methods, data, analyses | Vol. 17(2), 2023, pp. 303-324 DOI: 10.12758/mda.2023.03

Large-Scale Comparative School-Based Survey Research: Challenges and Solutions for Sampling, Fieldwork and Informed Consent

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Abstract

Based on our experiences with implementing the comparative school-based ySKILLS survey in six European countries, this article investigates the preparation of fieldwork in school-based surveys. This includes the sampling strategies and recruitment of schools and (secondary level) students, the continuous collaboration with schools, as well as collecting parental consent. By interviewing the national survey experts, we found that previously described challenges of school-based survey research have become specifically relevant during the COVID-19 pandemic. Our results further show that collaborating with schools is demanding and that collecting active parental consent involves problems regarding a non-response bias as well as ethical concerns about children's rights. For future research, we have identified seven general preconditions and facilitating factors regarding the recruitment and collaboration with schools for a successful implementation of school-based surveys. Regarding informed consent, we provide seven ethical and practical recommendations for research policy and future studies.

Keywords: School-based survey, fieldwork, informed consent, sampling, response rate, COVID-19

The European research project Youth Skills (ySKILLS) investigates digital skills of young people in a longitudinal perspective, surveying students aged 12 to 15 in three consecutive years (until they become 14 to 17, respectively). In order to understand which factors influence young people's acquisition of digital skills and how, in turn, digital skills influence young people's wellbeing, we have developed a quantitative, longitudinal research design and a questionnaire with new digital skills indicators. We decided on a non-probability sample with data collection in schools because previous research has led to expect much higher response rates in longitudinal school-based surveys (e.g., Schreiner & Haider, 2006) compared to out-of-school surveys with children and young people (e.g., Brix et al., 2017).

In the ySKILLS project, survey data is being collected in secondary schools in six European countries (Estonia, Finland, Germany, Italy, Poland and Portugal) in three waves (2021, 2022, 2023). For each wave we aim at a sample with at least N=6,000 students in secondary education (n=1,000 per country). This article focuses on our experiences and insights related to the first wave, which was successfully accomplished in 2021 with N=6,221 students aged 12 to 15.

While our overall response rate of 60.8% is higher than average response rates in out-of-school surveys,[1] it is still smaller than we had expected based on our previous experiences with (voluntary) school-surveys. In this article, we investigate possible reasons for the non-response and reflect on the particular challenges of school-based surveys and data collection with children and young people, as well as on the challenges related to the fieldwork during the COVID-19 pandemic. In fact, data collection in schools took place in spring and autumn 2021, when different restrictions to contain the health emergency were adopted by the survey countries. Consequently, in some countries the online-survey was not only administered in class but also fully online with students at home (as it was the case in Estonia, Germany, and Italy, when a class was quarantined or schools were closed[2]), or in a hybrid mode (with some students in class and some at home, as in Estonia and Italy). In Portugal, Poland and Finland, the survey was administered mainly face to face in class, except for certain classes in quarantine in Poland.

The diverse restrictions in place to contain the pandemic did alter not only data collection but also the recruitment and collaboration with schools. Previous research has already pointed out the complexity of school-based large-scale survey research (e.g., Bartlett et al., 2017; Madge et al., 2012). For a successful implemen-

1 A meta-analysis of studies published in academic journals revealed an average response rate of 52.7% (Baruch & Holtom, 2008).

2 In Italy, one of the participating schools was closed due to a power cut.

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tation of the school-based survey, we found fieldwork preparation regarding the recruitment of schools, the collaboration with participating schools and parental consent to be particularly important. In addition to the challenges in recruiting and working with schools and collecting parental consent as described in the literature so far, we also faced new challenges related to the COVID-19 pandemic.

In this article we will reflect on our experience and new insights based on qualitative expert interviews with all project leaders in the respective countries and team experts of the ySKILLS data collection consortium. The interviews concern the recruitment of schools, the collaboration with participating schools as well as the methodological and ethical problems with parental consent.

The following section summarizes previous findings regarding fieldwork preparation of school-based surveys. "The ySKILLS survey" section provides basic information on the ySKILLS survey and fieldwork, while in "The Expert Interview" section the methodological outline of our expert interviews is described. In the following sections we present and discuss the results of our experiences, reflections and insights regarding fieldwork preparation of large-scale school surveys. Finally, in the "Conclusions and Recommendations" we have developed recommendations for future school-based survey research.

Previous Findings and Scholarly Debate on Fieldwork Preparation: Recruitment of Schools and Parental Consent

Recruitment of Schools and Collaboration with Participating Schools

With some notable exceptions (Madge et al., 2012; Mishna et al., 2012; Rice et al., 2007), only few publications provide critical commentary on the process of doing school-based large-scale surveys in its complexity, including all the background work that usually remains invisible. In fact, the challenges of the "non-empirical work" and emotion work (Lindsay, 2005) involved in recruiting schools, getting them on board and negotiating access is often glossed over in articles reporting on school-based survey findings.

Gaining access to schools in order to undertake research with children is often a lengthy and sensitive process. Schools are busy institutions, increasingly overwhelmed with both requests for participating in academic research and growing administrative tasks (Madge et al., 2012). Getting schools to take part in research involves identifying the best contacts in the school, establishing collaborative relations with all the parties involved, and negotiating participation.

A major challenge in conducting school-based surveys lies in ensuring the cooperation of a variety of gatekeepers, including local authorities, school principals, teachers and parents (Barker & Weller, 2003; Bartlett et al., 2017). Gaining access to the key contacts in school is demanding: as Madge et al. (2012, p. 422) explain, "Making and maintaining contact involved school visits, telephone calls and emails, many of which did not elicit any response".

Once they receive a response from school, researchers have to cultivate collaborative relationships with each level of authority, and persuade them that participating in the research is not in conflict with the school's educational mission (Madge et al., 2012; Mishna et al., 2012; Rice et al., 2007). Negotiating participation of all interested parties is vital: if school principals are not motivated in taking part in the research, getting the support of teachers and solving any logistics issue may be complicated as well. Similarly, if the school principal is on board but key teachers are not committed to supporting the recruitment process, getting the consent of parents and children will also be difficult. For these reasons, Rice et al. (2007) suggest to motivate each group of gatekeepers within the school community separately.

Managing the logistical aspects of a school-based survey also requires a deep understanding of the school organization (daily timetable, the school's calendar of events and the national education calendar, including the PISA test administration) and access to computers.

Ultimately, recruitment and collaboration with schools is best achieved if research in schools is conceived of as a "give and take" process (Madge et al., 2012, p. 423). Researchers need to emphasize how the school community can benefit from participating in the survey and follow up with the school on a regular basis. For example, promising feedback on initial findings, offering teachers' training or education initiatives aimed at children and parents, and recognizing that each school has distinctive needs are all suggested ways to maintain a positive relationship with schools, and, as a consequence, gain their commitment over time (Clary et al., 2021; Madge et al, 2012; Mishna et al., 2012; Rice et al., 2007).

Parental Consent

Although a school-based survey is a viable method to reach adolescents' populations and to obtain important data on various aspects of their lives and surroundings, researching underage adolescents cannot be done without their parents' or guardians' permission as well as the voluntary and informed consent from the adolescents themselves. Ideally, these two decisions should be in harmony or at least negotiated, but there may appear situations where the researchers face the dilemma of having to choose between the parents' and the child's views.

The primary ethical norms and principles of research integrity (e.g., Ryan et al., 1979; The European Code of Conduct for Research Integrity, 2017) rightly pri-

oritize the need to respect the persons involved in research, and the protection of their wellbeing, autonomy, privacy and the best interests, stating that the research activity must avoid any harm to their health and dignity. The ethical approaches also warn against the risk of vulnerability, marginalization and stigmatization that may damage research participants' interests. However, depending on the topic and design of research, there may be cases of underage children being declined participation by their parents or guardians even if the children themselves would be in favor of taking part in the research. This may result in negative effects on the rights of adolescents as young citizens, as well as on the response rate, sampling bias, and, thus, validity of the research findings.

One of the central topics in scholarly discussion on parental consent (e.g., Baker et al., 2001; Dent et al., 1997; Cavazos-Regh et al., 2020; Courser et al., 2009; Liu et al., 2017) has been the methodological effects of "active" versus "passive" consent procedures. The first type of consent means an explicitly given, in most cases written and manually signed permission (an "opt-in" procedure), while "passive" type of consenting means receiving information about the study and having an opportunity to "opt-out" by returning a "non-consent" form. In the respective academic debate, Courser et al. (2009, p. 2) refer to the changing research environments and increasingly demanding requirements for school-based student surveys in several countries (e.g., the United States). They explicitly regret the shift from passive consent procedures, which have for a long time fulfilled ethical and statutory requirements when participating students remain anonymous and which have usually guaranteed high response rates, to active parental consent for all research. As Courser et al. (ibid.) clarify, under active consent procedure, "an unreturned consent form is equivalent to refusal of consent" and can mean several things including explicit refusal by the parents, neglecting to return the form, the loss of the form in transit back to the school, etc. The authors' (Courser et al., 2009, p. 3) main concerns about this shifting regulatory and research environment for school-based surveys are that it leads to low student participation rates and a non-response bias in survey data.

Courser et al. (2009, p. 4) also emphasize that there is a higher tendency for vulnerable students to be excluded from the surveys if their parents do not take much effort to interact with the school or research team. Systematic comparative analysis confirms that studies accepting only active forms of parental consent lead to silencing the voices of some (vulnerable) groups, for example, boys with lower academic achievement, adolescents belonging to certain ethnic minority groups or with risk-taking behavior (Liu et al., 2017, p. 46). Such systematic error in sampling based only on written parental consent and leaving out many participants may be associated with parents who do not provide active consent because they are not so engaged with the school and lack awareness of the benefits of their child's contribu-

tion to research, or who are skeptical of science, but also whose own educational attainment may be lower, or who are facing challenges in their everyday lives.

The authors of meta-analyses (e.g., Liu et al., 2017) and studies (e.g., Cavazos-Regh et al., 2020) point out another problem. They emphasize that active parental consent can act like a potential barrier, keeping some adolescents away from research who would be quite happy to participate. Both cited studies pay special attention to research on students with depression and anxiety, eating disorders and risk behaviors and who may not feel free to talk about these issues with their parents. Cavazos-Regh et al. (2020, p. 4) conclude that the adolescents attempted to retain privacy by not allowing researchers to contact parents about active consent.

Currently, the ethical regulations of empirical research among adolescents consider this issue mainly from a juridical perspective and associate it with parental responsibility and authority over their child in all matters until the children legally become adults. However, the overall regulations, largely influenced by medical research and sciences, do not address the key dilemma of parental authority versus children's agency, which is being faced by the researchers in the field of social studies. For example, Iltis (2013, p. 333) discusses the controversy in research ethics policy and guidelines "regarding who ought to make decisions involving children" in research, and proposes that the traditional approach of parents being "the default decision-makers for children" with regard to various matters including education needs to be revised, so that children could have greater authority over themselves and be treated as rights-bearers, as the United Nations Convention on the Rights of the Child states, especially when children's "best interests" tend to be threatened (ibid.).

The ySKILLS Survey: Sampling Schools, Classes, and Students

The ySKILLS longitudinal survey is based on a quantitative questionnaire administered in schools in six European countries in three waves (2021, 2022, 2023). We aimed at a purposive, non-probability sample (at least n=1000 per wave and country) that would allow for a diverse and inclusive sample of respondents. Our basic population in the first wave were 12- to 15-year-old adolescents attending secondary school (ISCED 2 and ISCED 3). The first wave was successfully accomplished in 2021 – despite the pandemic and restrictive measures which also affected schools we were able to collect data from N=6,221 participants (final sample size after data cleaning) (Bedrosova et al., 2022).

Funding regulations required that instead of using public opinion institutes, the national researchers of the ySKILLS consortium directly recruited schools for participation in the survey and carried out data collection in schools. Furthermore,

longitudinal, large-scale data collection in schools is a complex process, which we found can only be accordingly implemented and carried out by the researchers themselves. This applies even more since we also collected network data.

After our research had gotten approved by the IBR committee of the project coordinator's university (KU Leuven) (Application Dossier Social and Societal Ethics Committee, 2020), the project partners responsible for the longitudinal school-based data collection in their countries applied for ethical approval according to national regulations. In Germany and Portugal, the survey had to be approved by the (Federal) Ministry of Education, and in Finland, Italy, and Poland, approval was required by the ethical commission of the project partners' universities (University of Helsinki; Università Cattolica del Sacro Cuore; Adam Mickiewicz University). The Finnish team obtained another ethical approval by the city of Salo. In Estonia, no further ethical approval was necessary as KU Leuven's procedure was considered adequate and applicable.

In each of the six participating countries, the schools at secondary level were recruited in specific regions, usually the city and the surrounding districts of the partner university in the project. Regarding the *sampling of the schools*, we had decided for a non-probability sample because data collection would have required too many resources if carried out in schools across whole countries and there was no evidence leading to expect regional differences.

A systematic evidence review of the antecedents and consequences of digital skills (Haddon et al., 2020) has shown that some studies point to a direct association of families' socio-economic status (SES) with children's digital skills (Paus-Hasebrink et al., 2019; Zilka, 2019). Other research, instead, found an indirect effect of household SES on digital skills, mediated by access (Fizeşan, 2012): children from higher-income families seem to benefit from more autonomy of use and better quality of access. Overall, Haddon et al. (2020) found more studies showing a positive effect of household as well as school SES on digital skills of children than studies showing no significant effect.[3] Therefore, we aimed at collecting a diverse sample regarding SES and applied two sampling strategies. Basically, we selected schools in different school districts characterized by varying degrees of urbanization and wealth (as in Estonia, Finland, Italy, Poland, and Portugal) (Bedrosova et al., 2022). In countries with a segregated school system (Germany and Italy), we also selected different types of schools (professional/vocational education on the one side and

3 The authors conclude that the mixed results of household SES may derive from different measurements/proxies (e.g., parents' education, income). Regarding school SES, they state that the causality remains unclear: "Do these schools lead to more skills or do the type of children likely to develop such skills go to particular schools?" (Haddon et al., 2020, p. 72).

grammar schools on the other side, because each type is usually attended by students with a similar SES background).[4]

In each school, we sampled the *classes* by grades (in the first wave: classes with students aged 12 to 15 which corresponds with grade 6 or 7 to grade 9 or 10)[5] and availability (depending on the timetables, exams, etc.). In all countries, classes were sampled in four grades (grades 6–9 or grades 7–10) and the grades were equally distributed in each regional sample (e.g., two classes in each of the four grades). In smaller schools, all classes in a specific grade had to be surveyed.

In Germany, Estonia, and Finland, students transition after grade 9 from lower to upper secondary education (from ISCED 2 to ISCED 3). At this point, the majority of students are 15 years old. This means that in the first wave, the surveyed students in all four grades were in lower secondary education in Germany and Estonia (ISCED 2). Only in Finland, the students from grade 6 still belong to ISCED 1.

In Italy, Poland, and Portugal, students were surveyed in ISCED 2 grades as well as ISCED 3 grades in the first wave because the majority is only 14 years old when transitioning from ISCED 2 to ISCED 3.

In all classes, we aimed at a *full sample*, but because it was planned to survey all students per class at once, in the first wave we had expected a non-response rate (due to illness, etc.) of about 10%.[6] The actual (individual) non-response in wave 1, however, turned out to be 39.2% (ranging from 20.1% in Germany to 61.9% in Finland), mainly due to eligible students without active parental consent as well as more students having been absent from class during the pandemic (for response rates of each country see *Table 4*).

Considering the non-probability sample, we assessed possible limitations by considering population statistics and estimates. Regarding gender (50.2% male, 48.1% female, 1.7% other), the sample does not significantly differ from the population of 12- to 15-year-old adolescents in the surveyed countries. Regarding age,

4 The aim of this sampling strategy was not to define the SES for the individual students but to receive a diverse sample. For estimating the SES of the individual surveyed students, we used a child-friendly variable on the financial situation of the family ("the people with whom you live"). We asked them to choose from five items, from (1) "We live very well – We can purchase luxury items and still have money left over" to (5) "We struggle to get by – We sometimes do not have enough money to afford basic needs, such as food and clothes".

5 The European schooling systems vary somewhat in the age of school entry; therefore, a particular grade does not correspond with the exact same age group across all countries.

6 The consortium of the Programme of International Student Assessment (PISA) sets response thresholds for data quality. The threshold for pupil response is 80% (Micklewright et al., 2010). Authors of the German PISA study, for example, reported a non-response of only 6.4% (Schreiner & Haider, 2006). While participation in our survey was not mandatory, the school-based data collection during regular class with teachers being present led to expecting high participation rates, not much lower than those of PISA.

there are significantly less 12-year-olds and 15-year-olds than 13- and 14-year-olds in the sample, which is due to data collection per grade. In one grade, there are always two cohorts, so the lowest grade surveyed consists of students aged 12 and 13, while the next grade consists of students aged 13 and 14, etc. This means there were fewer chances for 12-year-olds to become part of the sample than for 13-year-olds who were presented in two grades. Furthermore, as described above, the sample does not represent the population regarding regional diversity within countries. Also the country- and region-specific school systems, their embeddedness in the respective political systems and the different political systems themselves as well as different social contexts represent limitations, above all, for comparing the regional samples in different countries. Regarding the language spoken at home, the distribution in our sample seems to correspond with the official national (or, if available, regional) population statistics. For example, in the German first wave sample (2021) collected in Bavarian schools, 17.3% reported a language other than German, while German microcensus data from 2017 reveals that 15.0% of the 12- to 17-year-old Germans and 17.6% of children and young people in Bavaria aged 17 and younger live in foreign language households (Geis-Thöne, 2021). Finally, in all countries where our survey was implemented, there is compulsory education until the age of 16 (in Poland: until 15). This means that there are no limitations regarding educational participation because in the surveyed age group (12 to 15) all boys and girls are obliged to be in school. In this paper, we will further address in which way the requirement of active parental consent represents a limitation.

The Expert Interviews: Reflecting on Fieldwork

As anticipated above, the challenges faced in recruiting participating schools, collecting data amidst social distancing measures and the higher non-response rate have left us with many unanswered questions. Therefore, in order to investigate possible reasons for the unexpected non-response and to reflect on the particular challenges of school-based surveys and data collection with children, as well as on challenges related to doing fieldwork during the COVID-19 pandemic, we used the qualitative method of expert interviews (see e.g., Bogner et al., 2014; Doeringer, 2020). Our aim was not only to learn about facts and processes that apply to the specific national and regional contexts but also to gain knowledge about interpretations and recommendations by the project leaders who were responsible for data collection in their countries. These stem from different academic disciplines within the field of social sciences (Sociology, Educational Science, and Media and Communication Studies), were all experienced in international survey research and had taken part in various collaborative research projects before (EU Kids Online, Medi-

appro, EUYOUPART, ENRI-East, CATCH-EyoU). Their previous experience in survey research allowed them to compare and to detect changes and particularities.

The authors of this article have developed a qualitative interview guide in written form (see Appendix) regarding the preparation and the implementation of fieldwork, containing mainly open questions as well as interview topics for elaborating on them. It was sent to all team leaders in the respective countries after the data collection had been completed in all countries (in November 2021). The team leaders and experts of the six countries answered extensively in written form (on average, more than 10 pages) and their answers were coded based on the topics (e.g., recruitment of schools) and subtopics of the questionnaire (e.g., recruitment strategies, changes of strategies, cancellation of schools, personal contacts, sampling strategy regarding SES, COVID-related problems, etc.). In accordance with the principles of qualitative research and problem-centered interviews (Doeringer, 2020), we were also open to new subtopics when coding the material, above all, regarding practical and political implications. During the process of qualitative content analysis (Kuckartz, 2014), we also used the possibility to contact the experts again for clarifying questions (both orally and in writing). Additionally, we used the national technical reports that had been written in the frame of the project for documenting data collection, as summarized in Bedrosova et al. (2022).

Findings

Recruiting Schools and Collaborating with Schools

Getting schools on board was a lengthy and challenging process: beyond the usual challenges of overburdened schools, already highlighted in prior school-based research (Madge et al., 2012; Mishna et al., 2012; Rice et al., 2007), the COVID-19 pandemic, with social distancing measures and schools switching to remote learning during surges in infection, played a role in schools' refusal to take part in the research. The national research teams had to make vigorous efforts to find schools for collaboration:

> "Ensuring schools' participation was highly demanding: especially for upper secondary schools, this involved several email exchanges, plus several phone calls and online meetings between the researcher and the reference teacher (up to 5 meetings lasting 1 to 2 hours for each school)." (Italian expert)

The German experts pointed out that they had prepared individual presentations for each school. In the meetings, typically, two researchers, the school principal, and the contact teacher had been taking part.

As shown in *Table 1*, in most countries, researchers contacted a higher number of schools than effectively participated in the studies. Non-response from schools

Table 1 Recruitment and participation of schools (ySKILLS survey 2021)

Country	Contacted schools	Recruited schools	Cancellation during data collection	Prolonged data collection	School response rate
Estonia	14	9	3	no	64%
Finland	11	11	0	no	100%
Germany	14	6	0	no	43%
Italy	20	8	1	yes	40%
Poland	33	12	2	yes	36%
Portugal	7	7	0	no	100%
Total	99	53	6 (6%)	2 countries	54%

was highest in Poland, Italy and Germany. In total, 99 schools were contacted and the final response rate was 54% (with great variations from 36% in Poland to 100% in Finland and Portugal).[7]

Refusal to participate in the study was due both to increasing institutional pressure on schools, schools having been over-researched in recent years, and the challenges associated with managing the COVID-19 uncertainties. Denying participation in the survey took either the form of lack of response to researchers' emails and phone calls, polite refusals or even annoyed and angry feedback. When the researchers had not collaborated with the principal or teachers prior to this project, contacts with schools through emails were more likely to fail eliciting any response from the school. Beyond numerous explicit or silent refusals, some schools in Estonia, Poland and Italy retracted their participation to the study after data collection had already started, due to the uncertain and constantly evolving pandemic situation.

Moreover, the participation of schools was also challenged by time pressure and a mismatch between the researchers' timeline and the schools' calendar: for example, since the start of data collection was postponed to April and May due to the pandemic situation, in some countries (including Finland, Italy, and Poland) the

7 Reflecting on the school response rate, our response rate (54%) seems high compared to school-based health related behaviour surveys (less than 40% in ESPAD, HBSC, and ISRD in the investigated countries Germany, the Netherlands, England, and USA), but relatively low compared to other school-based surveys on academic performance (52–93% in PISA and TIMSS for the same countries), which have a high public profile, "translating into pressure on schools to participate" (van der Gaag et al., 2019, p. 394–396). However, it is difficult to compare surveys with a different degree of voluntary participation. Furthermore, in our sample, the national school response rates of 100% (Finland and Portugal) did not result in high pupil response rates in these countries.

survey administration clashed both with OECD PISA tests, final exams and the end of the school year. Accordingly, in Italy and Poland data collection was postponed to the beginning of the following academic year (fall 2021).

The first contact with schools was made by the following two main patterns. Firstly, in most countries, researchers relied on prior collaborations with school principals or teachers. Having already built a collaborative and trustful relationship with certain teachers who were highly motivated in participating in the study meant that the school principals were also more easily persuaded on the value of getting on board. Secondly, and in addition to or as an alternative to prior collaborations, researchers pursued more institutional pathways. This includes contacting a researcher responsible for a given school district, who has strong relationships with both schools and local authorities (Finland), representatives from the city councils, who contacted schools and organized a first collective meeting with all the schools interested in taking part in the study (Portugal), and a formal endorsement of the project from the city council in order to approach schools where no prior collaboration existed with an institutional support (Italy). All survey partners acknowledge that prior collaboration with schools facilitated both the first contact and the following collaboration. From the countries' school response rates (*Table 1*) it seems that professional and official networks linking research, schools and local administration (as in Finland and Portugal) were most helpful for recruiting schools.

Negotiating access required multiple contacts with different levels of authority in the school, including online meetings with the principal, the teachers, and, sometimes, parents aimed at presenting the projects and highlighting the benefits for the school and the children in taking part in the study. Depending on the size of the school and the role of the first contact within the school's organizational structure, the contact person remained the school principal themselves, taking on the organization of the project directly, or teachers with key responsibilities (for example, teachers responsible for the digital citizenship curriculum or cyber-bullying prevention). In some schools, the responsibility to support the organization of the survey was delegated to the IT specialists, e.g., for remote learning platforms and sessions (Estonia), or to school counsellors and psychologists (Poland). Survey partners agreed that the commitment of teachers was crucial to the success of the survey, as the teachers mediated the information flow from researchers to children and their parents and could support the sensitive and problematic process of getting parental consent. Supportive teachers would also help researchers to deal with logistical and other unforeseen problems which might emerge during data collection (including when students needed extra-time to fill in the survey).

Consistent with the literature on recruitment and collaboration with schools, therefore, our experiences point to the importance of motivating the school principal, teachers and parents with a "take and give" approach (Madge et al., 2012). In many cases, the topic of the survey itself – digital skills, online risks and children's

wellbeing – represented a major source of motivation for schools. For example, Finnish researchers agreed with their contacts that the information produced by ySKILLS would integrate, or partly replace, the cities' own annual measurements of pupils/school wellbeing, etc. In Italy, since the National Plan for Digital Education implemented in 2015 introduced compulsory digital citizenship education at all levels and curricula, teachers would integrate the survey into digital citizenship education activities.

Researchers promised concrete benefits to the participating schools, including school-specific feedback on each wave's findings, training sessions for teachers and school staff, and awareness initiatives for parents. The possibility of using the "ySKILLS quiz" as well as another research instrument developed in the project in the future, namely the "performance test", as educational tools for the development of digital skills, also contributed to ensuring the school's commitment to the project. Incentive strategies may further increase participation (McGonagle, 2020), but since EU regulations did not allow remunerating schools with tangible gifts, we partially compensated this by distributing symbolic gifts such as appreciation certificates for the students, personal appreciation letters to the school principals, teachers, and staff who assisted in the fieldwork, and ySKILLS banners which schools could place on their websites.

While persuading schools to get on board presented a major challenge in each country, researchers reported high support from their contact persons in schools, even if the fieldwork meant additional administrative work for teachers, principals and other staff. Obtaining parental consent, organizing the data collection in order to minimize disruptions of ordinary teaching activities, and preparation of the list of nicknames necessary for network data collection required a huge effort on their part.

Problems with Obtaining Parents' Informed Consent

In planning the longitudinal survey of the ySKILLS project, we initially aimed at obtaining the participating students' informed assent and informed consent of one of their parents or legal representatives in all six survey countries. Based on this condition, the clearance from the Social and Societal Ethics Committee of KU Leuven was obtained for the whole project and for the longitudinal survey. As a general principle, the Board of the Ethics Committee discourages passive (opt-out) consent procedures (Application Dossier Social and Societal Ethics Committee, 2020, p. 7); however, they do not exclude passive informed consent procedures under certain circumstances.

The project team developed information and consent forms for students and parents, providing, inter alia, detailed information about linking the data across the three waves and the pseudonymization process (the code system) in place to

lessen the participants' and their parents' concerns. Furthermore, contact information of national researchers was provided and it was pointed out that consent can be withdrawn anytime without further explanation. The information and consent forms were prepared by the national project teams based on the specific national regulations (e.g., providing national legal contact information). Due to the length of the questionnaire (it was designed for a full teaching unit of 45–50 min), we did not attach it to the information and consent forms. Instead, parents and students were informed that the questionnaire is available at the schools on approval ahead of time.

According to the national regulations regarding the age of consent *(Table 2),* both child and parental consent had to be asked for in all grades (involving 12- to 15-year-old students) in three survey countries (Italy, Poland, and Portugal). In the other three countries, the older students (aged at least 14 in Germany, and at least 15 in Estonia and Finland) could give consent themselves. In Germany, the researchers communicated with parents by class or grade levels (via teachers) which made it feasible to ask for parental consent only in grades 6–8. In Estonia and Finland, the researchers could communicate with parents only via the schools' online systems, and parental consent was asked in all grades to streamline research and to simplify the procedure for schools.

Regarding the form of the parental consent procedure *(Table 2),* national and/or school regulations required obtaining *active* parental consent in five countries. In Estonia, the form of parental consent (active or passive) is not explicitly stated in regulations, and research practices vary. In the ySKILLS survey research practice, the country teams started by asking active parental consent via different, mostly online, channels *(Table 2).* Estonian schools, for example, were on distance learning mode at the beginning of the data collection, and parents could be reached only via online communication platforms. The initial endeavor of obtaining active written consent from parents through such platforms resulted in a very low response rate (26% in one school) as most parents were exhausted by online communication and/or indifferent or not used to consent actively online. The Estonian team decided to follow the suggestion by some schools to switch to passive parental consent which is a common and culturally accepted practice in the country context (for more details see Kalmus et al., 2022). Other countries stuck to the form of active consent procedure, as this was also required by schools' administrators, possibly reflecting a "free of troubles" line of thought (cf. Liu et al., 2017), or by national regulations (as is the case in Germany).

The requirement of active parental consent not only challenged the implementation of field work but also involved ethical problems and raised questions of how to solve them, as the following quote from the expert interviews illustrates:

> "Unexpectedly for researchers, obtaining parental consent via online channels sometimes accidentally excluded the child from the teacher-parent communi-

> cation on this matter. A few children, unaware of their parent's refusal, turned up in online sessions, willing to participate in the survey. This raised an ethical dilemma about respecting the child's rights and dignity versus parental will. Teachers and researchers tried to solve those cases as discreetly as possible, e.g., by letting the child fill in the survey and deleting the data later." (Estonian expert)

Following the active consent requirement in the research practice brought further problems. In several countries, the response rate was very low (e.g., 38.1% in Finland) as many parents did not give their consent (most of them simply did not respond via the schools' online systems) *(Table 2).* In Italy and Portugal, parental non-consent ranged between 90% and 100% in some school classes, and in Poland, two schools had to withdraw from the survey due to the low parental consent rate. The low response rate added to the problems with scheduling data collection units as described in the previous section and led to the need to recruit new schools for the survey and to partially postpone fieldwork in two countries (Italy and Poland).

Table 2 provides an overview of our actual research practices regarding parental consent across the six countries:

Table 2 Parental consent (ySKILLS survey 2021)

Country	Age-related requirements	Active vs passive in national regulations	Form of procedure	Rejection rate	Students' response rate
Estonia	< 15 years (grades 6–8); was asked in all grades	Unspecified	Active and passive, via online channels	5% (actively)	74.9%
Finland	Grades 6–8; was asked in all grades	Active required	Active, via online system / paper	62% (parent + child; 11% actively; 51% passively)	38.1%
Germany	< 14 years (grades 6–8)	Active required	Active, via online system / email / paper	11%	79.9%
Italy	All grades (6–9)	Active required by schools	Active, via online forms / platform / email	45% (90% in some classes); fieldwork postponed	50.2%
Poland	All grades (6–9)	Active required by schools	Active, organized by schools	7%; 2 schools withdrew; fieldwork postponed	69.9%
Portugal	All grades (7–10)	Active required	Active, on paper	39% (two classes collectively)	61.7%

Discussion

Collaboration with Schools in Times of the COVID-19 Pandemic

While the challenges of collaborating with schools have already been documented in the literature on doing research with children and young people (Madge et al., 2012; Mishna et al., 2012; Rice et al., 2007), the COVID-19 pandemic added an additional layer of complexity. Indeed, schools were cautious of starting new projects and collaborating in an uncertain and rapidly changing situation, where moments of full remote learning were followed by equally complex periods of hybrid teaching. Although the first wave of data collection took place in the second year of the pandemic, schools were still facing high degrees of uncertainty and had to switch teaching modes several times during the school year. For example, when schools were approached in Italy at the beginning of 2021, students were taught in a classroom setting, but all grades switched to remote schooling in March for four consecutive weeks. Such uncertainties had repercussions on both the fieldwork schedule and school's willingness to cooperate.

Therefore, recruiting and collaborating with schools under such circumstances required additional background preparation. Some national survey teams had to increase the number of team members in order to carry out the data collection. Others had to invest more working hours into fieldwork preparation than expected. Moreover, national teams had to approach more schools in order to reach the agreed sample size. These challenges have also had implications for the research findings. As explained above, partners adopted various strategies to ensure collecting a (even if not a representative) diverse and inclusive sample. In the face of (at times last minute) refusals from the selected schools to participate in the survey, additional schools had to be recruited. Thereby it was not always possible to strictly follow the original country-specific selection criteria (above all, regarding SES). Furthermore, in two countries data collection had to be postponed to a later stage (to the beginning of the following academic year) which might cause problems of comparability and interpretation.

Active Parental Consent and Implications for Data Quality and Interpretation

Problems with obtaining active parental consent have direct implications for research outcomes. It is probable that some systematic sampling biases result from the non-random selection of students for the study, by which some segments of the student population are over-represented while others are under-represented (see Liu et al., 2017). In our survey, for instance, the parental consent rate was highest in a religious school in Italy (with 98–100% of students per class). Also, variation in

the form of parental consent procedures and rejection rates between the countries needs to be analyzed and considered in the interpretation of findings. In the context of the Open Access Data policy, this means that in order to avoid misinterpretations, secondary analyses of the data collected under such complex and nationally varying circumstances cannot be encouraged without proper awareness and consideration of all contextual factors.

Our experiences also have some wider political implications. Firstly, we should keep in mind that participation in social research is more than just being a "data subject"; it is also a way and opportunity for expressing one's opinions and preferences, and exercising voice, agency, and power (Houghton, 2018). Therefore, the requirement of active parental consent procedure may conflict with children's civic rights, tending to discriminate against more vulnerable children. Furthermore, the requirement of active parental consent may result in biased samples and unreliable research findings, which, in turn, lead to inadequate policy recommendations that, again, are more likely to be inconsiderate of the concerns and needs of more vulnerable groups (Anderman et al., 1995).

We need to assume that the ethical dilemma concerning active parental consent and children's rights has become more acute in the "post-truth" and "(post)-pandemic" society. While on the global level general trust in science has risen during the COVID-19 pandemic, considerable differences in trust levels between the world's regions and social groups exist (Wellcome, 2020). For instance, in the United States, confidence in scientists is significantly stronger among Democrats and those with high self-evaluated science knowledge (Pew Research Center, 2019). Thus, we may assume that the attitudes of parents towards science and hence, their children's participation in research, may be diverse, perhaps even polarized. Therefore, considering the transforming information and political environment, the stakeholders in social research should revisit the ethical requirements concerning active parental consent and make efforts to enhance what we call "research literacy" – a set of knowledge and attitudes necessary for informed and active participation in scientific research – as an important new dimension of students' and parents' active citizenship.

Conclusions and Recommendations

Our experience has challenged the idea that school-based surveys are a more effective and less time-consuming way to collect data about and from children. While our response rates were still better than what could have been expected from collecting data from 12- to 15-year-olds in non-school-based surveys (e.g., with quota samples), the efforts for the researchers were higher than expected, calculated and budgeted for in the project. We conclude that, in order to reduce non-response

and non-response biases, (school-based) surveys benefit from data collection by the researchers but require appropriate time and personnel resources. Taking into account our longitudinal approach which means aiming at surveying the same sample over three years, we assume, however, that for minimizing non-response and sampling biases in wave 2 and 3, collaborating with schools promises best outcomes.

We were able to identify the following preconditions and facilitating factors for a successful recruitment process and fruitful collaboration with schools: 1) personal contacts with school principal or teachers prior to the project, 2) existing professional networks between schools, local administration and research, 3) committed principals and teachers, 4) measures for increasing parental consent, 5) respecting the school calendar and school events, 6) a school-relevant topic of research (such as digital skills which is in line with general national educational programs), and 7) further benefits for the schools (such as educational tools). Schools are unlikely to take part in the research if they do not find it worthwhile and feasible. However, this judgement is contingent upon a number of conditions: it may be that some teachers find the research topic of particular interest to them personally; alternatively, the research topic could fill in a gap in the curriculum or help teachers plan innovations in the curriculum. While it has its costs, nonetheless, the researchers-schools collaboration can be mutually beneficial: researchers can get access to the same group of children over years with less drop-outs, while offering support in forms of teacher training, and/or meetings with teachers and parents to present the initial findings and issues that concern them most (e.g., cyber-bullying, etc.).

We found that active parental consent as required by national and/or university regulations in many countries is problematic regarding ethical concerns about children's rights to express their own views (cf. The United Nations, 1989) and an assumed non-response bias, i.e., socially disadvantaged children and adolescents seem to be more likely to be excluded from participation in the survey. Therefore, a flexible, culture- and context-sensitive approach is needed to enable weighing the pros and cons of active parental consent procedures against the aims, focus and methods of each study. In school-based social research, it is sufficient to rely on one main gatekeeper (for instance, the school), parents' passive consent and adolescents' own informed consent.

For data analysis, it is important to consider possible limitations due to exclusions of students if their parents did not allow them to participate in the survey. Whether and in which ways such a sample bias limits the meaningfulness of data depends on the research questions. Assuming that children whose parents were skeptical about scientific research and considering that the majority of the excluded children were from lower SES backgrounds, leads to consider that the children excluded by parental non-consent might have fewer digital skills than the average of those participating (cf. Paus-Hasebrink et al., 2019). This means that the

bias based on parental consent might be a relevant limitation in certain aspects of ySKILLS data analysis.

This article, furthermore, contributes to and complements the literature about the challenges of doing research in the context of a pandemic. While some research has addressed the ways in which COVID-19 restrictions shaped the research process by focusing on the design of the survey instrument (Dales & Kottman, 2021), we focused on the process of data collection and the challenges of collaborating with schools and obtaining parental consent. The challenges caused by the COVID-19 pandemic have affected the process of conducting this school survey and social distancing rules and restrictions that led to the temporary closure of schools added to the usual complexities of doing survey research in schools. In pre-pandemic times, schools were already over-exploited in a research context. During the pandemic, teachers and staff, but also parents experienced an increasing amount of communicative activity and administrative work (Beilmann et al., 2023). The high rejection rates of parents in our study can be related to the COVID-19 situation to some extent. Further, COVID-19 related restrictions were implemented at slightly different times across Europe, adding an additional layer of complexity to the usual challenges involved in doing cross-cultural research. For example, due to problems with recruiting schools and students (including supportive parents), data collection had to be postponed in two countries, which might affect comparability and complicate interpretation. In summary, however, doing research under the COVID-19 pandemic provided valuable lessons in terms of increasing the resilience of all parties (including the young participants themselves), and improving methodological reflexivity as well as creativity. Therefore, although the circumstances were exceptional under many respects, we believe the lessons learned from this project can be extended to doing fieldwork in schools increasingly overburdened with research and bureaucratic demands.

For research policy and future studies employing school surveys, we provide the following seven ethical and practical recommendations.

(1) In designing or reconsidering ethics regulations, setting the age of consent for social science research should be consistent with the evolving capacities of children to enable them to express their views freely (in accordance with the UN Convention on the Rights of the Child; The United Nations, 1989);

(2) Asking for active parental consent, if not required by regulations, should be avoided to respect young people's rights, agency, and dignity to the fullest;

(3) In cross-cultural studies, the country/regional context of research regulations and practices has to be taken into account when deciding on the mode of parental consent;

(4) In the contexts where active parental consent in school surveys is obligatory, researchers have to consider that it can lead to a non-response bias and therefore should employ (well-prepared) practices to inform and encourage parents;

(5) The mode of communication when informing parents and asking their consent has to be technically accessible and convenient;

(6) Researchers have to negotiate carefully between providing students and parents as much information on the research and the data collection instruments as possible, and not producing an information overload;

(7) Researchers and educators should make efforts to enhance students' and parents' research literacy to encourage informed participation in social studies.

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