Community College Faculty's Knowledge and Comfort Related to Early Childhood Special Education

Presentation at 2015 DEC Conference
October 7-9, 2015
Atlanta, GA
Presenters: Chih-Ing Lim, Laurie Dinnebeil, Patricia Blasco, Tracey West, Camille Catlett, and William McInerney
Outline of Session

1. How We Started

2. Results from Baseline Faculty and Student Needs Assessments

3. Discussion
Participant Outcomes

- Learn about findings from faculty needs assessments that were conducted with community colleges across the United States; and
- Acquire strategies and ideas on enhancing teacher preparation including evaluation materials and syllabi revision.
How We Started
Why this Work is Critical

- **56%** of IHEs offering early childhood education are community colleges
- EC professionals are not prepared to work with children with disabilities
  - **41%** of Associate’s degree programs required practicum in working with children with disabilities
- Community college faculty have a high workload
  - 70% are adjunct faculty
  - Full-time faculty-student ratio = 1:79

Source: Maxwell, Lim & Early, 2006
Our Priorities from OSEP

Supporting children with disabilities
Faculty supports
Evidence-Based Practice
Increasing faculty knowledge and skills
Quality practica experience
Key Features of Projects

- Technical assistance (TA) and support is tailored based on the unique features of each community college
Key Features of Projects

- TA to support efforts of community college faculty to enhance their coursework and practica to meet state and national focuses around inclusion
Key Features of Projects

- Involvement of diverse community partners in the work
Key Features of Projects

- State of the art websites that provide updated and sustainable materials including the DEC Recommended Practices

Source: PEPI

Source: SCRIPT-NC

Source: Partner Project
Key Features of Projects

- User-friendly and accessible resources for community college faculty to include in their course work to fit their local community college goals

Source: SCRIPT-NC
Overview of needs assessment

- Needs assessment was adapted from previously-federally funded project, *Crosswalks*

- Needs assessment is used by OSEP paraprofessional grantees from:
  - Northampton Community College
  - Tacoma Community College
  - Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill
  - University of Toledo
  - Western Oregon University

- 2 programs administered a 36-item survey while the other 3 administered a 28-item survey
Faculty Needs Assessment Survey

Default Question Block

The purpose of this survey is to learn about your current level of knowledge and implementation of specific early childhood and early intervention content and instructional approaches. The information you provide will help us better understand how we might offer professional development and resources that are relevant and useful to you.

I. Early Childhood and Early Intervention Content Areas

Please read the following statements. On a scale of 1 to 5 where “1” is low and “5” is high, please indicate your CURRENT LEVEL of knowledge, emphasis in the courses you teach, knowledge of where to access resources, and comfort teaching the content with regard to each of the statements. Please note that the level of emphasis on specific content areas will vary depending on the courses you teach.

<table>
<thead>
<tr>
<th>Current Level of Your Knowledge</th>
<th>Current Level of Emphasis in the Courses You Teach</th>
<th>Current Level of Knowledge of Where to Access Resources</th>
<th>Current Level of Comfort with Teaching This Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

1. Using evidence-based practices in early intervention (EI) and early childhood special education (ECSE).
2. Collaborating and working effectively with licensed/certified professional practitioners who support children with and without disabilities.
3. Implementing intervention strategies to support the social-emotional and behavioral development of children of diverse abilities.
4. Implementing age-appropriate expectations for routines in early childhood settings for children of diverse abilities.
5. Implementing instructional strategies to support early development and learning or academic achievement for...
Overview of needs assessment

- Survey has 3 sections: EC and EI Content Areas, Instructional Strategies and Demographics

- EC and EI Content: Using a scale of 1 (Low) - 5 (High), respondents indicated their current level of knowledge, emphasis on ECSE content in the courses they teach, knowledge of where to access resources related to ECSE content, and comfort teaching the content with regard to the statements.

- Instructional Strategies: Using a scale of 0 (None) – 5 (High), respondents indicated their skills and emphasis on ECSE content and skills in the courses they teach with regard to the statements.
Methods

- Online survey – Qualtrics (n= 16), Survey Monkey (n=1)

- Needs assessment conducted in Fall 2011 / Spring 2012, Fall 2012 / Spring 2013, and Fall 2014/Spring 2015

- Descriptive statistics and bivariate correlations were conducted using SPSS 21
Who were the participants?

- 173 early childhood faculty from 17 community colleges in North Carolina, Ohio, Oregon, Pennsylvania, Michigan, and Washington

- #s of faculty respondents in each of the CCs surveyed ranged from 2 to 52 (Median = 9)

- The demographics of the faculty were similar to findings from national surveys (Early & Winton, 2001; Maxwell, Lim & Early, 2006)
Faculty Education and Experience in ECSE

- Faculty earned their highest level of education between 1967 and 2015
- 75% indicated their highest level of education was Master’s degree
- 53% indicated their primary discipline was early childhood education
- Number of years in personnel preparation ranged from 0-50 years
- Number of years of experience in providing direct services to children and families ranged from 3-50 years
Faculty knowledge and skills: Top 10 areas of needs

- Using AT to enhance children’s development and access to natural learning opportunities ($M = 3.02, SD = 1.09$)
- Using AT to enhance children’s participation in the general curriculum ($M = 3.04, SD = 1.04$)
- Implementing transition plans and services across settings ($M = 3.32, SD = 1.15$)
- Knowledge of relevant state and federal regulations specific to meeting the needs of children with diverse abilities and their families ($M = 3.51, SD = 1.03$)
- Using EBPs in EI and ECSE ($M = 3.55, SD = 1.01$)
Faculty knowledge and skills: Top areas of needs (cont’d)

- Implementing IFSPs and IEPs ($M = 3.70$, $SD = 1.16$)
- Systematically embedding intervention strategies into daily routines & activities of children with diverse abilities ($M = 3.71$, $SD = .99$)
- Using data from progress monitoring efforts to make curriculum decisions to support the academic & development progress of children with diverse abilities ($M = 3.75$, $SD = 1.17$)
- Implementing varied measures of informal assessment to monitor the academic or developmental progress of children of diverse abilities ($M=3.91$, $SD = 1.06$)
- Implementing intervention strategies to support early development or academic achievement of children of diverse abilities ($M=3.91$, $SD = .94$)
Research question

- What is the relationship between faculty members' knowledge, skills and comfort level related to ECSE topical areas and the degree to which they are addressed in Community College program coursework in ECE?
Using AT to enhance children’s access to natural learning opportunities

- Levels of emphasis in courses taught were correlated to knowledge and skills ($r(164) = .65$, $p < .01$) as well as to comfort level ($r(164) = .54$, $p < .01$).
Implementing transition plans and services across settings.

Levels of emphasis in courses taught were correlated to knowledge and skills ($r(162) = .61, p < .01$) as well as to comfort level ($r(162) = .52, p < .01$).
Relevant state and federal regulations specific to meeting the needs of children with diverse abilities and their families

- Levels of emphasis in courses taught were correlated to knowledge and skills ($r(162) = .54$, $p < .01$) as well as to comfort level ($r(162) = .52$, $p < .01$).
Using EBP in EI & ECSE

- Levels of emphasis in courses taught were correlated to knowledge and skills ($r(119) = .67, p<.01$) as well as to comfort level ($r(119) = .65, p<.01$).
Student Needs Assessment

- Questions were similar to faculty needs except:
  - Students were also asked the extent to which they were familiar with 11 key EI / ECSE terms
  - Students were only asked about their knowledge and skills on the key content areas

- Overall, mean ratings were all below 4 for all 11 terms, with the term ‘AT’ having the lowest mean rating
Student Needs Assessment

The majority of the students scoring low-medium in terms of level of knowledge:

- Using evidence-based practices in early intervention (EI) and early childhood special education (ECSE)
- Working with specialists and therapists who support children with diverse abilities.
- Implementing functional Individualized Family Service Plans (IFSPs) and Individualized Education Programs (IEPs).
- Implementing transition plans and services across settings.
- Relevant state and federal regulations specific to meeting the needs of children with diverse abilities and their families.
The Rasch Measurement Model (RMM)

Additional Analyses of the Faculty Needs Assessment
Survey Data are Ordinal

The problem with survey responses is that they are *ordinal* in nature (from ‘less to more’, such as ‘strongly disagree’ to ‘strongly agree’ or ‘low’ to ‘high’). As such, in their original form, they are not equal interval, meaning that they do not possess the mathematical qualities necessary for addition, subtraction, or comparison on a commonly understood standard, equal-interval unit of measure.
Ruler Analogy

Think of a RULER with equal intervals to demarcate commonly understood units of length. Before the development of standard measures of length, one could only line up people in an ordinal fashion - tallest, next tallest, shorter, and so forth.

This type of ‘measurement’ is not measurement at all and does not translate/communicate/infer to other groups of individuals. Such is the case with survey data in their original form.
Analysis Restrictions

There are also limitations as to what analyses you can do with your data. Without converting raw survey data into measurement units, only descriptive statistics (e.g., frequencies or percentages) can be generated to summarize the data, and these statistics do not allow researchers to make any inferences/generalizations.
We need to take ordinal survey responses and develop units of measurement so the unit values remain the same across the ruler, just like in any physical measure.

The Rasch Measurement Model is the only model that accomplishes that. It combines rigorous statistical methods with rich qualitative descriptions to provide meaningful measures that can be used to compare attributes, perceptions, and attitudes across any subgroup or time period of interest.

The Rasch Model also allows you to test your theory or understanding of the phenomenon you are studying and see it in a more complex way.
Item Ordering for ‘Philosophical Approach’

Most difficult to agree with

C27 Implementing positive behavior support plans from the data collected by the system of functional assessment
C9 Implementing functional Individualized Family Service Plans (IFSPs) and Individualized Education Programs (IEPs)
C6 Systematically embedding individualized intervention strategies into daily routines and activities of children with diverse abilities
C3 Implementing intervention strategies to support the social-emotional and behavioral development
C29 Demonstrating sensitivity to children from diverse linguistic backgrounds and their families
C19 Relationship-based professional development approaches, including coaching, consultation, and mentoring
C2 Collaborating and working effectively with licensed/certified professional practitioners who support children with and without disabilities.
C4 Implementing age appropriate expectations for routines in early childhood settings for children
C15 Communicating effectively with families of children of diverse abilities.
C28 Demonstrating sensitivity to children from diverse cultural backgrounds and their families
C18 Working with children from diverse socioeconomic backgrounds and their families

Least difficult to agree with
Summary Statistics

- Reliability = .82
- All items fit the model
- Support for unidimensionality (53% of variance accounted for)
Item Ordering for ‘Degree of Familiarity’

Most difficult to agree with
C7 Using a range of augmentative or assistive technology to enhance children’s development and access to natural learning opportunities.

C8 Using a range of augmentative or assistive technology to enhance children’s participation in the general curriculum.

C20 Relevant state and federal regulations specific to meeting the needs of children with diverse abilities and their families.

C11 Using data from progress monitoring efforts to make curricular decisions to support the academic and developmental (i.e., cognitive, language, motor, and social / emotional) progress of children with diverse abilities.

C10 Using varied measures of informal assessment to monitor the academic or developmental progress of children of diverse abilities.

C12 Adapting or modifying the physical environment to support children’s access to natural learning opportunities.

C2 Collaborating and working effectively with licensed/certified professional practitioners who support children with and without disabilities.

C13 Adapting or modifying classroom routines to support the learning and development of young children with diverse abilities.

C15 Communicating effectively with families of children of diverse abilities.
Summary Statistics

- Reliability = .87
- All items fit the model
- Support for unidimensionality (64.3% of variance accounted for)
Next Steps for Cross-Project Data Collection and Analyses

- Post-student and faculty needs assessments
  - Compare data across time
- Focus group discussion
## Cross-Project Measures

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Faculty Needs Assessment (Pre / Post)</th>
<th>Student Needs Assessment (Pre / Post)</th>
<th>Post-TA Focus Group</th>
<th>Graduate of the Future</th>
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<td>Frank Porter Graham Child Development Institute</td>
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<tr>
<td>Tacoma Community College</td>
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</tr>
</tbody>
</table>
Discussion Question

• How can faculty / researchers collaborate to coordinate data collection across projects and institutions?
TA and Support Offered by Projects

- Technical assistance (TA) and support is tailored based on the unique features of each community college
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Source: SCRIPT-NC
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TA and Support Offered by Projects

- User-friendly and accessible resources for community college faculty to include in their course work to fit their local community college goals

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Discussion Questions

- How can ECE faculty members' needs be addressed through various types of professional development?

- How can these program results be used to frame professional development for the ECE faculty members?
Thank You