in future studies involving individuals spanning a wider range of age levels.
5. Facets of music self-concept are *differentiated* from each other and from other facets of self-concept and other constructs to which they are theoretically related (music achievement, interest in music, attributions for success and failure in music, etc.). Although it is beyond the scope of this article to describe the relationships between music self-concept and other constructs in detail, one would expect music self-concept to be more strongly related to achievement in a music class than to achievement in a math class, and more strongly related to interest in music than to interest in math, and so forth.

In sum, I hypothesize that music self-concept is organized, multifaceted, hierarchically structured, and differentiated, and that relationships between music and higher-order facets of self-concept are mediated to some degree by domain importance. These hypotheses and their corollaries encompass ideas advocated by Harter (1986) as well as most features of the Shavelson et al. (1976) model.

My model, however, differs from the Shavelson et al. (1976) model in two ways. First, I did not distinguish between "descriptive" and "evaluative" components of music self-perceptions, because music self-concept instruments predominantly measure the "evaluative" dimension. Although the descriptive and evaluative components of self-concept can be distinguished conceptually,

these distinctions have yet to be established empirically in any self-concept domain. Moreover, researchers continue to use the terms "self-concept" (self-description and self-evaluation) and "self-esteem" (self-evaluation) interchangeably.

Second, I did not hypothesize that general components of music self-concept are more stable than specific components because Marsh (1993b, p. 94) has found some evidence to the contrary in studies of non-artistic domains using the SDQ-III. Marsh notes, for example, that General Self-Concept scores have lower long-term stability than do other SDQ-III scores, even though the General Self-Concept scale has nearly the highest internal consistency.[9] Marsh speculates that these results may indicate that scales targeted at general levels may be particularly susceptible to response biases, mood fluctuations, and other short-term time-specific influences. It seems appropriate, then, to wait to address the relative stability of global and specific facets of music self-concept scores in future research.

Concluding Remarks

In this brief review of self-concept research, I integrated ideas from recent models of self-concept into a theoretical framework for conceptualizing music self-concept. This review emphasized a psychometric approach to self-concept theory in which development and change in self-concept theory and instrumentation go hand in hand. An important assumption guiding this review was that high-quality instruments and an understanding of their internal structure and statistical properties are prerequisites to fostering progress in understanding self-concept.

A major theme throughout this review is that self-concept cannot be understood adequately unless it is viewed as a multifaceted construct; this applies to self-perceptions both within and outside of music. Recent studies of music self-concept discussed here provide clues about the possible structure of music self-concept and its relations to other facets of self-concept, but additional research is needed regarding many other central issues, including:

- changes in music self-concept from infancy through adulthood;
- the nature of and reasons for ethnic, cultural, and gender differences in music self-concept;
- the short- and long-term effects of interventions designed to enhance music self-concept; and
- the interrelations and potential causal connections between music self-concept and achievement.

The theoretical framework outlined here may provide a useful starting point for addressing these and other important issues related to music self-concept.

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Notes

1. The reader is referred to Hattie (1992), Marsh (1990a), Suls and Greenwald (1986), and Suls (1993) for more extended reviews of recent self-concept research outside of music.

2. A popular technique for assessing global aspects of self-concept pioneered by Rosenberg (1965) and adopted in many recently developed multidimensional self-concept inventories is to create separate unidimensional subscales that measure the global constructs directly. In measuring global self-esteem, for example, one might use items such as "I have a good overall self-concept," "I am self-accepting," "I have a lot of good qualities," and so forth. This approach overcomes, in some ways, the problem of individual differences in the way discrete components of self-concept are weighted and hierarchized in forming global self-appraisals because respondents focus strictly on the global aspects of self rather than its individual elements. This technique was used in creating the Self-Esteem scales in the SDQ inventories, the Global Self-Worth scales in Harter's inventories, the General School Ability scales in the SDQ and ASDQ inventories, all subscales in the ASPI instruments, and the Overall Music Skill scale in the MUSPI instruments (see Table 1).

3. Other hierarchical self-concept models in the literature include those by Epstein (1973), L'Ecuyer (1981), and Song and Hattie (1984).

4. See Marsh (1990a) for a comprehensive review of this research.

5. A factor analysis of responses to the *Measure of Self-Esteem of Musical Ability* reported by Schmitt (1979) revealed three underlying factors which she described as (I) Self-Confidence and Interest in Music, (II) Musical Skills and Abilities,

and (III) Feelings of Acceptance and Reinforcement by Parents, Teachers, and Friends.

6. I recently developed scales for the ASPI and MUSPI that assess actual and ideal levels of involvement and interest in each assessed area. The MUSPI also has new scales that assess the perceived importance of each subdomain-specific aspect of music self-concept (instrument playing, singing, etc.) in determining how good respondents feel about their overall music abilities.

7. A hierarchical model with a single second-order factor (General Music Self-Concept) linked to all seven first-order factors also was examined in Vispoel (in preparation b). It accounted for 88.5 percent of the correlation among first-order factors, 24.4 percent of the variance in singing self-concept scores, and 10 percent of the variance in dance movement self-concept scores. The hierarchical model shown in Figure 3 accounted for 96 percent of the correlation among first-order factors, 61.6 percent of the variance in singing self-concept scores, and 33 percent of the variance in dance movement self-concept scores.

8. Research cited by Marsh (1990a, pp. 105-106) based on the SDQ instruments indicates that self-concept becomes increasingly differentiated through early preadolescence but not beyond this age level.

9. The Self-Esteem scale from the SDQ-III is considered to be a measure of general self-concept. Terms such as self-esteem and general self-concept are often used interchangeably in the self-concept literature.

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