METHOD GUIDE 9

Global and regional comparative analysis of children’s internet use

Uwe Hasebrink
University of Hamburg, Germany

November 2016

www.globalkidsonline.net
# Table of Contents

**Global Kids Online** .................................................................................................................................................. 3

**Abstract** ............................................................................................................................................................... 4

**Key issues** .............................................................................................................................................................. 5
- Widening the horizon of options ............................................................................................................................... 5
- Enhancing the knowledge base ................................................................................................................................. 5
- Defining political priorities ......................................................................................................................................... 5
- Explaining country differences ................................................................................................................................. 6
- Understanding transnational phenomena .................................................................................................................. 6

**Main approaches** .................................................................................................................................................. 7
- Preparatory issues ...................................................................................................................................................... 7
- Defining the unit of comparison ................................................................................................................................. 7
- Selecting the cases to be compared ........................................................................................................................... 7
- Identifying functional equivalence ............................................................................................................................. 8
- Pragmatic problems of intercultural research ........................................................................................................... 8
- Country classifications .............................................................................................................................................. 9
- ‘Bottom-up’ classifications ...................................................................................................................................... 9
- ‘Top-down’ classifications ..................................................................................................................................... 9
- A conceptual framework to identify relevant country contexts ............................................................................... 10

**Identifying good practice** ..................................................................................................................................... 13

**Useful online resources** ....................................................................................................................................... 15
- Political and legal contexts ....................................................................................................................................... 15
- Economic and technical contexts ............................................................................................................................. 15
- Social contexts .......................................................................................................................................................... 15
- Cultural contexts ....................................................................................................................................................... 15

**References** ............................................................................................................................................................. 16
Global Kids Online is an international research project that aims to contribute to gathering rigorous cross-national evidence on children’s online risks, opportunities and rights by creating a global network of researchers and experts and by developing a toolkit as a flexible new resource for researchers around the world.

The aim is to gain a deeper understanding of children’s digital experiences that is attuned to their individual and contextual diversities and sensitive to cross-national differences, similarities, and specificities. The project was funded by UNICEF and WePROTECT Global Alliance and jointly coordinated by researchers at the London School of Economics and Political Science (LSE), the UNICEF Office of Research-Innocenti, and the EU Kids Online network.

The preferred citation for this report is:

You can find out more about the author of the report here: www.globalkidsonline.net/hasebrink
ABSTRACT

This Method Guide discusses the opportunities and challenges linked with international comparisons. Comparative research can help widen the horizon of options for (political) action, enhance the knowledge base, define political priorities, explain differences between countries and understand transnational phenomena. In order to achieve these benefits, research has to be carefully designed with regard to the unit of comparison, the cases to be compared, the definition of functionally equivalent samples, and the practical issues of organizing research in different countries.

Data analysis has to distinguish between at least two levels of analysis: the level of the individual child with the child’s personal characteristics, and the country level with indicators that have been assessed for the whole country. As an important objective of comparative research is to classify countries with respect to the context they provide for children’s online experiences, different approaches to country classifications are discussed, and a conceptual framework proposed to identify relevant country contexts. As an example of good practice, the EU Kids Online approach of comparing existing empirical evidence from different countries is described. Finally, key resources are listed with regard to all relevant dimensions of country contexts.
Making comparisons is one of the core cognitive operations of all sciences: any observation needs a point of reference. Investigating an object means to compare it with other objects and to assess differences and similarities between them. In contrast to this general understanding of comparison as a basic operation, the notion of comparative research in the context of this Guide refers to a more particular approach that includes ‘comparisons across two or more geographical or social systems’ (Chang et al., 2001, p. 415) or that ‘compares two or more nations with respect to some common activity’ (Edelstein, 1982, p. 14). In their overview of comparative research in communication, Esser and Hanitzsch summarise that this kind of research ‘simultaneously examines a minimum of two macro-level units (systems, cultures, markets or their sub-elements) with respect to at least one object of investigation’ (2012, p. 7).

Reasons for conducting comparative research are not difficult to enumerate (Lobe et al., 2011). One of the most obvious concerns is the question of universality and, simultaneously, uniqueness of findings based on nation-specific data, which cannot be answered unless they are compared with data from other countries. Among other values of cross-national comparisons, broadening the research perspective and providing a ‘fresh insight’ into the issues examined within a particular national context are probably most often cited, implying that such an approach can reveal significant gaps in knowledge or point to new (and previously hidden) variables and factors influencing the phenomenon under scrutiny (Hantrais & Mangen, 1996, p. 2; Livingstone, 2003, p. 478).

In an often-quoted typology of comparative research, Kohn (1989; see also Livingstone, 2003) distinguished four approaches to cross-country comparisons: countries as objects of study; countries as a context of study; countries as a unit of analysis; and countries as part of a larger international/global system. These four approaches are linked with particular epistemological as well as practical functions, the argument being that each form of comparative research (understood as a specific form to consider national contexts) fulfils a specific role within the research process on children’s online experiences.

Widening the horizon of options

The first option within Kohn’s classifications, the ‘countries as objects of study’ approach, refers to studies that are not comparative in a more ambitious sense but just provide reports about single countries. This kind of evidence can be helpful and stimulating in practical terms. It is a characteristic of cultural contexts that people within a certain context regard any phenomenon that occurs within this context as quite ‘normal’ – cultural context frames the range and meaning of practices that are perceived as acceptable. Against this background, comparative research of this type (which provides reports on the specific experiences in other countries) can widen the horizon of alternatives by demonstrating different patterns of communication practices and communication policies.

Enhancing the knowledge base

The main objective of Kohn’s ‘countries as a context of study’ option is to test universal hypotheses across a sample of countries. In each country the respective research investigates correlations between a theoretically defined set of variables, and then compares to what extent these correlations and the fit of the overall model are the same for all countries. This approach to the analysis of children’s online experiences in different national contexts can enhance the knowledge base with regard to practical functions. This is obviously true for countries where no data on a concrete issue are available: in these cases, findings from other countries might provide a better evidence base for political action than pure assumptions. On the other hand, for countries where data are available, comparative research can enhance existing knowledge: if a certain empirical finding holds true in different national contexts, it can be regarded as a solid piece of knowledge that should be taken into account in policy development.

Defining political priorities

Studies following Kohn’s third option (‘countries as a unit of analysis’) examine the relations among dimensions along which countries vary. The first step of this kind of approach is to assess a certain indicator
in all selected countries and to compare the results. An example is the worldwide ICT Development Index offered by the International Telecommunication Union (ITU) (2015b). In many cases comparative studies stop at this point and present their result as a country ranking. Within the process of globalisation this kind of comparative study has become a core argument for defining political priorities. Comparative data are taken as benchmarks: if a particular country is below the international average regarding internet skills, politicians will be highly motivated to develop initiatives to increase media literacy. So, although comparative data do relatively little to enhance the knowledge base, they can have a strong motivational impact on policy-making.

Explaining country differences

In some cases, the comparative approach that defines countries as units of analysis is more ambitious and goes beyond mere benchmarking. This kind of comparative research sets out to explain the differences between countries by investigating additional factors at the country level. An example would be to ask whether the intensity of information and communication technology (ICT) regulation and the implementation of media literacy in the educational system go along with a higher or lower likelihood for children to be bullied on the internet. This approach is particularly helpful for the development of practical initiatives. If there is empirical evidence that poor online skills in a particular country are linked with specific patterns of parental mediation rather than with aspects of technical access, this finding may lead to the recommendation to invest more efforts in improving parents' digital skills than in developing the technical infrastructure.

Understanding transnational phenomena

The comparative options mentioned so far stay with a conception of the country or nation as a container: the respective research projects investigate commonalities and differences between countries. This is not necessarily the case in the final option distinguished by Kohn (‘countries as part of a larger global system’). The main objective of this kind of approach is to investigate transnational phenomena and how they can be observed in different countries. An example would be to investigate Facebook or YouTube users from all countries and how they make use of these communicative options. This kind of evidence provides a knowledge base for transnational political initiatives, for example, with regard to the regulation of transnational online services such as Facebook and other social networking sites.
MAIN APPROACHES

Preparatory issues

Despite its self-evident advantages and benefits, comparative research must cope with many methodological as well as practical challenges and pitfalls. Some scholars warn against injudicious and theoretically unfounded engagement in cross-country explorations. As one of them puts it directly, ‘unless one has a good reason why research should be cross-national, it generally isn’t worth the effort of making it cross-national’ (Kohn, 1987, p. 728, quoted in Chang et al., 2001).

Defining the unit of comparison

Doing comparative research requires the macro units under comparison to be specified. Although most comparative studies compare ‘countries’, ‘states’ or ‘nations’, one key question is being asked with increasing urgency: to what extent is it legitimate and relevant, especially in the age of the progressive globalisation of social worlds and increasing trans-border flows of culture, economy and labour, to perceive the nation (or nation-state) as a basic unit of comparison? Focusing on the nation-state (the prevalent approach in social science research for most of its history) has recently come under criticism for ignoring these transnational trends, and the fundamental heterogeneity of modern societies that are structured along class, gender, ethnic and other identity lines. For Beck, social theory and research has to tackle this ‘methodological nationalism’, which he describes as ‘the explicit or implicit assumption about the nation-state being the power container of social processes and the national being the key-order for studying major social, economic and political processes’ (Beck, 2002, p. 21).

However, regardless of the theoretical plausibility of this argument, there are still reasons for comparative research not to abandon the nation-state as a unit. In spite of the omnipresent forces of globalisation, the nation-state seems to be far from its demise, and its institutional, legal and symbolic order is still significantly shaping the everyday lives of its citizens (even if possibly less so than several decades ago). If it is true that ‘there is no single identifiable, durable and relatively stable sociological unit equivalent to the total geographical territory of a nation’ (Hantrais & Mangen, 1996, p. 9), it is understandable that comparative research might want to use the nation as the unit of comparison on purely practical grounds. At any rate, researchers are advised to ‘argue the case for treating the nation as a unit, rather than simply presuming the legitimacy of such a research strategy’ (Livingstone, 2003, p. 478).

Selecting the cases to be compared

Once the unit of comparison has been specified, it has to be decided which concrete cases should be compared. While in the early days of comparative research this decision was mainly driven by pragmatism – for example, cultural proximity, knowledge of the respective languages and direct contact with colleagues from other countries – the careful selection of cases for comparison is regarded as a key criterion for mature comparative research. The two most prominent approaches are the ‘most-similar-cases design’ and the ‘most-different-cases design’ (Esser & Hanitzsch, 2012, p. 13). According to the most-similar-cases approach we compare countries that have many commonalities, for example, countries in northwestern Europe. This approach can help to identify the factors that may explain differences in children’s online experiences. The storyline is as follows: if countries are so similar in terms of economy, culture and technical infrastructure, why do children’s online experiences differ? According to the most-different-cases approach we compare countries that differ substantially in some key characteristics, for example, countries from Europe, Africa, Latin America and East Asia. This approach can help to identify the factors that may explain similarities in children’s online experiences.
experiences. The storyline is as follows: if the country contexts are so different in terms of economy, culture and technical infrastructure, why are children’s experiences quite similar (indicating a kind of ‘universal’ phenomenon)? In any case, comparative researchers have to provide good reasons for the particular selection of countries that are compared.

**Identifying functional equivalence**

According to the above definition of comparative research, the macro units selected for comparison are examined with regard to particular populations, for example, families or children with particular characteristics. For proper comparison, it is necessary to identify populations that are functionally equivalent within their systems (Wirth & Kolb, 2004). For example, in the EU Kids Online 2010 comparative survey in 25 European countries, the relevant population was defined as all children aged 9–16 who use the internet (Livingstone et al., 2011). Due to substantial differences in internet access between countries, this meant that in countries with almost full internet access, the sample represented almost all children in this age group, while in countries with much lower levels of internet access, the sample represented a particular subgroup of children only. This shows that the process of identifying functionally equivalent populations is not a trivial task: it requires careful consideration of the research question and some knowledge of the relevant contexts of all countries involved.

**Pragmatic problems of intercultural research**

Besides the substantial methodological challenges linked with comparative research there are several pragmatic problems that might also shape the findings and their interpretation. In many cases comparative research is realised by a coordinated network of researchers who take care of data collection in ‘their’ countries. This includes the major issue of translating research instruments such as questionnaires, code books or interview guides. This process of translation together with the cultural and paradigmatic differences between the researchers and their scientific communities are important sources of variance for comparative research: observed differences between countries with regard to a particular object might reflect differences between the research contexts in these countries rather than between the objects that have been investigated. Analytical issues

Comparative research on children’s online experiences leads to data on at least two different levels:

- individual child level, with the child’s personal characteristics, patterns of online use and online experiences, family structure and immediate social context;
- country level, with indicators that have been assessed for the whole country – as a rule these data are collected independently from the survey of children, for example, by national or international statistics offices (see below for resources providing this kind of data).

The analytical objective of comparative research starts from the assumption that some of the variance that appears on the individual level might actually be a function of factors that belong to the country level. As Lobe et al. (2011, p. 18) point out, looking at findings on the individual level only might prompt the reader to perform an ‘individualist fallacy’ by making macro-level inferences from micro-level relations. The example they provide refers to the empirical finding on the individual level that family income is negatively related to encountering online risks. This finding could be caused by factors at country level: if we assume that wealthier countries are more advanced in internet diffusion and that this might be linked with a higher likelihood of encountering online risks, the correlation would be based on country differences, not on differences between different families within countries. It is therefore important to link individual-level analysis to the cross-country context in which these individuals live.

Correspondingly, from the cross-country perspective it is also important to take information on the individual level into account when trying to explain country-level differences. Just as individual variance might be a function of country-level factors, country-level variance can be a function of factors at the individual level. And if we present findings from the national level only, this might prompt an ‘ecological fallacy’, with inference being made about micro-level (individual-level) relations from relations between macro-level averages.

When analysing this kind of data there are at least two options:
First, it is possible to focus on country averages (e.g., comparing averages as outcomes) and to aim for a contextual explanation of cross-national differences in some aggregate properties (e.g., level of internet use or proportion of children that have seen sexual images on the internet). In this case we would try to relate differences in these outcomes (children who have seen sexual images) to some structural or institutional properties of the respective countries, such as internet penetration or GDP.

Second, it is possible to aim for a contextual explanation of cross-national differences in terms of the relations between individual-level properties (e.g., the strength of gender differences in the likelihood of having seen sexual images on the internet). The focus here is on the relations between two or more indicators instead of single indicators, as in the previous example. In this case we would want to state the cross-level interactions of relations between individual-level properties with the structural or institutional properties of the respective countries (e.g., if internet penetration is related to the strength of the relationship between gender and likelihood of having seen sexual images on the internet).

Country classifications

Comparative research on a large number of units of comparison leads to the need to reduce complexity. Although no country has exactly the same characteristics as any other country, identifying groups of countries that are similar to each other is an important step towards a compromise between over-differentiation (taking single countries as unique cases) and over-simplification (taking the average as an indicator for all countries). As a rule, comparative studies on large country samples lead to clusters of countries with similar findings that seem intuitively plausible, for example, in the case of European studies, the ‘Northern’ or ‘Mediterranean’ countries, or in the case of global studies, the ‘West’ or the ‘South’. Unfortunately, beyond these intuitive (mostly geographical) clusters, there are almost no agreed classifications of countries in terms of relevant contexts for children growing up with media; there is not even an agreed selection of indicators along which these contexts can be assessed.

‘Bottom-up’ classifications

One approach to country classifications builds directly on concrete empirical evidence. A simple case would be a classification based on a single indicator such as the percentage of the population having access to the internet. This kind of approach becomes more differentiated with any additional variable used to refine the classification. Since these approaches are quite dependent on a few variables, a more ambitious approach is to classify countries on the basis of a number of theoretically selected variables by means of cluster analysis or similar statistical procedures. An example is the classification of European countries according to children’s online practices, parental mediation and perceived risk and harm, as proposed by the EU Kids Online network (Helsper et al., 2013).

‘Top-down’ classifications

The ‘bottom-up’ approach is an easy way of classifying countries, but these classifications are difficult to understand in terms of underlying country factors that might explain the differences or, indeed, the reasons why particular countries belong to any one group. In most cases there are ‘exceptions’ that are difficult to understand. Therefore, there are good reasons to try a more systematic approach to country classification that starts from a conceptual basis and sets out to operationalise the fuzzy concept of ‘context’.

A prominent approach to the classification of countries with regard to their media systems has been proposed by Hallin and Mancini (2004, 2012). Originally developed for a sample of 18 Western countries, the more recent study also included non-Western countries. This approach builds on indicators for the structure of media markets, political parallelism, professionalisation of journalism, and the role of the state with regard to the media and communication system. As the authors (and many reviewers) of this approach emphasise, even this widely acknowledged approach to classification includes quite a few overlapping characteristics between countries that belong to different groups as well as substantial differences between the media systems within a single group.
A conceptual framework to identify relevant country contexts

In order to support future comparative research on children’s online practices and skills, we propose a conceptual framework to identify relevant country contexts. On the basis of the general Global Kids Online (GKO) model, Figure 1 specifies four sub-dimensions of contexts:

- The political and legal context refers to all aspects of regulation relevant to children’s well-being and rights; these include legislation and rules regarding children and families, education, and media and communication.
- The technical and economic context comprises the technology available for children and their families, the structure of the media industry, and the quality and diversity of the media supply in a country. Together these two contextual dimensions shape children’s media environment – what is available for them, what they could use and what they cannot use.
- The societal context refers to the degree of societal inclusion, education, (in)equality and welfare that shapes the position of children and their families within society and, linked with this, the material and social resources that are available to them.
- The cultural context primarily reflects the dominant values in the country, the way issues of public concern – including childhood, parenting and the role of the media – are discussed, and cultural diversity.

Figure 1: Contextual factors influencing children’s online practices and skills, risks and opportunities
Together the societal and cultural contexts shape the everyday life of children, that is, the tasks they have to cope with, the material, social and cultural resources that are at their disposal, and their own ambitions.

In all, according to this framework, children’s online practices and skills, and the opportunities and risks they encounter, can be regarded as the outcome of the interaction between these two structuring patterns: the media environment and the conditions of children’s everyday life. Until now there have been no agreed country indicators for children’s online practices and skills, opportunities and risks. The framework above sets out to develop such a set of indicators. By distinguishing the media environment (shaped by political/legal and technical/economic contexts) on the one hand, and children’s everyday life (shaped by societal and cultural contexts) on the other, we have a systematic structure to identify relevant country indicators. The list of sources for global data (as provided in the section on key resources below) is structured along the four groups of contextual factors, and includes many interesting indicators that could be integrated into comparative research on children and their online practices and skills on a global level.

Case study: Kids Online Brazil

Since 2012, Cetic.br has adapted the original EU Kids Online model and questionnaire for Brazil, conducting an annual nationally representative in-home survey with children aged 9–17. This necessitated addressing the considerable regional and income differences across Brazil, these being much greater than in Europe. Further adaptation was needed because, by contrast with Europe, where until very recently children have generally accessed the internet via a computer, many children in Brazil go online first, or only, via a mobile phone.

Making the effort (itself expensive) to survey children even across the rural and mountainous regions of the country was the only way to capture the experiences of the poorest children. This in turn revealed that while children from wealthier homes mainly accessed the internet at home, those from poorer and more rural homes relied on LAN (local area network) houses (coffee shops etc. with LANs that charge for internet access by the hour). It also enabled the researchers to speak authoritatively when presenting the findings to government and stakeholders.

Replicating the survey year after year allows the researchers to track changes in access and use over time. For example, the findings from 2012, 2013 and 2014 show, first, a slight rise over time in the number of children who reported being bullied. It also showed that this is largely because of the increase in cyberbullying rather than face-to-face bullying, as internet access has grown over those years. The researchers also found that cyberbullying – reported in 2014 by around one in six children – was particularly growing among girls.

Last, adapting a common questionnaire allowed the Brazilian and European research teams to compare their findings. For example, in both places, pornography and violent content topped children’s concerns about the internet. But in Brazil, fewer children than in Europe had parents who used the internet, and children in Brazil thought they knew more than their parents about the internet (see Barbosa, 2015; Barbosa et al., 2013).

Case study: Growing up unequal – gender and socioeconomic differences in young people’s health and well-being

Drawing on 2013/14 survey data, the sixth international report of Health Behaviour in School-aged Children (HBSC) examines how gender and socioeconomic differences influence adolescents’ health and well-being. The 2013/14 survey data was collected in 42 countries and regions, totalling almost 220,000 young people at the ages of 11, 13 and 15 (Inchley et al., 2016).

Since electronic media communication plays an increasingly integral and important role in young people’s life, the report studied screen entertainments and social media use, and

1 See http://publius.cc/lan_houses_new_wave_digital_inclusion_brazil/091509
investigating cyberbullying, found that the use of social media increases with age, that is, older adolescents in most countries use social media more often. In Luxembourg (boys) and Greece and the Ukraine (girls), there was an increase by over 30 percentage points. In addition to age, social media use also varies with gender. Evidence shows that in general, girls at ages 13 and 15 use social media more frequently than their male counterparts. Moreover, there is a positive association between family affluence and daily social media contact.

In terms of cyberbullying, the general pattern is a decrease over age for boys. However, such a pattern is not evident for girls. In addition, gender differences are not significant either. Some have demonstrated that girls are bullied more than boys whereas others have shown the opposite. Similarly, family affluence does not constitute clear evidence, that is, cyberbullying is associated with lower family affluence in only a few countries.

Screen entertainment includes watching not only TV and DVDs, but also YouTube videos. The findings show that screen times of both boys and girls increases with age. This pattern can be seen in almost all countries and regions. Gender differences are less clear and tend to decrease with age. Regarding family affluence, both genders from low-income families are more likely to report higher proportions of those watching television for two or more hours on week days.
IDENTIFYING GOOD PRACTICE

No practice is ‘good’ in all situations. The following example for comparative research therefore starts from a particular situation that might be relevant for many countries that cannot afford a representative survey or intense qualitative research, or that plan to do this kind of research, but would first like to make use of the existing empirical evidence.

Since carrying out empirical research in several countries is a complex and expensive task, one option is to start from existing empirical evidence from the countries involved. During its first project phase the EU Kids Online network developed a methodology for this kind of comparative research (see Hasebrink et al., 2009, 2010). In order to ‘add value’ on a European level to the many national studies on children’s online experiences that have been conducted in different countries, disciplines and languages, the most important preparatory step was the collection and annotation of relevant studies in all participating countries (see Staksrud et al., 2007). Based on this, four steps of analysis were conducted (see Figure 2 below).

“No practice is ‘good’ in all situations.”

Figure 2: Overview of the four steps of comparative analysis

---

**Definition of research questions and hypotheses:** the project coordinators developed a template for writing country reports, which included research questions and hypotheses.

**Country reports:** teams in each country summarised the empirical evidence available for their country. Addressing the research questions and hypotheses, each team tried to provide a state-of-the-art report for their respective country. Despite the use of a common template for these reports, they remained subjective descriptions of the research evidence – depending on factors such as the national academic tradition, the personal disciplinary background and the dominant public discourse on topics related to children and media. Therefore an important part of this step was for
all teams to first provide a draft country report to allow critical reflection on the content. This also meant that before finalising their report, each team had seen how other teams were approaching their task.

**Comparative analysis of single research questions:** selected members of the project team then conducted the comparative analysis of single research questions or hypotheses. They compiled all the empirical findings reported across the national reports, and checked in how many countries the specific hypothesis could be supported or had to be rejected. A short paragraph was then written to highlight relevant differences and commonalities between countries. In addition, the authors responsible for this interim analysis proposed a classification of the countries regarding the respective aspect under research. In this step there was also room for new hypotheses to be developed. The main challenge was a consequence of the above-mentioned problem in achieving comparable country reports; in some cases the database was not sufficient to develop meaningful classifications, because no evidence could be provided for some countries.

**Comprehensive comparison and grouping of countries:** finally, the project coordinators analysed the texts produced in the third step to see whether they provided evidence for clustering countries according to differences and commonalities.

This kind of analysis has made a significant contribution to the knowledge base on children’s online behaviour at a substantially lower cost than in a project collecting primary data. It also provides clear evidence of research gaps with regard to certain topics or countries that should be filled by new research.
USEFUL ONLINE RESOURCES

The following resources have been selected according to the following criteria:

- they should provide sources with regard to all four dimensions of country contexts that have been introduced above; and
- they should have a global scope and include data for countries from all world regions.

Political and legal contexts


Economic and technical contexts


Social contexts

- UNESCO Institute for Statistics (no date). Data to make a difference. www.uis.unesco.org

Cultural contexts

REFERENCES

- Staksrud, E., Livingstone, S., & Haddon, L. (2007). What do we know about children’s use of online technologies? A report on data availability and
research gaps in Europe. London: EU Kids Online, LSE.
