Assessing Teacher Beliefs about Early Literacy Curriculum Implementation

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Abstract

Against the backdrop of growing international concern for a narrowing view of early literacy, this study was initiated to determine how teachers of four-year-olds view their task of fostering early literacy. This paper reports on the first steps to design and validate an instrument which captures teachers' perceptions of: early literacy content goals; developmentally appropriate and effective pedagogical practices related to each content goal; and their own competencies to offer a suitable environment for developing early literacy. The content validity of the instrument was evaluated by an expert screening; the reliability and practicality of the instrument are being assessed through a pilot study involving 40 teachers from two countries; this paper reports on the findings from the first 20 teachers. Validation findings indicate that the instrument appears to be reliable. The findings from the pilot run show that teachers focus on decoding skills most; there is some attention to book orientation and understanding, and relatively little to the functions of written language.

Purpose

A pioneer in the field, Clay, (1966) emphasized that literacy begins long before school entry. Underpinning Clay's notion of emergent literacy, which involves synergistic development of listening, speaking, reading, writing and viewing from birth, are several assertions, which have been stressed by other experts, as well. First, well-known theorists have long claimed that children play active roles in their own development, (Bruner, 1983; Piaget, 1952; Piaget & Inhelder, 1969; Vygotsky, 1962). Clay's position that children are active learners about print long before they can read or write is consistent with this view. Second, Macnamara (1972) argued that language learning is driven by and dependent on the capacity to understand and participate in social situations. This is well-aligned with Clay's view that social interaction is the basis of emergent literacy.

While these notions may ring true with many early childhood educators today, the last two decades have seen a clear and, in our opinion, disquieting, trend toward a narrowed view

of early literacy which focuses predominantly on pre-reading skills. For example, the (American) National Early Literacy Panel (NELP) conducted a meta-analysis, which identified numerous early literacy skills that have predictive relationships with later measures of literacy (NELP, 2008). While early literacy researchers acknowledge the value and limitations inherent in the NELP report, they also are deeply concerned that NELP, like the National Reading Report, may lead to policies that inadvertently narrow the curriculum (Pearson & Hiebert, 2010). Specifically, they are concerned that the NELP will lead to policies that over-emphasize constrained skills (e.g., alphabet knowledge, phonological awareness) that promote early decoding rather than on abilities, such as oral language, that support conceptual development and reading comprehension (Neuman, 2010; Dickinson, Golinkoff, & Hirsh-Pasek, 2010; Paris & Luo, 2010; Pearson & Hiebert, 2010; Schickendanz & McGee, 2010; Teale, Hoffman & Paciga, 2010).

Given these circumstances, it would seem prudent to investigate what, if any, kind of actions can/should be taken to (re)broaden the potentially narrow view of what early literacy among various stakeholders. A first step in addressing that problem is to take stock of how practitioners view early literacy, how their views translate into classroom practices, and how competent they feel with regard to how they foster early literacy. While we have identified several instruments that address aspects relevant to this concern, we know of no instrument available for the purpose stated. Therefore, the aim of this study is to design and validate an instrument that captures teacher beliefs, practices and competencies with regard to early literacy.

Perspectives

With this renewed focus on early literacy and possibly changes in educational policies, it is important to understand teachers' beliefs, competencies, and practices about literacy for several reasons. First, by understanding teachers' beliefs and practices, teacher educators and coaches may be better able to help teachers understand and interpret research findings in relation to their own teaching and the needs of their students. Second, teacher educators and coaches may be better able to implement professional development that recognizes and respects teachers' beliefs and practices, and suggest instructional practices

that teachers find ecologically valid. Finally, understanding teachers' beliefs and practice is important when conducting research in collaboration with teachers, particularly when conducting a learning needs or context analysis prior to designing and intervention.

The National Association for the Education of Young Children (1998, 2005) position statements on early literacy emphasize a range of activities that should be undertaken to support language development and literacy. For infancy through preschool, a phase characterized by awareness and exploration, core elements for the curriculum should include: reading aloud to children; exposure to and concepts about print; alphabetic principle, linguistic awareness and phonemic awareness. Based on these guidelines and those from international literature (cf. Dickenson & Neuman, 2007; Neuman & Dickenson 2003; Snow, Burns & Griffen, 1998; Verhoeven & Arnoutse, 1999), we distinguish three strands. The (de)coding strand includes elements such as: linguistic consciousness, alphabetic principle, and the phoneme-grapheme connection. The text comprehension strand includes: book orientation, story understanding and reading/listing enjoyment. And the functional strand includes: the relationship between spoken and written words; the communicative purposes of different written products; and understanding that symbols represent ideas/words.

As mentioned previously, recent findings related to the (de)coding strand (cf. NELP, 2008) are valuable. Yet there is concern that other important areas, represented in the other two strands, may be(come) under-represented in early years curricula and classroom enactment. Further, a focus on pre-reading skills is often accompanied by instructional practices which, on the surface may seem appropriate for younger children (e.g. cutting, pasting, drawing, singing), but actually amount to little more than drill and practice, with limited connection to personal meaning-making. In their (2005) article entitled, "Whatever Happened to Developmentally Appropriate Practice in Early Literacy?" Neuman and Roskos express unease with classroom trends in which, for example, 3 and 4 year olds spend long spans of time learning the alphabet, spelling their names and sounding out first letters in words. They contend that such practices may, "consign children to a narrow, limited view of reading that is antithetical to their long-term success not only in school but

throughout their lifetime. In other words, we believe that such instruction might actually undermine, rather than promote, the very goals of improving literacy learning." Not only are the teaching practices subject to criticism, but also the related assessment. As Van Oers (2007, p. 301) puts it, "… in the assessment of children's ability to participate in literacy practices, early years teachers, researchers and policy makers often cling to the old tests of technical reading, spelling, and for the youngest child especially, vocabulary acquisition. It looks as if the practice of literacy is reduced to a limited range of decontextualised performances and tests for the sake of measurability."

Research has been conducted to explore teachers' beliefs about teaching and early literacy in relation to developmentally appropriate practices (Charlesworth, Hart, Burts, Thomasson, Moslety & Fleege, 1993); best practices in early literacy (Burgess, Lundgren, Lloyd, & Pianta, 2001; Hindman & Wasik, 2008); and teacher background such as education and experience (Hindman & Wasik, 2008). Correlations between teachers' beliefs and these dimensions have been inconsistent among some studies because, in part, limited views of beliefs have been examined (Pajares, 1992); because some questionnaires have asked teachers only a limited number of questions (Kowalski, Pretti-Frontczak, & Johnson, 2001); and because questions have often been unclear or ambiguous (Hindman & Wasik, 2008; Kowalski et al, 2001). Consequently, throughout the development of the instrument reported on here, we ascribe to the definition that beliefs include what teachers assume, think, and know; how they believe instructional practices should be implemented; what they believe their role is in the process of teaching and student learning; and their ability to implement instruction (Bandura, 1986; Charlesworth, Hart, Burts, & Hernandez, 1991, Deford, 1985, Kagan, 1992). Further, we have taken care to write explicit statements to address the concerns about ambiguity in previous questionnaires.

About this study

Instrument: TBCI-EL

The Teacher Beliefs about Curriculum Implementation – Early Literacy (TBCI-EL) instrument contains both open and closed questions, in an effort to capture teacher beliefs,

practices and competencies. For example, many questions are related to three strands of early literacy content goals: comprehension of text; functional reading and writing; and (de)coding. Unlike questionnaires that ask teachers to responds to statements on a Lickert scale, the TBCI-EL asks teachers for (a) examples of how to ideally teach the educational objective in each statement; (b) the frequency with which the teacher implements that particular instructional practice; (c) the teachers' knowledge and ability to provide instruction related to each educational objective. Further, teachers are asked to rank order each educational objective within each of the strands, and then to rank order the three strands.

Context

While the concerns described earlier are prevalent in many countries, this research is currently being undertaken in two very different countries, where this issue is increasingly a topic of public and researcher debate: the USA and the Netherlands. Both of these countries are home to immense cultural variation across the national populations. Both nations have high percentages of pupils learning in schools through their second language. Both the USA and the Netherlands have recently renewed the commitment to invest heavily in early education and especially in language development. At this stage of the study, instrument validation, we sought to include teachers in middle-sized cities working in middle-income schools. For the first piloting of the instrument, teachers of four and five-year-olds were selected.

Methods

This study was guided by the following main research question: *To what extent is the TBCI-EL a valid, reliable and practical instrument for capturing teacher beliefs, practices and competencies with regard to early literacy in 4-year old classrooms?*

The research question is being answered in two phases: expert appraisal and piloting. The first phase focused on the content validation of the instrument, and was carried out through an expert appraisal. In this phase, an initial draft of the instrument, based on literature, was designed and validated by experts. The respondents in this phase were 3 experts in the field of early literacy, whose comments were captured during a focus group

discussion. Based on the expert comments, the instrument was revised and administered in the second phase: pilot use. In the second phase, which is currently underway, the revised instrument is being piloted with 40 teachers, with the aims of exploring the reliability and practicality of the TBCI-EL. In the pilot use phase, 20 American (hereafter referred to as US) and 20 Dutch (hereafter referred to as NL) teachers of four-and five-year olds are participating. This paper reports findings based on use with 20 teachers (13 NL, 7 US). Chronbach's alpha was calculated to assess the reliability of the instrument, across the TBCI-EL clusters. Brief interviews with the teachers as well as the research assistants who administered the TBCI-EL captured data on how practical the instrument is to use.

Results

The qualitative data analysis showed basically the same basic patters across both US and NL groups. The number of respondents to date is too small to check for differences in the quantitative data set. Throughout this section, when we refer to 'teachers,' we mean the combined group of 20 respondents. Where NL-US differences were found, they are reported as such.

Content validity

Respondents from the expert appraisal conducted during the first phase of the study focused on content validation. The experts acknowledged the value of the three strands, but recommended more precise wording and focus within each strand. They also recommended more open questions to gain nuanced information on not only on the content goals but also on the instructional practices teachers currently undertake.

Face validity

The researchers administering the TBCI-EL were alert to teacher reactions to the content during the second phase of the study. The teachers did, indeed seem to feel that the TBCI-EL was measuring teacher beliefs about early literacy, and they seemed to understand the questions. Reflecting on statements given was easier for teachers (and in NL, more enjoyable) than producing examples from their own practice. We suspect this primarily a function of the fact that reaction tasks tend to be less cognitively demanding than

production tasks, but do not rule out the possible need to clarify some of the questions. Also, the notion of describing 'ideal' practices may be too difficult for most teachers.

The TBCI-EL took approximately one hour to administer to teachers in the US and also in NL. In both countries, it was given to these teachers at the end of their workday, as required by their school district so not to interfere with regular work hours. Despite this, teachers seemed genuinely interested in participating. All the US and some of the NL teachers talked with the researcher for at least 30 minutes after the questionnaire was complete about issues related to teaching issue both personally and nationally.

First, each teacher was asked general questions about her teaching experiences and then she were asked to explain what "early literacy" meant to her and to describe what "learning to read…write…listen…talk" should look like in early childhood classroom. Next, for each of the three strands, which consisted of 7 – 12 goals, the teacher was asked to (a) list two ways teachers should ideally address each goal presented, and (b) identify how often she engaged her students in those types of activities. Although this was the time-consuming portion of the questionnaire, teachers did remain focused. However, the NL teachers seemed to require more prodding and the flow of the interview tended to 'bog down' toward the end of this section; this was less the case with the US teachers. Both groups of teachers' seemed to have difficulty considering how "ideally" the goals might be address but rather discussed how they addressed the goals and then how often they presented those activities to their students. That is, at least for literacy, teachers did not or could not contemplate activities beyond that they did in their classrooms. This is interesting because it raises the question of whether teachers are reflecting on their instructional practices and considering how they might better meet the needs of their students. Lastly, teachers were asked to consider each strand as a whole to rate its importance, their knowledge and ability to teach the content, and their wish for additional knowledge. Both groups enjoyed this portion of the interview. In general, teachers felt confident in their abilities, which may explain, in part, they could discuss "ideally" - that is, they believe they are presenting literacy activities that meet the needs of their students.

With respect to Strand 1, Book Orientation and Understanding, teachers understood the difference between story structure and story element, and could give examples of how they taught these goals. However, there was a sense that even though they presented activities that addressed the goals, they were not planned intentionally, but rather just part of book sharing routines and activities. With respect to Strand 2, Functions of Written Print, teachers seem to struggle with three of the goals (i.e., Understands that symbols (e.g. pictures or logos) represent ideas/words; Understands that written words represent objects/actions/ideas; Understands that there is a relationship between written and spoken words). Although teachers could identify logos that their students' recognized (e.g., McDonald's, cereal boxes, STOP sign) and symbols that were their classroom, in general, teacher seemed hesitant when responding to these goals. Lastly, teachers struggled with some goals related to Strand 3: (De)coding. Specifically, they did not understand "distinguishes between the form and the meaning of words," which may be too "test-like" and not a reasonable goal to young children. Teachers also struggled with "distinguishes between words and sentences" and "understands simple alliteration". Although they understood what these goals meant, some teachers may not have intentionally planned activities them when teaching, but seemed compelled to provide examples. Further, some teachers seemed to have difficulty distinguishing between "understands that spoken words are made up of phonemes" and "understands the phoneme-grapheme connection". Lastly, three goals were closely related (i.e., provides the names of some letters, provides the sounds that letters represent, understands the phoneme-grapheme connection) and, understandably, challenging for teachers to separate in terms of their instructional practices.

Reliability

It would be necessary to accumulate intercorrelations from several studies using this instrument before any claims can be made about the TBCI-EL. For the round of testing that has been completed, Cronbach's alpha was calculated for the quantitative portion of the instrument. The three kinds of items that were expected to show internal consistency were: self-efficacy (teacher's own skills, teachers' own background knowledge), belief about

importance and wish for additional knowledge. Cronbach's alpha for all those items taken together was .84, indicating a reasonable level of reliability.

Practicality

To assess practicality, instrument use was assessed by the researchers who administered the TBCI-EL, using standard criteria for usability testing: performance, accuracy, recall and emotional response. Translated into criteria for assessing the practicality of a research instrument, the following aspects were assessed:

- Performance: How much time and steps were required to administer the instrument?
- Accuracy: How easy or difficult was it to make and/or correct mistakes?
- Recall: After not using the instrument for a period, how easy/difficult was it to get sufficiently up to speed to administer again?
- Emotional response: What was the instrument-administering experience like from the researcher and participant perspectives? E.g. Afterwards, did the researcher feel confident, stressed, motivated to use the instrument again? Did the participants (appear to) feel relaxed, flustered, engaged and ready to tell more of tired and eager to be finished)

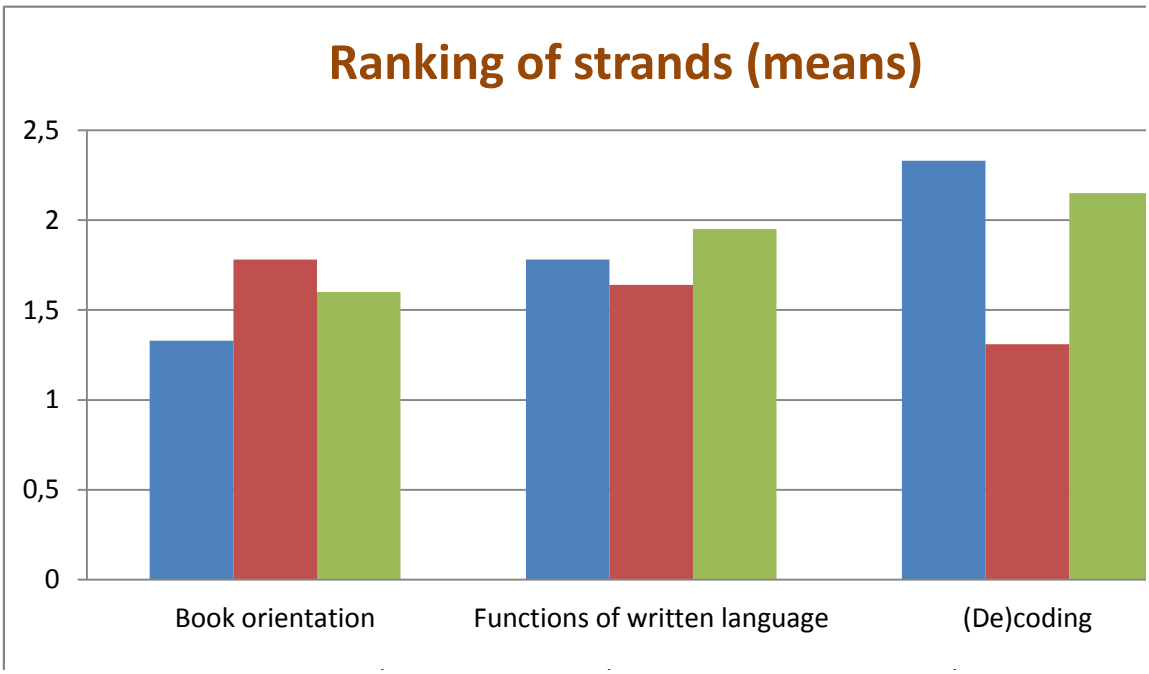
The TBCI-EL took about an hour to complete. In NL, some were conducted individually and some were conducted as a group activity (but yielding individual responses). The individual conversations were similar to those in the US – pleasant and interested. As a group activity with some (n=6) of the NL teachers, the cohesion fell apart and people got tired. In addition to giving the teachers cards with the individual goals, the US teachers were also given a document for each strand that had the individual goals listed underneath it. Several teachers found it easier to refer to the "big picture" to help them to organize their thoughts. Partway through data collection, the document was slightly reformatted to make it easier to record teachers' responses and decrease the risk for errors. The protocol was clear, but it did require researcher preparation the first time and a some degree of refreshing that preparation if more than a month elapsed between interviews. Re-learning was much quicker after initial use, and patterns of routines (e.g. giving prompts) were

readily (re)established. In the group situation, teachers were visibly tired and eager to be finished by the end of the activity. In the individual situation, teachers were happy to share their thoughts and seemed genuinely interested in the topic. As mentioned previously, teachers struggled more with productive responses than with reactive responses, especially related to 'ideal' practices for teaching early literacy.

Teacher responses to the TBCI-EL

The TBCI-EL instrument is still in development and has been tested with a small number of respondents (n=20) so far. We therefore view the findings as general impressions only. Nonetheless, even given this caveat, we do find the results interesting and therefore worthy of sharing here. When asked what early literacy means, teacher responses showed a clear focus on decoding skills and preparing to read. Thereafter, book orientation was mentioned by some and only a few teachers mentioned functions of written language (more in NL than in the US). Figure X below shows how teachers rank the importance of each cluster from three perspectives: their personal view; how they perceive their external environment prioritizes things; and how they view incoming teachers to prioritize the three clusters. The latter two favor the decoding strand.

Figure X. Rankings for the relative importance of each strand



Taken together, teachers had ideas about how to meet all of the goals mentioned in the TBCI-EL. But not every teacher had ideas for every goal. With some of the more advanced decoding goals, teachers indicated that they did not feel the items were developmentally appropriate for four and five year olds (though they said that a few children in their classes might be ready).Table 3 summarizes the most frequent responses from the teachers in this study with regard to the book orientation and understanding strand; Table 4 does the same for the functional reading and writing strand; and Table 5 presents the same for the (de)coding strand. Within each strand, teachers ranked the importance of different goals. The relevant goal rankings follow each of the practices tables below.

Table 3. Teacher practices for to facilitate book orientation and understanding

Book handling	Teacher models book handling; children have opportunities to "read"; classroom 'rules' for how to treat books
Directionality	Teacher finger points; children point to text; always write child's name un the upper left corner of their work
Story Structure	Teacher asks questions; picture card to sequence story; act it out
Story elements	Teacher asks questions; children retell, predict or act out; vertelkastje

Enjoys reading/ listening	Teacher reads with expression, re-reads books, and models enjoyment
Understands reading/listening	Teacher asks questions; children act out story; children re-tell stories
Vocabulary	Teacher defines new words; children point to picture or act out; "telling table" with artifacts related to classroom themes

Figure X. Teacher priorities related to book orientation and understanding

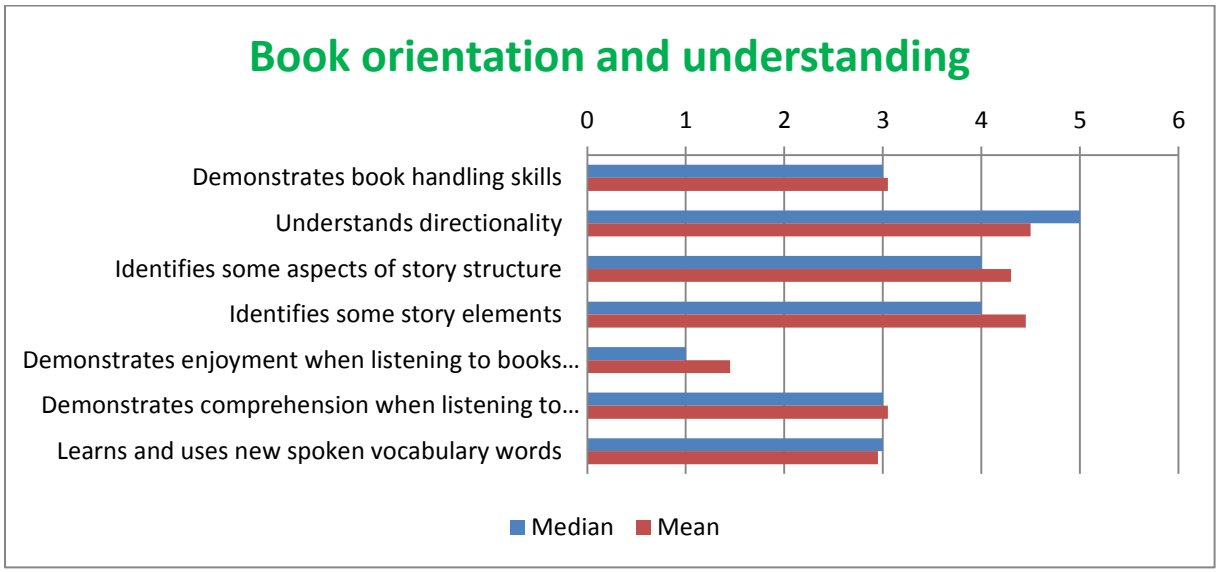


Table 4. Teacher practices for to facilitating functional reading and writing

Symbols represent ideas/words	Environmental print available; using image-based daily rhythm cards (these show main events: circle time, snack, outdoor play)
Written words represent objects/ actions/ideas	Tell children we read words, not pictures; write in front of children; send letters home with children
Relationship between written-spoken words	Dictation or writing in front of children; children's name tags; labeled environment
Communicative purposes of written	Variety of printed materials and opportunities to use or make; using written products in (dramatic) play

products	
Approximates conventional writing	Handwriting without Tears program, trace/copy/write their own names; pre-writing practice skills
Writes own name	Copy/trace/write their names or first letter; daily sign-in; demonstration
Attempts to spell words conventionally	Invented spelling based on letter-sound correspondences; (many teachers said they did not work on this yet)

Figure X. Teacher priorities related to functional reading and writing

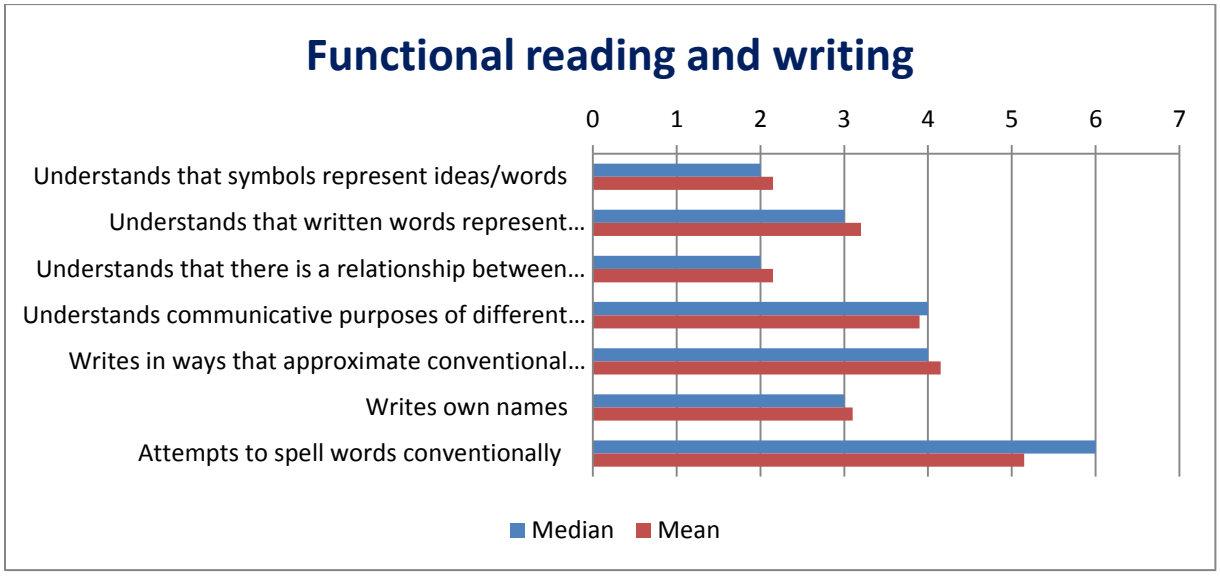
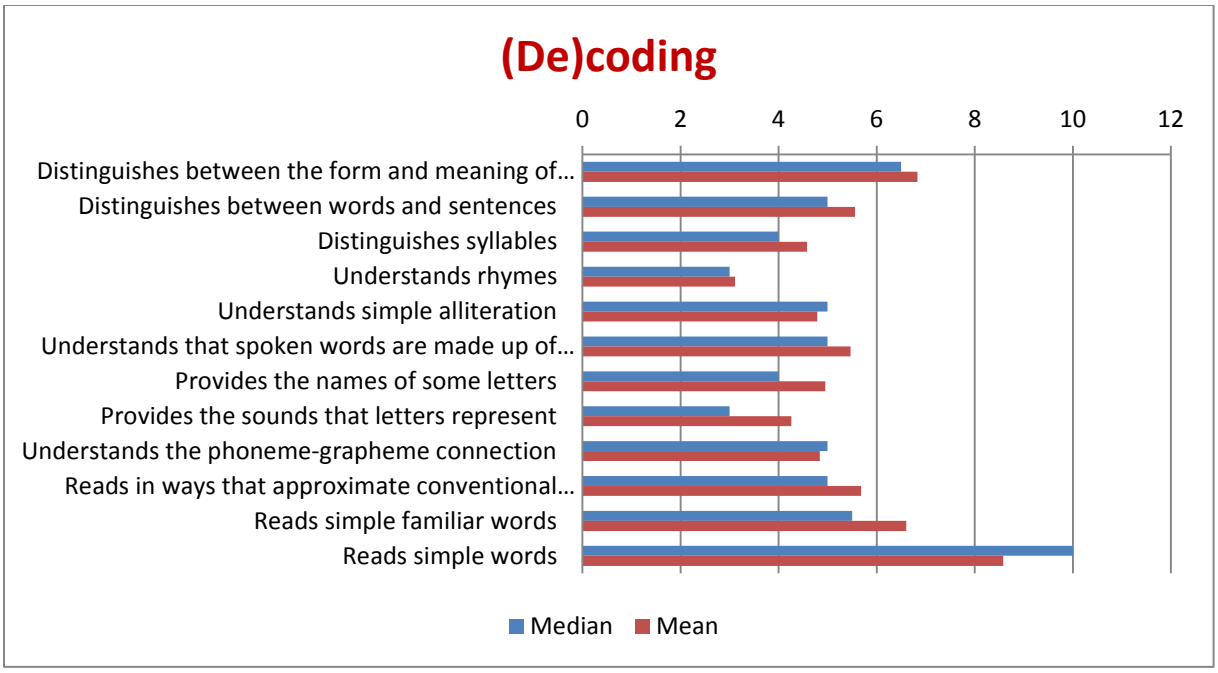


Table 5. Teacher practices for facilitating (de)coding

distinguishes between form and meaning of word	Match words and pictures; write words and show the size of them
distinguishes between words and sentences	Point to words; talk about spaces; count words when writing; games (e.g. when you hear 'ball', stand up)
distinguishes syllables	Clap and/or count syllables in words
understands rhymes	Help children notice, identify and generate rhymes by using books, nursery rhymes, songs, and picture/objects that rhyme
understands simple	Use books, songs, poems with alliteration, encourage children to

alliteration	notice the first letter
understands that spoken words are made up of phonemes	Manipulative and words – to say each letter name and sound
provides the names of some letters	Teach letters in children's names, teacher letters daily/weekly, ABC games; letter wall
provides sounds that letters represent	Teach letters daily; games; flash cards; letter wall
understands phoneme-grapheme connection	Pretend writing or writing their names; sounding out simple words
reads in ways that approximate conventional reading	Teacher models reading and finger pointing; reading corner; reading to doll or other child
reads simple familiar words	Recognize or reads their own name (many teachers indicated this was not a goal they had at this age)
reads simple words	Label room; practice making words with letter title (many teachers indicated this was not a goal they had at this age)

Figure X. Teacher priorities related to decoding



Teachers were asked which materials they commonly use to support the teaching and learning in each strand. For each strand, they mentioned books. For the book orientation and understanding strand, they also mentioned (books on) CDs, story cards, felt board stories, puppets, writing materials. For the functional reading and writing strand, they mentioned also word cards, writing materials. For the decoding strand, teachers also mentioned name cards/flash cards, board games and rhyming tubs. For both the functional reading and writing strand, and the (de)coding strands, teachers mentioned *Handwriting without Tears.* They also described how they use technology to meet the goals of each strand. For each strand they mentioned CDs. For book orientation and understanding they also mentioned tapes, computer–read books, interactive games and TV/videos. Teachers mentioned a document camera for both book orientation and functional reading and writing. For functional reading and writing they additionally mentioned interactive websites/games. For (de)coding, teachers additionally mentioned computer games, and TV/videos.

Conclusions and discussion

Conclusions

At this early stage of instrument testing, it would seem premature to draw any hard conclusions. Our initial impressions are based on piloting with 3 experts and 20 teachers. Based on those findings, we tend to be optimistic about the content and face validity. It would seem that both experts and teachers felt that the content of the instrument was appropriate. However, the next round of instrument testing should involve a more rigorous assessment of both content and face validity. Initial findings regarding the reliability of the instrument give us cause for optimism, given the satisfactory level of internal consistency. It would seem prudent to continue testing with this same basic instrument, before revisions are made to the TBCI-EL. However, in the short term, it may be advisable to consider making modest modifications to the instrument by eliminating or merging the questions that teachers struggled to answer (e.g. 'ideal' practices). In addition, because it is time consuming, it could benefit from being shorter.

Should we have a paragraph here on the findings? Compare that to literature/discuss? Or not bother for now and do a proper job with the more robust data set?

Future research

Future research on the TBCI-EL should involve a more systematic assessment of content and face validity, with both experts and teachers, respectively. One way to tackle this could be to use the Lawshe's CVR (content validity ratio) method for assessing content validity. This essentially gauges agreement among exerts regarding how essential a particular item is. Lawshe (1975) proposed that each of the subject matter expert (SMEs) on the judging panel respond to the following question for each item: "Is the skill or knowledge measured by this item 'essential,' 'useful, but not essential,' or 'not necessary' to the performance of the construct?" According to Lawshe, if more than half the panelists indicate that an item is essential, that item has at least some content validity. His formula can be used to calculate the CVR. In addition, the same activity could also be used to ask experts the question, "Are we missing important constructs?" Finally, if the same basic approach were used with the target audience (teachers), it would provide a more robust measure of face validity.

In addition, with increased numbers of respondents, attention should be given to discriminant validity. It would be important to ascertain if the TBCI-EL could distinguish between different respondent groups, namely teachers of junior kindergarten (primarily 4 year olds) or teachers of senior kindergarten (teachers of 5 year olds). With the full set of respondents (20 US and 20 NL) a non-parametric test could be used to explore this possibility. If each of the two groups show a normal distribution, a t-test may suffice; if not, the Wilcoxon signed-rank test could be used.

Finally, the three strands should be studied using factor analysis. It will be useful to discern if, indeed, the three strands identified so far do constitute three main constructs. However, substantially more respondents will be necessary before this can be completed. Alongside the content guidance from experts, this could help identify goals that could be removed or possibly merged.

Significance

The present study is significant for several reasons. First, the TBCI-EL is intended for use in a wide range of settings concerned with fostering early literacy in classrooms of young children (for this version, four-year-olds). The tool is unique because it is designed from an encompassing view of teachers' beliefs, competencies, and practices; this provides a valuable lens for a range of stakeholders. That is, teachers' beliefs are complex (Pajares, 1992) and a better understanding of this construct will help coaches, teacher educators, and researchers to provide or conduct more ecological value support and research. Second, the present study is significant because it investigates teachers' beliefs and practices through a cross-cultural lens. Educational beliefs and practices are culturally based (Tobin, Hsueh, & Karasawa, 2009) but understanding how culture influences educational decisions can be difficult without a comparative stance with other cultures. This study provides a first step towards developing a nuanced understanding of how teachers from The Netherlands and the United States view early literacy, and sets the stage for future research on this topic. This cultural understanding may be particularly relevant in the US with changing demographics and the need for teachers to understand how their cultural values influence their teaching and how those values may be different from the families they

serve. Finally, because early education and especially early language development is crucial to successfully launching a child's learning career, we view this work to be at the heart of this year's conference theme because it facilitates education research for the public good.

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