

Considerations for the Use of Online Open-Ended Survey Questions in Educational Research on Youth Experience of the School System

Michelle Dusko Biferie¹  Johanna Sam²  Bowen Xiao³  Jennifer Shapka⁴ 

To cite this article

Dusko Biferie, M., Sam, J., Xiao, B., & Shapka, J. (2025). Considerations for the use of online open-ended survey questions in educational research on youth experience of the school system. *Qualitative Inquiry in Education: Theory & Practice*, 3(2), 107-133. <https://doi.org/10.59455/qietp.44>

Article Info: Received: 23.07.2025

Revised: 24.10.2025

Accepted: 19.12.2025

Abstract

Purpose: Educational psychology research practices have been criticised for using impersonal methods to study personal and relational topics. In response to these tensions, there is a push towards more qualitative research in educational psychology and growing use of youth-friendly research approaches to increase youth participation. We are proposing the use of stand-alone online open-ended surveys as a ‘middle way’ for researchers who are sensitive to the criticisms around rigour around qualitative research in educational psychology and for positivist researchers who wish to use a qualitative method to tackle large amounts of data.

Method: Using open-ended data from a longitudinal school-administered survey on adolescent student perceptions of teacher rapport, our five steps (entry into the field, responder and non-responder analysis, data preparation, data analysis and interpretation) describe how to triangulate and crystallize data within the survey to enhance rigour and argue that holistic data management, coding within the data set and across multiple questions yields a rethinking of triangulation and crystallization. Our approach yielded four themes that honored the diversity of student perspectives: “Pull and Push”, “Holding the students hand”, “The teacher is the school” and “Solo flyers”. We provide examples of the richness of data achievable through this method.

Findings: Our findings show that teachers’ relational skills are valued by students and are important in fostering positive student learning dispositions for deeper understanding of content and lessons.

Implications: We encourage researchers to consider analyzing online open-ended survey data using an interpretivist lens to honor student diversity and inclusion in school-based research.

Keywords

youth, school-based research, survey, interpretivism, online methods

¹ **Corresponding Author:** University of British Columbia, Canada. michelle.biferie@gmail.com

² University of British Columbia, Canada. johanna.sam@ubc.ca

³ Carleton University, Canada. bowen.xiao@ubc.ca

⁴ University of British Columbia, Canada. jennifer.shapka@ubc.ca

Background

Educational psychology research practices have been criticized for using impersonal methods to study personal and relational topics (Newman & Clare, 2016), most notably how students learn and the underlying cognitive, emotional and social processes that drive learning (Immordino-Yang et al., 2025). Despite the complexity of the dynamics in the school environment, most research in educational psychology is siloed; “qualitative and quantitative research traditions continue to exist and develop in disconnected spaces [and] present a risk to coherence in the psychological sciences” (Wallace & Kuo, 2020, p. 579).

In response to these tensions, there is a push towards more qualitative research in educational psychology; indeed, this research enterprise seeks to understand context and to describe and make meaning of human experiences, often resulting in great, realistic detail (Lim, 2025). Because the focus of interpretative research is people (the researcher as a researcher instrument) and learning about people, it is inherently relational (Newman & Clare, 2016). Despite the growth of qualitative research publications in educational psychology, issues around methodological integrity and rigour abound, mostly from misunderstandings from positivist researchers as to what constitutes ‘rigour’ in qualitative research (Meyer & Schutz, 2020; LaDonna et al., 2018).

In addition to the growing impetus for qualitative research in psychology in general, there is a growing involvement of youth (aged 12 to 18 years) in educational research. This interest stems partly from children’s rights to participation and the recognition of youths as experts in their own lives and identities and sense of personal agency (Kirk, 2007). Discussion around dismantling the ‘patriarchal’ treatment of youth as inherently fragile and unsuitable ‘subjects’ for research on sensitive topics that affect their lives is yielding a growing awareness of the identities of youth. Various frameworks have been proposed to engage youth in research with the understanding that youth participation lies on a continuum from consultation to empowerment (Eckhoff, 2019).

Acknowledging that children and youth should not be passive objects of research inquiry but active participants in the creation and generation of knowledge has resulted in significant interest in community and participatory qualitative research with youth (Tilley & Taylor, 2018). However, community-based approaches (digital or not) and other qualitative methodologies that require deep engagement with participants, as most do, are often not entirely feasible in the study of school environments and the relationships that support student success. The demand on school communities to support such intensive research, the time required to build rapport, trust, and school community buy-in, gaining consent from parents, and the rather intrusive nature of researchers being present at school activities for observation are challenging for researchers to navigate. Additionally, the personal disclosure from teachers and students is problematic despite the best efforts by researchers to mitigate these concerns and in light of the numerous challenges schools are experiencing to simply teach the curriculum and support students (Kristjansson et al., 2013).

Community participatory research is often seen as a remedy for the involvement of marginalized youth in educational research (Rodriguez Espinosa & Verney, 2021). Attention to marginalized identities, and how best to engage marginalized youth in a way that honours their voice and diversity (i.e. culture, race) and that promotes equity and their agency to the extent that is

developmentally appropriate, are also growing trends. Marginalized youth, such as those from racialized or immigrant backgrounds, neurodiverse or LGBTQ communities, are heavily under-represented in educational research (Matthews & López, 2020). Most research on marginalized youth frames their experiences from deficit perspectives with poor representation of marginalized youth voice and perspectives (Kumar & DeCuir-Gunby, 2023). Indeed, marginalized youth are ‘researched on’ as opposed to ‘involved’ or consulted in the research processes that impact their representation to the scholarly community (Tilley & Taylor, 2018). Some of the root causes of their lack of visibility are rooted in logistical issues surrounding researchers gaining access to places where youth feel comfortable sharing their stories. Also relevant are the power imbalances and trust issues typical of the research process, involving youth exposure and disclosure to powerful and unfamiliar adults from communities that are typically not their own (Teixeira et al., 2021).

The recognition of these factors has resulted in a push towards more ‘youth-friendly’ research engagement approaches (Flanagan et al., 2015). To increase access to youth and youth engagement, researchers are exploring digital research approaches such as digital storytelling, voice recording and blogs that engage youth, the same technologies that have become central to their lives and that are used to build and grow their relationships with others (Flanagan et al., 2015). Digital and online approaches have been shown to increase participation in marginalized and otherwise hard-to-reach populations (Murthy, 2008) with youth reporting greater psychological safety in the form of increased anonymity and confidentiality with their use (Kelly et al., 2020; McDermott et al., 2013). We are proposing the use of stand-alone online open-ended surveys as a ‘middle way’ for researchers who are sensitive to the criticisms around rigour around qualitative research in educational psychology and for positivist researchers who wish to use a qualitative method to tackle large amounts of data. In summary, we propose an innovative approach to circumvent some of the challenges of studying the ‘personal with impersonal methods’ with youth in educational research.

Surveys as Qualitative Research Tools

Surveys are especially useful in collecting or generating large amounts of data about many participants, making them well-suited to exploring school-based phenomena. Online data collection in particular has the ability to reach a diversity of people, transcend geographic boundaries and comes with relative ease of development and administration (Topp & Pawloski, 2002). Of particular interest is the use of open-ended survey questions (or free text responses), which have often been used to supplement number-based or quantitative studies. This question type provides the necessary context to yield more insights and enables participants to provide additional information (Kelly et al., 2020). Open-ended questions have been perceived as additional data, a research ‘nice to have’ rather than a research method in its own right (Kelly et al., 2020). At best, open-ended survey questions (OESQ) add ‘richness’ to quantitative data, findings and analysis.

As our digital lives encompass more of our day-to-day lives, collecting and using online data makes research more accessible to populations such as youth who otherwise would be difficult to reach and engage in a comfortable fashion than the more personal and geographically limiting in-

person interview with unfamiliar adults (Flanagan et al., 2015). Studies on response rates have shown that when questionnaires are administered digitally in a school setting, response rates are high, up to 80% (Raspberry et al., 2018), in contrast to an average of 44% among randomly surveyed adults online (Wu et al., 2022). Indeed, online survey use reduces perceived power imbalances between youth and adults, as perceived by youth (Kirk, 2007). The impetus to redress power imbalances between youth and researchers is crucial in light of the growing need to recognize youth as agentic and powerful participants in the research process and to enable more youth to participate in research about their schooling experiences.

Similarly, online surveys are able to elicit more honest responses, especially about sensitive topics, compared to face-to-face interviewing or interactions (McCabe et al., 2004). Likewise, the lure of reaching hard-to-reach populations, which often have very unique, traumatic and rare experiences that are of great interest to qualitative researchers, is now more easily reached by an internet connection, a click of a button, and the near anonymity provided by online-mediated interactions (McInroy, 2016).

Beyond the use of online open-ended survey questions (OESQ) for quantitative and mixed methods studies is the growing debate on the use of these types of questions as standalone qualitative research projects. The impetus for this re-imagining of the use of OESQ stems partly from perhaps unfounded criticism from positivist researchers about the low ecological validity of qualitative studies. The growing awareness of making qualitative research more accessible to wider audiences and more applicable to wider contexts is encouraging qualitative researchers to ‘think outside the box’ of more traditional data collection procedures such as the ‘gold standard’ semi-structured interview. Using a dataset from Cyberteens, a school-based longitudinal study employing online open-ended survey question (OESQ) investigating the impact of teachers on student learning dispositions and learning behaviours, we will illustrate approaches to and discuss considerations with working with the data that honours 1) student diversity, agency and voice, aspirations in line with bridging the siloes of educational psychological research and; 2) creating rigorous, ‘youth-friendly’ qualitative methods of research engagement. In doing so, we will provide examples of the richness of online open-ended survey responses and discuss alternatives to using additional data sources in triangulation and crystallization approaches to achieve rigour using a qualitative research approach.

We will introduce the epistemological differences between using online OESQ from a post-positivist and interpretative perspective followed by a discussion on how to understand online OESQ response patterns to learn about respondents. We elaborate on the need for youth-friendly online open-ended survey questions and the possible richness of responses that goes beyond the number of responses. To illustrate a new method for analyzing large data sets we will discuss 1) entry into the field and collaborating with school communities to best capture student diversity; 2) A comparison between responders’ and non-responders’ sociodemographic characteristics enabling a discussion about the importance of youth-friendly design and school-friendly data collection procedures; 3) potential ways to prepare the data for analysis; 4) Data analysis and interpretation and lastly, 5) Additional considerations, directions for future research and limitations of our proposed method. Borrowing from Tracy’s conceptualization of rigour for qualitative

research approaches, we illustrate how online open-ended survey responses can be triangulated and crystallized within the original dataset while respecting multivocality to lend the data to credible interpretations. Direct quotes from high school students are provided to illustrate richness and possible interpretations of the data using a pre-existing framework.

Post-positivist and Interpretative Use of Survey Data

In order to provide sufficient background on OESQ to be more relevant to qualitative data collection methods in educational psychology, a discussion on the differences between positivist and interpretative use of survey data is necessary. Positivists perspectives on survey design posit that reality is shared, exists outside of our minds and is objectively known. Additionally, respondents are able to accurately perceive and report on reality and that language is medium or conduit through which participants convey reality to others (Junjie, M., & Yingxin, 2022). In light of these understandings, positivists create survey questions to minimize various respondent biases (biases rooted in the person answering the questions) and design biases (biases in survey construction that influence how respondents answer) or noise in their data to get at the truth. Indeed, survey designers acknowledge examples of biases such as extreme-end responding, down the middle responding, priming effects, ‘survey fatigue’ and the like (Stantcheva, 2023; Burruss & Johnson, 2021). These biases are often based on cultural habituation and modes of communicating; for example, cultural psychology studies exploring the differences between East Asian and Hispanic populations showed evidence that East Asians tend to answer surveys in the mid-range of possible responses. In contrast, Hispanics tend to answer in the extremes (Heine & Ruby, 2010).

In contrast, Kelly et al., 2020 argue that survey and question construction should be understood from an interpretativist perspective. Borrowing perspectives from the social constructionist approach, which informs many qualitative methodologies, language is not a medium of conveying information, but a highly dynamic social action between two or more interlocutors (Raclaw et al., 2020). Completion of surveys, then, is a form of this social action and so-called response biases are a product of the limitation of human computer interaction. Raclaw et al. 2020 continue explaining that humans actually activate a frame of interaction and scripts that we use for human-human interaction for human-computer interaction. We imagine we are talking to real people, but we are not. Survey completion, therefore, is a contrived interaction for humans, requiring the need to make this interaction more ‘more human’ or ‘more natural’. The most common approach is to imagine that we are discussing the questions with a real person (Raclaw et al., 2020). The result is the reflection of the mood, approach and perspectives a human is making meaning of the experience of completing a survey and answering questions.

The structure of the survey, its design and how participants interact with it are not noise, but nuggets of data for the qualitative researcher. These so-called ‘biases’ are data in themselves; they are the participants and can imply their demographic backgrounds. Response biases tell us something about the survey-human interaction through the generation of language and the co-creation of knowledge (Kelly et al., 2020). As for the criticism that surveys offer de-contextualized data, one needs simply to analyze how respondents are answering the questions and who these respondents are to be provided with ample context to make sense of what is being meant or implied

by the responses. We can shift our gaze to who the respondent is in addition to their responses. As with most survey data, individuals who choose not to answer the question tend to vary considerably from those that do. The most salient example is that women are more likely to answer OESQ than men (Miller & Lambert, 2014). The choice to answer the question reflects participants' agency, which is akin to their choice to participate in an interview or not. We can also learn about the identities of those showing up and those who feel they have been excluded, as evidenced by non-participation.

The implications for educational psychology or any psychology that seeks to engage youth, for that matter, is that much can be learned about which youth *choose* to participate in research and how. Attempts to be as inclusive as possible to encourage more youth to participate encourages careful wording of questions. From a positivist perspective questions may be written in rigid ways with careful attention to jargon or including definitions of any key terms. Whereas from an interpretivist perspective questions may be worded in a more casual or conversational manner to promote a 'rapport' or a 'relationship' of sorts. Regardless of approach, we can expect to see variation in responses based on how questions are asked and how they are presented online.

Additionally, to know who is 'showing up' in the data, we can analyze the text with differing levels of depth (Kelly et al. 2020). As positivist- interpretivist epistemological differences lie on a continuum, we can also approach textual analysis of OESQ responses from a socially constructivist perspective. Positivists analyze textual data on the surface level. That is not to say that these approaches are not sophisticated or lacking in rigour; using computer assisted technologies, researchers can generate word frequencies, mine the data for most commonly used words, statistically analyze chosen units of analysis called n-grams (one, two, or three word grouping that represent some kind of unit of meaning) (ten Kleij & Musters, 2003; Jaeger & Rasmussen, 2021). Researchers even code the data using auto-code approaches based on prescribed parameters created by humans and code responses in positive, negative and neutral responses, called expressive coding (Hai-Jew, 2022). Positivist researchers attempt to clean their data, removing noise items or those that are not easily understood or that seem irrelevant, again, to remove biases or 'nonsense' responses (Jackson & Trochim, 2002; Elliott, 2022).

Our approach to analyzing OESQ responses is also an alternative to the use of artificial intelligence (AI) in qualitative research. AI services such as ChatGPT and deep learning models are gaining traction among researchers who primarily use these technologies to gain familiarity with their data, to conduct superficial coding and to check their analyses. However, the use of AI is fraught with many challenges, including yielding unreliable analyses, issues around originality of the analyses, and positionality of the researcher and authoring of the findings and related ethical concerns such as biased content (Christou, 2023). These grave concerns reflect the epistemological debates about how knowledge is constructed, for whom and for what purpose noting the inherent biases that are introduced by the technology itself. Many studies highlight the need for strong human oversight when using these technologies ultimately reducing their value as 'robot research assistants'. When we ascribe meaning-making to machines, the end product reflects machine thinking, which undermines our goal of understanding human relationality and perspectives.

While the use of computer-assisted technologies has significantly reduced the work of positivists researchers, qualitative researchers that seek to understand meaning have to resort to more laborious methods because computers don't generate meaning, humans do (Popping et al., 2015). While becoming familiar with one's data is a crucial step in all qualitative methodologies, a step that can certainly benefit from tools from the positivist researchers' toolbox, the qualitative researcher must dig deeper in the data and move beyond simple description (Hai-Jew, 2022). There is unfortunately no way to get around analyzing hundreds if not thousands of lines of text; interpretative paradigms requires interpretation of the data, rather than mere exploration (ten Kleij & Musters, 2003).

At first glance, the amount of data possible from OESQ responses appears overwhelming. However, a closer examination of the volume of data reveals some interesting parallels to the weight of data from semi-structured interviews. Using NUD*IST package, the precursor software to NVivo, Higgins et al. (2000) took one minute to code each half-line of text from open-ended survey responses. The study also showed that a survey with 500 respondents answering 4 open-ended questions resulted in 1000 lines of text, which equated to 2,000 minutes of coding, which adds up to 39 hours of work. Likewise, a meta-analysis indicated that data saturation, or the point at which there are no changes to the codebook explains how much data is needed to identify a theme:

In the literature, 85% of researchers used a convenience sample, with a median size of 167 participants (interquartile range [IQR] = 69 – 406). In our simulation study, the probability of identifying at least one new theme for the next included subject was 32%, 24%, and 12% after the inclusion of 30, 50, and 100 subjects, respectively. The inclusion of 150 participants at random resulted in the identification of 92% themes (IQR = 91 – 93%) identified in the original study (Tran, Porcher, Falissard, & Ravaut, 2016, p. 88).

In summary, there needs to be a minimum of at least 150 people for one theme to be identified. Braun and Clarke applied a more qualitative analysis to find a theme in open-ended responses' one needs at least 500 lines of responses but only 300 lines to be able to apply codes; comparable to analyzing half an interview in narrative form (Braun & Clarke, 2021). The point here is that with a sufficient number of respondents, one can achieve comparable volume and richness of data. Because responses are brief, they alone are not 'rich' however, in aggregate and within the sample, there is diversity and heterogeneity that would not be achievable with interviews. There is sufficient heterogeneity of responses to devise codes and themes to facilitate deeper analysis, especially after 500 participants (Jaeger & Rasmussen, 2021). While there may deceptively be more data from OESQ, the reality is that it is the form of the data in the lines of seemingly unrelated text that is unfamiliar for qualitative researchers, rather than it's volume.

In line with other researchers who are advocating for more adaptive and perhaps modern approaches to data collection, we clarify that we are not de-emphasizing the role and utility of traditional qualitative methods. In contrast, we argue that OESQ and surveys are a very adaptable and flexible method that could be useful for a variety of qualitative methodologies in educational psychology. We acknowledge the major criticisms of this approach, namely the perceived lack of context, depth of responses or richness, inflexibility, and the inability to probe respondents to ask clarifying questions to co-create the 'richness' or valid and authentic responding so integral to the

interpretivist paradigm (Braun & Clarke, 2021). Instead, we provide an example of how to use OESQ in a systematic way for qualitative research in education, while addressing the advantages and limitations using Tracy's 8 criteria for excellent qualitative research (Tracy, 2010; Tracy & Hinrichs, 2017). To date, in our opinion, Tracy's articulation of rigour is the most comprehensive reflecting commonalities across most if not all qualitative methodologies.

Qualitative Research Rigour Criteria

As with most evolving data collection methods, issues around rigour and quality are of central concern. In 2010, Tracy published "Qualitative Quality: Eight "Big-Tent" Criteria for Excellent Qualitative Research" in which she argued for a more systematised and universal criterion for evaluating qualitative studies across various interpretivist approaches. She identified eight criteria (a) worthy topic, (b) rich rigor, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence that could be applied to determine methodological quality while at the same time "leaving space for dialogue, imagination, growth, and improvisation" (Tracy, 2010 p. 837). We would like to incorporate some of her thinking in addressing some of the concerns raised over the use of OESQ responses as standalone research projects, namely, credibility. We believe these criteria are uniquely relevant to the discussion on the use of open-ended survey responses, judging from the criticisms of their use. Tracy's modified framework will be used to critically examine the feasibility of maintaining rigour in the use of online open-ended survey questions in qualitative ways.

In terms of credibility, Tracy encourages researchers to think about how to increase the trustworthiness of the findings. She argues that through practices such a thick description, triangulation or crystallization, and multivocality, credibility can be achieved, yielding a research project that is both rigorous and accessible to a wider audience. Thick description includes noting what is being said and what is not being said and who is doing the talking, showing meaning rather than telling readers what to think, and tacit knowledge that "transcends the immediate surface of speech, texts, or discursive materials" revealing hidden assumptions, meanings and all things taken for granted in speech (Tracy, 2010, p. 843).

Through triangulation and crystallization, researchers are encouraged to provide different facets of exploration, scope, understanding and consistent interpretation of thick description. Triangulation, an offshoot of more quantitative studies seeks to find one single truth, is often referred to in qualitative paradigms as the use of multiple data methods and theoretical lenses. In other words, data and findings are shaped by their means of production (Bloor, 2001 in Tracy, 20210). Crystallization, however, "assumes that the goal of doing so is not to provide researchers with a more valid singular truth, but to open up a more complex, in-depth, but still thoroughly partial, understanding of the issue" (Tracy, 2010, p. 844).

Lastly, multivocality, refers to the plurality of voices and multiple opinions and Tracy argues that this can be achieved with "intense collaboration with participants" (Tracy, 2010, p. 844). While she argues for in-person interactions, we show that multiple opinions can also be achieved in textual form with sufficient numbers of respondents. We would like to demonstrate that analysis of OESR can be done with attention to rigour as defined by qualitative methodologists.

Current Study

This paper adopts an interpretivist lens to examine survey data, focusing on the subjective meanings and lived experiences of youth in digital contexts. The data are drawn from *Cyberteens*, a broader longitudinal research project spanning four waves of data collection. The project investigates adolescents' use of online technologies and their implications for mental health and academic outcomes. Data collection took place separately at each school between October 2023 and March 2024. All self-report questionnaires were completed online using Qualtrics (www.qualtrics.com) on students' personal devices during school hours, with survey administration occurring simultaneously across all grade levels. What makes our study unique is the input from school authorities and emphasis on giving youth a voice; researchers and school authorities co-created open-ended questions based on perceived knowledge gaps about students with students. Our study sought to provide youth with the ability to provide insight into the system, 'from the inside'. To show appreciation for participation, all students from each school were entered into a draw for a chance to win a smartphone at each time point.

Step 1. Entry into the Field

As with all community-based research how a researcher gains access to participants is equally important to the quality of the data. Rapport with the school community was facilitated because of the low-demand placed on schools to conduct this research with teaching staff spearheading research direction based on the needs of the school. This intense collaboration generated open-ended questions that reflected systems-level concerns about school climate. With some pre-planning and collaborative engagement, schools are responsive to one-time data collection strategies as was demonstrated by the enthusiasm of schools involved in our study. Our research team capitalized on long-standing partnerships with schools, built over several years through the consistent sharing of annual reports on student well-being and digital media use, commonly referred to as updates on "how the kids are doing." In this study, school staff were able to use this data to improve school climate and create initiatives for teachers to get to know their students better to build a stronger sense of belonging, a known promoter of social and emotional wellbeing among youth (Arslan et al., 2020). Our approach demonstrated that data collection can be efficiently and quickly done with little drain on school resources, an approach that is surely to be appreciated in schools that are under-resourced or that have high numbers of students with unique challenges. Likewise, the plurality of voices represented in our data honours the diversity of the school body and protects students anonymity and privacy.

The total number of students across our four schools was 3,519, and we obtained 2144 responses. We recommend that researchers devise a plan to deal with the enormous amount of data they will receive in a short amount of time. The use of computer-assisted technologies like NVivo may be useful in organizing data in ways that make sense in light of the research question being asked. Before data analysis, it is essential to determine 'who showed up' in our study and analyze the response patterns to elucidate if our entry into the field and study design attracted an inclusive representation of the student body.

Step 2. Responder and Non-responder Analysis

Data were collected from four public secondary (high) schools serving grades 8–12 in Southwest British Columbia: three urban schools within a large metropolitan district and one rural school in a smaller community. All four are comprehensive, non-vocational high schools offering broad academic and extracurricular programs. This urban–rural mix (3 urban, 1 rural) and comprehensive school profile provides essential context for interpreting participation patterns and any school-level differences in outcomes. (What kind of school? Middle? High school? Normal or vocational?). As researchers who regularly conduct research in this region, we have tacit knowledge about local schools and communities. We recommend that researchers who are unfamiliar with schools and communities they are approach to familiarize themselves with them ahead of time.

Sociodemographic Characteristics of Total Population and Responders

Before any analysis of the statements or comments began, we compared the students in the school who completed the questionnaires (Table 1) to the sample of students who answered the open-ended survey question (see Table 2). We conducted a series of chi-square tests to examine differences in response likelihood based on various demographic characteristics.

Table 1

Composition of Student Body across All Schools

<i>Variable</i>	<i>n/ % / M (SD)</i>
Total students (n)	3,519 (1,604 girls, 45.6%)
Age (years)	$M = 14.49$ years, $SD = 1.49$
International students (study permit required)	15.2 %
Domestic students (born in Canada or permanent residents)	61.9 %
Ethnicity	
- East Asian	37.2 %
- White/Caucasian	24.8 %
- South Asian	6.2 %
- Southeast Asian	19.3 %
- South Asian	6.2 %
- West Asian	2.6 %
- Latin American	6.3 %
- Indigenous	3.5 %
- Black	3.9 %
- Other	4.4 %

Note. M = mean; SD = standard deviation.

As is typical across many schools in this region, there is a significant number of students with Asian heritage and who speak multiple languages at home. Unlike other regions, there are significantly more boys across the four schools sampled than girls. These response patterns are

most likely due to recent high volume of immigration from Asian countries and the physical closeness of one school to the university and international family student housing.

Table 2

Responder Analysis

Respondent Characteristic	Chi-Square Test (χ^2)	P-value	Key Finding
International Students	$\chi^2 (8, n=3466) = 32.21$	$p < 0.001$	International students are less likely to provide responses.
Age	$\chi^2 (9, n=3311) = 24.37$	$p = 0.004$	Younger students (11-13) are less likely to provide responses compared to older students (14-18).
Born in Canada	$\chi^2 (1, n=3311) = 16.17$	$p < 0.001$	Students born in Canada are more likely to provide responses compared to international students.
Language Spoken at Home	$\chi^2 (1, n=3301) = 4.38$	$p = 0.036$	English-speaking students at home are more likely to provide responses.
Gender	$\chi^2 (1, n=3519) = 7.89$	$p = 0.005$	Girls are more likely to provide responses compared to other genders.

Results revealed that international students were significantly less likely to provide responses compared to domestic students, $\chi^2(8, n = 3466) = 32.21, p < .001$. Similarly, students born in Canada were more likely to respond, $\chi^2(1, n = 3311) = 16.17, p < .001$. A potential explanation is that these students are perhaps feeling more empowered to comment on teacher performance than international students. The majority of international students in our sample come from cultures that have a more hierarchical relationship with teachers, mostly East Asian and Southeast societies (Jiang, 2025). Language spoken at home was also significant: students who spoke English at home were more likely to participate, $\chi^2(1, n = 3301) = 4.38, p = .036$. Another barrier could involve language usage. Our sample included comments written in languages other than English, despite the English language prompt. Translation of the comments prompted concerns about our questionnaire design and the encouragement of ease of disclosure. Age also emerged as a significant factor: younger students (ages 11–13) were less likely to respond than older peers (ages 14–18), $\chi^2(9, n = 3311) = 24.37, p = .004$. Older students were also more likely to answer the question, perhaps due to having more experience in the school system and familiarity with their teachers who often taught multiple grades. In terms of gender, girls were more likely to respond than students of other genders, $\chi^2(1, n = 3519) = 7.89, p = .005$. This finding was consistent with previous research showing that females are more likely to answer open-ended survey questions than males (Miller & Lambert, 2014) and is problematic as our sample was predominantly male. Our questionnaire design and questions can foster more exploration on how to make questionnaires more inclusive to varied populations, especially those that are not usually well represented in

survey research (males, ESL, students from lower socioeconomic status) (Porter & Whitcomb, 2005).

It was apparent that our sampling strategy had certain limitations, namely our original research question did not speak to a significant number of students. With growing artificial intelligence capacities, language prompts, word generators and automatic translation could address some language barriers. In the case of research with youth, researchers should be mindful to tailor the research question to the developmental level of the potential participants. With older children more likely to answer the question, younger students volunteered that they liked or did not like their teacher. Directions for future research can include finding methods to make OESQ completion more appealing for younger people to answer, using more youth-friendly language or tone and experimenting with administering surveys on youth-friendly platforms. These forward thinking approaches capitalize on youths' capacities to use and read on their smartphones quite extensively, in contrast to more researcher-friendly approaches, such as laptops and in-person methods that may be more alienating to young people (Denny et al., 2008).

Despite our best efforts to build a healthy relationship with the school, a more targeted approach could have provided additional benefit. Building relationships with school communities and creating an inclusive climate with a particular focus on learning about younger students' and boys' opinions may be a worthwhile endeavour for researchers who are able to enter school communities in person. As for creating more hospitable and welcoming online environments, further research should explore digital design of surveys and platforms that could appeal to younger ages and boys. The analysis of qualitative findings must be congruent with the aforementioned respondent characteristics, not the sample as a whole.

In addition to developing approaches to inspire youth to participate in research, especially research conducted online, researchers need to be able to tailor the content to suit the needs of youth. This approach is particularly important in creating OESQs. As there is no opportunity for elaboration as with the semi-structured interview, researchers need to be prepared and ask the right question. This of course is no easy task and pilot testing the question for possible range of responses would be ideal. As with all rigorous approaches, tailoring the question to the audience or sample will increase validity and reduce non-response bias (assuming this is of importance for your study) or inclusivity.

Going forward, we needed to keep in mind that our sample was predominantly older, domestic and female students and a significantly different sample, mainly younger boys and international students' voices were mostly absent from analysis. As with other research designs, researchers should seek to capture intended voices; we were aiming for inclusivity and thus these response patterns should be further discussed with the schools to learn how to encourage younger boys from the international student community to participate.

Step 3. Data Preparation

While knowing 'who showed up' is the first step to becoming familiar with the data, the sheer volume of responses requires care in organizing in meaningful units of analysis. Our Qualtrics

(www.qualtrics.com) output was an Excel file with 2144 responses. This translated into nearly 3000 words. Closer reading of the file revealed that a significant number of responses were not written in English and some students responded with texting language and emojis, pictograms embedded in texts used to convey emotion. Non-English statements were translated using Google Translate and texted responses like IDK (I don't know) were included. Responses with emojis were excluded from analysis (n=35) because our focus was on text-based responses.

To facilitate the meaning-making process, we chose to alphabetize the responses by first letter as similar statements often started with the same letter or word. Alphabetizing responses also provided the opportunity to quickly glance through the data noting any semiotic patterns. After reading all 2144 comments to the question, "In your own words, tell us how your relationships with your teachers at school influence your learning experiences" statements were grouped based on negative or positive behaviour exhibited by the teacher. This yielded 129 comments that depicted behaviours that had a negative impact on student learning and 629 comments that had positive effects. See Table 3 for examples of positive and negative comments.

Table 3

Examples of Positive and Negative Teacher Behaviours

<i>Statement Valence</i>	<i>Positive</i>	<i>Negative</i>
Teacher Behaviours	Good, they respect me and I respect me. Their timeless efforts helps me stay active and ready.	It's a hit or miss. Some teachers act like they're out to get you— especially in our most important years for grades. Many will treat us as 9-5 workers with far too much overtime. It's hard to feel connected with our teachers when our lives are just filled with work.
	I can pay attention more to teachers that try to have more of a connection with their students past standard teacher-student dynamics.	Last year, I got a (locally) infamously bad teacher. He continuously called me out in class, asking why I couldn't finish my homework; despite the fact that my mom had emailed him with all the information he needed to know about it. When I asked him if he had read the email, he said something like “yeah, well... Aren't you 14 or something?”. Which is definitely something. I mean, if everyone with issues just grew out of it spontaneously at the age of 14, that would be awesome. The next time he asked me about homework, I told him that he was giving me too much work. He then dragged me outside the classroom to tell me that I'm “only what, 14 years old?” and that I was too young to criticize his teaching methods. After that, I never entered that classroom for the rest of the year. Obviously, I failed. Got an applying in the summer school socials class, by the way! All this is to say, if the teacher sucks, my chances of academic success are drastically lowered.

As the quotes above demonstrate, there was enormous richness in the data set. With such plurality of voices possible with online OESQs and the thousands of respondents, it is perhaps not surprising that some individuals chose to share stories or experiences in greater depth than one-line answers. As Tran et al. (2016) described, the richness of the responses to online open-ended questions tends to be a function of the number of respondents and consequently, the development of codes and themes also requires a sufficient number of lines of text. These trends were also observed as we worked through our data set.

While we did not encounter any responses that proved to be troubling or conveyed psychological distress in this dataset, researchers must also be prepared for a range of responses. Special attention should be paid to those responses that reveal psychological trauma, typical self-disclosure from the anonymous nature of online surveys (McInroy, 2016), and in light of the fact that analysis of data occurs after the incident causing harm. Our previous research with large data sets resulting from online open-ended survey questions inquiring about how students are feeling during the COVID-19 lockdown and how teachers can promote school connectedness contained a few statements of a distressing nature. Examples included students disclosing suicidality and physical abuse (Dusko Biferie et al. 2024). Trauma informed data collection practices should be explored to minimize harm to participants. Approaches to potentially re-identify respondents to provide care whenever reasonably possible should also be considered.

Step 4. Data Analysis and Interpretation

Further analysis of these comments included identifying what else students are talking about and what other questions can be posed to the data to help crystallize the findings as nearly 1300 students did not directly answer the primary research question. The aim was to go beyond just summarizing the data but finding the meaning behind the comments. Exploratory techniques were employed such as the creation of word maps using NVivo 12; selection was based on the inclusion of all words with at least three letters from the remaining 1300 comments. After removing grammatical and lexical words, the words left behind were amalgamated into a phrase with the semantic meaning 'Good teachers help students understand'. Using this exploratory approach and the semantic grouping as a guide to the general trend, the data were approached again with the perspective that the teacher drives development forward.

Upon closer reading of these 1300 comments, inductive codes were developed. Each statement was coded as one unit of analysis and applied to all statements (n= 1265). As per the reflexive thematic analysis approach including the six steps that moved analysis from inductive to deductive approaches, codes were then linked in a concept map to identify themes (Braun & Clarke, 2006), which are described below. For examples of quotes see Table 4.

In the search for meaningful patterns in the data and in thinking of additional questions to ask the data in the absence of additional sources, we attempted to triangulate and crystallize within our data set. This approach we believe offers an alternative to more traditional interpretations of triangulation (the use of multiple data sources) and by extension, crystallization. With large data sets with thousands of participants, we felt confident in probing the data for alternative

interpretations of the OESR question. Based off the guiding statement and re-reading the 1265 comments, we posed the following questions: 1) how do students understand how a positive relationship with teacher impacts their learning?; 2) what is the value of positive relationships and its importance to students; 3) what do students do to achieve/maintain a positive relationship with their teacher? And lastly, how do students who feel their teacher relationship doesn't influence learning perceive learning? These lines of inquiry resulted in the following themes: Hold(ing) the students hand, The teacher is the school, and solo flyers. Please see Table 4 for theme description, example quotes and interpretation.

Table 4

Description of Themes, Selected Quotes and Thematic Interpretation

Theme	Description	Examples	Interpretation
“Pull” and “Push”	<p>-when the teacher is being open, warm, receptive and responsive to students needs; students read these behaviours as a willingness to help and invite learning</p> <p>-when teachers that were rude, passive-aggressive, or ‘not pleasant’, singling out students and those that employed punitive correction were perceived as abusing teacher’s power and pushing them away from learning</p>	<p>“Having a bad relationship with your teacher can make it hard to feel like learning or asking for help if needed. But if you have a good relationship with your teacher, any nervous feelings around asking questions are usually gone. Also, this is kind of like a feeling you’d get if you had a presentation you were scared for, (its the same feeling) but for a different reason, for example if you needed to get a paper because you were going to be gone, you’d feel a sinking feeling because you need to talk to a certain teacher, and feelings like this about stuff causes unnecessary stress so removing all types of stress like this makes you feel better overall which is why good relationships are important. This also influences your learning because being anxious or stressed and trying to focus is hard for me.”</p> <p>“I don’t have much of a relationship with my teachers at school, especially for classes that are more academically challenging. This affects me because I don’t approach them as much as I should when I am struggling. Some teachers though, I feel like support my growth through freedom of our choices. It helps us learn about concepts that we don’t just need in school, but also everyday life.”</p> <p>“I feel as though my teachers care about their students and want them to have a positive learning environment. Personally, I find that when I form a closer relationship with teachers I tend to be more successful in that course and in my learning.”</p>	<p>-teacher gently pulls students towards learning by adjusting and modifying their own approach and consequently, the learning disposition of the student</p> <p>-when teachers encourage students and show passion for their subject matter and genuine interest in students’ success, students feel pulled into wanting to learn and overcome obstacles to learning</p> <p>-teachers prosocial disposition resulted in positive learning experiences which for students were perceived as feeling motivated, confident and comfortable about asking questions and seeking further help from the teacher, also strengthening the student-teacher relationship</p>

HOLD(ing) the students' hand as a friend	<p>-a good student-teacher relationships is like analogous to parent holding a child's hand through a difficult task</p> <p>-more comfort, less stress and enjoyment for the student</p>	<p>“Based on my relationships with teachers in my previous school year, I gained motivation from classes that felt more laid back despite the challenging concepts. A teacher’s perception of student capability and the concepts they are able to tackle can shift depending on how they encourage students to view the subject matter. A laid back attitude while going through loaded material promoted a calm attitude amongst myself and my peers.”</p> <p>“Having a positive relationship with my teachers and having them understand me helps immensely in my learning - when they understand that I DO want to learn and do my work but ADHD makes it a struggle, that I DO want to show up on time but I have insomnia and while I may miss the start of class I'll still do my best to finish the work and engage in class. When they understand they give me more leeway than would normally be granted to students and because of that I'm more able to actually learn and engage in my own way.”</p> <p>“I try to be kind to all my teachers, because I know that everyone is really just trying their best to do their job at the end of the day. Becoming friendlier with my teachers helps with feeling free to ask question and not being afraid to reach out should I need help. Learning is less intimidating if I feel comfortable with my teacher.”</p>	<p>-students characterize a positive learning relationship as one in which the fear to ask questions was absent and when students feel the courage to persist in learning despite confusion and difficulties</p> <p>-students feel they better understand concepts, feel happier in school and enjoy learning</p> <p>-students spoke clearly to communicate their needs to the teacher and viewing the teacher as a mentor</p> <p>-students applied strategies to maximize their learning ambitions by fostering positive dyadic relationship with their teacher</p> <p>-if teacher-student relationship was good, student felt teacher more willing to help</p>
The teacher is the school	<p>- relationship with their teacher is symbolic of their relationship with the school environment</p>	<p>“I believe that when a teacher grows close with a student by showing how they care and believe they can do it then a student will feel more inclined to work hard and finish their work making a positive impact on how they perceive school.”</p>	<p>-students change their peer group to suit their needs but cannot choose teacher or school structures - students spend nearly all of their school time with teachers, teachers are in essence, the spirt and soul of their school and</p>

		<p>“If you have a good relationship with your teachers, the safer you could feel at school.”</p> <p>“In my school, so far this semester I've been lucky to have really good teachers. Usually in my other years of school, there's been the odd couple of teachers that create a negative impact in some way, but so far this year the teachers I have are really good. The space they've created have shown me they actually care for what they are teaching and are passionate about it. They are very organized and helpful. This has helped me a lot and has influenced my learning experiences positively. I feel like I am understanding the material I am learning a lot better than I used to. It's actually sinking in, rather than washing away after a while. I feel a bit more content with being at school because of this, but it's still difficult for personal reasons.”</p>	<p>face of the institution especially among younger students</p> <p>-a good teacher relationship leads to positive perception of learning and especially of the school environment and connection with classmates</p> <p>-positive associations encourage students to want to learn and increase the motivation to connect to school life among especially among students that are struggling</p>
Solo flyers	<p>- students who see themselves as independent learners</p> <p>-don't need nurturing relationship with their teachers; they keep psychological distance</p>	<p>“I don't have much of a relationship with my teachers. they're nice and friendly but I don't know much about their personal lives (except for Mr. [Name] but he tells everyone about himself. Good guy). I haven't had any negative experiences with my teachers. they're all positive so they don't really noticeably effect my learning. (Obviously they're the ones teaching me so I guess they're doing a good job).”</p> <p>“I really like it when teachers are nice AND good at teaching. However, I'd rather [have] a teacher be better at teaching than nice. Good teachers allow me to be good a subject. I usually don't like forming relationships with my teachers.”</p>	<p>-students prefaced their comments that they had very distant relationships with their students lending us to interpret that that for some students, learning is not really affected by a lukewarm relationship with teacher but more so by negative or abusive ones</p>

In terms of data analysis procedures and as our findings in their totality indicate, OESQ yielded incredible richness; there was enough richness in our data to answer four related research questions with just over 2000 responses from just a little over 3000 respondents. Our findings show that teacher relational skills are valued by students of all ages and are important in fostering positive student learning dispositions for a deeper understanding of content and lessons.

Step 4. Interpretation of the Data

After the data were prepared and thematically analyzed by borrowing conceptualizations from learning sciences, we analyzed data at the collective level and emphasized situated learning and a systemic approach (Anderson & Shattuck, 2012). Specifically, we were interested in the effect of top-down structures on student learning (role of teacher). As part of the system, our study emphasized youth's voices to highlight how youth perceive a system (learning at school) that is often described by researchers from the perspectives of research theory and researcher positionalities.

In line with the concept of inviting students to learn, students expect teachers to attune to student psychosocial and learning needs by helping them make the necessary attitudinal shifts and overcoming personal obstacles to learning. When teachers 'hold the students' the teacher is able to sustain the energy of the student, maintains engagement with the student resulting in a student who is energized and ready to learn. When teachers understand students' particular situation, students perceive the teacher working with student, rather than against them. A good teacher-student relationship for students, therefore, is characterized by an increased sense of safety to engage in the risk taking required in learning, like trying new things, asking questions and stepping outside of one's comfort zone. An overwhelming number of students' comments referred to the students liking or not liking their teacher; in other words, being likable matters.

Our findings also confirm volumes of research showing the importance of teacher-student interactions on student engagement and connectedness to school (Göktaş, & Kaya, 2023). When engagement and connectedness is high, students develop strategies to further maximize the connectedness and to achieve and maintain positive relationships with their teachers. In our theme, Teacher as Friend, students were actively attempting to equalize the natural power imbalance that exists between teacher and student and to meet their teacher 'half-way'. Some students took these attitudes even further, capitalizing on a positive teacher relationship for personal ambition such as higher grades or more attention from the teacher. More importantly, our research confirms well established findings through youth's voices and perspectives. System-level factors such as teacher skills and attitude that permeate in the culture of the classroom are directly and viscerally experienced by students, often leading to diverging learning outcomes and enthusiasm to learn.

As our interpretation of the data demonstrates, we were able to create a coherent narrative with detailed quotes based off the responses provided. Our data set added more nuanced understanding of the topic of student-teacher relationships that went beyond our immediate question about what behaviours were perceived as creating a positive or negative relationship among student and teachers. Had we not dug deeper in the data with additional questions attempting to crystalize our

findings, we would have lost the plurality of voices that chose to discuss something other than what we had originally deemed important or interesting. Moving forward, all data has value and needs to be accounted for in survey research; participants volunteered their responses because they were meaningful for them. Honouring both the emic and etic perspectives in the data analysis is so integral to the multivocality required for qualitative research to be considered credible (Tracy, 2010). Indeed, we had over 2000 independent voices in our data set. Providing the questionnaires to youth on their phones or on their tablets appeared to well received as our non-response rate for the students present during data collection was fairly low.

Beyond online use of OESQs, researchers should consider data sources that can be incorporated into online data collection strategies to further triangulate and crystallize findings. Confidential, online portals can easily accommodate multimedia, voice memos and digital recordings which unquestionably provide richness in that they enable more creative responding than traditional methods (Murthy, 2008), especially for youth who are already quite familiar with them (Kristjansson et al., 2013). Using youth-friendly methods may address some of the issues with non-response among youth who already feel alienated from both in-person and online cultures.

OESQs as a method can yield incredibly diverse and rich data for qualitative researchers willing to take the time to explore their data set. With an appropriate number of responses, researchers can look at their data from multiple angles, ask it multiple questions and read multiple voices sharing unique perspectives that go even beyond the phenomenon of interest. Through crystallization of the data and re-thinking triangulation, qualitative researchers can confidently generate their findings while staying true to the data and their methodology of choice. We have argued that our proposed methods can foster greater credibility in research design and study findings and we hope to inspire others to use OESQs especially researchers who work with youth. We encourage qualitative researchers to use OESQs from a qualitative research perspective and devise strategies that are in line with the epistemological principles of this research endeavour and to design surveys and their questions accordingly.

5. Additional Considerations and Limitations

Future research on how best to encourage rich responding should consider establishing parameters of data collection or at least standardized goals around required number of responses, a qualitative power metric of sorts, to use an analogy from positivist research. This endeavour will be especially challenging in light of the fact that not all responses are rich. Most are only three word answers and not all respondents actually answer the question. Altogether however, a tenacious researcher can find nuggets of richness and in their totality resulting in a coherent and crystallized account of the phenomena in question.

However, we are also cognizant of the limitations of this approach, namely that the source and representation of the data can yield considerable influence on how the question is answered and who answers it. For example, the length of a text box has considerable influence on the length of responses provided; shorter text box lengths produce more targeted responses than longer text boxes, which sometimes discourage responding (Zuell et al., 2015). On the other hand, a longer text box encourages longer answers (Yamazaki et al., 2023). Beyond survey data collection,

alternative data sources such as interviews and focus groups carry their own particular ways of responding. While hailed as the gold standard in authentic responding, semi-structured interviews actually yield less honest responding compared to the more anonymous and written feedback required of OESQs (Krumpal, 2023). When thinking about how best to crystallize and triangulate our data and findings, OESQs may provide many advantages, such as prompting the desired length of answers and more honest and private responding, particularly useful with sensitive research topics.

We must also note that despite the volume of data possible with OESQs, this research method may not be suitable for all qualitative methodologies. For example, narrative analysis would benefit from more traditional methods in which individuals are more able to share stories through interviews. We do urge researchers to devise approaches that are more amenable to storying in online platforms, such as the use of online diaries or online voice memos that may be response options to an open-ended question posed online. In this study, we used reflexive thematic analysis, staying consistent with previous research on OESQs with the work of Braun and Clarke (2021) and researcher comfort with the methodology. However, our approach can be used in junction with other methodologies, such as social network analysis (SNA) using online open-ended surveys. Analyzing respondents and non-respondent characteristics, re-thinking crystallization and triangulation with additional questions and tailoring questions accordingly can be a useful and rigorous way to strengthen SNA, especially with a sufficient number of responses. However, further research would be needed to determine how to incorporate the findings from these additional analyses into the matrix.

Despite these limitations, we argue that interpretive approaches to OESR are a viable alternative to more intensive and participatory youth-friendly approaches. As discussed, OESR can reach literally thousands of respondents in a short amount of time, especially in school settings. Using survey data, especially open-ended questions in an interpretative approach is, in our opinion, a healthy compromise between more traditional qualitative and quantitative approaches. We have shown that richness, multivocality, and crystallization of findings are possible with large seemingly ‘quantitative-looking’ data sets. The ability to maintain rigour as deemed required by qualitative approaches may appease concerns around credibility among positivist and interpretive researchers while capturing the context or landscape of the school community and providing a systems-view understanding of the complexity of school environments and learning in a youth-friendly way. We have also shown how we can explore ‘the personal’ and ‘relational’ in ways that build communities of schools and researchers working collaboratively using a method that draws in thousands of students to share their stories and meaning-making in less demanding ways than more traditional qualitative research methods.

Declarations

Acknowledgments:

The authors would like to thank Dr. Deirdre Kelly for input into the structure of the manuscript.

Funding:

Funded by the Social Sciences Humanities Research Council Canada (F18-04297)

Ethics Statements:

This research was approved by the University of British Columbia Behavioural Research Ethics board (H19-03035)

Conflict of Interest:

There are no conflicts of interest.

Informed Consent:

Informed consent was obtained from all individual participants included in the study.

Data Availability:

Data is not publicly available.

References

- Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research? *Educational Researcher*, 41(1), 16-25. <https://doi.org/10.3102/0013189X11428813>
- Arslan, G., Allen, K. A., & Ryan, T. (2020). Exploring the impacts of school belonging on youth wellbeing and mental health among Turkish adolescents. *Child Indicators Research*, 13(5), 1619-1635. <https://doi.org/10.1007/s12187-020-09721-z>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328-352. <https://doi.org/10.1080/14780887.2020.1769238>
- Burruss, G. W., & Johnson, A. (2021). Online survey research. *The Encyclopedia of Research Methods in Criminology and Criminal Justice*, 1, 104-107. <https://doi.org/10.1002/9781119111931.ch21>
- Christou, P. A. (2023). How to use artificial intelligence (AI) as a resource, methodological and analysis tool in qualitative research? *Qualitative Report*, 28(7). <https://doi.org/10.46743/2160-3715/2023.6406>
- Denny, S. J., Milfont, T. L., Utter, J., Robinson, E. M., Ameratunga, S. N., Merry, S. N., ... & Watson, P. D. (2008). Hand-held internet tablets for school-based data collection. *BMC Research Notes*, 1, 1-4. <https://doi.org/10.1186/1756-0500-1-52>
- Dusko Biferie, M., Hussey, R., Sam, J., Xiao, B., and Shapka, J. (2024, Jan.). *Adolescent mental health in the time of COVID-19: A reflexive thematic analysis of social connectedness and technology use*. AHSE – Arts, Humanities, Social Sciences & Education Conference, Honolulu, HI, USA. <https://artshumanitieshawaii.org/wp-content/uploads/2024/05/Dusko-Biferie-Michelle-2024-HUIC-AHSE.pdf>
- Eckhoff, A. (2019). Participation takes many forms: exploring the frameworks surrounding children's engagement in participatory research. *Participatory Research with Young Children*, 3-19. https://doi.org/10.1007/978-3-030-19365-2_1
- Elliott, J. (2022). The craft of using NVivo12 to analyze open-ended questions: an approach to mixed methods analysis. *The Qualitative Report*. <https://doi.org/10.46743/2160-3715/2022.5460>
- Flanagan, S. M., Greenfield, S., Coad, J., & Neilson, S. (2015). An exploration of the data collection methods utilised with children, teenagers and young people (CTYPs). *BMC Research Notes*, 8, 1-14. <https://doi.org/10.1186/s13104-015-1018-y>
- Göktaş, E., & Kaya, M. (2023). The effects of teacher relationships on student academic achievement: a second order meta-analysis. *Participatory Educational Research*, 10(1), 275-289. <https://doi.org/10.17275/per.23.15.10.1>
- Hai-Jew, S. (2022). Using computational text analysis to explore open-ended survey question responses. In *Research anthology on implementing sentiment analysis across multiple disciplines* (pp. 342-366). IGI Global. DOI: 10.4018/978-1-6684-6303-1.ch019
- Heine, S. J., & Ruby, M. B. (2010). Cultural psychology. *Wiley Interdisciplinary Reviews: Cognitive Science*, 1(2), 254-266.

- Higgins, S. E., Ford, K., & Oberski, I. (2000). Computer-aided qualitative analysis of interview data: some recommendations for collaborative working. *The Qualitative Report*. <http://www.nova.edu/ssss/QR/QR4-3/oberski.html>
- Immordino-Yang, M. H., Darling-Hammond, L., & Krone, C. R. (2025). Nurturing nature: How brain development is inherently social and emotional, and what this means for education. In *Social and Emotional Learning* (pp. 63-83). Routledge. [https://www.academia.edu/download/60775066/Nurturing Nature How Brain Development Is Inherently Social and Emotional and What This Means for Education20191002-19689-1obrkk4.pdf](https://www.academia.edu/download/60775066/Nurturing_Nature_How_Brain_Development_Is_Inherently_Social_and_Emotional_and_What_This_Means_for_Education20191002-19689-1obrkk4.pdf)
- Jackson, K. M., & Trochim, W. M. (2002). Concept mapping as an alternative approach for the analysis of open-ended survey responses. *Organizational Research Methods*, 5(4), 307-336. <https://doi.org/10.1177/109442802237114>
- Jaeger, S. R., & Rasmussen, M. A. (2021). Importance of data preparation when analysing written responses to open-ended questions: An empirical assessment and comparison with manual coding. *Food Quality and Preference*, 93, 104270. <https://doi.org/10.1016/j.foodqual.2021.104270>
- Jiang, E. H. C. (2025). Hierarchy fetishism in an urban Chinese school. *Dialectical Anthropology*, 1-23. <https://doi.org/10.1007/s10624-025-09771-1>
- Junjie, M., & Yingxin, M. (2022). The Discussions of Positivism and Interpretivism. *Online Submission*, 4(1), 10-14. <https://doi.org/10.36348/gajhss.2022.v04i01.002>
- Kelly, G., McKnight, M., & Schubotz, D. (2020). 'Is there anything else you'd like to say about community relations?' Thematic time series analysis of open-ended questions from an annual survey of 16-year olds. *Methods, Data, Analysis*. <https://mda.gesis.org/index.php/mda/article/view/2020.07/277>
- Kirk, S. (2007). Methodological and ethical issues in conducting qualitative research with children and young people: A literature review. *International Journal of Nursing Studies*, 44(7), 1250-1260. <https://doi.org/10.1016/j.ijnurstu.2006.08.015>
- Kristjansson, A. L., Sigfusson, J., Sigfusdottir, I. D., & Allegrante, J. P. (2013). Data collection procedures for school-based surveys among adolescents: The Youth in Europe Study. *Journal of School Health*, 83(9), 662-667. <https://doi.org/10.1111/josh.12079>
- Krumpal, I. (2023). Social desirability bias and context in sensitive surveys. In *Encyclopedia of quality of life and well-being research* (pp. 1-7). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-69909-7_4086-2
- Kumar, R., & DeCuir-Gunby, J. (2023). What is the role of race in educational psychology? A review of research in Educational Psychologist. *Educational Psychologist*, 58(1), 1-17. <https://doi.org/10.1080/00461520.2022.2137804>
- LaDonna, K. A., Taylor, T., & Lingard, L. (2018). Why open-ended survey questions are unlikely to support rigorous qualitative insights. *Academic Medicine*, 93(3), 347-349. <https://doi.org/10.1097/ACM.0000000000002088>
- Lim, W. M. (2025). What is qualitative research? An overview and guidelines. *Australasian Marketing Journal*, 33(2), 199-229. <https://doi.org/10.1177/14413582241264619>
- Matthews, J. S., & López, F. (2020). Race-reimaging educational psychology research: Investigating constructs through the lens of race and culture. *Contemporary Educational Psychology*, 61, 101878. <https://doi.org/10.1016/j.cedpsych.2020.101878>
- McCabe, S. E., Boyd, C. J., Young, A., & Crawford, S. (2004). Feasibility study for collecting alcohol and other drug use data among secondary school students: a web-based survey

- approach. *Journal of Drug Education*, 34(4), 373-383. <https://doi.org/10.2190/TGMB-0X3Q-6PV1-9A6W>
- McDermott, E., Roen, K., & Piela, A. (2013). Hard-to-reach youth online: Methodological advances in self-harm research. *Sexuality Research and Social Policy*, 10, 125-134. <https://doi.org/10.1007/s13178-012-0108-z>
- McInroy, L. B. (2016). Pitfalls, potentials, and ethics of online survey research: LGBTQ and other marginalized and hard-to-access youths. *Social Work Research*, 40(2), 83-94. <https://doi.org/10.1093/swr/svw005>
- Meyer, D. K., & Schutz, P. A. (2020). Why talk about qualitative and mixed methods in educational psychology? Introduction to special issue. *Educational Psychologist*, 55(4), 193-196. <https://doi.org/10.1080/00461520.2020.1796671>
- Miller, A. L., & Lambert, A. D. (2014). Open-ended survey questions: item nonresponse nightmare or qualitative data dream? *Survey Practice*, 7(5). <https://doi.org/10.29115/SP-2014-0024>
- Murthy, D. (2008). Digital ethnography: An examination of the use of new technologies for social research. *Sociology*, 42(5), 837-855. <https://doi.org/10.1177/0038038508094565>
- Newman, D. S., & Clare, M. M. (2016). School psychology as a relational enterprise: The role and process of qualitative methodology. *Contemporary School Psychology*, 20, 327-335. <https://doi.org/10.1007/s40688-016-0090-1>
- Popping, R. (2015). Analyzing open-ended questions by means of text analysis procedures. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, 128(1), 23-39. <https://doi.org/10.1177/0759106315597389>
- Porter, S. R., & Whitcomb, M. E. (2005). Non-response in student surveys: The role of demographics, engagement and personality. *Research in Higher Education*, 46, 127-152. <https://doi.org/10.1007/s11162-004-1597-2>
- Raclaw, J., Barchas-Lichtenstein, J., & Bajuniemi, A. (2020). Online surveys as discourse context: Response practices and recipient design. *Discourse, Context & Media*, 38, 100441. <https://doi.org/10.1016/j.dcm.2020.100441>
- Rodriguez Espinosa, P., & Verney, S. P. (2021). The underutilization of community-based participatory research in psychology: A systematic review. *American Journal of Community Psychology*, 67(3-4), 312-326. <https://doi.org/10.1002/ajcp.12469>
- Stantcheva, S. (2023). How to run surveys: A guide to creating your own identifying variation and revealing the invisible. *Annual Review of Economics*, 15(1), 205-234. <https://doi.org/10.1146/annurev-economics-091622-010157>
- Teixeira, S., Augsberger, A., Richards-Schuster, K., & Sprague Martinez, L. (2021). Participatory research approaches with youth: Ethics, engagement, and meaningful action. *American Journal of Community Psychology*, 68(1-2), 142-153. <https://doi.org/10.1002/ajcp.12501>
- ten Kleij, F., & Musters, P. A. (2003). Text analysis of open-ended survey responses: A complementary method to preference mapping. *Food Quality and Preference*, 14(1), 43-52. [https://doi.org/10.1016/S0950-3293\(02\)00011-3](https://doi.org/10.1016/S0950-3293(02)00011-3)
- Tilley, S., & Taylor, L. (2018). Qualitative methods and respectful praxis: Researching with youth. *The Qualitative Report*, 23(9), 2184-2204. <https://core.ac.uk/download/pdf/215362947.pdf>

- Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative research. *Qualitative Inquiry*, 16(10), 837-851. <https://doi.org/10.1177/1077800410383121>
- Tracy, S. J., & Hinrichs, M. M. (2017). Big tent criteria for qualitative quality. *The International Encyclopedia of Communication Research Methods*, 1-10. <https://doi.org/10.1002/9781118901731.iecrm0016>
- Tran, V. T., Porcher, R., Tran, V. C., & Ravaud, P. (2017). Predicting data saturation in qualitative surveys with mathematical models from ecological research. *Journal of Clinical Epidemiology*, 82, 71-78. <https://doi.org/10.1016/j.jclinepi.2016.10.001>
- Wallace, T. L., & Kuo, E. (2020). Publishing qualitative research in the Journal of Educational Psychology: Synthesizing research perspectives across methodological silos. <http://dx.doi.org/10.1037/edu0000474>
- Wu, M. J., Zhao, K., & Fils-Aime, F. (2022). Response rates of online surveys in published research: A meta-analysis. *Computers in Human Behavior Reports*, 7, 100206. <https://doi.org/10.1016/j.chbr.2022.100206>
- Yamazaki, I., Hatanaka, K., Nakamura, S., & Komatsu, T. (2023, December). The effects of order and text box size of open-ended questions on withdrawal rate and the length of response. In *Proceedings of the 35th Australian Computer-Human Interaction Conference* (pp. 446-453). <https://doi.org/10.1145/3638380.36384>
- Zuell, C., Menold, N., & Körber, S. (2015). The influence of the answer box size on item nonresponse to open-ended questions in a web survey. *Social Science Computer Review*, 33(1), 115-122. <https://doi.org/10.1177/0894439314528091>