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Contemporary Social Science

Journal of the Academy of Social Sciences

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rsoc21

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To cite this article: Monique H. Harrison & Philip A. Hernandez (2022): Supporting interviews with technology: how software integration can benefit participants and interviewers, Contemporary Social Science, DOI: 10.1080/21582041.2022.2153158

To link to this article: https://doi.org/10.1080/21582041.2022.2153158

Published online: 11 Dec 2022.

CONTEMPORARY SOCIAL SCIENCE
https://doi.org/10.1080/21582041.2022.2153158

ACADEMY of SOCIAL SCIENCES
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Supporting interviews with technology: how software integration can benefit participants and interviewers

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ABSTRACT

The interview experience is only one component of the process of interviewing – software programmes can coordinate the pre-interview steps and begin a digitally-mediated relationship with participants long before the actual interview commences. This essay provides examples of how researchers can maximise their time and energy by digitally coordinating the steps of the interview process, thus reducing the logistical time and stress for all involved. Smoothly tying together the user experience from the first click of interest, to consent, to scheduling, and finally payment, confers many advantages to both the interviewer and interviewee. Based on a study with over 700 online interviews conducted from 2019 to 2022, this article gives insight into the platforms and customisation options that allowed a relatively small research team to conduct a large qualitative study. The automation of portions of the typical process allowed us to spend more of our time and intellectual resources on the interviews and initial analysis rather than logistics. We discuss the process of digital consent, interview scheduling using calendar managers, and standardised communication coordination. We describe the participant experience, give detailed descriptions of how we integrated the software associated with interviews, and provide our insights on the process. This article is a timely guide for qualitative researchers to lessen their load by coordinating the logistics of interviewing more efficiently.

ARTICLE HISTORY
Received 9 June 2022
Accepted 16 November 2022

KEYWORDS
methodology; interviews; technology; qualitative; digital culture

Put mildly, the COVID-19 pandemic disrupted and continues to disrupt many aspects of life, including qualitative research. The nature of this disruption caused many researchers to re-examine or re-tool the way in which they did academic work. As part of this re-examination, it is worth asking which insights and innovations used during this time might be worth keeping. As the research community undergoes this period of introspection and change, we offer a detailed digital workflow which coordinates the plethora of time-consuming tasks associated with qualitative interviewing into a seamless experience for both the interviewer and interviewee.

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Over the past three years, our team has conducted over 700 online interviews via Zoom (a video-conferencing platform) as part of a longitudinal study that began prior to and has continued unabated throughout the COVID-19 pandemic. The study was originally conceived with a possible transition to in-person interviews, however, the affordances of online interviews and digital workflows compelled us to continue using Zoom for online interviews, even before the pandemic emerged. Although Zoom presents its own benefits to the qualitative interview, discussed further below, we found substantial benefits in the integration of supplemental software to support the interviews – benefits which are not limited to online interviewing.

The purpose of this essay is to provide examples of how researchers can maximise their time and energy by digitally coordinating processes, thus reducing the logistical time and stress for all involved. In addition to these benefits, these processes mirror the integrations that digital-era users have come to expect from professional organisations (e.g. food-delivery, ride-share, medical appointments). Researchers from many domains should find these supportive processes useful to aid in both online and in-person interviewing. The following is a brief description of the literature supporting online interviews, an overview of the digitally-mediated interviewee experience in our study, and our methods for structuring the software associated with interviews.

The online interview

The ethnographic interview is held sacred in qualitative methodology as a peculiar type of social exchange (Weiss, 1995). It has its own literature and phenomenology, covering theory, planning, execution and reflection on the experience (Emerson, Fretz, & Shaw, 2011; Glese, 1998).

Before COVID-19 there was already a robust conversation underway about the efficacy and desirability of online interviews, especially as a replacement for in-person interviews. Multiple recent studies have targeted the efficacy and experience of a Zoom interview. One study found that Zoom participants overwhelmingly had a positive experience with the platform and interview (Gray, Wong-Wylie, Rempel, & Cook, 2020). Another found that Zoom was rated highly by researchers and interviewees alike given its relative ease of use, cost-effectiveness, data management features, and security options (Archibald, Ambagtsheer, Casey, & Lawless, 2019). Additionally, multiple studies have compared online interviews with in-person interviews for specific populations and found no difference in content (Seymour, 2001; Shapka, Domene, Khan, & Mijin, 2016).

Having completed three years of a longitudinal study, we offer our rationale for online interviews as well as a workflow intended for either online or in-person interviews.

Our study

In the summer of 2019, our team began a longitudinal cohort study by interviewing 103 incoming undergraduates to understand their decision-making processes around course search and selection.[1] Our study at Western University,[2] a highly selective private university on the west coast, followed these students each quarter and used semi-structured interviews to ask about their college and course experiences as well as the evolution of their strategies and thinking. Given that these students were located all over the world

before classes began, it made sense to conduct our initial interview online.[3] During this initial round of interviews, the two authors interviewed initial participants over a 6-week timespan before they arrived on campus. We expected to convert to in-person interviews in the fall and winter quarters.

However, we decided to continue the interviews online because of the numerous affordances it provided. For example, we could avoid the complexity of finding space and the attrition that might come with asking students to travel to a particular location on a new campus. In addition, we had developed a process for interview flow that optimised communication without the constant need to monitor and respond to emails. Furthermore, our sample included college students who were likely to be comfortable in a digital environment, and likely to have irregular scheduling constraints, which meant flexibility was important. In the spring quarter, the university's closure due to the COVID-19 pandemic reinforced our choice to continue with online interviews, as the students were again located across the world.

Integrating the interview experience

It is important to remember the interview platform and experience are only one component of the interview process and the relationship with participants begins long before the actual interview commences. Seamless integration is helpful in establishing trust with participants and increasing ease for interviewers. Rapport is thought to be helpful in increasing participation and response quality (Garbarski, Schaeffer, & Dykema, 2016). Figure 1 shows the flow of participants and information through the process and delineates which transitions were automated. The software and websites used comprise a linked system that guides students through introduction, consent, scheduling, execution, and ultimately payment for the interview.

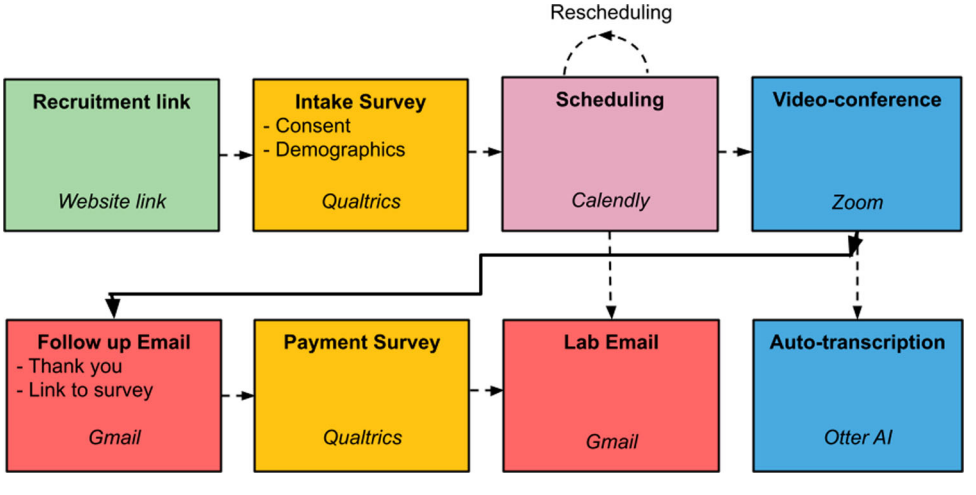

Figure 1. Interview flow and technology integration. Dotted lines indicate links which use automated processes, solid lines represent links requiring a human input. Colours indicate when similar or linked technology was used.

In the following section, we describe the participant perspective of this process, offer suggestions, and then delve deeper into the personalisation options within each platform to customise the interview experience. We highlight how technology was used to reduce the labor/time needed for the study and streamline the participant experience.

The interviewee experience:

1. **Recruitment –** A potential participant clicks a link to an online survey tool, in our case – Qualtrics. We used a pop-up notification on a student course selection website to which we had access, but other options abound (website, email, social media, MTurk, etc).
2. **Intake/Consent and Demographics –** The recruitment link sends the potential participant to the intake survey where they are introduced to the study and answer a few initial questions (name, preferred email, etc.). They then read a consent form and if they click accept, a copy of the consent form is automatically emailed to them. Participants then answer questions that we felt were best asked after consent was obtained (for instance, demographic information). Finally, the survey ends by linking them to a scheduling app.
3. **Scheduling –** In the scheduling app (we used Calendly), participants select the time most convenient for them, enter their name, email, and answer any additional questions required. We asked for a contact phone number 'to contact you in case you're running late for your interview', which was utilised quite often. Their contact phone number was embedded in the calendar invite email, and thus saved the interviewers time searching for this data. This auto-generated email contains the video-conferencing link (we used Zoom) and links to cancel or reschedule the interview – and includes a calendar invite for those with electronic calendars. Before the meeting, participants received reminder emails via Calendly (we choose to send them 48, 24 h, and five minutes before the scheduled interview). Each subsequent email reminder also had a link to reschedule and the Zoom video-conference link.
4. **Video conference –** After clicking the Zoom link participants join a Zoom video-conference, where they are immediately notified that the meeting is being recorded. At the end of the interview, the interviewer mentions that they will be sent a follow-up email asking for payment preferences.
5. **Follow-up –** In an email thanking them for their interview, participants receive a different survey link (Qualtrics) asking for their preferred method of payment (Venmo or email where a gift card can be sent). A few days later, they are paid (we did this manually although some platforms are available to automate this process as well).

The participant experience was designed to be seamless and there were only minor maintenance issues to resolve. There were customisations to consider and modify in each of these programmes which facilitated easier data management and efficient communication. Below we outline some of the affordances and choices offered by the technologies that were utilised.

Intake – consent and demographics (Qualtrics)

- Qualtrics records partially completed surveys, so prospective participants who may have thought they were done but did not complete the intake survey can be sent

reminders to finish and sign up for an interview (it helps to have 'email address' as one of the first few questions).
- Qualtrics can show where participants navigated from and the geolocators of their internet access. This feature can be turned off if it is not approved by an IRB.
- Qualtrics allows for various emails to be sent automatically, triggered by the participant's selections in the survey. We used this to send a copy of the consent form when students consented.

Scheduling (Calendly)

- Calendly is adaptable:
  - It takes inputs from personal calendar(s) and only allows interviews to be scheduled when there are no conflicts, with customisable buffer times between events. Time constraints can be set directly in the app so outside personal calendars do not need to be modified (for instance, 8am – 5pm, Mondays and Wednesdays, but not the 7th, etc).
  - Further specifications include the length of the interview, how many interviews can be scheduled per day and how far in advance people can/cannot schedule interviews.
  - Reminder emails can be sent multiple times before the meeting (e.g. 2 days before, 1 hour before).
  - For multiple interviewers, Calendly pools availability from each interviewer's respective calendars to give a larger time selection to students. The priority of interviewers can also be altered (if both interviewers are available, give preference to one). This allows one person to be more restrictive with their availability, but when available, to schedule an interview with them first.
- A Zoom account can be linked to Calendly so that a unique Zoom link is automatically created and placed in the email/calendar invite and added to an interviewer's calendar. Other options/integrations for inclusion in the calendar invite are available for those considering in-person, phone interviews, or other web conferencing platforms (for Calendly, other web conferencing platform options currently include Webex, Microsoft Teams, GoTo Meeting, and Google Meet).

Video conference (Zoom)

- Zoom offers the option to be notified when a participant enters the interview. Occasionally this is just the interviewee testing the Zoom link, but this feature is useful in occasions when there is time-zone confusion or one of the parties forgot about the interview.
- If internet connection issues arise, calling in to/from Zoom via phone can allow for interviews to continue. If at least one person remains in the room, Zoom maintains one audio file and transcript.
- Zoom has an option to automatically record to the cloud and then create an automatic transcription using OtterAI. In addition, there is an option to be notified when transcription is complete. We found these transcriptions still required checking but these AI transcriptions substantially reduced the time needed for transcribing.
- Zoom offers many customisations, which are especially useful if you plan on doing group interviews/focus groups.

- Once a Zoom interview ends, the next steps take care of themselves. Though transcripts can be edited directly in the Zoom interface, we found it best to download and re-upload those audio files and transcripts to another location for cleaning, coding, etc.

Follow-up

- A 'thank you for your time' email was sent, which included a link to another Qualtrics survey which asked participants for their preferred payment method. Upon submission, emails were automatically sent with the payment details to the person in charge of payment and to the email account for the study. This allowed for a centralised, searchable database (Gmail) to track payment requests and completion. Participants would be emailed again if no response was received – for us, this represented about 5% of our interviewees.

Study account (Email, calendar, cloud drive)

- We created a Google account for this study which we used to send emails, provide a central location for shared documents, and allow for a shared calendar. Among other benefits, this allowed others, like our Principal Investigator (PI) and project interns, direct access to all relevant information and contact with any given participant. Both interviewers shared interview calendars with the study account, so the study account calendar was fully inclusive of all interviews. In emergency situations, the shared calendar allowed for one interviewer to step in for another interviewer as the links to the Zoom video conference were embedded in the calendar details. We also used automatic email filters on our personal emails to collect all 'Calendly' emails and send copies to the study's GMail, which thus maintained an accurate accounting of interviews scheduled, cancelled, rescheduled, etc.

Personnel and manual processing

In addition to two interviewers[4] and our faculty PI, we had an intern helping with logistical support during the first round of interviews. To provide quick feedback to participants, we traded days of checking the email account and responding to issues as they arose. All instructions and protocols were kept in our communal Google Drive. In addition, template emails were created to respond to common situations (missed interview, incomplete survey, etc.). We managed a log, tracking each participant's stage of the interview process – intake survey initiated, intake survey completed, interview scheduled, interview completed, thank you sent, paid. Using this log, we manually looked for mistakes in scheduling, such as one person signing up for multiple interviews rather than rescheduling. If participants could not make the interview times available, participants were instructed to email us to find additional times and we manually created interview invites, though this was rare. After the first round of interviews, our population became more static and the manual work needed to manage interviews decreased as both participants and interviewers became familiar with the flow.

As mentioned above, there were several instances where emails would automatically be sent depending on a participant's choices. Any automated process, including email, was tested repeatedly before being utilised in the study.

Drawbacks/Caveats

We noticed a few drawbacks to this integrated system. For one, it was easy for our participants to reschedule, and it happened often. It was disappointing to approach an interview only to have the interview rescheduled when the participant received the 'reminder' email 5 min before the interview (In future interviews, we changed the lead time to 10 min). However, we think we retained over 80% of participants at least in part because of the ease of rescheduling. Another limitation occurred when internet connections were unreliable, as sections of the interview were lost or garbled. We prepared for this by having a back-up phone number that we could call in case of disconnection; however, there are instances when unreliable connections led to indecipherable audio and increased the length of time in the interview. In addition, auto-transcription, though helpful, still requires significant human input to edit into a codable form.

We fully acknowledge that by the time of publication some of this information may be out of date; software updates and improvements move fast and are continuously changed and (hopefully) improved. As an additional caveat, it is important to consider the sample population; we were scheduling recurring interviews with college-aged students at an elite university who we assumed were familiar with navigating technology. We gave our participants no additional instructions beyond those embedded in the platforms and had only minor technical problems.[5] Attempting these procedures with a cohort of octogenarians would likely require different support. To start, both Qualtrics and Zoom have specific sites to help researchers make their surveys and interview experiences more accessible for those with vision and hearing impairments. Additionally, Zoom has basic videos available giving instructions for navigating the platform, which researchers could send to participants ahead of their interview.[6]

Finally, this article presents a case for integrations; however, these connections can be limited. For example, the scheduling programme we used only currently interfaces with Google, Outlook Desktop, Office 365, Microsoft Exchange, and iCloud calendars. We look forward to having more research tools/platforms that diversify the possible integrations beyond those of Microsoft, Google, and Apple.

Conclusion

Every bureaucratic step in the interview process is a chance to lose participants. Our users grew up in a digital world and have certain expectations of fluidity in online environments, especially since commercial platforms have already made many online experiences seamless. The more the process is smoothly tied together from the first click of interest to consent and scheduling, the smaller the chance of losing participants to a leaky pipeline of back-and-forth emails or phone calls. Furthermore, the online process helped with the portability of the study as we were able to access relevant documents and conduct interviews wherever a secure internet connection could be found. This

portability allowed us the flexibility to expand our availability for interviews into times that better fit our participants' schedules.

The integration of technology into our study design allowed us to provide clear communication, coordinate effectively among the small number of workers devoted to the study, and process the interview transcripts quickly. The automation and coordination forced us to deeply think through the process and anticipate responses, which also helped with providing consistent messaging to all our participants. The automation of portions of the process allowed us to spend more of our time and intellectual resources on the interviews and initial analysis rather than logistics. We hope that providing our methods and rationale allows other researchers to do the same.

Notes

1. The demographics of our sample largely matched their peers in the incoming class of 2023. Appendix 1 shows the demographic distribution of the 85 students that comprise our first year cohort who each completed 3 or more interviews during the first year.
2. Pseudonym.
3. Initial interview length averaged approximately 30 min, future interviews were designed to last 45 min but ranged from about 25 min to over 2 h.
4. Both interviewers were graduate students at the time of initial interviews.
5. Issues included problems with dial-in numbers for international participants, assumptions about the interview being in-person, or and assumptions that a specific Zoom device was needed (rather than an loading a web application).
6. For Qualtrics accessibility – https://www.qualtrics.com/support/survey-platform/survey-module/survey-tools/check-survey-accessibility/.
   Zoom support – https://learn-zoom.us/show-me.
   Zoom accessibility – https://explore.zoom.us/en/accessibility/.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was supported in part by the Institute of Education Sciences, U.S. Department of Education, through Grant R305B140009 to the Board of Trustees of the Leland Stanford Junior University, by the Michelle R. Clayman Institute for Gender Research, the Stanford EDGE Doctoral Fellowship Program, the Stanford Graduate Fellowship, and by the Stanford GSE Dissertation Support Grant.

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Philip A. Hernandez is a PhD candidate in education. He has degrees in Neuroscience (MS, Stanford), science teaching (MEd, SMU), Biochemistry and Cell Biology (BA, Rice), and Hispanic Studies (BA, Rice). His interests include the relationship between science pathways, pedagogy, assessment,

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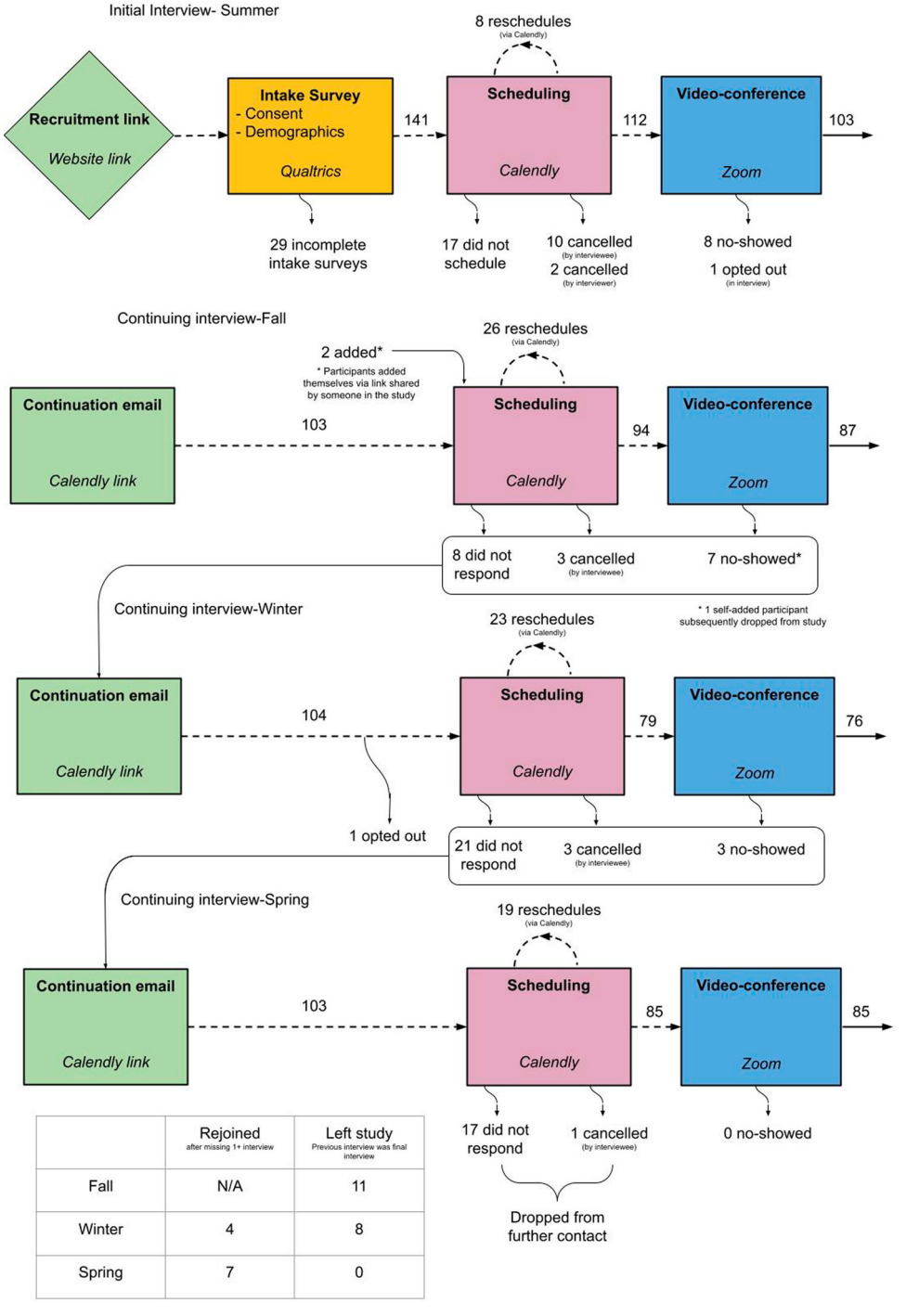
Appendices

Appendix 1: First Year Interview Participation



	Rejoined after missing 1+ interview	Left study Previous interview was final interview
Fall	N/A	11
Winter	4	8
Spring	7	0

Appendix 2: Demographics of Cohort and Class of 2023

Table A1. Demographics of Western University Class of 2023, First Year Cohort.

	Class of 2023 ($N = 1,701$)	Initial Study Cohort ($N = 85$)
Race/Ethnicity		
White	27%	18.80%
Asian	21%	31.80%
Hispanic or Latino	17%	8.20%
International	12%	10.60%
Two or more races	9%	18.80%
Black or African American	8%	8.20%
American Indian or Alaska Native	1%	2.40%
Native Hawaiian or Pacific Islander	<1%	1.20%
Unknown	6%	
Gender (self-identified)		
Women	52%	59%
High School		
Private	27%	24%
Public	59%	51%
International	14%	9%
To Be Determined		11%
Parent Educational Background		
First-Generation College Students	18.50%	16.50%