THE CLINICAL SKILL ACQUISITION RUBRIC (CSAR)

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Financial Disclosure

None of the presenters have a relevant financial relationship with regards to the content of this presentation.
All of the presenters are employed by the University of Central Florida.

Non-Financial Disclosure

All of the presenters have developed and tested the system that is being presented.
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Anthony Kong, Ph.D., is an Associate Professor in the Department of Communication Sciences and Disorders at the University of Central Florida. His research interests include: discourse production in speakers with aphasia, development of clinical aphasia assessment tools and neurogenic communication disorders in multi-lingual speakers.
OBJECTIVES

- Distinguish gaps in the educators’ ability to critique clinical skill acquisition
- Identify benefits of a rubric based measure of clinical skill acquisition across a continuum of learning
- Describe the framework of the CSAR
- Discuss correlation findings of KASA and CSAR
RATIONALE FOR INSTRUMENT DEVELOPMENT

Backward Design
Continuum of Supervision
Objective Measurement
BACKWARD DESIGN

“One starts with the end - the desired results (goals or standards) - and then derives the curriculum from the evidence of learning (performances) called for by the standard and the teaching needed to equip students to perform”

(Wiggins & McTighe, 2005, p. 10)
BACKWARD DESIGN

1. Identify Desired Results.
2. Determine acceptable evidence.
3. Plan learning experiences and instruction.

(Wiggins & McTighe, 2005)
KEY QUESTIONS

(http://yorkscience.org.uk/backward-design)
SYNTHESIS

**Backward Design**
- “Specifics of instructional planning can be established only **AFTER** we identify desired results & assessments”
- “Establishment of concrete goals & standards in terms of assessment evidence”

*(Wiggins & McTighe, 2005, p. 19)*

**CSAR**
- Developed with the end in mind
- Inclusion of concrete target skills dictated from ASHA Standards
- Continuum of mandatory clinical skill acquisition necessary for advancement
Continuum of Supervision

(McCrea and Brasser, 2003)
OBJECTIVE MEASUREMENT

- Distinct clinical behaviors which are commensurate with level of experience
- Data driven clinical decision-making
- Allows for tracking clinical skill acquisition across all practica experience
Why Did We Develop the CSAR?

- The realization that our current system lacked inter-rater reliability (e.g., 3.5 to one educator is not the same).
- Subjective
- Challenges in defining student outcome measures that correspond to entry level through externship clinical practica experiences.
CSAR & INSTRUMENT DEVELOPMENT

Clinical Supervision and Assessment of Clinical Skill Acquisition

Key Constructs
WHAT IS THE EVIDENCE BASE FOR CLINICAL SUPERVISION?
KEY CONSTRUCTS

- Clinical Supervision: “an interactional process, emphasizing clinical teaching via ongoing assessment to facilitate and improve student learning and acquisition of clinical competencies” (McRea & Brasser, 2002).

- Clinical Competency: The American Speech Language Hearing Association (ASHA) states; “there are nine primary areas of study to attain critical knowledge and skills necessary for entry level speech-language pathology” (ASHA, 2008).
KEY CONSTRUCTS

- American Speech Language Hearing Association [ASHA] Standards: “for accreditation of academic programs in speech language pathology and audiology there is emphasis for ongoing formative and summative assessment and evaluation of trainees’ critical thinking, decision making, and problem solving skills for the purpose of “improving and measuring student learning” (ASHA, 2000a).
MEASURES OF CLINICAL SKILL ACQUISITION

- ASHA; the accrediting body for speech-language pathology and audiology requires: “applicants must obtain sufficiently supervised clinical experiences in which the supervisor provides guidance and feedback to facilitate the student’s acquisition of essential clinical skills” (ASHA, 2000a).

- Formative assessment measures of clinical skill acquisition have been identified; Clinical Supervision Methods in Speech-Language Pathology [CSMSLP] (Glaser & Donnelly, 1989) & COMPASS (McCallister, 2005).

- Need for the development of a measure of ongoing clinical skill acquisition that is both summative and formative across distinct levels (ASHA, 2008).
WHY IS THE CSAR UNIQUE?

- Although, researchers have developed assessment measures for evaluating clinical skill competencies of graduate students; there is a void in the development of both a formative and assessment tool across seven distinct levels of clinical learning.

- A rubric provides formative objective feedback with the identification of specific expected behaviors and how students’ performance compares to the expected behavior (*Hancock & Brundage, 2010*).

- Inclusion of concrete target skills dictated from ASHA Standards.
CLINICAL SKILLS ACQUISITION RUBRIC

CSAR
Instrument Overview Components
CSAR COMPONENTS

- **Key Objectives**
  - Behaviors derived from ASHA Standards
  - Two Clinical Check Points
  - Objective representation of expected clinical skills across the learning continuum

- **Clinical Benchmarks**
  - Specific clinical skills necessary for advancement across practica experiences
  - Identifiable levels of required expertise
  - Explicit inclusion of requisite knowledge and skills
  - Evidence of clinical skill acquisition achievement
WHY A SEVEN POINT SCALE?

- Seven levels reflect acquisition of clinical competencies from initial practica experience through externship placements

  Inspired by

  - ASHA National Outcome Measurement System (NOMS)
  - Functional Independent Measurement (FIM)
<table>
<thead>
<tr>
<th>Key Elements</th>
<th>Level I</th>
<th>Level II</th>
<th>Level III</th>
<th>Level IV</th>
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</thead>
<tbody>
<tr>
<td>Modes of Acquisition</td>
<td>Academic Lab, Online Modules, Simulation, UCF Clinic</td>
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<tr>
<td>Learning Objectives/Benchmarks</td>
<td>Dependent on Clinical Educator</td>
<td>Maximum assistance provided by Clinical Educator</td>
<td>Moderate assistance provided by Clinical Educator</td>
<td>Minimal assistance provided by Clinical Educator</td>
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<td>Level of Expertise</td>
<td>100% assistance</td>
<td>75-50% assistance</td>
<td>50-25% assistance</td>
<td>&lt; 25% assistance</td>
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<tr>
<td>Key Elements</td>
<td>Level V</td>
<td>Level VI</td>
<td>Level VII</td>
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<tr>
<td>Learning Objectives/Benchmarks</td>
<td>Semi-Independent from Clinical Educator</td>
<td>Independent from Clinical Educator with consultative guidance</td>
<td>Independent from Clinical Educator</td>
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<tr>
<td>Level of Expertise</td>
<td>20-10% assistance</td>
<td>10-0% assistance</td>
<td>Student initiated assistance</td>
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# Two Checkpoints

<table>
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<th>YEAR ONE</th>
<th>YEAR TWO</th>
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<tr>
<td>Graduate students MUST achieve 80% or higher at Level IV</td>
<td>Completed adult practicum, part-time and full-time clinical experiences</td>
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<tr>
<td>Deemed competent (requiring &lt; 25% assistance) in treatment of pediatric population</td>
<td>Deemed competent (Level IV-VII) in treatment of adult and pediatric populations</td>
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<tr>
<td>Benchmarks achieved</td>
<td>Benchmarks achieved</td>
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</table>
**Clinical Skills Acquisition Rubric (CSAR)**

- Formative & summative rubric instrument for measuring graduate students’ clinical skill acquisition
- 35 key objectives & 7 levels of clinical acquisition for each element
- Each level of clinical skill acquisition has an equal point level to the level achieved (e.g., Level II = 2 points)
- Advanced Practicum Expectation = Level V maximum point allotment = 175 (5 x 35)

*(Resnick & Whiteside, 2013)*
Let’s Take a closer Look!
TREATMENT PLANNING OBJECTIVE 1

Learning Objective

- Demonstrates ability to review case file and abstract relevant information needed to develop a plan of care

Level 1, Dependent on Clinical Educator

Inaccurate & Inefficient

- Student is not familiar with file contents and is unable to find relevant information regarding diagnosis, prior level of function, medical/social history, medical reports including radiology reports, reports regarding prior treatment. Student is unable to determine current function based on the file. Constant assistance is required.
Level II  Maximum Assistance  
Partially Accurate  
75-50% Accuracy

- Student may be able to identify one or more elements of relevant information in the chart but is unable to understand the application/relevance to the case without directive. The student needs specific instruction the majority of the time.

Level III  Moderate Assistance  
Accurate Identification; Application Aware  
50-25% Assistance

- Student identifies three or more elements of relevant information in the chart. Requires moderate assistance in locating and applying information to the case. Student needs moderate direct or specific instruction.
Level IV  Minimal Assistance
Accurate Identification; Developing Application
<25% Assistance

- Student identifies at least 4 or more elements of relevant information from the chart. Requires minimal assistance in locating and applying relevant information.

Level V Semi-Independent
Accurate Identification & Adequate Application with Monitoring
20-10% Assistance

- The student identifies all pertinent information and understands the meaning with semi-independence. The student can analyze relevance to the case with intermittent guidance.
Level VI: Independent with Consultative Guidance
Accurate and Efficient
10-0% Assistance

- The student can identify and understand the meaning of all pertinent information in the chart and can apply relevance to the case independently with consultative guidance.

Level VII: Independent from Clinical Educator
Accurate and Efficient
Student Initiated Assistance

- The student can independently identify, analyze and report all pertinent information found in the chart relevant to the case. The student operates independently with student-initiated assistance observed.
Study Design

- 38 students from two cohorts
  - 4 Intermediate
  - 34 Advanced
    - 16 were in intensive 4 hrs/week of clinical instruction for twelve weeks
    - 18 students traditional 2 hrs/week of clinical instruction for 14 weeks
- Five clinical educators completing the ratings
- Each student was assessed on KASA and CSAR at mid-term and final
STATISTICAL ANALYSIS

- Pearson Correlations between the following:
  - KASA C Intervention vs. CSAR Treatment 1, 2 & 3
  - KASA D Evaluation vs. Diagnostic CSAR 4,5 & 6
  - Percentage Total of KASA vs. Percentage Total of CSAR
  - KASA A, B, C & D vs. CSAR Total Percentage
  - Correlation was competed for Mid-term and Final scores
## MID-TERM

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<td>KASA A: Oral Written</td>
<td>.725**</td>
<td>.559**</td>
<td>.349*</td>
<td>NS</td>
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<td>KASA C: Intervention</td>
<td>.502**</td>
<td>.468**</td>
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<td>.458**</td>
<td>.464**</td>
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<td>KASA total %</td>
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*Note. *p ≤ .05. **p ≤ .01. ***p ≤ .001*
## Table: KASA Scores and CSAR Total Percentages

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<td>KASA C: Intervention</td>
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DISCUSSION
Mid-Term Hypothesis for Low Correlation between KASA & C-SAR for Interpretation of Therapeutic Intervention

- The KASA includes 7 objectives and the C-SAR includes 5 objectives.
- The issue is not the number of objectives but the content of the objectives under this heading. The KASA objectives deal with the process of selection of EBP, implementation of plan and modification of plan, use of appropriate materials, accuracy of data, use of time, and organization of written progress.
- The C-SAR objectives deal with accuracy of data, accurate analysis of intervention, referral of client for further services, administrative compliance and written documentation compliance.
FINAL HYPOTHESIS FOR CORRELATION BETWEEN KASA & C-SAR FOR INTERPRETATION OF THERAPEUTIC INTERVENTION

- Intensity and number of hours students are receiving vary across intensive and traditional practicum experience
HYPOTHESIS FOR LOW CORRELATION BETWEEN KASA AND C-SAR FOR FINAL DX

- When evaluating a student’s growth in determining change in “pre- and post-assessment” of therapeutic intervention, the KASA includes 6 objectives. One of the objectives reads:

- The C-SAR Rubric for formative and summative evaluation of “pre- and post-therapeutic assessment” of intervention includes 9 objectives.
**Diagnostic Comparison**

**KASA**
- Interprets, integrates and synthesizes evaluative data to determine the etiology, diagnosis, severity and prognosis of a condition in order to make a recommendation for intervention.

**CSAR**
- Determines qualitative & quantitative results from spoken and written language assessment instruments and procedures.
- Analyzes & interprets findings from spoken & written language assessment.
- Interprets findings to derive accurate diagnosis, severity & prognosis of disorder.
- Devises appropriate recommendations for intervention and/or referrals.
OVERALL IMPRESSIONS

- The C-SAR has greater objectivity.
- The C-SAR allows for greater specificity with finer gradation of skill.
NEXT STEPS

- Correlation of Diagnostic KASA & CSAR Diagnostic
- Item Analysis
- Wider range of students with different clinical levels of experience
- Experience vs. clinical educator’s variation
- Develop a stand-alone C-SAR for diagnostics as there is a stand-alone KASA for diagnostics.
- Capture most relevant objectives needed to assess student’s growth in determining change in pre- and post-therapeutic intervention.
- Devise a diagnostic seminar that addresses diagnostic process, not just instrumentation.
QUESTIONS

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REFERENCES

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