Field Evaluation Instruments Designed to Measure Social Work Competencies: A Psychometric Analysis

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University of North Carolina at Chapel Hill
Acknowledgements

• Larry Rosenfeld
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Outline

• Background and Context
• Our Field Evaluation Instrument (Before)
• Study Aims, Analyses, and Findings
• Our Field Evaluation Instrument (Now)
• Questions
Background and Context

• Adoption of a competency-based model in social work education
• Students expected to cultivate a set of professional competencies prior to graduation
• Nine competencies, each with a set of competency indicators (i.e., behavior-level manifestations of the competency)

<table>
<thead>
<tr>
<th>Competency</th>
<th># of Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Demonstrate ethical and professional behavior</td>
<td>5</td>
</tr>
<tr>
<td>2) Engage diversity and difference in practice</td>
<td>3</td>
</tr>
<tr>
<td>3) Advance human rights and social, economic, and environmental justice</td>
<td>2</td>
</tr>
<tr>
<td>4) Engage in practice-informed research and research-informed practice</td>
<td>3</td>
</tr>
<tr>
<td>5) Engage in policy practice</td>
<td>3</td>
</tr>
<tr>
<td>6) Engage with individuals, families, groups, organizations, and communities</td>
<td>2</td>
</tr>
<tr>
<td>7) Assess individuals, families, groups, organizations, and communities</td>
<td>4</td>
</tr>
<tr>
<td>8) Intervene with individuals, families, groups, organizations, and communities</td>
<td>5</td>
</tr>
<tr>
<td>9) Evaluate practice with individuals, families, groups, organizations, and communities</td>
<td>4</td>
</tr>
</tbody>
</table>
Example

• **Competency 4:** Engage in practice-informed research and research-informed practice

• **Indicators:**
  
  • 4.1: Use practice experience and theory to inform scientific inquiry and research
  
  • 4.2: Apply critical thinking to engage in analysis of quantitative and qualitative research methods and research findings
  
  • 4.3: Use and translate research evidence to inform and improve practice, policy, and service delivery
Evaluation Instruments

• How and where can we best measure and evaluate students’ acquisition of social work competencies?

• Students spend a considerable amount of time in field practicum settings, providing opportunities to demonstrate the emergence and acquisition of competencies

(Bogo, 2010)
Evaluation Instruments

• Student competencies can be subjected to both (a) students’ self-evaluation and (b) evaluation by Field Instructors (FIs)

• Some Schools of Social Work use electronic assessment instruments

• Students and FIs indicate students’ level of competence along a scaled continuum with respect to each competency indicator

(Bogo, 2010)
Quick Notes

• Institutional contexts shape decisions about evaluation approaches

• Field-based evaluations have limitations:
  • **Leniency bias:** FIs’ propensity to extend their students relatively favorable and positively inflated evaluation scores

• Consequently, other evaluation strategies have been proposed:
  • Vignette-matching
  • Practice simulations

(Bogo, 2010; Vinton & Wilke, 2011)
Quick Notes

• It is beyond the scope of this presentation to discuss the relative advantages or weaknesses of various evaluation methods
• Advisable to use multiple evaluation methods to measure students’ acquisition of professional competencies

(Bogo, 2010; Council on Social Work Education, 2015; Jensen & Strom-Gottfried, 2018)
Our Instrument (Before)

• Electronic evaluation instruments
  • MSW Generalist-level field evaluation
  • MSW Specialization-level field evaluation

• Because specialization-level competency indicators can be school-specific, the content of this presentation focuses on the MSW generalist-level field evaluation

(Council on Social Work Education, 2015)
Our Instrument (Before)

• The evaluation includes items that reflect competency indicators across all nine competencies (verbatim from 2015 EPAS)

(Council on Social Work Education, 2015)
Our Instrument (Before)

- Evaluation administered at the end of both Fall and Spring semesters
- Our focus is on evaluation scores from Spring semesters, representing the completion of the first year of study

**PDF of full instrument available at:**
Our Instrument (Before)

- Consistent with extant literature, we used a five-point response-option specification to gauge levels of competence.
- The wording of response options was intended to maintain a positive framing of student performance.

(Bogo et al., 2002; Bogo, 2010)
Our Instrument (Before)

- Attempt to account for potential leniency bias among FIs by placing greater response granularity at the high end of the competence distribution

(Vinton & Wilke, 2011)
<table>
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<tr>
<th>Response Option</th>
<th>Description</th>
</tr>
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<tr>
<td>Superior Competence (5)</td>
<td>Student adapts the skill to the setting and demonstrates <strong>mastery of the skill in novel, diverse, and difficult contexts</strong>.</td>
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<td>Student consistently understands the skill and its applicability and <strong>effectively and routinely</strong> demonstrates the skills in practice. The student shows an ability to function independently with appropriate supervision and support.</td>
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<tr>
<td>Emerging Competence (3)</td>
<td>Student understands the skill and demonstrates a <strong>beginning or growing</strong> ability to apply knowledge to practice. The student predominantly functions semi independently with appropriate supervision and support.</td>
</tr>
<tr>
<td>Limited Competence (2)</td>
<td>Student demonstrates <strong>limited and/or inconsistent</strong> understanding of essential knowledge and/or the application of knowledge to practice. More than the usual amount of supervision may be required. There is significant concern about the student’s knowledge and/or practice level. A remediation plan is required.</td>
</tr>
<tr>
<td>Not Competent (1)</td>
<td>Student <strong>does not demonstrate</strong> command of essential knowledge and/or does not demonstrate application of knowledge to practice. The student is practicing well below a satisfactory level.</td>
</tr>
</tbody>
</table>
Welcome to the School of Social Work Information System.

If you need technical assistance, please click on "Help" on the bottom of the navigation menu.

- Accessibility Resources & Service (ARS)
- Equal Opportunity and Compliance (EOC) Statement
### Generalist Learning Agreement & Competency Evaluations

**Core Competency 4 - Engage in Practice-informed Research and Research-Informed Practice**

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#### Learning Agreement Activities for Item GC 4.2

<table>
<thead>
<tr>
<th>This student demonstrates the ability to:</th>
<th>Select appropriate learning activities and/or add additional activities in the &quot;other&quot; box.</th>
<th>Check all that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2 Apply critical thinking to engage in analysis of quantitative and qualitative research methods and research findings.</td>
<td>Participate in an agency research project. (CSWE dimensions: K S )</td>
<td>DP</td>
</tr>
<tr>
<td></td>
<td>Assist agency in gathering research data. (CSWE dimensions: K S )</td>
<td>CMPP</td>
</tr>
<tr>
<td></td>
<td>Identify the strengths, weaknesses and appropriate use of varying theories and treatment models. (CSWE dimensions: V K S C )</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Competency Evaluations for Item GC 4.2

<table>
<thead>
<tr>
<th>Rating Criteria: help</th>
<th>Student Self-Assessment</th>
<th>Field Instructor Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – Superior Competence</td>
<td>1 2 3 4 5 NA</td>
<td>1 2 3 4 5 NA</td>
</tr>
<tr>
<td>4 – Competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 – Emerging Competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 – Limited Competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 – Not Competent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A – not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**First Evaluation: SOWO 520**

**Second Evaluation: SOWO 521**

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**Social Work Education: Looking Back, Looking Forward**

![Social Work Education Logo](CSWE)
Our Aims

1) Assess the *psychometric performance of a generalist-level field evaluation instrument*, across both MSW student self-reports and FI reports

2) Assess the *performance of a positively framed, five-point response-option specification* for measuring students’ competence

(Jensen, Brigham, & Rosenfeld, 2019)
Data and Sample

• Generalist-level field evaluations completed during Spring semester of the 2015-2016 or 2016-2017 academic years
• Secure web-based application used for the evaluation, accessed via personal computer or other digital device

(Jensen, Brigham, & Rosenfeld, 2019)
Data and Sample

• 198 generalist-level (first-year) MSW students and their FIs
• 2/3 of students enrolled in full-time MSW program; others enrolled in distance education

(Jensen, Brigham, & Rosenfeld, 2019)
## Data and Sample

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>2015 U.S. Statistic (Full-Time)</th>
<th>2015 U.S. Statistic (Part-Time)</th>
<th>Our Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify as female</td>
<td>84.8%</td>
<td>81.7%</td>
<td>90%</td>
</tr>
<tr>
<td>Identify as White</td>
<td>55.4%</td>
<td>51.3%</td>
<td>74%</td>
</tr>
<tr>
<td>Identify as African American/Black</td>
<td>17.3%</td>
<td>22.5%</td>
<td>12%</td>
</tr>
<tr>
<td>Identify as Latinx</td>
<td>12.8%</td>
<td>12.3%</td>
<td>7%</td>
</tr>
<tr>
<td>Identify as Asian</td>
<td>3.7%</td>
<td>3.1%</td>
<td>1%</td>
</tr>
<tr>
<td>Identify as multiracial</td>
<td>2.7%</td>
<td>2.7%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Data and Sample

- Average student age: 29.7 years \((SD = 7.3)\)

- 2015 U.S. Statistic (Full-Time)
  - 40.7% between 25 and 34 years old

- 2015 U.S. Statistic (Part-Time)
  - 47.5% between 25 and 34 years old
Analysis

• Confirmatory Factor Analysis
  • Estimator: means- and variance-adjusted weighted least squares (WLSMV)
• Standard errors were corrected for potential within-agency data clustering (few students completed their field practica in the same agency settings)

(Bovaird & Koziol, 2012)
Aim 1
Psychometric Performance of the Evaluation Instrument
Psychometric Performance

• Factor Structure

[Diagram: Complex Variable

- Latent Variable or Latent Factor

- Factor Loadings

- Observed Indicators: Item 1, Item 2, Item 3]
Psychometric Performance

- Confirmatory Factor Analysis

English Translation:
Higher factor loadings = Good
Lower factor loadings = Bad

.92  .89  .90

Indicator 4.1
Indicator 4.2
Indicator 4.3
Aim 1: Our Findings

Evidence of valid factor structure?

<table>
<thead>
<tr>
<th>Competency</th>
<th>Student Self-Reports</th>
<th>FI Reports</th>
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<tbody>
<tr>
<td>1</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>2</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>8</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

All Factor Loadings: \( \geq .76 \)

All Factor Loadings: \( \geq .68 \)
Aim 1: Our Findings

• Evidence of valid factor structure across all nine competencies, and with respect to both student self-reports and FI reports

Better English Translation:

Evidence of strong items!
Aim 2
Response-Option Performance
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Response-Option Performance

• What does it really mean to receive a score of:
  • Not Competent (1)
  • Limited Competence (2)
  • Emerging Competence (3)
  • Competence (4)
  • Superior Competence (5)

• Ordinal-level measures, by definition, lack precision in metric (rank-ordered categorical descriptions versus truly continuous metric)
Response-Option Performance

- Superior Competence
- Competence
- Emerging Competence
- Limited Competence
- Not Competent
Distribution of competence in the sample

-3  -2  -1  0  1  2  3

Not Competent  Limited Competence  Emerging Competence  Competence  Superior Competence

\( \tau(1) = -2.5 \)  \( \tau(2) = -1.3 \)  \( \tau(3) = 0.4 \)  \( \tau(4) = 1.7 \)
Average level of competence in the sample (mean)
1 standard deviation above the mean in competence.
1 standard deviation **below** the mean in competence
For competency indicator 4.1, levels of student competence at which the probability of response-option selection shifts upward.
When students are $1.7 \text{ SDs} (\tau = 1.7)$ above the mean for Competency 4, it becomes more likely that the “Superior Competence” response will be selected for competency indicator 4.1, as opposed to the “Competence” response.
Aim 2: Our Findings
*Average threshold values across all competency indicators and competencies
*Average threshold values across all competency indicators and competencies
Aim 2: Our Findings

• Taken together, our results indicate that students and FIs tend to use two main response options: “Competence” or “Superior Competence”

• Limited ability for response options to discriminate across levels of student competence (especially near and above average levels)
Conclusions
Aim 1: Conclusions

• Findings provide good news

• Competency indicators, as outlined in the 2015 EPAS:
  • (a) appear to cohere well with one another in expected ways
  • (b) might represent well their underlying core social work competencies

(Jensen, Brigham, & Rosenfeld, 2019)
Aim 1: Conclusions

• Our sample is not necessarily representative of all MSW students

• Value of replication

• Assess factor structure of generalist-level competencies via field evaluation instruments across student subpopulations (e.g., racial/ethnic identity, age, socioeconomic background, program type)

(Jensen, Brigham, & Rosenfeld, 2019)
Aim 1: Conclusions

• Assess predictive validity of field evaluation instruments that measure social work competencies

• Identifying potential associations between field evaluation scores and subsequent professional performance, job readiness, and other professional benchmarks

(Jensen, Brigham, & Rosenfeld, 2019)
Aim 2: Conclusions

• The challenge of strong response-option formatting
• Balancing parsimony and an ability to discriminate effectively across levels of competence
• Influence of grade cut-off points, the FI-student relationship, etc.

(Jensen, Brigham, & Rosenfeld, 2019)
Our Instrument (Now)
Core Competency 9: Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities

Behavior 9.1
Select and use appropriate methods for evaluation of outcomes.

Behavior 9.1 Activities

1. Review what instrument(s) the agency uses for evaluating practice. Discover what process the agency uses to implement the tool, review the resulting data and change agency practice.
   CSWE dimensions: K S C
   Practice types: DP

4. Discuss with field instructor how accountability is measured when working interprofessionally on a team.
   CSWE dimensions: S C I
   Practice types: CMPP

5. Meet with agency executive director to discuss evaluation plan of agency.
   Practice types: CMPP

SOWO520 Evaluation
These sliders are disabled. For students and field instructors, sliders are disabled after an evaluation has been signed. (Faculty and administrators are not able to change ratings directly and thus, for them, sliders are always disabled.)

Student Self-Assessment
(Average Student SOWO520 rating is 3.88 based on 25 of 44 behaviors)

Field Instructor Assessment
(Average Field Instructor SOWO520 rating is 2.86 based on 25 of 44 behaviors)
Average Student Behavior Rating: 4.00
based on 25 behaviors as rated by the student.

Average Instructor Behavior Rating: 4.44
based on 25 behaviors as rated by the field instructor.

Chart Type
- bar chart
- spider chart
- histogram
- text

Bar Chart Features
- show all rating lines
- show pass/fail area
- show data on bars

Rater
- student
- instructor

Semester
- SOW0820
- SOW0821

Student average rating SOW0821
Instructor average rating SOW0821

rating
competence (PASS)
emerging competence (LOW PASS)

1 2 3 4 5
Social Work Education: Looking Back, Looking Forward

COUNCIL ON SOCIAL WORK EDUCATION

#APM19
Questions?
Thank You!

For Further Information Contact

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