

Reply to Li, D'Angiulli, & Kendall:
**The Early Development Index and children from culturally and linguistically
diverse backgrounds**

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To the Editor of *Early Years*:

We are writing in response to the paper by Li, D'Angiulli, & Kendall (2007), published recently in your journal. As researchers responsible for developing, validating, disseminating, and improving the Early Development Instrument, we welcome all constructive feedback. However, we feel that there are two key aspects of this paper that we would like to address. The first concerns a number of errors and misconceptions in the paper that we think are important to clarify and correct. The second issue relates to the significant amount of research and effort that has taken place since this article was first written, particularly the increasing amount of effort, both in Canada and in Australia to engage the Indigenous/Aboriginal populations.

Misconceptions and errors

1. The Early Development Instrument (not Index; EDI) and its adaptation, the Australian Early Development Index (AEDI), are not screening or “testing” tools. The EDI is a measurement tool that communities can use to gauge early childhood development. It reports on populations of children in different communities, monitors groups of children over time, and predicts children’s success in elementary school (Forget-Dubois et al. 2007). The tool is completed by the teacher for each child after a few months into the kindergarten year (Canada) or into the first year of full time schooling (Australia), so that the teacher is familiar with each child. EDI data, however, cannot be interpreted at the individual child level, but only at the group level; i.e., for whole classrooms, for all boys or all girls, for all children from one language group, or for all children in a given neighbourhood, etc.

Quite clearly the EDI is *not* a screening tool (Janus and Offord 2007); screening tools are typically administered to identify children who may require further diagnostics and testing; the EDI is not intended for either screening or diagnostic purposes (considering this serious misrepresentation, all references in the paper to the “screening tests similar to the EDI” are clearly incorrect).

2. Li, D’Angiulli and Kendall (2007, 225) argue that the EDI “sets the stage for subsequent targeted programs. Targeted programs run the risk of labeling identified individuals when there is no universal program in place first”; however, the EDI research network unanimously recommends *universal programs* over targeted programs, as the network is acutely aware of the ‘risk of labeling’. As a population tool the EDI not only “potentially avoids” the problem of labeling children as ‘at risk’ or ‘vulnerable’, but, in fact, makes it impossible to do so, because individual child ratings are never interpreted for diagnosis.

3. Li, D’Angiulli and Kendall (2007, 227) assert “the assumption [of the EDI] seems to be that English is the only communication tool”. However, the EDI also measures social competence and emotional maturity, as well as non-linguistic cognitive skills, all of which are referring to the ways in which kindergarten children communicate and interact with each other as well as with adults. It would have been correct to say that a number of items of the EDI refer to children’s “ability to use language effectively in [language of instruction]” and “ability to listen in [language of instruction]”, noting that the language of instruction in Australia and Canada most commonly is English. Of note, the EDI in Canadian Francophone schools is completed in French and questions about children’s skills in French replace those about skills in English. Currently the EDI has

been translated and has been or is in the process of being adapted for use in the following countries: United States, Australia, Chile, Egypt, Holland, New Zealand, Jamaica, Kosovo, Moldova, Mexico, Indonesia, China and Mozambique.

The EDI does not intend to measure children's first language skills. The claim by Li, D'Angiulli and Kendall (2007) that "many immigrant children catch up with other children in learning English once they enter primary school (D'Angiulli et al., 2004)" fails to mention that many immigrant children do *not* catch up due to language problems, so that certain subgroups of immigrant child populations have consistently lower verbal and reading achievement scores in primary grades (e.g., Duncan and Magnusson 2005; Rutherford 2006).

4. Throughout the text of Li, D'Angiulli and Kendall's (2007) article there are incorrect references to the EDI domains and the specific items that make up each domain. In addition there are a series of misquotes and incorrect reporting of previous findings. Although these are too numerous to mention within a letter to the editor and may be considered pedantic, these mistakes are of particular concern when they misconstrue the interpretation of the instrument.

Update on recent research

1. A couple of recent studies may be of particular interest to readers of Li, D'Angiulli and Kendall's (2007) paper in regard to the ability to make cultural comparisons using EDI data. The HELP research team has recently conducted a Differential Item Functioning study of the EDI (Guhn, Gadermann and Zumbo 2007). The study found that the EDI measures, at the item level, readiness to learn at school in the same way across different groups of children (girls versus boys; Aboriginal versus

non-Aboriginal children; English-as-a-Second-Language (ESL) versus non-ESL children). The only significant systematic difference between ESL and non-ESL children substantiated the validity of the EDI: it was found that ESL children, at any given level of overall readiness to learn at school, receive lower ratings on the communication and general knowledge domain than non-ESL children with the equivalent overall level of readiness to learn at school. It is important for specific cultural groups to be confident that the EDI represents their communities in a way that is unbiased, and useful. The Federal Government of Australia has recently provided funds to review not only the AEDI as a culturally relevant instrument but to modify associated materials (such as teacher guidelines, community consultation and data dissemination resources) to facilitate Indigenous engagement and empowerment around the AEDI processes and results. It is anticipated that further validity work will also be undertaken for other cultural groups.

Although as yet unpublished, preliminary analyses of the AEDI data comparing Indigenous to non-Indigenous children using the Differential Item Functioning indicates that the instrument is working in the same way for each of the population group (Styles and Parum 2008).

2. Since the original creation of the EDI, there have been ongoing efforts to scientifically validate and enhance the EDI, and various papers have been published (many in peer reviewed journals) to establish validity of the EDI, including test-retest reliability, inter-rater reliability, construct and concurrent validity, psychometric property analyses, systematic bias analyses, and predictive validity work (Brinkman et al. 2007; Forget-Dubois et al. 2007; Guhn, Gadermann and Zumbo 2007; Janus and Duku, 2007;

Janus and Offord, 2007; Kershaw et al. 2007; Lapointe, Ford, and Zumbo, 2007; Lesaux, Rupp and Siegel, 2007; Sayers et al. 2007; Silburn et al., 2007).

3. A number of studies have now been undertaken to ensure the validity of teacher evaluations. Research evidence supported by stringent statistical methodology suggests that: 1) Direct tests of kindergarten children's cognitive skills contribute little to children's later achievements (see meta-analysis by LaParo and Pianta 2000). 2) Teacher ratings carry higher predictive power over the first few years of schooling than direct assessments (meta-analysis by Kim and Suen, 2003). 3) School readiness assessments based on teacher ratings have high predictability level to Grade 6, controlling for family, SES, individual characteristics across six different large-scale longitudinal studies (Duncan et al. 2007). 4) EDI predicts Grade 1 outcomes as well or better than other measures (Forget-Dubois et al., 2007; Silburn et al. 2007). The average level of parent-teacher agreement on assessments is about 40%, and the same level was achieved for the EDI domains in its testing (Janus and Offord 2007). This being said, ideally, EDI information is, at the community level, complemented by parent information. In several areas where EDI is completed, a companion instrument called the Kindergarten Parent Survey (KPS; Janus et al. 2007) is also being implemented.

4. The EDI is now being utilized for longitudinal research in two ways: tracking communities (as unit of analysis) over time, and tracking populations of children over time. As such, the EDI is being utilized in the Australian Longitudinal Study of Australian Children, the Montreal Longitudinal Experimental Study, the Evaluation of the Early Childhood Development and Education Program (World Bank) in Indonesia and various other studies.

In conclusion, we hope this letter addresses most of the misinterpretations arising from Li et al.'s paper and that the papers referenced below and current studies evaluating the use of the EDI in various countries and cultural groups will continue to inform its use, adaptation and application as a reliable and valid instrument. The adaptation of the EDI has now been undertaken in over 10 countries and diverse cultures around the world. The main emphasis of the adaptation work is on ensuring that the resulting measure is indeed reflective of the cultural and linguistic contexts children grow up in, providing a consistent and potentially powerful international measure of early childhood development.

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