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Content Validation of the Community College Student Success Program Inventory

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Abstract

This study reports on the content validation of the Community College Student Success Program Inventory (CCSSPI), a structured interview protocol for program personnel, designed to serve as a tool for researchers and practitioners alike to account for critical features of various types of student success programs in detailed and comparable ways across multiple sites. In all, 20 subject matter experts (SMEs) rated the relevancy and clarity of each item to ascertain essential program features. Content validity index (CVI) and scale-level index scores (S-CVI) were calculated. Results showed high to moderately high validity for items related to course goals, logistics, skills-focused curricular items, and academic and student services. Other contingent facets—collaborative and contextualized learning, co-curricular and community activities, ancillary instruction, and instructor role—were rated as less valid, depending on program goals. The instrument is recommended for use in multisite qualitative or mixed-methods research and institutional improvement.

The Community College Student Success Program Inventory

The exigencies of the completion agenda and community colleges' ever-evolving strategies to fulfill their mission of true college access have led to the search for *high-impact practices* (HIPs) including first-year seminars, college skills courses, learning communities, and co-requisite support courses for developmental education, among others that are receiving renewed attention by practitioners and researchers (Crisp & Hatch, 2016; Kuh, 2008). The research literature largely shows these programs do make a difference (Crisp & Taggart, 2013), though it is not clear to what extent (Robbins, Oh, Le, & Button, 2009), why the impact may be short-lived or long-lasting (Karp, Raufman, Efthimiou, & Ritze, 2016; Weiss et al., 2015), or to what extent effects are due to student or program differences (Pike, Kuh, & McCormick, 2011; Porter & Swing, 2006). To address these limitations, researchers have called for larger-scale studies across multiple sites that better account for programmatic features. Yet, at the same time, there is a lack of methodological proposals to do so. The Community College Student Success Program Inventory (CCSSPI), a protocol for structured interviews of program personnel, was developed to fill this gap and serve as a tool for researchers and practitioners alike to account for critical features of student success programs in detailed and comparable ways. The CCSSPI was the result of an extensive literature review and multiple empirical studies (Center for Community College Student Engagement [CCCSE], 2012; Hatch, 2016; Hatch & Bohlig, 2015, 2016; Hatch, Mardock-Uman, Garcia, & Johnson, in press).

The purpose of this study was a content validation (Wynd, Schmidt, & Schaefer, 2003) of the CCSSPI to determine the extent to which the instrument adequately accounts for its domain of interest: in this case, the goals, curricular and pedagogical features, and logistical mechanisms that characterize student success programs in comparable ways. In recognition of the socio-cultural nature of student success programs that ultimately are designed to make explicit often unspoken norms and expectations of college-going as a form of learned social literacy (Gildersleeve, 2010; Hatch, 2016), the CCSSPI relies on the framework of activity theory (Engeström, 2000; Leont'ev, 1978) to specify which features to account for. Activity theory postulates that what distinguishes one activity from another is the difference between their objectives that shape their nature and direction (Leont'ev, 1978). This allows us to conceptualize various student success programs, despite their particulars, as instances of a broader type of activity precisely because they are designed around the common objectives of fostering college knowledge, skills, and support networks. According to activity theory, the features of student success programs can be operationalized in regard to an activity's *participants* (students and instructors alike), its mediating *artifacts* (e.g., curricular tools), the *rules* and social conventions that shape how participants carry out the activity (e.g., the syllabus, duration, academic credit), the *community* within which and for which the activity takes place (e.g., connections to the campus and community), and the *division of labor* within the activity (e.g., auxiliary instruction, tutoring). The CCSSPI can be used and analyzed following this or other frameworks, precisely in accordance with activity theory that is scalable to the task at hand, and meant to be used for institutional improvement generally (Engeström, 2000; Roth & Lee, 2007).

Method

Researchers provided a copy of the instrument in electronic form to community college practitioners and research scholars—subject matter experts (SMEs)—with an explanation of its purpose and method of administration. The Web-based survey utilized prompts for SMEs to rate each CCSSPI item in terms of its relevance to the goal of understanding the nature and design of college success programs, along with an open-ended question to gather qualitative data about each item's clarity. In all, 20 SMEs participated, including 12 instructional administrators, five researchers, two academic advisors, and one instructor/designer (Five of the other SMEs also indicated instructor/ designer roles.).

Following the examples of Harris and Wood (2014) and Wood, Reid, Harris, and Xiong (2016), two types of validation scores were calculated: a content validity index (CVI) for each item, and an averaged scale-level index (S-CVI) for five factor-based content areas according to Hatch and Bohlig (2016). CVI measures represent the number of SMEs who rated an item as valid (*highly relevant* or *relevant*) divided by all ratings, including invalid ones (*somewhat relevant* or *not relevant*). There is no common, agreed-upon threshold for CVI scores, though some scholars (Harris & Wood, 2014; Polit & Beck, 2006; Polit, Beck, & Owen, 2007; Wood et al., 2016) have identified .80 following Davis's (1992) suggestion or .78 following Lynn (1986). However, it seems .78 simply happens to be the lowest figure in Lynn's (1986) chart, and even more reviewers would allow for lower thresholds. For example, Lawshe's (1975) sliding scale shows that a CVI score of .42 may be acceptable for an instrument with 20 SMEs.

Results

The first content area in the CCSSPI concerns overall goals and purposes of student success programs (Table 1). All of the items had high CVI scores, except for whether the program "[involves] students with big questions beyond the classroom" (CVI = .60). It was not clear to some SMEs what this notion referred to, though it came verbatim from empirical evidence of instructors' purposes (Hatch et al., in press). The next section of the CCSSPI (Table 2) covers nine logistical facets of student success programs' norms and the size and scope of its sociocultural context. All but seven of these had high CVI scores except for whether the course/program has an online component (CVI = .74) and if so, to what extent students dedicate time to online activity (CVI = .68). Indeed, online modalities are rare, though increasingly more common (CCCSE, 2012; Young & Keup, 2016).

Tables 3–7 present items reflecting the five factor-based scales of curricular and programmatic elements outlined by Hatch and Bohlig (2016). SMEs overwhelmingly agreed that most of the curricular

Table 1. Goals and characteristic activities.

Item	M	SD	CVI
1.1 In your words, after the course/program is completed and the students move on, what do you hope or expect to be the ultimate outcome for them?	3.50	.76	.95
1.2 Moving from the long-term outcomes, to thinking about day-to-day activities to achieve those outcomes: What are some of the most prominent activities that you do in class to help you achieve the overall purpose of the course/program?	3.67	.49	1.00
1.3 Becoming self-aware is a major theme or goal that characterizes this class.	3.37	.68	.89
1.4 Acquiring skills is a major theme or goal that characterizes this class.	3.40	.82	.90
1.5 Developing an identity as a college student is a major theme or goal that characterizes this class.	3.30	.66	.90
1.6 Gaining confidence (self-efficacy) is a major theme or goal that characterizes this class.	3.65	.49	1.00
1.7 Establishing a support network is a major theme or goal that characterizes this class.	3.60	.50	1.00
1.8 Gaining a vision is a major theme or goal that characterizes this class.	3.15	.67	.85
1.9 Establishing a plan is a major theme or goal that characterizes this class.	3.65	.49	1.00
1.10 Involving students with big questions beyond the classroom is a major theme or goal that characterizes this class.	2.70	.80	.60
1.11 Something else (Write in) is a major theme or goal that characterizes this class.	3.13	.99	.88

Table 2. Logistics.

Item	M	SD	CVI
2.1 Is the course required or optional for those who enroll?	3.40	.75	.85
2.2 How long does the course/program last?	3.25	.64	.90
2.3 How often and for how long do students attend class?	3.21	.85	.84
2.4 Does the course/program have an online component?	2.95	.71	.74
2.5 If on-line component, how often and for how long do students dedicate to on-line activity?	2.79	.79	.68
2.6 How much time per week are students expected to dedicate to this class outside of class time?	3.32	.75	.84
2.7 Is this program/course linked to other programs such as in a learning community or paired with developmental coursework? (If yes, in what way?)	3.26	.81	.79
2.8 How many students are enrolled in the course/program?	3.05	.85	.79
2.9 How many students typically attend class or participate actively?	3.21	.98	.84

Table 3. College success skills.

Item M	SD	CVI	S-CVI	
3.1 Time management skills	3.75	.44	1.00	–
3.2 Study skills	3.65	.49	1.00	–
3.3 Note-taking skills	3.55	.51	1.00	–
3.4 Test-taking skills	3.50	.51	1.00	–
3.5 Research skills or use of information resources (such as using the library, finding, and evaluating sources)	3.50	.61	.95	–
3.6 Basic technology skills (such as using the Internet, word processing)	3.30	.66	.90	–
3.7 Oratory or presentation skills	2.75	.91	.55	–
3.8 Debate skills	1.90	.85	.20	–
3.9 Trust or confidence building activities	3.00	.92	.80	–
3.10 Learning style assessment	2.90	.85	.70	–
3.11 Identification of personal strengths and challenges	3.50	.61	.95	–
Total S-CVI				.82

features of college success skills (Table 3) and academic and student services (Table 4) were relevant or highly relevant aspects, leading to high CVI scores and thus high validity. Some clear exceptions were oratory or presentation skills (CVI = .55) and debate skills (CVI = .20). Qualitative comments revealed that “group academic advising” (CVI = .60) would be more relevant if focused on individual academic advising instead. Still, the S-CVIs of both areas show moderately high validity.

Table 4. Academic and student services.

Item	M	SD	CVI	S-CVI
4.1 Development of a written individual academic plan	3.60	.60	.95	–
4.2 Information about and/or use of the college's academic support services	3.80	.41	1.00	–
4.3 Information about and/or use of the college's personal/social support services	3.35	.75	.85	–
4.4 Group academic advising	2.90	.97	.60	–
4.5 Career orientation or counseling	3.10	.79	.75	–
4.6 Training of online learning skills (e.g., course management system, "netiquette," constructive discourse)	3.15	.67	.85	–
Total S-CVI				.83

Table 5. Collaborative and contextualized learning.

Item	M	SD	CVI	S-CVI
5.1 Assigned group projects/assignments	3.20	1.01	.70	–
5.2 Assigned study groups outside of class time	2.45	1.15	.45	–
5.3 Common readings (coordinated with another class/session/instructor)	2.65	1.04	.55	–
5.4 Assignments focused on a common theme (coordinated with another class/session/instructor)	2.70	1.03	.60	–
5.5 Contextualized curriculum or discipline-related content and activities	3.15	1.09	.80	–
Total S-CVI				.62

Table 6. Co-curricular and community activities.

Item	M	SD	CVI	S-CVI
6.1 Campus or community service project(s)	2.45	.76	.50	–
6.2 Participation in campus activities/events/groups outside the classroom	2.80	1.01	.60	–
6.3 Service learning	2.40	.94	.50	–
Total S-CVI				.53

Table 7. Ancillary instruction.

Item	M	SD	CVI	S-CVI
7.1 Mentoring	3.00	.82	.79	–
7.2 Tutoring	3.32	.67	.89	–
7.3 Supplemental Instruction	2.68	1.00	.63	–
Total S-CVI				.77

For the pedagogical features of *collaborative and contextualized learning* (Table 5), *cocurricular and community activities* (Table 6), and *ancillary instruction* (Table 7), SMEs found less relevancy. Only “contextualized curriculum or discipline-related content and activities” (CVI = .80) and “Tutoring” (CVI = .89) were rated as highly valid. Several write-in notes made it clear that SMEs saw many of the features in these areas as highly contingent, depending on the particular program or course goals. Notably, in relation to *co-curricular and community activities* (S-CVI = .53), one SME noted that these elements are add-ons (“A great course could have these elements or not”), while another noted they could be serious distractions (“[if these are] crammed into it . . . you tend to lose the focus on the real important items”). These ratings do reveal the rarity of such features (Hatch & Bohlig, 2016). However, emerging evidence shows that they actually may have much more influence on engagement and meta-cognitive learning than skills-focused curricular items (Hatch, 2017; Hatch, Garcia, Mardock-Uman, Rodriguez, & Young, 2017).

Table 8. Instructor role.

Item	M	SD	CVI
8.1 Job title (e.g., instructor, counselor)	2.50	1.00	.55
8.2 Primary designation of job title (academic or student affairs)	2.65	.93	.65
8.3 Full-time or part-time appointment	2.75	1.21	.55
8.4 Number of times taught this college success course	2.75	1.16	.60
8.5 Percentage of course designed by instructor vs. someone else	2.65	1.14	.65

Table 8 relates to the instructor role in the course, which are key decision points in practice (Song, Price, & Dodrill, 2016) but rarely raised in research. SMEs did not rate these as highly valid topical areas, though the write-in commentary revealed it may be due to the complex process of course design and development.

Implications for use of the CCSSPI

The purpose of this study was to examine the content validity of the CCSSPI. Results showed high to moderately high CVI scores for items related to course goals, logistics, skills-focused curricular items, and academic and student services. Other facets—collaborative and contextualized learning, co-curricular and community activities, ancillary instruction, and instructor role—were mixed or poorly rated according to traditional CVI cut-off scores, in large part due to the contingency of many of the items in relation to program goals.

Relatively low CVI scores can be interpreted in a few ways. Most directly, low CVI scores indicate questionable validity of the items. However, qualitative data suggested that SMEs may have tended to score items as less relevant due in part to their rarity, which agrees with the relative frequency of course features in national surveys (CCCSE, 2012; Hatch & Bohlig, 2016; Young & Keup, 2016). Because the conceptualization and definitions of these programs are fluid and contested (Hatch, 2016), and because there were double the number of SMEs than in typical content analyses, which arguably led to lower relative acceptable CVI scores in the range of .42 (Lawshe, 1975), we argue that the instrument's content, though not appropriate for a closed-ended survey, is valid for limited purposes. Namely, in accordance with mixed-methods approaches (Sandelowski, Voils, & Knafl, 2009) and qualitative magnitude and hypothesis coding approaches (Saldaña, 2013; Weston et al., 2001), there is evidence the CCSSPI has sufficient content validity for the purpose of a structured interview protocol to account for recognized and contingent programmatic features of student success programs in comparable and systematic ways.

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