

Collecting data Online from Young Students During a Pandemic: Reflections

Margaret Mangion

Edward de Bono Institute for Creative Thinking and Innovation

margaret.mangion@um.edu.mt

Abstract: As researchers we need to be able to reflect deeply to constantly improve the research processes. Reflection can help researchers to engage critically and objectively with the worldview while acknowledging what works and what doesn't. This paper focuses on reflections emerging from online data collection during a pandemic. This paper presents what was learned from conducting online research by collecting data through an online survey administered to school children during the Covid-19 pandemic. Following a brief review of relevant literature, the research process employed is outlined. This includes the sample, measures used and ethics clearance. Secondly, we explore the advantages and limitations of conducting online research. In particular we explore the issues that were encountered and how online research made data collection from a school possible during a pandemic. The main stumbling blocks were related to: (a) parental engagement and the subsequent collection of consent forms; (b) issues that emerged during the actual data collection. These issues and others are explored through a reflection process using cycle outlined by Gibbs (1988). The aim of the study was to explore how students aged between 9 – 11 years perceived their own creative self-concept and their wellbeing at school. In this quantitative study, 530 students coming from different schools were surveyed using an online platform. Participants were recruited through their respective schools following the dissemination of information letters and consent forms. While various advantages emerged from conducting online research, a number of challenges were encountered throughout the process. This data collection exercise presented an opportunity for learning and growth through a process of reflection and evaluation.

Keywords: online research, limitations, advantages, reflection

1. Introduction:

The pandemic induced by the spread of the COVID-19 virus left a mark on empirical research on a global scale (Harper et al., 2020). The limited mobility due to various lockdowns restricted access to various sample populations. This led to the need to explore other methods to be able to access and obtain data. Online data collection has been on the increase for a while (Ward et al., 2014). This appears to be due to the fact that many more people have access to the world wide web (Granello and Wheaton, 2004).

This paper presents what was learned from conducting online research by collecting data through an online survey administered to school children during the Covid-19 pandemic. Following a brief review of relevant literature, an outline the research process employed is presented. A reflective process on the experience of collecting data online including recommendations for further consideration ensues. Jasper and Rosser (2013) refer to a reflective process as a learning experience where evaluation on the acquired knowledge takes places while fine tuning procedures for future use.

2. Doing research online.

Online research has increased considerably over the years especially since access to online media had become widespread (Hokke et al. 2018) in most developed countries. This presents an array of issues ranging from advantages and limitations of collecting data online as well as new ethical issues emerging from this method. Below is a brief outline of these factors.

2.1 Advantages when collecting data online.

In person data collection can be time consuming and expensive (Granello and Weathon, 2004; Lefever, et al. 2007). A number of advantages emerge in favour of online data collection over more traditional methods. Commutes to visit the site where data is collected from for instance could be one of the most time-consuming aspects if multiple data collection sites are used. To this end, online data collection presents researchers with the opportunity to collect data efficiently and in a timely manner (Lefever, et al. 2007, Mohanty et al, 2020). Online data collection is also perceived as being cost-effective for a variety of reasons (Mohanty et al. 2020). Firstly, paper and pencil methods are replaced by online forms thus eliminating the need for printing. Moreover,

manhours spent on the field to collect the data could be expedited through access to online portals. Mertler (2002) noted these advantages in relation to data collection from students, teachers and parents. Other points in favour of data collection appear to support the researcher directly. Using online data collection methods enhances the safe storage of data and makes loss of data less likely. Moreover, the inputting of data is efficient since it is easily downloaded into user-friendly formats. Data can then be cleaned and analysed more easily (Ileva, Baron and Healey, 2002).

2.2 Limitations when collecting data online.

Notwithstanding the various advantages of online data collection, a number of short-comings may still be observed when using this method. One of the main bones of contention here remains the issue of sampling and data integrity. (Hocevar and Flanagan, 2017) raise this issue in their work and claim that sampling and data integrity raise critical concerns in the assessment of research results no matter which online data collection method is used. Further limitations related to the sample were pointed out by Granello and Weathon (2004). They claim that when conducting online data collection, there may be issues related to the representativeness of the sample. Since the researcher will not have face to face access to respondents it may be difficult to tell who is actually completing a survey. Another relevant difficulty may arise due to technical issues (Lefever, et al. 2007). These issues may vary in nature from difficulties to establish an online connection due to faults from the part of the Internet service provider to difficulties emerging from the level of technological literacy experienced by respondents.

Response rates may still vary when collecting data online. Whereas Fricker Jr in Fielding et al (2017) claim that often the response rate for online data collection can be low, previously Ileva et al. (2002) had indicated that there may be an argument for a better response rate when using this method. Granello and Weathon (2004) suggested the use of reminders to nudge respondents into participating in online data collection methods. Other researchers have anticipated these issues and identified means to make the process of online data collection more user friendly. For instance, as early as 1999 Dillman et al. identified eleven principles that can encourage participation in online data collection. These include the following: include a welcome screen, formats that are similar to paper-and-pencil formats, limiting scrolling for respondents to view statements and clear instructions for different operating systems.

2.3 Ethical issues when conducting online research

The increase of internet and smartphone technology has made it easier for researchers to engage with family and child populations (Hokke et al., 2018). However, online research and the ease with which respondents may be approached has created new challenges for ethics committees and institutions as well as researchers (Ackland 2013 cited in Sugiura et al 2017). The need to establish ethical guidelines is evident since there is an increase in engagement with online environments by respondents. A number of researchers capitalised on this engagement leading to an increase in online data collection during the COVID-19 pandemic. These instances may have created difficulties and opportunities for new thinking for ethics committees and researchers alike (Sugiura, 2017). Some of the newly introduced research ethics procedures have been said to be to 'restrictive' (Langer and Beckman, 2005).

Shelley-Egan (2015) identified a number of issues related to ethics when conducting online research. Privacy, confidentiality and anonymity are amongst the most problematic. Another critical element is informed consent. These matters need to be given adequate consideration especially when conducting research with families and children (Hokke et al. 2018). Obtaining valid informed consent becomes critical especially since minors are considered as vulnerable and their capacity to conclude if they should participate in an online study may not be clear. It is therefore important to obtain consent from parents or legal guardians.

This section offered a brief overview of the issues surrounding online data collection. These issues were considered at research design stage. In the following section, contextual elements about the project are outlined for better appreciation of the reflection exercise.

3. Research context:

The study on which reflection is carried out involved gathering of information from students about their own perceptions of their creativity and their wellbeing at school during the time of the Covid-19 pandemic. The study took place in Malta (EU), and it adopted a quantitative approach with the aim to be able to generalise findings to the relevant age group. Statistical analysis can be used to indicate how a sample population could behave at

a macro-level. This is typically done since quantitative measures address the 'what' elements (Kelle, 2006). In this quantitative study, a sample of 530 students coming from different schools were surveyed using an online platform. Participants were recruited through their respective schools following the dissemination of information letters and consent forms.

Ethics clearance was obtained from all the stakeholders involved, namely the University, Department of Education, the Secretariat for Catholic Education and each Independent School. It was stipulated that the Head of each school would act as an intermediary between the researcher and parents or legal guardians. The latter had to provide written consent to allow the participation of their children on the project. This was done keeping in mind, the claims by Hokke et al (2018) that it is important to establish the capacity of young students to consent to participate in the study.

Information letters and consent forms were issued electronically instead of through printed formats by the school in the two official languages, Maltese and English. This was done since the handling of material was limited to the minimum to mitigate the spread of the virus. Moreover, some students experienced online schooling for the duration of the scholastic year. In Malta, approximately 90% of the population has access to the internet (NSO, 2020). This should have facilitated access to the information letters and consent forms as well as access to the online survey for students following school from home. Access to the survey was not anticipated to be an issue since all the students in the identified sample had access to a tablet provided by the Department of Education nationwide. Therefore, data for the project was to be collected using a one-time intervention on the part of each student using an anonymous self-rated survey. The researcher made arrangements with each school to access each class virtually to guide the students through the survey by giving the same instructions to all groups and by reading out each statement. This was done at different times and according to slots previously agreed on with the participating schools. This method ensured that data was collected simultaneously and that students had the same interpretation of the statements they were to use for the self-rating exercise. The survey was always administered during school hours. In keeping with total anonymity of respondents, digital identifiers of any type were not considered for harvest.

4. Guiding Framework for the reflective process.

Reflection is an essential part of learning. Although this method has gained prominence over the years, a single definition of what is understood by 'reflective practice' is not available. (Fook et al., 2006; Moon, 2013). This lack of a standardised definition causes various difficulties. Rodgers (2002) points out that there is lack of clarity about how reflection may differ from other thinking processes. For the purposes of this paper, reflective practice involved the review of an experience that was used to actively and critically think about how the activity could be improved in future. At the origins of critical reflection, we find the need for sense making to add meaning and context to develop. Gibbs (1998) provides a cycle that encourages reflective thinking that has been used in a number of studies.

The methodology used to collect reflections was of a qualitative nature. Driven by the reflective cycle identified by Gibbs (1988) reflection on the experience of doing online research was collected before, during and after the data collection process through journaling. Journals are convenient since they capture the experience as it is lived while thoughts and feelings are still fresh. This method was found useful due to the critical and reflective stance in which one needs to be in order to revisit and process events as they unfold chronologically. This practice allows the possibility to relive the experience while capitalising on opportunities for improvement thus fostering critical reflection through a growth mindset. In his reflective cycle Gibbs identifies 6 key steps to think and process experiences and learn from these practices. In itself the process leads to recalibration of how procedures are executed thus resulting in a learning experience. One may note that this cycle bears resemblance to the model of experiential learning produced by Kolb (1984).

Below and in Figure 1, are the six stages involved in the reflection process by Gibbs (1988).

- Description. In this first stage details about how the experience unfolds are shared.
- Feelings. Feelings may be associated an emotional state or a frame of mind. It is important to recall and acknowledge the feelings that emerge as a result of an experience.
- Evaluation. This stage requires an assessment of the experience itself. Details of what worked and what could be improved or what did not work at all need to be highlighted.

- Analysis. At this point we would interpret and understand the experience. This supports our sense making of a series of events that make a whole experience.
- Conclusion. This stage is particularly important if an experience is to be repeated. Using the previous stages as a scaffold, the opportunity for creative thinking emerges since deliberate effort needs to be made to generate alternatives. At this point one needs to capitalise on the learning and identify what could be done differently if there had to be a repeat of the experience.
- Action plan. The alternatives identified in the previous stage can be developed and turned into an action plan that can support future experiences.

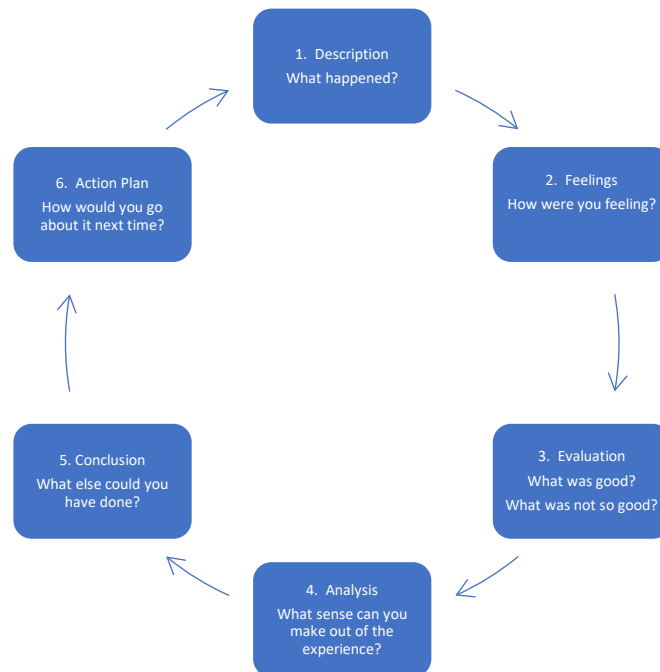


Figure 1: Reflective Cycle. Gibbs (1988)

5. Reflections:

The process of reflection started as early as during the planning of the research project itself. Assumptions about how meaning is typically made (Brookfield, 2000a) were questioned since the challenges imposed partly or completely due to the pandemic influenced how data was collected. Driven by Gibbs (1988) a critical and reflective disposition was adopted to go through the different stages of the reflective cycle model (Fig.1). A number of questions emerging from the different stages presented by the model were used as cues to guide the reflection process as found in Table 1.

Table 1: Cues guiding the reflective process.

Stage	Cues
Description	Where and when did the activities unfold? What happened? What was the outcome of the activities? What worked as anticipated? What were the potential difficulties? What was the role of the different stakeholders?
Feelings	How did the processes of collecting data online make me feel? How was I feeling before and after data collection? How did the stakeholders feel?
Evaluation	What went well when collecting data online? What didn't work out well? How did the respondents contribute to make the experience a positive or negative one?
Analysis	Why did the process work out? What made the process stall?

Stage	Cues
Conclusion	What did I learn from this experience? What could have been done differently? What precautions can be taken for future studies?
Action Plan	How can the process be improved for next time?

While various advantages emerged from conducting online research, a number of challenges were encountered throughout the process. In particular we explore the issues that were encountered and how online research made data collection from schools possible during a pandemic. The main stumbling blocks were related to: (a) parental engagement and the subsequent collection of consent forms; (b) issues that emerged during the actual data collection.

5.1 Description.

The planning phase and ethics clearance for the project took place between December 2020 and March 2021. Ethics clearance proved to be time consuming since submissions had to be made to different bodies including the University, the Department of Education, Secretariat for Catholic Education and each Independent schools that took part. This process ensured that the study adhered to all ethical principles both in its design and during the data collection phase. Following Recital 38 (<https://gdpr-info.eu/recitals/no-38/>) under the GDPR act, special attention was given since data was collected from minors. Once all approvals were in place, information letters and consent forms for parents and legal guardians and assent forms for the students were distributed by the Head of each school who acted as an intermediary. Consent forms were to reach the researcher directly from the parents or legal guardians of each participating child. This was a very long process.

As noted above, data integrity when conducting online research could pose an issue (Hocevar and Flanagan, 2017). This was overcome through the specific targeting of schools with populations of students aged between 9-11 years. Collecting data during the scholastic year also helped with the preservation of integrity. Issues pertaining to the authenticity of respondents were resolved easily since the schools confirmed the ages of the participants taking part in the project. Information letters and consent forms were sent out to the parents or legal guardians of approximately 1275 students.

Collecting data from schools during a pandemic was expected to be difficult from the outset. Different schools adopted different methods to mitigate the spread of the virus, however, one factor was common to all schools; no visitors were allowed for the duration of the scholastic year. Two options were presented. The first involved the dissemination of the surveys by class teachers who would have received training on how to present the instructions to their students prior to data collection. It was envisaged that this method could compromise the data (Hocevar and Flanagan, 2017) due to multiple interpretations. The second option, was for the researcher to reach each school online and instruct each class on the aims of the project and how to complete the survey. The latter was the preferred option. Following a pilot study with a separate school, a script was written to ensure consistency in how the instructions were given. The researcher accessed each school using the online platforms used by the different schools and read out each statement to all respondents. A number of sessions were required since each class or year group within the participating schools was approached separately to allow time for clarifications by the respondents if requested. The respondents indicated how they perceived their own creativity using the 'Short Scale for the Creative Self' by Karwowski et al. 2013 and the 'How I Feel About Myself and School Questionnaire' by Stewart and McLellan (2015) on a Likert scale.

At the outset of the project, it was initially anticipated that obtaining consent would not be a problem. This was an assumption that was soon discounted as will be outlined below.

5.2 Feelings

This project presented a new opportunity, a novel way to engage with data collection methods. It was an exciting break to operationalise a concept that would not have otherwise been possible to do. Data collection during academic year 2020-21 could not have happened on a face-to-face basis. These feelings of excitement and anticipation were coupled with a careful stance to ensure the all ethical procedures were adhered to especially because of the vulnerability of the sample. Guided by elements highlighted in the literature privacy, confidentiality and anonymity (Shelley-Egan, 2015) were adhered to. Feelings of nervousness arose each time that data was being collected due to fears that there could be a technical breakdown. Due to the large number

of people making use of the band with locally, technical issues were not uncommon. A frozen screen or loss of connection were issues that we have learned to deal with during the pandemic. Apart from these isolated occasions that caused disruptions to the programme outlining data collection, the overall experience was appreciated by the participating schools.

The feelings related directly to the project were compounded by a degree of disappointment emerging from the expectation that parents or legal guardians could have engaged with the process more. The assumption that widespread use of internet services is made by many induced the researcher to expect a higher response rate.

5.3 Evaluation

For most of the project online data collection proved to be a pleasant experience. The advantages referred to in the literature, were experienced in their entirety. The project was run in an efficient manner both in terms of time and cost acknowledging findings by Lefever, et al. (2007), and Mohanty et al., (2020). The data collection exercise was welcomed by the participating schools since this activity provided space for students aged 9-11 years to experience personal reflection about their own creativity and wellbeing at school.

One episode in particular however, was disconcerting since a class had to postpone the data collection activity due to miscommunication within the school. The IT technician was not informed of my online visit. In this school the network was set up to allow access to approved individuals. Since I was not given rights to access, my attempts to use the provided link were futile. This led to frustration on both sides. The teachers and the students involved in this school were deeply disappointed.

5.4 Analysis

The overall satisfaction with how the online data collection project unfolded still leaves space for questions to be asked and to look back and assess the different touchpoints of the process. The carefully laid out instructions along with appropriately scheduled data collection sessions made the process run smoothly most of the time.

It was particularly pleasant to see how engaged the students were during the process. Some issues however emerged. However, parental engagement was expected to yield a higher response rate.

The research ethics committee of the university stipulated that the schools act as intermediaries between the researcher and the parents and their children. Signed consent forms had to be sent directly to the researcher via email. This process involved the assumption that parents were downloading the information sheet and the consent form that were sent by email. Initially, the response rate was low, however, a number of reminders (Granello and Weathon, 2004) encouraged more parents to give their consent on behalf of their children. After a few weeks of assessing why a number of parents were not giving their consent, potential reasons leading to a low response rate were generated as follows: (1) parents may not have had access to online devices where they could download a document, sign it and upload it again, (2) the email detailing the research project may have been interpreted as less important than other emails sent by the school and therefore it was not read, (3) parents were experiencing screen fatigue from getting all school communication sent via email, (4) parents viewing emails on a mobile phone may not have had the opportunity to download the documents. Following communication with the various schools about the response rate being lower than initially expected, one of the participating schools asked parents to simply send an email to the researching stating the name of the school, name of the child and a statement confirming their wish to participate in the project. This led to an instant increase in the number of parents or legal guardians consenting participation.

5.5 Conclusion and Action Plan

This project provided an experience for growth as a researcher. Various lessons were learned with the most salient ones being to ensure that access is granted by gatekeepers on the ground, IT technicians in this case and to potentially make the information and consenting process more accessible to respondents. In future a recorded message or a video link could replace the information sheet since this may have been too long and detailed for parents to read through especially if the medium used is a smartphone.

6. Concluding remarks

The pandemic induced by the spread of Covid-19 created new possibilities to make data collection feasible. These methods were not entirely new, however, the uptake by researchers increased dramatically since 2020. This provided a learning experience for many researchers leading to opportunities to implement reflective

practices. These methods are often desired and actively used as self-development tools. Hobbs (2007) claims that this practice ought to be pursued. This bears relevance especially in view of the experiential learning process that is undertaken through reflection leading to potential improvement of activities. This paper presented a reflective process using the reflective cycle illustrated by Gibbs (1988). The reflection process together with the increased interest in online data collection could provide fertile grounds for in-depth study of ethical procedures to enhance and encourage researchers to engage with online methods while keeping respondents safe. The level of engagement with respondents as well as the factors that could lead to enhanced participation rates need to be explored in detail to facilitate future online research.

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