

Chapter 1. Introduction

Countries see a successful education system as a vital element of their social and economic development. Human capital has long been identified as a key factor in battling unemployment and low pay and there is also robust evidence that it is an important determinant of economic growth. Moreover, there is emerging evidence that it is associated with a wide range of non-economic benefits, including improvements in health, stronger civic and social engagement, and a greater sense of well-being.

The development of effective education policies is therefore a priority for national governments and they are increasingly looking to the international arena to inform and influence their policy reforms. As part of the drive to enhance the OECD's contribution in this area, the OECD's Directorate for Education and Skills devotes a major effort to the development and analysis of quantitative and qualitative indicators, the results of which are published in the flagship annual publication *Education at a Glance*. These enable governments to analyse their education system in light of other countries' performances. Together with other OECD publications, the indicators are designed to support and review efforts which governments are making towards policy reform.

Indicators from *Education at a Glance* reflect the progressive development of international comparisons in education that has taken place over the last 25 years or so. Fundamental to this development is the quality of the underlying data which is itself driven by the definition of clear concepts, conventions and methodologies which underlie the data collections and the calculations of the indicators. This handbook draws together all of these methodologies in a single publication which is annually aligned to the regular core indicators of *Education at a Glance*. In doing so, its aim is to facilitate a greater understanding of the statistics and indicators produced and hence allow for their effective use in policy analysis.

The handbook therefore provides answers to questions such as “What do we mean by a teacher?” and “What do we mean by public education expenditure?” as well as to questions concerning the use of the indicators such as “How should I interpret expenditure per student?” and “Are there data-quality issues I should be aware of?”

While much has been achieved in improving the international comparability of the statistics, there is still plenty to be done and the handbook acknowledges this. Through its networking with member countries and other international organisations, the OECD is progressively working to address the areas of ambiguity that remain. The OECD will publish further editions of the handbook as it makes updates and improvements.

1.1. Purpose of the handbook

This handbook has the following key objectives:

- To set out the conceptual framework used by the OECD as the basis for the international statistics and indicators it compiles and disseminates.

- To document the international standards for concepts, classifications, conventions and methodologies that the OECD applies in the collection and compilation of education statistics and indicators.
- To provide standards for others to follow in the collection, organisation and international comparison of education statistics and indicators.

The handbook is not intended as a data collection manual but rather as a reference from which such manuals can be compiled. For that reason it makes no detailed reference to the current OECD data collection instruments and how they should be completed by respondents. That task is fulfilled by the existing data collection manuals.

Importantly, the revision of the handbook has also provided an opportunity to review the existing definitions that are used in the OECD data collections and seek improvements where possible.

1.2. Target audience and using the handbook

It follows from these objectives that this handbook is intended for users of OECD international statistics and education indicators, and for those involved in compiling international data on education.

The users of the statistics and indicators will often be readers of *Education at a Glance* but will also be those who access OECD education data in other ways, for example via the OECD's Education at a Glance Database (<http://stats.oecd.org/> (OECD, 2018_[1])) or via the OECD data portal (<https://data.oecd.org/education.htm> (OECD, 2018_[2])). For them, the handbook aims to create a better understanding of the educational statistics and indicators produced by the OECD and facilitate their use. The catalogue of data definitions and classifications used in the underlying data collections as well as the concepts and methodologies that are used to compile the statistics and indicators are vital in this regard. The descriptions of country reporting practices are also important, particularly the mappings of national educational programmes to the international classification, which are published in Annex 2. Also key is an appreciation of the data-quality controls that are applied in the collection and compilation of the statistics as well as knowledge of where data quality is weakest. The handbook meets all of these needs.

For those involved in collecting and compiling international data on education, the handbook provides a comprehensive reference for the established international standards and conventions used by the OECD in the regular core indicators from *Education at a Glance*, offering standards which they might follow. Greater consistency across international collections can only enrich the collective data that are available at the international level.

Finally, the transparency provided by explaining methodologies and highlighting remaining data-quality problems presents an opportunity for debate about what improvements can be made and how they can be achieved.

1.3. Structure of the handbook

Chapter 2 sets out the conceptual framework for international education statistics and indicators which have driven the development of definitions and the data collections. The chapter begins by giving a short historical perspective of the development of OECD-INES statistics and indicators on education and describes the organisation of the OECD

Indicators of Education Systems (INES) Programme, which produces these indicators. It also gives an overview of the latest data collection instruments and methods which provide the data underpinning the statistics and indicators.

Chapter 3 sets out the coverage of the OECD-INES internationally comparable statistics on education. It begins by defining education and proceeds to define the coverage of the statistics which follows from that. In order to clarify the coverage, it discusses various boundary issues around education, for instance in relation to early childhood programmes and vocational and technical education.

Chapter 4 sets out the definitions and classifications used in the collection of OECD-INES international education statistics, taking in turn students and graduates, educational personnel, school organisation and the curriculum, educational institutions, and educational expenditure. It provides key definitions along with discussion of the interpretation and practical implementation of these definitions. It also notes where work remains to be done to further clarify these definitions.

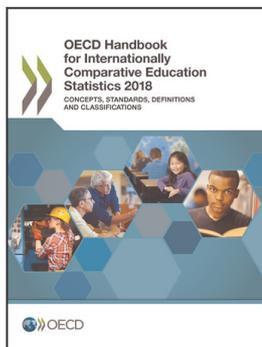
Chapter 5 covers the conceptual, definition and classification issues concerning educational programmes. It is organised in three parts. The first part begins with an overview of the International Standard Classification of Education (ISCED 2011) and sets out the related definitions and classifications that apply to educational programmes. The second part sets out in detail how to allocate educational programmes within each of the levels of the ISCED classification and is consistent with the OECD's "ISCED 2011 Operational Manual Guidelines for classifying national education programmes and related qualifications". Annex 2 contains diagrams mapping countries' national educational programmes to the ISCED framework, a key tool in interpreting the published statistics and indicators.

Chapter 6 examines issues surrounding the quality of the international education data. It begins with a declaration of the OECD's commitment to data quality and the quality framework used to collect, compile and disseminate data. It then discusses the types of data-quality problems that arise and why they arise, and describes how the OECD assesses and addresses these issues. It suggests some ways to make estimates for missing data and concludes with an account of the main international education data-quality issues that remain to be tackled.

Chapter 7 turns to the statistics and indicators that are derived from the raw data. It explains the concepts, methodologies and conventions used in the calculations, and the measurement issues that can arise. It focuses on the main types of indicators compiled from the data collected through the INES Programme. It does not seek to describe in detail every indicator that appears or ever has appeared in *Education at a Glance*. Instead it focuses on the key indicators or groups of indicators which have conceptual or methodological aspects worthy of explanation and can therefore be considered a catalogue of indicator methodologies rather than a catalogue of indicators.

References

- OECD (2018), *OECD Data*, <https://data.oecd.org/> (accessed on 26 July 2018). [2]
- OECD (2018), *OECD Statistics*, <https://stats.oecd.org/> (accessed on 26 July 2018). [1]



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