2017

Content Validation - Community College Instructional Development Inventory

J. Luke Wood
Soua Xiong
Frank Harris III, *San Diego State University*
Nexi Delgado, *San Diego State University*

Community College Instructional Development Inventory (CC-IDI)

CCEAL

Soua Xiong, Nexi Delgado
J. Luke Wood, and Frank Harris III

This white paper describes the development and content validation of the Community College Instructional Development Inventory (CC-IDI). The CC-IDI is an institutional assessment tool designed to inform professional development programming for instructional faculty. The instrument was developed to serve as a standardized assessment tool to determine the efficacy of community college faculty instruction and encourage institutional professional development.

Assessing Faculty Professional Development Needs

The CC-IDI features items and scales that have been indicated to promote successful teaching practices for underserved students in the community college. Content validity of the CC-IDI was employed to determine the extent to which the instrument measures what it is designed to measure (Davis, 1992; Grant & Davis, 1997; Waltz, Strickland, & Lenz, 2005).

The instrument was developed based on a literature review of community college teaching practices commonly employed to serve students of color. The authors evaluated whether the CC-IDI instrument adequately assess faculty instructional practices in and out of the classroom.

The operationalization and measurement was informed by research published on underserved students in the community college (Bush & Bush, 2010; Flowers, 2006; Hagedorn, Maxwell, & Hampton, 2001; Harris & Harper, 2008; Vasquez Urias, 2012; Wood & Essien-Wood, 2012; Wood & Harris, 2013; Wood, 2012). The literature review revealed faculty student engagement as a key outcome.

The researchers distributed the CC-IDI instrument via Qualtrics to subject matter experts (SMEs) determine the validity of the instrument's content. The SMEs were identified based on scholars who have a history of conducting research and evaluation of teaching practices targeted at students of color in higher education. SMEs were asked to rate constructs employed in the CC-IDI using multiple items. SMEs rated the relevance of each item using a 4-point scale. Items were rated not relevant (coded 1), somewhat relevant (coded 2), relevant (coded 3), and highly relevant (coded 4). Eleven SMEs participated in the content validation of the CC-IDI.

Content validity index (CVI) scores and scale-level index (S-CVI) scores were calculated to assess the inter-rater reliability of the items and constructs. The CVI scores were used to calculate the content validity for individual items based on proportion of satisfactory SME ratings. Inadequate item scores of 1 and 2 were recoded as 0, and satisfactory item scores of 3 and 4 recoded as 1. CVI scores were then calculated by dividing the total adequate scores by the total scores (Lynn, 1986; Waltz et al., 2005). Lynn (1986) noted that CVI scores should be at .78 or higher, though Lawshe (1975) employed a score of .59 or higher as an acceptable threshold, whereas scores below 0.59 were considered having weak validity.

S-CVI scores were calculated by averaging the CVI scores for a given construct. Scores of .90 or above are considered optimal (Polit, Beck, & Owen, 2007), scores of .80 are acceptable (Davis, 1992), and scores below .80 were interpreted as demonstrating weak validity.

The CC-IDI consisted of 84 items intended to measure 14 instructional practices. All 84 items were employed for analysis. Constructs included: collaborative learning, personal relationships, validating messages, students authentic care for faculty, authentic care for students, academic challenge, academic support, empowerment, performance monitoring, faculty-student engagement, institutional responsibility vs. student responsibility, collectivist vs. individualistic, microaggressions, and culturally relevant teaching. Definitions for the constructs appear in Table 1.

Table 1

Constructs and operational definitions employed in the Community College Instructional Development Inventory (CC-IDI)

Construct	Total Items	Operational Definitions
Collaborative Learning	4	How often a faculty member employs collaborative learning techniques in the classroom
Personal Relationships	6	The percentage of students of which faculty have a personal relationship
Validating Messages	7	The relevance faculty member perceives validating messages as an important practice
Students Authentic Care for Faculty	7	The percentage of students of which the faculty member perceives care for them
Authentic Care for Students	6	The percentage of students of which a faculty member cares for
Academic Challenge	5	The percentage of time of which the faculty dedicates towards challenging students
Academic Support	10	How often a faculty member provides academic support during the semester
Empowerment	5	How often a faculty member employs learning opportunities that empower students
Performance Monitoring	10	How often a faculty member employs performance monitoring during the semester
Faculty-Student Engagement	4	The percentage of students of which the faculty member engages with
Institutional Responsibility vs. Student Responsibility	4	The degree to which faculty orient towards institutional or student responsibility
Collectivist vs. Individualistic	5	The degree to which faculty orient towards collectivist or individualistic philosophies
Microaggressions	7	How often a faculty member has been made aware of microaggressions from students
Culturally Relevant Teaching	4	The degree of importance a faculty member perceives culturally relevant teaching as an important practice

Table 2

CC-IDI Content Validity Index (CVI) and Scale-Level Index (S-CVI) Scores

Construct	Total Items	Mean Ranges	CVI Range	S-CVI
Collaborative Learning	4	3.00-3.73	0.63-0.91	0.80
Personal Relationships	6	3.27-3.55	0.82-1.00	0.89
Validating Messages	7	3.30-3.60	0.80-0.90	0.83
Students Authentic Care for Faculty	7	2.36-3.27	0.45-0.82	0.69
Authentic Care for Students	6	3.56-3.89	0.89-1.00	0.96
Academic Challenge	5	3.45-3.91	0.82-1.00	0.95
Academic Support	10	3.27-3.73	0.82-1.00	0.89
Empowerment	5	2.80-3.60	0.70-1.00	0.90
Performance Monitoring	10	3.20-3.90	0.70-1.00	0.91
Faculty-Student Engagement	4	3.30-3.70	0.80-1.00	0.90
Institutional Responsibility vs. Student Responsibility	4	3.20-3.90	0.90-1.00	0.95
Collectivist vs. Individualistic	5	2.40-3.40	0.40-0.90	0.70
Microaggressions	7	3.82-4.00	0.64-1.00	0.95
Culturally Relevant Teaching	4	3.73-4.00	0.91-1.00	0.98

The mean scores for construct items, CVI scores, and S-CVI scores appear in Table 2. The lowest mean ranges for item scores were for students authentic care for faculty and empowerment. Both constructs had item means as low as 2.36 and 2.80 respectively. In contrast, most mean scores ranged from 3.00 and above. CVI scores were assessed on a scale from .59 to .78 and above, representing moderate and strong CVI scores.

The lowest CVI score ranges were students authentic care for faculty, and collectivist vs individualistic with scores from 0.45 to .82 and .40 to .90 respectively. Thus, items in the constructs met the threshold of weak validity. Other constructs such as collaborative learning, empowerment, performance monitoring, and microaggressions had items that met above the .59 threshold, but were below the .78 threshold, thus not meeting strong validity standards.

Thus, CVI scores for all other constructs demonstrated strong content validity. S-CVI scores, scores were assessed on a scale from .80 to .90 and above, representing moderate and strong scores. Two constructs, students authentic care for faculty and collectivist vs. individualistic showed weak content validity. Four constructs, collaborative learning, validating messages, academic support, and personal relationships showed moderate content validity. Eight constructs, authentic care for students, academic challenge, empowerment, performance monitoring, faculty-student engagement, institutional responsibility vs. student responsibility, microaggressions, and culturally relevant teaching showed strong content validity.

Implications

The main findings of the study demonstrated that content for 12 out of 14 constructs of faculty instructional practices were determined valid for faculty professional development.

Thus the content validation results indicated that the CC-IDI has an overall moderate to strong validity. Weak S-CVI scores were found for the constructs students authentic care and collectivist vs. individualistic orientation blocks. Future iterations of instrument would need to refine or remove the constructs.

The instrument demonstrated strong content validity. It is recommended that community colleges consider employing the instrument to assess the instructional practices of faculty and further invest in professional development in areas in which faculty are lacking. This tool can better enable community colleges to prepare their faculty to instruct students of color.

Nonetheless, the CC-IDI has utility as an assessment tool for faculty serving college students of color. Community colleges can use the instrument to inform training and professional development programs to advance success outcomes for students of color in the community college. The CC-IDI should be used to assess community college faculty teaching practices.

Community colleges could then utilize the CC-IDI to create a baseline and proceed with multiple assessments over time. In addition to using the CC-IDI to assess the effectiveness of current teaching practices, community colleges could also use the survey instrument to help guide the development of future classroom structures as well. With the development of the CC-IDI, it is hoped that community colleges will now have a valid and reliable tool to assess the efficacy of faculty teaching practices serving college men of color.

References

Bush, E. C., & Bush, L. (2010). Calling out the elephant: An examination of African American male achievement in community colleges. *Journal of African American Males in Education, 1*(1), 40–62.

Center for Urban Education. (2010). *STEM Toolkit-SAIs*. Los Angeles, CA: Rossier School of Education, University of Southern California.

Davis, L. L. (1992). Instrument review: Getting the most from your panel of experts. *Applied Nursing Research, 5*(4), 194–197.

Digest of Education Statistics. (2010). *Chapter 3: Postsecondary education*. Washington, DC: National Center for Education Statistics, U.S. Department of Education.

Flowers, L. A. (2006). Effects of attending a two-year institution on African American males' academic and social integration in the first year of college. *Teachers College Record, 108*(2), 267–286.

Glenn, F. S. (2003–2004). The retention of Black male students in Texas public community colleges. *Journal of College Student Retention, 5*(2), 115–133.

Grant, J. S., & Davis, L. T. (1997). Selection and use of content experts in instrument development. *Research in Nursing & Health, 20*(3), 269–274.

Hagedorn, S. L., Maxwell, W., & Hampton, P. (2001). Correlates of retention for African-American males in the community college. *Journal of College Student Retention, 3*(3), 243–263.

Harper, S. R., & Kuykendall, J. A. (2012). Institutional efforts to improve Black male student achievement: A standards based approach. *Change, 44*(2), 23–29.

Harris III, F., & Harper, S. R. (2008). Masculinities go to community college: Understanding male identity socialization and gender role conflict. *New Directions for Community Colleges, 142*, 25–35.

Harris, F., III, & Wood, J. L. (2013). Student success for men of color in community colleges: A review of published literature and research, 1998–2012. *Journal of Diversity in Higher Education, 6*(3), 174–185.

Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel Psychology, 28*(4), 563–575.

Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing Research, 35*(6), 382–385.

Mason, H. P. (1998). A persistence model for African American male urban community college students. *Community College Journal of Research and Practice, 22*(8), 751–760.

Perrakis, A. I. (2008). Factor promoting academic success among African American and White male community college students. In J. Lester (Ed.), *Gendered perspectives on community colleges, New Directions for Community Colleges, no. 142* (pp. 15–23). San Francisco, CA: Jossey-Bass.

Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health, 30*(4), 459–467.

Vasquez Urias, M. (2012). The impact of institutional characteristics on Latino male graduation rates in community colleges. *Annuals of the Next Generation, 3*(1), 1–12.

Waltz, C. F., Strickland, O. L., & Lenz, E. R. (2005). *Measurement in nursing and health research* (3rd ed.) New York, NY: Springer.

References

Wood, J. L., (2011, October 13). Falling through the cracks: An early warning system can help Black males on the community college campus. *Diverse Issues in Higher Education, 24.*

Wood, J. L. (2012). Leaving the two-year college: Predictors of Black male collegian departure. *The Journal of Black Studies, 43*(3), 303–326.

Wood, J. L., & Essien-Wood, I. R. (2012). Capital identity projection: Understanding the psychosocial effects of capitalism on Black male community college students. *Journal of Economic Psychology, 33*(3), 984–995.

Wood, J. L., & Harris, F., III. (2013). The Community College Survey of Men: An initial validation of the instrument's non-cognitive outcomes construct. *Community College Journal of Research and Practice, 37*(4), 333–338.

Wood, J. L., & Hilton, A. A., & Lewis, C. (2011). Black male collegians in public two-year colleges: Student perspectives on the effect of employment on academic success. *National Association of Student Affairs Professionals Journal, 14*(1), 97-110.

Wynd, C. A., Schmidt, B., & Schaefer, M. A. (2003). Two quantitative approaches for estimating content validity. *Western Journal of Nursing Research, 25*(5), 508– 518.

Soua Xiong – Research Associate
Nexi Delgado – Research Associate
J. Luke Wood – Co-Director
Frank Harris III – Co-Director

Community College Equity Assessment Lab
San Diego State University
5500 Campanile Drive, EBA 210
San Diego, CA 92115

www.cceal.org