

International Early Learning and Child Well-Being Study

The International Early Learning and Child Well-Being Study (IELS) assesses children at age 5, measuring key learning and development outcomes. IELS is an initiative of the Organisation for Economic Cooperation and Development (OECD). IELS is a collaborative effort among OECD and partner governments, with overall managerial responsibility by an OECD Secretariat. The international administration of IELS is undertaken by a consortium led by the Australian Council for Educational Research (ACER), and including the International Association for the Evaluation of Educational Achievement (IEA), and cApStAn.

Origins and context

The OECD provides a forum for its member countries to work together in comparing and developing policies to advance their common goals. IELS is specifically lead by the OECD Directorate for Education and Skills, which focuses on the key challenges facing education systems.

Over the past half century there has been increasing recognition of the importance of the early years in shaping future life outcomes:

Children's early experiences have a profound and long-lasting impact on individual children's well-being and happiness during childhood, as well as their later life outcomes, including education, employment, health, citizenship and life satisfaction (OECD, 2018).

IELS was initiated by countries interested in improving outcomes for children. There is particular concern about inequitable child outcomes, which result both from inequity in access to the provision of early education and care (ECEC) and variations in the home learning environment.

Prior to IELS, there were no internationally comparable measure of child development that was reliable and valid. Hence, as the first study of its kind, IELS responds to a lack of global early childhood data.

IELS was initiated in 2016, with the main study undertaken in 2018, and reporting in 2020. Future cycles are planned. Three countries participated in the first cycle of IELS – England, Estonia and the United States.

Purpose

The overall purpose of IELS is to help countries to better support the development and overall well-being of young children through improved early learning experiences. It achieves this by:

- Providing robust empirical data on children's early learning
- Identifying factors that enable and inhibit children's early learning
- Informing early childhood education centres and schools about skill levels of five year old children, as well as related contextual factors, which could be used to make more informed decisions about curriculums and pedagogical methods. (Ainley et al., 2020)

Measurement objectives

IELS combines direct child assessments and indirect assessments, along with contextual information from parent and teacher questionnaires to gain a holistic picture of childhood development. Direct assessments are conducted one on one, between the child and assessment administrator. Indirect assessments of child attributes are included in the teacher and parent questionnaires.

Assessment domains

IELS focuses on three developmental areas: a) emergent literacy and numeracy, b) self-regulation, and c) social and emotional skills. The definition of and measures used in each of these areas is described below and presented in Table 1.

Emergent literacy is defined as the capacity to demonstrate key emergent literacy skills, including listening comprehension, vocabulary and phonological awareness, which are the foundation of conventional literacy skill development.

Emergent numeracy is defined as the ability to recognise numbers and undertake numerical operations and reasoning in mathematics. This includes an early developmental understanding of numbers and counting, working with numbers, measurement, shape and space, and patterns.

Self-regulation is defined as a set of higher order cognitive processes that facilitate purposeful, goal-directed problem-solving behaviour. IELS focuses on working memory, mental flexibility and inhibitory control. These skills are sometimes also described as Executive Function.

The three social and emotional skills that IELS measures are: empathy, trust and pro-social behaviour. Empathy involves the capability of recognising emotions of others, expressing intrapersonal emotional states and being able to attribute the cause of emotional states in others. Trust involves children developing the disposition of expecting others to be protective and benevolent. Pro-social behaviours involve the expression of positive social behaviours, through being aware and understanding of other people's emotions, avoiding disruptive behaviour and cooperating with other people. (Ainley et al., 2020)

Contextual information

Contextual factors help explain the learning and developmental capacities of children who are assessed in IELS. The contextual data that are collected relate to: individual characteristics, family characteristics, the home learning environment and any Early Childhood Education Centre (ECEC) environment.

- Individual characteristics include: gender, age, disabilities and special learning needs
- Family characteristics: linguistic background, migration history, socioeconomic status (aligned to the PISA index of Economic, Social and Cultural Status (ESCS))
- Home learning environment include: the activities that parents undertake with their children and the frequency of these activities.
- ECEC environment include: age of entry to ECEC and the duration and continuity of participation, as well as staff educational and occupational background

These data are collected via the parent, staff and assessment administrator questionnaires.

Target population and sampling methodology

The main target population of IELS is children aged 5 years, who are enrolled in an officially registered school or early childhood education centre. To be classified as a centre/school, educational activities must be provided for at least two hours per day across 100 days in the year. (OECD, 2020e)

Table 1: IELSE Assessment Framework

Domains			
Emergent literacy and numeracy		Self-regulation	Social & emotional skills
Emergent literacy	Emergent numeracy	Working memory Mental flexibility Inhibition	Empathy
Listening comprehension	Numbers and counting		Trust*
Phonological awareness	Working with numbers		Pro-social Behaviours and Cooperation*
Vocabulary	Measurement Shape and space Pattern		

* These domains were indirectly measured in IELS 2018.

For every sampled child, the parents or main caregivers are asked to complete a questionnaire about the child and the child's home context. Additionally, each staff member who knows each sampled child well is asked to complete a questionnaire about that child (OECD, 2020e)

The sampling approach is designed to obtain unbiased estimates of population parameters so that the results can be generalised to the population of children aged 5 in the country. Samples are a minimum of 200 centres/schools and 3 000 children per participating country. The technical standards include a 5% upper limit for the exclusion of children from the study population. Exclusions vary across countries but a typical reason would be children living in very remote areas. (OECD, 2020e).

The target sample is drawn using a two-stage design, with centres/schools as primary sampling units and children within those centres/schools as secondary sampling units. Centres/schools are selected with systematic random sampling and probabilities proportional to size. If a centre refuses to participate it is replaced with a centre similar on observed characteristics. Within all sampled centres/schools, at least 15 children are sampled. If a school/centre has fewer than 15 children, all are sampled (OECD, 2020e).

A Minimum acceptable participation rate is set at 75% of centres/schools (before replacement of non-responding centres/schools). A centre is defined as participating if at least 50% of the sampled children in that centre participate (OECD, 2020e).

Assessment administration

The assessments of the early learning domains are delivered digitally on tablets, offline. A trained study administrator conducts the assessment, one-on-one with the child.

The contextual questionnaires can be completed digitally or on paper. Parents are asked to complete one questionnaire (about 30 minutes) about themselves, their child and the home environment.. The centre/school staff member may need to provide information for up to 15 children, which takes no more than 10 minutes per child to complete.

National Study Centres (NSC) implement the study within each participating country. Once NSCs obtain a list of the centres/schools for the sample, they invite the centres/schools to take part in the study, which often requires the approval of the relevant government authority. NSC request a list of all eligible children

from each participating centre/school, and generates the list of sampled children for each centre/school. (OECD, 2020e)

Since IELS is a comparative international survey, the assessment must be standardised across countries. Guides are provided to translate and adapt assessment items from the source language (English) to the target language(s). The translations are independently externally verified, by capstan, the linguistic quality assurance partner of the international study consortium. (OECD, 2020e)

In addition to the preparation of assessment booklets, other assessment activities, including test administration, scoring, and data entry and processing, must also be standardised as much as possible. To achieve this, the study administrators receive documented procedures, protocols, software and training, and are subject to an independent quality assurance program. (OECD, 2020e)

Reporting and dissemination

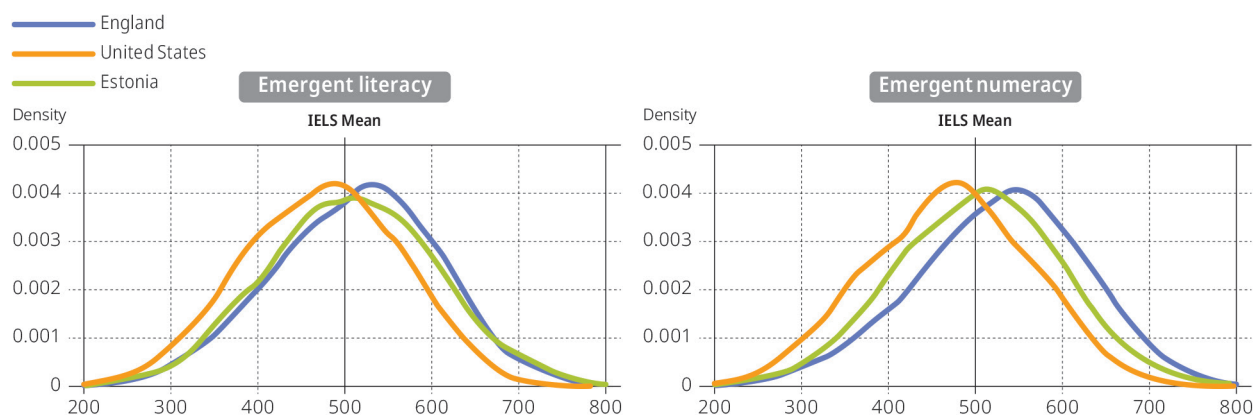
The results from IELS for each participating country are released in a national report, and those results are also brought together in an international report (OECD, 2020a).

The national reports begin with a chapter explaining the background of the study, which includes an overview about the research and the importance of the early years. The context of the study, including social, demographic and policy factors, is provided. There is commentary on the provision and quality of early childhood education in the country. The national reports also summarise the assessment results (with means, percentiles, distributions, correlations, and proficiency levels) and associations with key contextual features, including: individual characteristics, the home learning environment and ECEC attendance (OECD, 2020b, 2020c, 2020d).

An international report provides aggregate findings from all countries and compares results between countries. Figure 1 presents one of the charts from the IELS 2018 International Report showing how the results of participating countries are compared.

The national and international reports are complemented by the Technical Report and Assessment Framework. The technical report provides standards and procedures to maintain the reliability of data collection, analysis and inferences. The Technical Report describes the technical aspects of the Study at a level of detail to enable review and replication of the Study (OECD, 2020e).

Figure 1: Example of charts provides in IELS 2018 International report



Source: (OECD, 2020a)

The Assessment Framework draws on a body of evidence-based literature to guide the Study. The Framework presents important theories on child development and early learning environments. It articulates dimensions, themes and indicators underpinning the Study (Ainley et al., 2020). These reports are available on the OECD IELS webpage¹.

References

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¹ <http://www.oecd.org/education/school/early-learning-and-child-well-being-study/early-learning-and-child-well-being-in-estonia-15009dbe-en.htm>

The ACER Centre for Global Education Monitoring supports the monitoring of educational outcomes worldwide, holding the view that the systematic and strategic collection of data on educational outcomes, and factors related to those outcomes, can inform policy aimed at improving educational progress for all learners.

<https://www.acer.org/au/gem>