

Finnish (student) teachers' perceptions of closeness, conflict, and cultural competence in early childhood education

**Maarit Silvén , Wenwen Yang, Eero Laakkonen & the JUMP
ALONG Intervention Study Group**

Department of Teacher Education, University of Turku

NERA Conference 4-6 March 2020 in Turku



JUMP ALONG intervention study

- Funded by the Ministry of Education and Culture
- Aims at renewing preservice and in-service teacher education in collaboration across four universities:

University of Turku (Maarit Silvén et al.)

University of Jyväskylä (Niina Rutanen et al.)

University of Helsinki & University of Eastern Finland
(Nina Sajaniemi et al.)

**HALLITUKSEN
KÄRKIHANKE**

**REGERINGENS
SPETSProjekt**

JUMP ALONG intervention study

- Explores new evidence-based ways of assessing and supporting early childhood education teachers' professional development during various phases of their career.
- We report here data collected as part of the intervention study.

www.osaamisenyhteisloikka.fi



Introduction

- Drawing on the socio-cultural paradigm (e.g., Rogoff, 2008; Vygotsky, 1978), children's development and learning are shaped by interactional experiences which are shared across generations in various cultural contexts.
- The relationship between teachers and children has a fundamental influence on children's academic and behavioral outcomes, social interactions with peers and adults and emotional development in the long term (Birch & Ladd, 1997; 2001; Hamre & Pianta, 2001; Howes, 2000; Pianta, 1994).
- Student–Teacher Relationship Scale–Short Form (STRS-SF) consists of two subscales: Closeness and Conflict (Pianta, 2001).

Introduction

- Cultural competence is a “set of congruent behaviors, attitudes, and policies that come together ... among professionals and enable ... those professionals to work effectively in cross-cultural situations” (Diller & Moule, 2006).
- Substantive studies in USA have investigated *school student teachers’ and teachers’* cultural competence (e.g. Spanierman et al., 2011; Yang & Montgomery, 2011; Yang, Cox & Cho, 2019; for Europe, see Acquah, Tandon, & Lempinen, 2015; Rajić & Rajić, 2015).
- Few studies have focused on *teachers’* perceived cultural competence in the Early Childhood Education (ECE; Leung & Hue, 2017; Obegi & Ritblatt, 2005) and no study has examined ECE student teachers.

Introduction

- Few studies have focused on ECE teachers' perceived cultural competence.
 - Multicultural teaching competency scale (MTCS) confirmed a three-factor structure assessing skills, knowledge, and relationships in a Hong Kong preschool teachers' sample (Leung & Hue, 2017).
 - Infant and Toddler Caregiver Cultural Rating Scale (ITCCRS) had an acceptable Cronbach's alpha but it did not result in three factors: awareness, knowledge, and skills in USA (Obegi & Ritblatt, 2005).
- There is no study about Finnish ECE teachers' and student teachers' cultural competence.
- Based on a school teachers' cultural competence questionnaire (Siwatu, 2007), we selected some items and developed our own questionnaire to fit in Finnish ECE context.

Research questions



- What is the factor structure and measurement invariance of cultural competence among ECE teachers and student teachers?
- Are there differences in the factor means and factor variances between the ECE teachers and student teachers in how they perceive their cultural competence with children?
- How does teachers' and student teachers' perception of Closeness and Conflict with a group of children relate with their Cultural Competence?

Methods: Sample



- *ECE student teachers* ($n= 103$): first year university students
 - age ranged from 19 to 49 years ($M=25.4$, $SD=6.48$)
 - mainly females (97.1%)
- *ECE teachers* ($n= 155$)
 - in-service teachers were working in day care centers of several municipalities of two provinces
 - educational background: BA in social sciences (48.4%), BA in education (42.6%) and MA in education (9.0%)
 - age ranged from 23 to 63 ($M=42.9$, $SD=11.17$)
 - working experiences ranged from 1 to 40 years ($M=15.4$, $SD=11.48$)
 - mainly females (97.4%)

Methods: Assessment of Cultural Competence

- Culturally Responsive Interaction Scale (CuRe) (Yang, Sorariutta & Silvén, 2019)
- 16 items related to how confident ECE teachers are in their ability to engage in culturally responsive interactions.
 - “I can design the environment of early childhood education to take into account children from diverse backgrounds.”
 - “I can help children from diverse backgrounds.”
- 5-point Likert scale (1 = Definitely does not apply; 2 = Not really; 3 = Neutral, not sure; 4 = Applies somewhat; and 5 = Definitely applies).

Methods: Assessment of Teacher-Children Relationships

- A validated Finnish version of Student-Teacher Relationship Scale (STRS-SF) for estimating teachers' overall perceptions of their relationships with a whole group of children (Pianta, 2001).
- Two-factor structure:
- Closeness (6 items, e.g., “I share an affectionate, warm relationship with the children.”)
- Conflict (6 items, e.g., “The children and I always seem to be struggling with each other .”)
- 5-point Likert scale (1 = Definitely does not apply; 2 = Not really; 3 = Neutral, not sure; 4 = Applies somewhat; and 5 = Definitely applies).



Results: Confirmatory Factor Analysis

- One-factor structure fit the samples of ECE teachers and student teachers

Sample	df	χ^2	RMSEA	SRMR	TLI	CFI	p
Whole sample(N=258)							
Original (16 items)	103	208.35	.063	.055	.929	.917	.000
Modified (8 items)	18	11.45	.000	.017	1.00	1.00	.875
Student teachers(n=103)	18	22.44	.049	.035	.989	.983	.213
Teachers (n=155)	18	11.32	.000	.024	1.00	1.00	.881

Model is considered reasonably good when p -value > .05, CFI and TLI \geq .90, SRMR and RMESA \leq .06 (Hu and Bentler, 1995)



Results: Testing of measurement invariance

- We found partial scalar measurement invariance across the two samples of ECE teachers and student teachers

Model (M)	χ^2	df	CFI	TLI	RMSEA	$\Delta \chi^2$ -test (df)	p	Δ CFI
M ₁ : Configural	33.76	36	1.00	1.00	.000			
M ₂ : Metric	35.08	43	1.00	1.00	.000	1.32 (7)	.988	.000
M ₃ : Scalar	73.67	50	.969	.966	.061	38.59 (7)	.000	.031
M ₄ : Partial scalar	53.60	49	.994	.993	.027	18.52 (6)	.005	.006

Note: CFI-difference was <0.01 (Cheung & Rensvold, 2000).

Results: Comparing teachers' and student teachers' cultural competence

- We found no group differences in cultural competence, but the amount of variability differs across groups.

Model	χ^2	df	CFI	TLI	RMSEA	$\Delta \chi^2$ -test (df)	<i>p</i>	Δ CFI
Partial scalar	53.60	49	.994	.993	.027	18.52 (6)	.005	.006
Partial scalar equal means	54.86	50	.994	.993	.027	1.26 (1)	.262	.000
Partial scalar equal variances	60.53	50	.986	.985	.040	6.93 (1)	.008	.008
	Student teachers					Teachers		
Factor loadings	0.62-0.78					0.50-0.77		
Intercepts	3.77-5.09					4.25-6.80		
Factor means	3.94					4.03		
Factor variances	0.36					0.21		

Results: Models of Closeness, Conflict and Cultural Competence

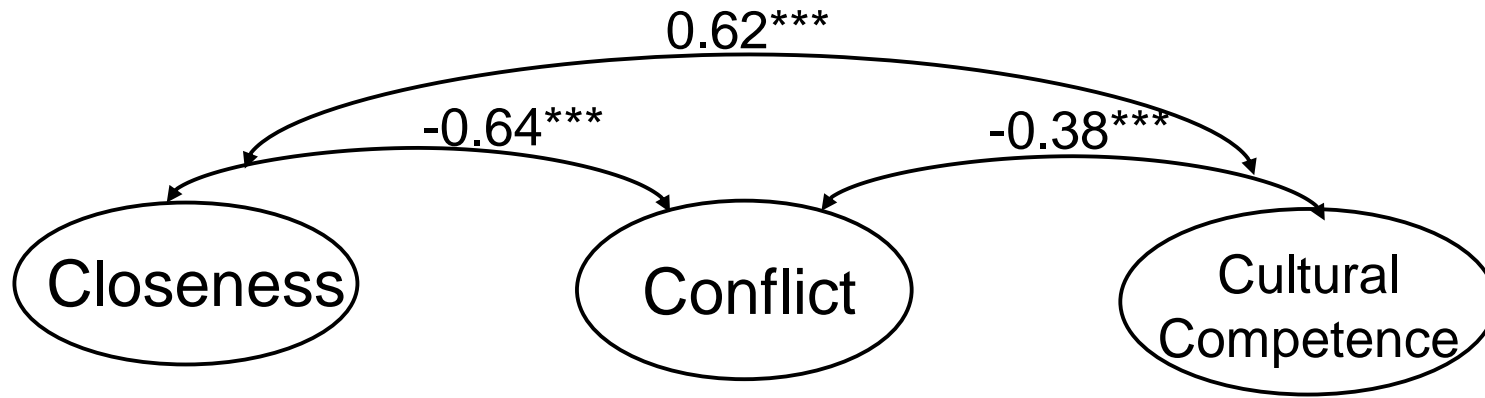


Fig. 1. Model for student teachers:
Standardized correlations
 χ^2 (df) 186.34 (161), $p = 0.08$,
RMSEA 0.04; CFI 0.96; TLI 0.95;
SRMR 0.06.

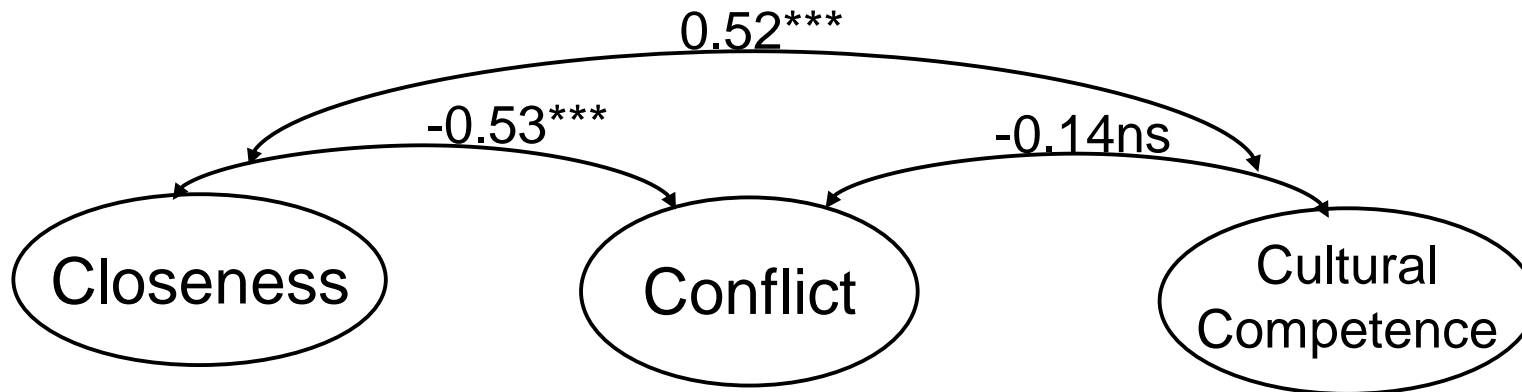


Fig. 2. Model for teachers:
Standardized correlations
 χ^2 (df) 177.57 (161), $p = 0.18$,
RMSEA 0.03; CFI 0.98; TLI 0.97;
SRMR 0.06.

Discussion



- Our study confirmed the one-factor structure of CuRe, a self-report questionnaire on ECE teachers' cultural competence.
- This is the first study to test the measurement invariance across ECE teachers and student teachers.
- Findings suggest that CuRe is a reliable and valid self-report measure that can be applied in a Nordic cultural context.
- ECE teachers and student teachers are both highly confident in their cultural competence, but among students there are more variation in confidence compared to teachers.

Discussion



- Among teachers and student teachers, the closer and warmer relationships teachers perceive to have with children (*Closeness*), the more efficacious they perceive themselves when working with children from diverse cultures (*Cultural Competence*).
- Only among student teachers, the more conflictual relationships teachers reported to have with children (*Conflict*), the less efficacious believes they perceived to have when working with diverse background children (*Cultural Competence*).

References



Acquah, E.O., Tandon, M., Lempinen, S. (2015). Teacher Diversity Awareness in the Context of Changing Demographics. *European Educational Research Journal*, 15, 218-235.

Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology*, 35, 61–79.

Gordon W. Cheung, & Roger B. Rensvold. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233-255.

Hame, B., & Pianta, R. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development*, 72, 625. <http://doi.org/10.1111/1467-8624.00301>

Howes, C. (2000). Socio-emotional classroom climate in child care, child-teacher relationships and children's second grade peer relations. *Social Development*, 9 (2), 191-204.

Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling. Concepts, issues, and applications* (pp. 76–99). London, UK: Sage.

Leung, C. H., & Hue, M. T. (2017). Understanding and enhancing multicultural teaching in preschool. *Early Child Development and Care*, 187(12), 2002-2014.

Obegi, A. D., & Ritblatt, S. N. (2005). Cultural competence in infant/toddler caregivers: Application of a tri-dimensional model. *Journal of Research in Childhood Education*, 19, 199–213.

Pianta, R.C. (1994). Patterns of relationships between children and kindergarten teachers. *Journal of School Psychology*, 32 (1), 15-31.

Pianta, R. C. (2001). *Student–Teacher Relationship Scale–Short Form*. Lutz, FL: Psychological Assessment Resources, Inc.

Rogoff, B. (2008). Observing sociocultural activity in three planes: participatory appropriation, guided participation, and apprenticeship. In K. Hall, P. Murphy, & J. Soler, (Eds.), *Pedagogy and Practice: Culture and Identities* (pp. 58–74). Milton Keynes: Open University.

Spanierman, L. B., Oh, E., Heppner, P. P., Neville, H. A., Mobley, M., Wright, C. V., ... Navarro, R. (2011). The multicultural teaching competency scale: Development and initial validation. *Urban Education*, 46, 440–464.

Yang, Y., Cox, C., & Cho, Y. (2019). Development and Initial Validation of Cultural Competence Inventory–Preservice Teachers. *Journal of Psychoeducational Assessment*



**TURUN
YLIOPISTO**

Thank you ! Kiitos!