

THE RELIABILITY AND VALIDITY OF THE *QUALITY OF EDUCATORS' OBSERVATION AND PLANNING PRACTICES SCALE (QEOPPS)*

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Quality in early childhood education

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- Attending an educational setting early in life promotes children' development and learning (McCain, Mustard, & McCuaig, 2011; OCDE, 2012).
- Quality have been identified as an essential variable in achieving such gain (e.g. Bigras & Lemay, 2012; Britto et al., 2017; Burchinal, Kainz, & Cai, 2011; Zaslow, Martinez-Beck, Tout, & Halle, 2011).
- A lot of attention have been given to various indicators of quality supporting children's development, mostly physical environment, activities, as well as interactions offered to children (Pianta, Downer, & Hamre, 2016).
- However, offering high quality in early childhood education starts before intervening with children.

Educational intervention as a process

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- What adults think and decide prior being with children affect what they do while intervening with them (Clark & Yinger, 1987; Hall & Smith, 2006).
- Early childhood educators (ECEs) should start with observing each child and then plan to best meet his or her needs (Bredenkamp & Copple, 1997; NAEYC, 2009).



- Observing, planning and intervening form an inseparable process in offering high quality educational intervention.
- Few research has assessed the quality of observation and planning practices (Bollig & Schulz, 2012).

Assessing the quality of observation and planning practices

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- Existing measures of quality assess the physical environment, the activities and the interactions
- Only 2 scales measure the quality of observation and planning practices
 - High/Scope Program Quality Assessment tool (PQA, 2003) – 5 items
 - Educational Quality Observation Scale (EQOS; Bourgon & Lavallée, 2013) – 7 items
- Both scales mostly rely on reported practices
- Needed improvements

Conception of the *Quality of educators' observation and planning practices scale*

- Reviewing and analyzing relevant documents;
- Developing the first draft of the QEOPSS a 30 minutes semi-structured interview:
 - Inspired from the 7 items of the EQOS (Bourgon & Lavallée, 2013);
 - Including verification of documents reported in the interview;
 - Adding questions about the use of a curriculum to guide educational intervention;
 - Developing the scoring guide;
- Spring 2016, ensuring content validity of the instrument with a panel of experts.

Research objectives

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- This study wants to explore the properties of the QEOPPS. More specifically:
 - 1) Describe data collected with the instrument.
 - 2) Test the reliability of the scale.
 - 3) Test the validity of the scale.

Sample

- This study was conducted in Quebec (Canada) in the fall of 2016.
- Representative sample of types of child care centers, socioeconomic conditions and of curriculum framework implemented.
- From 300 centers randomly selected, 62 participated (\approx 3 ECE in each).
- Subjects are 181 ECEs working in 3 to 5 year-old groups of children.

Type of centers	94 not-for-profit centers (51.9%) 38 for-profits subsidies centres (21.0%) 49 in-for-profits unsubsidised centers (27.1%)
Material et social deprivation indices	ECEs' centers are located in area where... 26 (15.1%) ... where social and material living conditions are favourable 26 (15.1%) ...where social and material living conditions are average 42 (24.4%) ... where material living conditions are unfavourable 36 (20.9%) ...where social living conditions are unfavourable 42 (24.4%) ... where social and material living conditions are unfavourable
Curriculum framework	150 (82.9%) implementing Quebec's curriculum 31 (17.1%) implementing a particular curriculum

Measures

Variable	Instrument	Description
Quality of observation and planning practices	QEOPPS Cantin & Lemire, 2016	A 30 minutes semi-structured interview. Verification of the presence and the content of documents that were reported. Refer to the scoring guide to attribute a quality level (low, middle or high) to the 8 items: 4 items on observation practices 4 items on planning practices Score the quality of observation practices and planning practices on a scale of 1 to 7. Subscales average into a total score.
Quality of interactions within the group	CLASS-Pre K Pianta, Hamre et La Paro, 2008	Domains: 1) Emotional Support, 2) Classroom Organization, 3) Instructional Support. Observation period of 2 hours. For each domain, scores range from 1 to 7.
Quality of the physical environment	EQOS Bourgon & Lavallée, 2013	11 items assessing whether the layout and furnishing of the classroom is welcoming, flexible, allow a diversity of activities and grouping, is appropriate to children's and ECE's needs, encourage children's autonomy, etc. From the number of features checked, each item are assign a score from 1 (minimum) to 4 (very good). Computation of the items mean gives the scale total score Completed under 30 minutes

Procedures

- The 17 observers had six days of training and reliability certification tests.
- Child care centers were contacted to fix an observation day.
- On that day, three observers went to the centers and collected data in three groups. In order: (a) Quality of interactions; (b) Quality of the physical environment; (c) Quality of the observation and planning practices.
- A second observer was present in a group for 15% of the observations and interviews to calculate inter-rater reliability agreement.
- All ECEs were informed about the project and signed a consent form.

Descriptives statistics

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	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Observation practices	181	4.91	1.365	1.00 - 7.00
Planning practices	181	4.33	1.312	1.00 - 7.00
Total QEOPPS score	181	4.62	1.182	1.00 - 7.00

Reliability

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- Inter-rater agreement
 - ▣ The proportion of absolute agreement is **90.74%**.

- Internal consistency
 - ▣ The value of the Cronbach alpha of $\alpha = 0.72$ for the instrument is greater than the threshold of acceptable internal consistency (George & Mallery, 2003).

Criterion validity

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	Observation practices			Planning practices			Post-hoc
	<i>F</i>	<i>p</i>	Partial η^2	<i>F</i>	<i>p</i>	Partial η^2	
Type of child care centers	14.264***	0.000	0.128	8.246***	0.000	0.075	Not-for-profit > For-profit Subsidies = Unsubsidies
Material and Social deprivation indice	0.786	0.536	0.005	0.922	0.452	0.002	1 = 2 = 3 = 4 = 5
Curriculum framework	3.507	0.063	0.014	19.569***	0.000	0.094	Quebec's curriculum < Other curriculum

Note: * $p < .05$, ** $p < .01$, $p < .001$

Concurrent validity

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	1	2	3	4	5	6
1. QEOPPS_Observation practices	---					
2. QEOPPS_Planning practices	0.543***	---				
3. CLASS_Emotional support	0.506***	0.424***	---			
4. CLASS_Organisation	0.376***	0.321***	0.744***	---		
5. CLASS_Instructional support	0.393***	0.449***	0.630***	0.498***	---	
6. EQOS_Physical environment	0.454***	0.441***	0.530***	0.336***	0.379***	---

Note: * $p < .05$, ** $p < .01$, $p < .001$

Discussion - Implications for research

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- The QEOPPS seems a reliable and valid scale to be used by researcher.
 - Reproduces differences base on type of center (Drouin et al., 2004; Lapointe & Gingras, 2015).
 - Differences in planning practices based on the curriculum implemented.
 - Seem possible to be use in a variety of settings.

- The scale could be useful to measure the quality of observation and planning practices → increase the quality of interventions offer to children (Brunsek et al., 2017).
 - The QEOPPS correlated with the quality of interactions and of the physical environment without multicollinearity (Field, 2013).
 - Measures a complementary dimension of early childhood education quality.
 - Further work should explore the complex association of the QEOPPS with process quality and children's development.

Discussion - Implications for practice

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- **Priority!!!**
- The quality of observation and planning practices is variable.
 - In 2004, among the lowest scores obtained (Drouin et al., 2004).
 - In 2015, remained of minimal-moderate quality (Gingras et al., 2015).
 - Our results, significant standards deviations and range covering all the points of the rating scale – even though we might have the “best” centers.
- Hence, observation and planning appear to either be challenging for a lot of ECEs, or be practices that many of them are unaware of or unable to explain.
- Observation and planning practices should be prioritize in initial and ongoing training to improve the quality of early childhood education.
- The QEOPPS may offer relevant information to do so.

Conclusion

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- The QEOPSS presents interesting properties.
- It could be useful to:
 - have a better understanding of the complexity between observation and planning practices, process quality and children’s development.
 - contribute to acknowledge the complexity of what ECEs are doing and support them in initial and ongoing training.

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