

ÜGK / COFO / VECOF 2024 (HarmoS 4) Field Trial
School Principal Questionnaire: Technical Report
Cooperation ÜGK / DigiPrim

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Abstract: This technical report offers support to researchers who intend to use the data from the school principal questionnaire of the ÜGK / COFO / VECOF 2024 (HarmoS 4) Field Trial 2022. The report documents the main steps of the implementation of the school principal questionnaire and provides detailed information on response rates and the progress of the field work. Its main aim is the documentation of the processes that generated the data in the Scientific Use File.

Keywords: ÜGK24 H4, survey data, school sites, large-scale assessment, field management, methodological report, survey methodology

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1 Introduction

The school principal questionnaire within the ÜGK / COFO / VECOF 2024 (HarmoS 4) Field Trial (in the following: ÜGKH4 field trial) was developed and implemented by the Interfaculty Centre of Educational Research (ICER) of the University of Bern, Switzerland, in cooperation with the ÜGK / COFO / VECOF project team and the BeLEARN project DigiPrim. ÜGK / COFO / VECOF is the assessment of basic competencies of students in compulsory education in Switzerland. The school principal questionnaire supports the contextualization of the results of the ÜGK / COFO / VECOF and collects information on the state of digitalization in Swiss primary schools. School principals of all school sites participating in the ÜGKH4 field trial were asked to complete an online questionnaire, available in multiple languages. The questionnaire covered two main topics: First, general information about the school principal and the internal school context and, second, the state of the digitalization of primary schools and the school principals' perspectives on the digitalization process.

The target group of this study are the school principals who are responsible for those students at the HarmoS level 4 (second grade) in Switzerland which participated in the assessment of the ÜGKH4 field trial. The ICER contacted the principals via an invitation and a reminder email. This technical report documents the main steps of the implementation of the school principal questionnaire in the ÜGKH4 field trial.

2 Study design

The school principal questionnaire asks school principals of students participating in the ÜGKH4 field trial about different aspects through a 30-40 minutes online questionnaire. The first part of the questionnaire deals with the general conditions at schools that have an explanatory value for the ÜGK / COFO / VECOF study and for additional research projects. The second and third part of the questionnaire consist of questions from two additional research projects: *SILVIVA* and *DigiPrim*. The survey of school principals is designed as a cross-sectional study.

Key elements under investigation regarding the design of the present ÜGKH4 field trial are:

- Principal questionnaires for all three language regions (German, French, Italian)
- Short multilingual questionnaires for additional school sites
- Gathering information on school context
- Gathering information on teaching outside of the classroom
- Gathering information on digitalization aspects.

The data collection for all school sites took place between May 9th and July 18th, 2022.

Table 1: Study overview

Dimension	Details
Data collection instrument	Online questionnaire
Field time	May 9 th to July 18 th , 2022
Sample	First stage of sampling frame of ÜGKH4 field trial (school sites)
Number of targeted school sites	275
Number of invited school principals	240
Languages	Main questionnaire: German, French, Italian Short questionnaire: German, French, Italian
Contact	Contact to the school principals was established via email
Valid interviews	172 school sites (167 school principals)
Reminder	1 st Reminder: May 30 th , 2022, via email
Quality assurance	Weekly field monitoring Reaction to problems during the field (e.g., technical problems)

3 Data collection instruments

3.1 Overview of questionnaire content

The (main) school principal questionnaire contains 60 questions. Eleven questions were displayed only if a filter condition was met. The minimum number of displayed questions was 49. The school principal questionnaire consists of three parts (60 questions), covering the following topics:

- Part 1: General questions
 - Characteristics of the school principal (10 questions)
 - Internal school context (20 questions)
- Part 2: Teaching outside the classroom (*SILVIVA* project)
 - Teaching outdoors (2 questions)
- Part 3: Digitalization in primary schools (*DigiPrim* project)
 - Digital resources (7 questions)
 - ICT coordinator (3 questions)
 - (Digital) school culture (10 questions)

- Attitudes towards ICTs (3 questions)
- Part 4: Questionnaire evaluation and further contact (5 questions)

Several questions were adopted from other studies. The most important sources for the school principal questionnaire were: PISA ("Programme for International Student Assessment"), ICILS ("International Computer and Information Literacy Study"), and SLMS ("Schulleitungsmonitor Schweiz"). The questionnaire documentation reports in detail which questions were adopted from which source.

The majority of questions were closed-ended text-based questions with multiple answer categories. Example: "What type of classes are run at your school at the HarmoS 4 school level?" (categories: regular classes, mixed-age classes, special classes). Several closed-ended questions were displayed together with an open text field offering space for indicating details or any "other" answers.

3.1.1 Modifications - Short questionnaire

The short questionnaire contained 15 out of the 60 questions from the long version, focusing on the internal school context and selected digitalization aspects.

3.1.2 Translation process

The school principal questionnaire both in its main (long) and its short version was offered in three different languages: German, French and Italian. Some of the items that were adopted from other studies were already available in all three languages. Some other translations were provided by the cooperating research projects responsible for certain items (in the following: "scale owners"). Members from the ÜGK / COFO / VECOF project team provided an initial translation for the remaining items. The translations were then refined in an iterative process between the ÜGK / COFO / VECOF project team and the coordination centers in the German-, French- and Italian-speaking language regions. The latter evaluated the appropriateness of the entire questionnaire content and language for the specific contexts. Next, the scale owners were provided with the refined version of the questionnaire and could suggest modifications that were integrated into the final version of the questionnaire.

3.2 Implementation of questionnaire

The school principal questionnaire was implemented as an online questionnaire only (single-mode design). As an additional service for school principals, the invitation email contained an attached document (pdf) which displayed a subset of questions from the questionnaire. This document was not eligible for submission. It was designed and communicated as a voluntary opportunity for school principals to outsource the potentially time-consuming collection of statistical information (e.g., number of students or staff) to other members of the school management team or to the school secretariat. In any case, the collected information

had to be filled in to the online questionnaire by the school principal in possession of the personalized online link him- or herself.

3.2.1 Online survey software

The online questionnaire was implemented using the online survey system LimeSurvey, Version 5.3.24+220711. The survey was implemented using the free and open source "LimeSurvey Community Edition", hosted on a server of the ICER located in Bern, Switzerland. The access to the survey was conditional on access to the personalized login details that school principals received through the invitation emails. The online questionnaire was optimized and tested for both desktop and mobile (touchscreen and small screen) use.

3.2.2 Questionnaire design

The questionnaire was grouped into topics. These topics were used for a question index (displayed at the top right corner of the page), which allowed respondents to fill out the survey in their preferred topic order. The questions which were grouped in the same topic were displayed on the same page. Respondents were able to jump back and forth between groups of questions. No questions were mandatory. Some questions showed warning messages when answers did not match the required format, but it was always possible to proceed to the next question. No pop-up messages were displayed in case no answer was given to a question. The questionnaire had no progress bar. The latest answers were always saved regardless of the completion of the questionnaire by the respondents. It was not possible to "unclick" initial answers in matrix questions, but it was always possible to change the selection.

A "continue later" button was constantly visible at the top right of the page, which saved the answers of the current page (however, some privacy settings could have disabled this function). Pausing the questionnaire and resuming later was facilitated by the integration of a question index that enabled respondents to jump between larger topical sections.

3.2.3 Pretesting

The final questionnaire was approved by the Kosta HarmoS (coordination staff for the application of the intercantonal agreement on harmonisation of compulsory education in Switzerland). The associations VSLCH and the CLACESO (associations of Swiss school principals in the German- and French-speaking parts of Switzerland) also supported the conduct of the survey by announcing the survey to their members in a newsletter, sent out shortly prior to the beginning of the field phase. Pretests of the implemented school principal questionnaire for the ÜGKH4 field trial were conducted within the project team and by external scientists during April 2022.

4 Field monitoring

The evolution of the field work and potential problems were monitored by the project team at the ICER and the coordination centers over the whole course of field work. The following section reports the most important statistics. An assessment of potentially selective unit nonresponse was not feasible, as opposed to the parent questionnaire of the ÜGKH4 field trial. This is because there was no statistical information on the target population available which could have been compared to the realized sample (the scientific use file analyzed here).

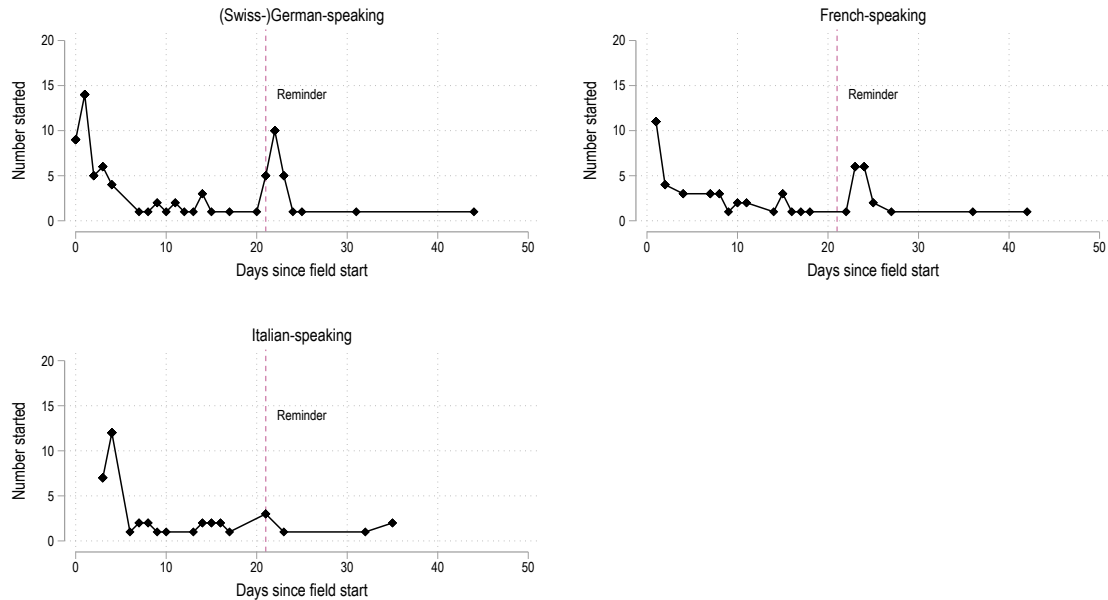
4.1 Field work evolution

School principals could access the questionnaire(s) with personalized links (school site level), which were emailed to them on May 9th, 2022. A reminder email was sent out three weeks after field start, on May 30th, 2022. The field work proceeded in parallel with the test sessions of the ÜGKH4 field trial in schools and with the field work for the parent questionnaire. However, the timing of invitation and reminder emails was not linked to the test session dates in the individual schools.

Some principals were responsible for more than one school site in the ÜGKH4 field trial sample. These principals received one email with multiple questionnaire links: One for the main questionnaire and the first (arbitrary) school site and an additional link to a short questionnaire for all further school sites. In the following, statistics refer to the unit of school sites (or questionnaires), not principals if not stated otherwise (in any case, the numbers are very similar: 167 school principals filled in 172 questionnaires).

Figure 1 plots the daily number of started school principal questionnaires, by main language of the school site. Day 0 corresponds to the day of the initial invitation (May 9th). The dashed vertical line indicates the sending of the reminder email. Field work was terminated after 70 days, on July 18th. The last ÜGKH4 test session of the field trial took place on day 36 after the start of field work. Only very few school principals filled in a questionnaire after this date.

Figure 1: Number of started school principal questionnaires per day, by school main language



4.2 Unit nonresponse - Participation

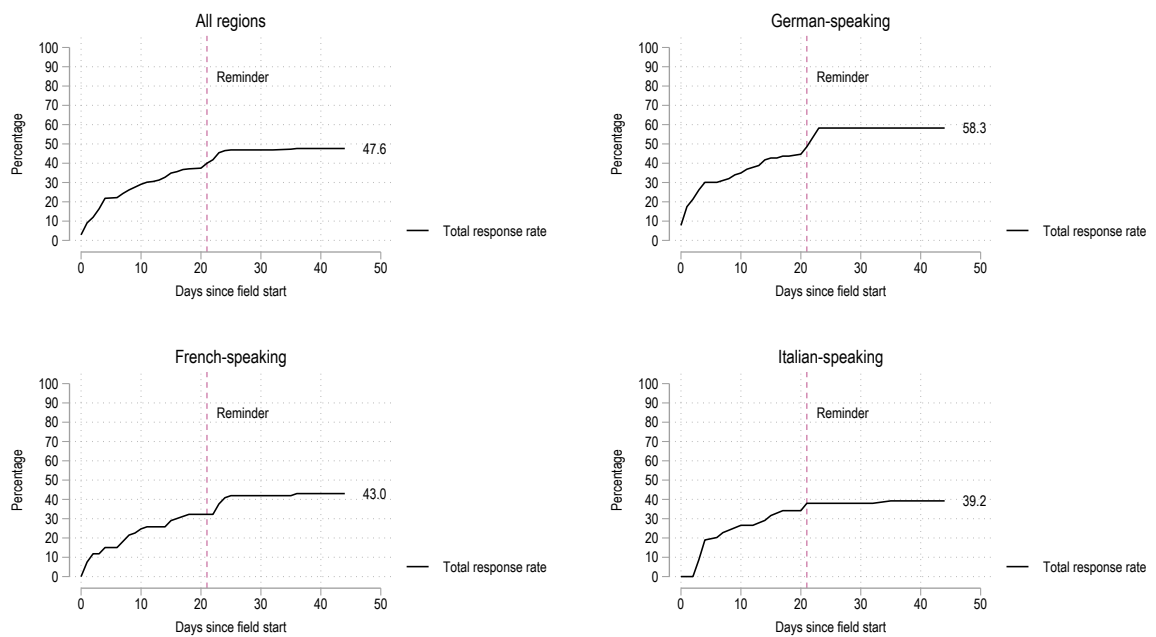
Figure 2 displays the response rate over the course of the field work, overall and by language region. The dashed vertical line indicates the sending of the reminder email.

The response rate was calculated according to the AAPOR standard definition (American Association for Public Opinion Research (2017); Response Rate 2). The cumulated number of ultimately completed (>80% of questions answered) and partial school principal questionnaires (between 50 and 80% of questions answered) that were started on a given day after field start was divided by the constant number of all sampled school sites.

The final overall response rate was 47.6%. The response rate among schools with (Swiss-)German as the main school language was 58.3%, which is higher than the overall response rate. The response rate in the French language region was 43.0%. It was the lowest (39.2%) in the Italian language region. The overall response rate levelled off shortly after the first (and final) reminder email was sent out 21 days after field start.

Because some data users might be interested in specific questions posed in the beginning of the questionnaire only and a relatively large share of respondents terminated the questionnaire prematurely (breakoffs), all respondents with at least one valid answer were included in the scientific use file. Figure 8 in the Appendix shows the response rate(s) if these cases were counted as partial interviews instead of breakoffs. According to this alternative calculation, the overall response rate was considerably higher (62.5%).

Figure 2: Response rate school principal questionnaire

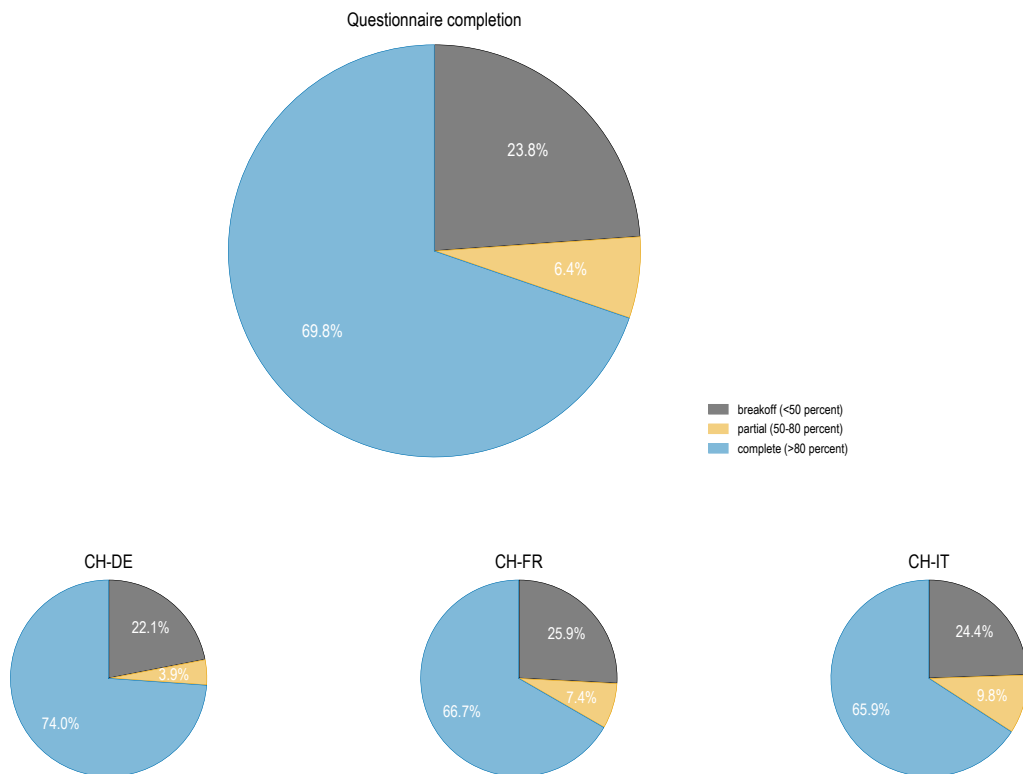


4.3 Item nonresponse and interview duration

4.3.1 Questionnaire completion

Figure 3 reports the distribution of questionnaires over the questionnaire completion status, following the AAPOR standard definition (American Association for Public Opinion Research 2017). The share of complete questionnaires (>80% of questions answered) is relatively low with only 69.8%. The majority of incomplete questionnaires can be technically considered as breakoffs: 23.8% of respondents who started a questionnaire answered less than 50% of all questions. 6.4% of respondents completed the questionnaire partially (50-80% of questions answered).

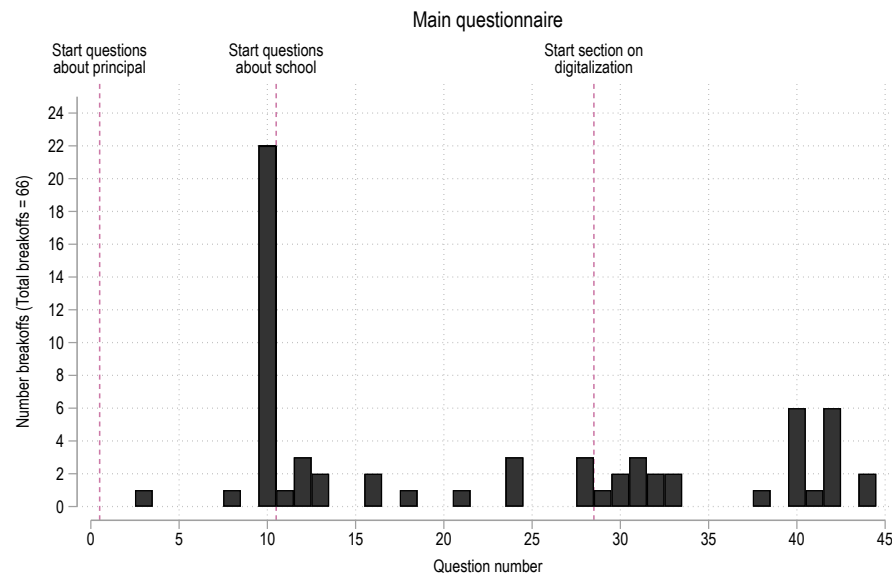
Figure 3: Share of breakoffs, partial and complete questionnaires



4.3.2 Breakoff position

Figure 4 displays the number of interviews terminated after each question (excluding introductory and evaluation questions and all subquestions; total number of questions = 45). This graph includes all interviews including those counted as partial and complete in the previous graph. The graph indicates that many principals terminated the questionnaire right after the end of the first section about their own person ($n = 22$). A moderate number of breakoffs ($n = 26$) occurred at some point during the section on digitalization. These cases may indicate respondent exhaustion (see interview duration).

Figure 4: Survey breakoffs by position of last question answered

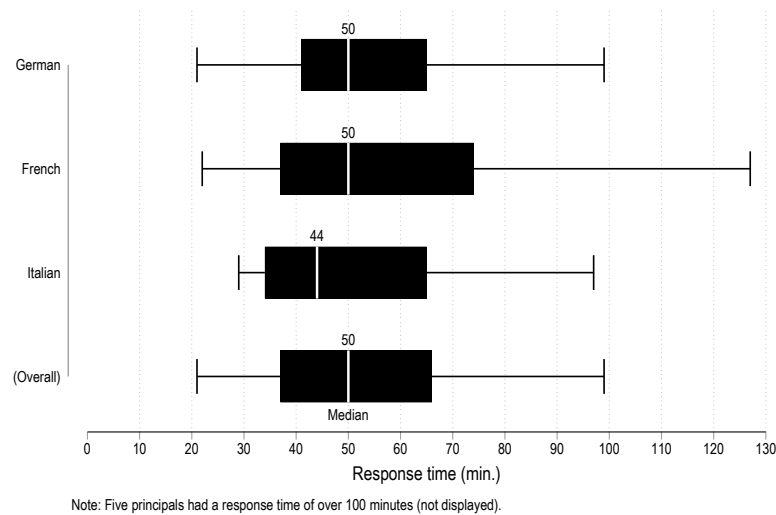


4.3.3 Interview duration

Figure 5 presents boxplots summarizing the distribution of response times (the time respondents who completed the questionnaire (more than 80% of questions answered) spent on the questionnaire), overall and separately by questionnaire language. The left and right borders of the black boxes indicate the positions of the 25%- and the 75%-percentiles, the white line in the middle of the boxes indicates the median (50%-percentiles; annotated).

The estimated response time for the (main) survey that was communicated to the potential respondents beforehand was 30-40 minutes. Many respondents took considerably more time than estimated, with the overall median (50 minutes) laying considerably beyond the estimated questionnaire length. The distribution of response times was very similar between the questionnaires in (Swiss-)German and French. However, interviews in Italian took much less time (median = 44 minutes). This difference is not attributable to the average number of questions answered.

Figure 5: Response time of completed surveys by language, main questionnaire



4.4 Evaluation of the survey

4.4.1 Satisfaction with the questionnaire

Figure 6 shows the general satisfaction with the school site (main) questionnaire (on the level of respondents, not school sites). Overall satisfaction was mixed, with around half (48.2%) of the respondents who gave an answer indicating they found the questionnaire "average", while only 18.4% found the questionnaire "good" (no respondent answered with "very good"). 21.9% of respondents found the questionnaire "not so good", and 9.6% did not like it at all. 1.8% of respondents were unsure.

Figure 6: Overall evaluation of main questionnaire by respondents

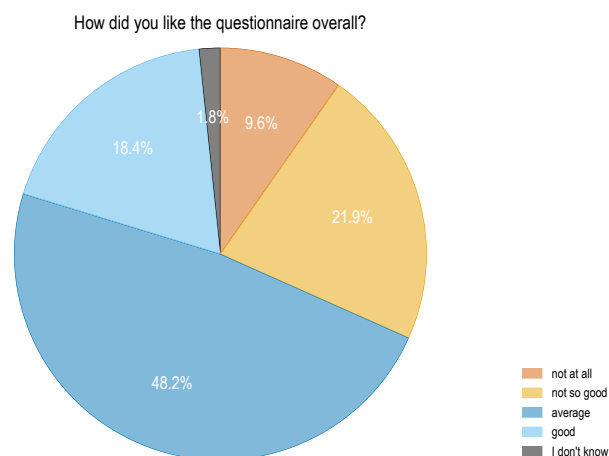
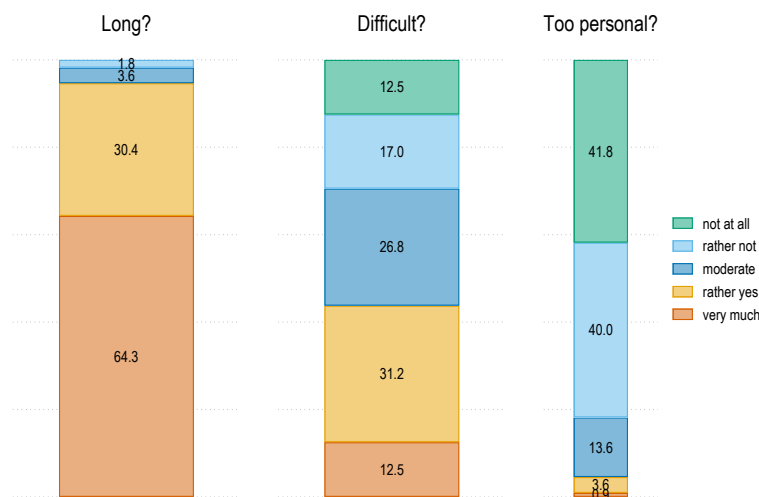


Figure 7 shows the overall satisfaction with certain aspects of the school principal questionnaire. A overwhelming majority of school principals found the questionnaire to be long (64.3 % responded with "very much" and 30.4% said "rather yes"), which is unsurprising given the average response times being much higher than estimated and communicated before (see Figure 5). Regarding the question whether the questions were "difficult", the picture is more mixed: Almost half of the respondents found them difficult (12.5% "very much" and 31.2% "rather yes"). The vast majority of respondents did not find the questionnaire too personal (41.8% said "not at all" and 40.0% said "rather not"). Only a small minority did find it too personal (3.6% "rather yes" and 0.9% "very much").

Figure 7: Respondents' evaluation of certain aspects regarding the main questionnaire



4.4.2 Open comments

In total, 27 open answers were given at the end of the survey (about 15.6% of respondents). 15 comments (55.6%) came from principals in the German, 10 (37.0%) from principals in the French, and 2 (7.4%) from principals in the Italian language region. 19.5% of respondents from the German, 18.2% of respondents from the French, and 4.9% of respondents from the Italian language region made use of the open comment field.

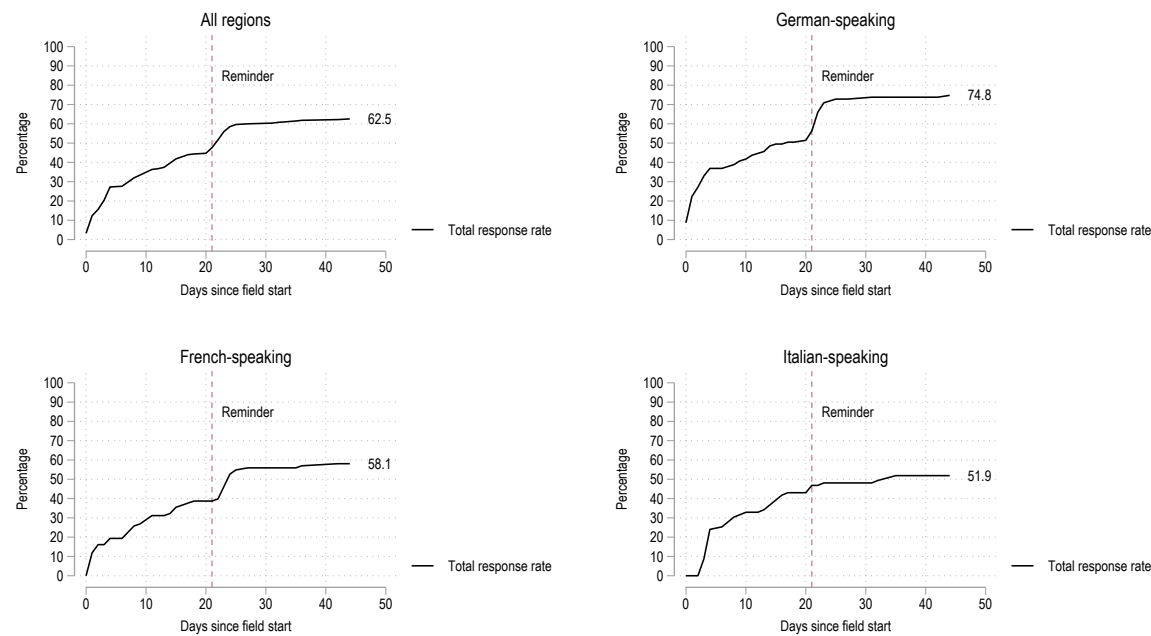
The majority of comments (17 out of 27) referred to the length of the questionnaire and the effort required, the burden of surveys for school principals in general, or the (inconvenient) timing of the survey. 10 comments stated it was difficult to answer some questions due to a mismatch with the school's structure, imprecise questions, or due to the absence of requested information. 3 comments critiqued the content of the questionnaire, only one referring to the topic of digital media in particular. Only 2 comments referred to technical or design aspects of the questionnaire.

Respondents could call a language-specific support contact in case of questions about or problems with the questionnaire. These requests and the associated feedback were not

documented systematically, as they were partly indissociable from requests regarding the PISA study (Programme for International Student Assessment).

5 Appendix

Figure 8: Response rate school principal questionnaire (including breakoffs)



References

American Association for Public Opinion Research (2017). Standard definitions: Final dispositions of case codes and outcome rates for surveys. 9th edition.