Creating Data and Assessment Literate Teachers

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By: Kathryn Newman, Ph.D.
Elaine S. Foster, Ph.D.
Loretta Walton Jaggers, Ph.D.
Grambling State University

The problem:

- Many educators leave EPPs without adequate knowledge of assessments and are not data literate

- Without adequate knowledge, they competently use, analyze or evaluate assessment data necessary for progress monitoring and student evaluation

- In short, they cannot comprehend, analyze or evaluate assessments or the information they provide to make instructional decisions

- This was a finding of NCTQ.

Our institution

- Has had in place courses to support such learning
- Undergraduate and Post-baccalaureate certification
- For both general and special education certification areas
- PK-12
- Existed for many years, has been enhanced to meet new standards and challenges

Theoretical and Research Influences

- Bloom's Revised Taxonomy (2001)
- Craik & Lockhart "Levels of Processing" (1972)
- Gagne's *Nine Steps of Instruction*
- Current brain research on how perceptions can effect learning
- Vygotsky--Scaffolding
- Michelene Chi—Engaging Students to Promote Deeper Learning

Common Features:

- Developing, using, and revisiting background knowledge
- Ensuring understanding of foundational material
- Active use of UDL
- Active engagement and scaffolding
- Encouraging the manipulation of ideas, facts, figures
- Generation of conclusions based on data given
- "Cooking the frog" to change internal perceptions (amygdala)

Additional Common Features:

- Use of sequencing of content from previous class sessions and courses
- Multi-faceted and intensive focus, expectations to apply and transfer knowledge
- Task analysis, Practice and Review
- Case studies for analysis, evaluation and subsequent creation of new ideas
- Leading to course signature pieces involving actual implementation of learning

Developing Background Knowledge

Key Vocabulary + Examples given in class

- Assessment
- Evaluation
- Measurement
- Validity
- Reliability
- Aptitude Test
- Achievement Test
- Norm-Referenced

- Criterion Referenced
- Growth-Referenced
- Formal Assessments
- Informal Assessments
- Preliminary Evaluation
- Formative Evaluation
- Diagnostic Evaluation
- Summative Evaluation

More background knowledge

- Informed Consent and the Rights of Human Subjects
- Human subjects review training available for field experience credit through https://www.citiprogram.org/
- Threats and enhancements of internal and external reliability and validity
- Overview and initial in-class practice administering, scoring and interpreting of several formal assessments*

Review of Descriptive Statistics

- Measures of Central Tendency
- Understanding the theoretical Normal Curve
- Knowledge, Understanding, Computing and Analyzing & Critiquing various Standard scores
  - z-score, t-score, NCE, percentiles, age-equivalent, grade-equivalent
- In-class practice
- To be able to score and interpret actual formal tests

Signature Assessments

- Take the information, analyze the findings, create an instructional plan, and in several courses, evaluate the implementation of the instructional plan
- Three courses to be discussed--two undergraduate, one post-baccalaureate
- All designed for initial certification

First Undergraduate Course: ED 328 Issues & Practice in Assessment

- Basic Assessment course
- Developing working knowledge and understanding of terms, theories
- Analyzing, comparing and contrasting terms & theories
- Exposure to theory the "normal curve" and how it relates to students
- Review of basic descriptive statistics with case study practice
- Developing familiarity with formal assessments and their protocols.

First Undergraduate Course ED 328 Issues & Practice in Assessment

- Required Level II Field experience leads to the capstone project:

- Assessing a PK-12 student with at least one (1) formal and numerous informal assessments to create a plan in candidate's area of certification

- Other skills include to: Developing rapport, enhancing observational skills, working with the teacher, securing permissions, assessing, developing a plan, providing non-binding information to student, parent, & teacher, and always respecting confidentiality

Sample Subsequent Assessment Undergraduate Course— ED 431 Reading Diagnosis and Correction

- Focus is developing instructional strategies to remediate Reading/Language Arts skills in P-12 students
- Research Project for Assessing and Remediating Reading/Literacy Skills

- To identify and use *formal* and *informal* assessments to diagnose the reading performance of students

- To identify specific strategies and resources that may be used to remediate specific needs identified on the assessment

Course content contains three main phases:

- **Phase I**-Laying the Foundation for the Research Project

- **Phase II**- Gathering the Data

- **Phase III**-The Diagnostic-Remediation Connection: Identifying the Remediation Activities and Resources Based on the Results of the Diagnosis

Phase I—Foundation for the Research Project

- The *In Class* Experiences: Preparing for the Culminating Research Project
  - Lecture/Discussions
  - Cooperative/ Collaborative Learning Activities
  - Article Critiques and Reflections
  - Micro-Teaching of Creative Remediation Activities
  - Power-Point Presentations on the Development of Reading Skills
  - Course Assessments

Phase II– Gathering Data

- Meet with the classroom teacher at the elementary school to discuss the project

- Student/subject assigned for the research project

- Administer selected diagnostic measures at various intervals e.g.
  - IRI (Informal Reading Inventory)
  - Observation Checklist of student performance in the actual classroom setting
  - Reading Attitude Inventory
  - DIBELS Results (Dynamic Indicators of Basic Early Literacy Skills)
  - SORT (SLOSSON Oral Reading Test)
  - Self-Perception Inventory Toward Reading
  - Emergent Literacy Behavioral Checklist
  - Peabody Picture Vocabulary Test

Phase III--Assessment-Remediation Connection—One sample project Part A

- Results of Investigator #1
- Subject -3rd grade female student
  - Diagnostic measures and results
    - SLOSSON Word Attack Skills(Graded Word List) <u>3.6 level</u>
    - IRI-(Informal Reading Inventory)
      - Graded Word List (Word Attack Skills)   <u>3.0 Instructional Level</u>
      - Graded Passages (Comprehension Skills)   <u>3.0 Instructional Level</u>
      - Oral Reading (Reading Fluency)   <u>2.0 Instructional Level</u>

Phase III—Sample Project Part B

Further information gathered:

- Attitude Inventory and Self-Perception Inventory
  - Likes to be read to
  - Does not like to read aloud
  - Reading is not her favorite subject
  - Thinks that she is a good reader

Phase III– Sample Project Part C

- Remediation Needs-
- Vocabulary in Context
  - Consonant Blends
  - Short Vowel Sounds
  - Long Vowel Sounds
  - Enhance attitude toward reading
  - More guided oral reading exercises
  - Enhancement of Phonics Instruction

Phase III--Sample project Part D

- Suggested Instructional Strategies/Activities

  - Vowel Digraph Bingo
  - Winter CLOZE
  - Phonics Game
  - Comprehension Activity

Master of Arts in Teaching leading to Certification

- **The problem:**
  - The majority of the MAT candidates are novice teachers with limited experiences and interactions with diverse student populations
  - It is essential for them to become familiar with an operational definition of *Assessment* and associated terminologies such as *mean, median, mode, range, etc.*
  - Numbers/scores are a catalyst for invaluable information about each student.
  - What kind of information does the data reflect about each student and how can the data serve as a basis for achieving *Student Learning Targets*?

The course is EDPT 514

- MAT Candidates are exposed to content knowledge and pedagogical skills
- These skills are relevant to developing, selecting, and administering formal/informal assessments
- They serve as partial preparation for their transition into actual classroom settings.
- This occurs through course discussions, field experiences, and experiential learning with students that they are currently teaching.
- The final step is for them to transfer the knowledge from the course to their own classrooms

EDPT 514: Assessment Strategies for Diverse Learners

- The course is designed to acquaint MAT candidates with the fundamental concepts associated with the selection and application of assessment strategies used to enhance instruction and improve the academic achievement of diverse students in inclusive classroom settings.

- Emphasis is placed on **research, theory, and practice** relevant to assessments

Capstone Project

- **The Assessment/Impact Project** is the capstone project for the EDPT 514: Assessment Strategies for Diverse Learners course.
- The candidates' successful performance on this assessment ensures that he or she is competent in collecting, analyzing, and interpreting formative, summative, and informal assessment data
- The data are utilized for the purpose of guiding instructional decisions for students with mild disabilities, English language learners, as well as students without disabilities in inclusive classroom settings

Field Component is the Key

- **Diverse Field Experiences** are embedded throughout the EDPT 514 course to enhance the candidates' pedagogical skills/knowledge and professional preparation.
- Candidates are afforded opportunities to observe and engage in various activities that are specific to *Assessment Strategies, Data Driven Instruction, Types of Assessments and their Utilization, Progress Monitoring Techniques, Best Practices, and Assessment Interpretation*.
- Additionally, these experiences are designed to increase the candidates' efficiency and capabilities to provide successful learning outcomes for all students.

Outcomes

- Candidates are prepared to use, evaluate, and create assessment tools during student teaching and first year teaching
- Using skills in actual classrooms as new teachers
- Facility with data usage
- Provides foundations for leadership positions

THANK YOU!!!!

- Contact information:

- Kathryn Newman   newman@gram.edu
- Elaine S. Foster   fostere@gram.edu
- Loretta W. Jaggers   jaggerslw@gram.edu