A Validation Study of Instruments for Measuring Student and Teacher Perceptions of Reading Instructional Practices

Patricia F. Wood, Ph.D.
Samford University
Carol L. Tieso, Ph.D.
The College of William and Mary

Purpose of the Study

The purpose of this study was to validate results from two instruments designed to measure:

1. elementary students’ perceptions of their classroom reading activities
2. teachers’ reported practices in reading instruction with gifted and high-ability readers

Background

- Reading curriculum and instructional practices typically focus on struggling and at-risk readers (National Reading Panel, 2000; Wood, in press).
- Research findings indicate few modifications are made for gifted learners in the general education classroom (Archambault et al., 1993).
- There is a lack of instrumentation for measuring student attitudes toward their reading class and teacher practices with gifted/high-ability readers.

Gaps in the Literature

- Reading research has focused primarily on comprehension and achievement, particularly with struggling and at risk readers, with scant consideration for motivational aspects of reading (Wigfield & Guthrie, 1997).
- Few studies have addressed differentiated reading instruction for meeting the needs of gifted and high-ability readers (Reis et al., 2004).

Research Questions

1. What are the psychometric properties of the My Reading Class Activities (MRCA) questionnaire?
2. What are the psychometric properties of the Classroom Reading Instructional Practices (CRIP) questionnaire?

Patricia F. Wood
Samford University
Carol L. Tieso
The College of William and Mary

Instrument Development

- Literature review pertinent to reading instructional practices with gifted readers; reading motivation; and student attitudes toward learning tasks (Kush & Watkins, 1996; McKenna et al., 1995; National Reading Panel, 2000; Reis et al., 2004; Schiefele, 1991)
- Examination of existing instruments which measure student attitudes toward their reading class activities and current teacher practices with gifted readers (Haladyna & Thomas, 1978; McKenna & Kear, 1990)
A Validation Study of Instruments for Measuring Student and Teacher Perceptions of Reading Instructional Practices

AERA 2008
New York, NY

Patricia F. Wood
Samford University
Carol L. Tieso
The College of William and Mary

Content Validity
- Literature review
- Content experts (reading and gifted education)
- MRCA: 50 items initially, reduced to 35
- CRIP: 35 items initially, reduced to 31
- Constructs/Conceptual Definitions (Tables 1 & 2)
  - MRCA: interest, choice, challenge, enjoyment
  - CRIP: critical reading, choice, differentiation, grouping

Instrument Format
- Modeled after My Class Activities (Gentry & Gable, 2001)
- Five-point Likert type frequency response scale (1 = Never to 5 = Always)
- Student demographic data: age, grade, gender, school, reading level, ethnicity
- Teacher demographic data: grade level, number of gifted and/or high-ability readers in their class, years of teaching experience, and education degree

My Reading Class Activities (MRCA)
- Convenience sample: N = 577
- Gifted/high-ability readers in grades 2-8
- Nine schools from a southeastern state
- 48% male and 52% female
- 68% Caucasian, 21% African-American, 7% Asian-American, 4% Hispanic

Classroom Reading Instructional Practices (CRIP)
- Convenience sample: N = 195
- Teachers from grades 1-8
- 98% female and 2% male
- 64% Caucasian; 29% African American; 7% Hispanic/Other
- Teaching experience: 55% had 5 years or less; 26% had 10 or more years
- Degree: 68% had master’s degree or higher

Data Collection
- MRCA: Students completed the questionnaires in their gifted resource classrooms or with the investigator in settings outside of the general education classroom.
- CRIP: Teachers completed the questionnaires at after-school faculty meetings or at educational conferences.

Construct Validity
- MRCA: N = 577
- CRIP: N = 195

N:p ratio of 6:1 needed to produce a stable factor model (Gable & Wolfe, 1993).

Criteria was met with both sample sizes.
Data Analyses

MRCA: Tables 3 & 4
- Validity: CFA
  - $\chi^2$ (548) = 2012.04, $p < .0001$, (CFI = .97, PNFI = .87, and RMSEA = 0.068)
- Reliability: Cronbach’s alpha
  - Interest (.81)
  - Challenge (.79)
  - Choice (.76)
  - Enjoyment (.94)

Data Analyses

CRIP: Tables 5 & 6
- Validity: CFA
  - $\chi^2$ (195) = 751.90, $p < .0001$, (CFI = .92, PNFI = .66, and RMSEA = 0.074)
- Reliability: Cronbach’s alpha
  - Critical Reading (.86)
  - Choice (.81)
  - Differentiation (.77)
  - Grouping (.78)

Data Analyses

MRCA: Factor Pattern Coefficients (Table 7)
- Each of the 35 items loaded on its hypothesized factor and all factor parameters were at least .40
- All factor pattern coefficients were significantly different from zero and of the same direction, and all factor correlations were also significantly different from zero.

Data Analyses

CRIP: Factor Pattern Coefficients (Table 8)
- All but three of the 31 items loaded on the hypothesized factors and all factor parameters of at least .30. (Items 8, 14, & 15 were eliminated from analysis.)
- All factor pattern coefficients were significantly different from zero and of the same direction, and all factor correlations were also significantly different from zero.

Discussion

- CFA supported the factor structure of both affective instruments.
- Scale scores showed moderate to excellent levels of internal consistency for both instruments.

Implications

- MRCA could prove useful for teachers to gauge student attitudes toward classroom reading practices.
- CRIP could serve as a tool for principals and reading coaches to focus attention on ways teachers can modify instructional practices for advanced readers.
Limitations/Future Research

- Small sample sizes for both instruments, especially the teacher questionnaire, imposes constraints on the interpretation of the CFA results.
- Examination of concurrent validity needed to further establish the construct validity.
- Items on CRIP need to be refined in order to improve the construct validity.