



Teaching Quantitative Methods for Social Anthropology: Reflections and recommendations from student experiences

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Abstract:

Training in quantitative methods is an essential part of postgraduate degree courses in social anthropology. However, the student experience with learning these methods is negative and it is not perceived useful to studies and future professional practice. That is why we ask how skills in quantitative methods serve social anthropologists and what challenges to teaching need to be addressed. We use autoethnographic reflections and self-narratives to illustrate how our recommendations are situated in the student experience.

Our goal is to contribute to discussions around multimodal, interdisciplinary approaches in social anthropology and to improve the student experience with quantitative method modules. To make this tangible, we give six recommendations: 1) focus on data literacy, 2) make quantitative concepts applicable to research practice, 3) situate quantitative methods in social anthropology, 4) address quantitative methods problematic aspects, 5) introduce it with care, and 6) facilitate collaborative learning and peer-support.

Keywords

Quantitative Methods, Methods Teaching, social anthropology, Mixed-Methods, Data literacy.

Introduction

Training in quantitative methods is an essential part of most postgraduate degree courses. It is a mandatory requirement to receive financial support from UKRI pathways and, as such, core training for most degrees, not just in natural but also social sciences. PGR programs in social anthropology¹ fall under this, which means that a quantitative methods class will be on the curriculum, usually in the first year before funding applications are due. social anthropology's predilection for qualitative fieldwork makes use of quantitative methodology in the field rare and it is unlikely for students to have come across it earlier in their academic career.

We, the authors, took a quantitative methods class, and, as many before us, our cohort struggled. Our lecturers assured us that they faced similar challenges as students. Frustrations about the subject and our inadequacy learning it grew. In an act of defiance, we decided to make quantitative methods classes productive for us and investigate the challenges we faced, discovering that we are not alone in this: An inquiry of the HEA Social Sciences into quantitative methods teaching in UK higher education, points out the 'neglect' this subject has suffered and the need to reverse this through innovative teaching (MacInnes, 2012).

Our motivation for writing this article is twofold: First, it helps us to process our experience with quantitative methods learning. Second, and more importantly, we hope it will contribute to future students having a better experience engaging with the subject by providing impulses on what this innovative teaching should address. In light of this, it is pertinent to reflect on what PGR students of social anthropology think about quantitative methods, and how the introduction and teaching of it can be innovated further (see Williams & Sutton, 2011). The existence of 'statistics anxiety' among students in other disciplines is well documented (Onwuegbuzie, A. J., & Wilson, V. A., 2003). A study of psychology undergraduates indicated "disinterest in quantitative courses is

¹When Anthropology is mentioned in this article, we mean social anthropology. We are aware that quantitative methodology is key to researchers in Medical, Forensic, and Psychological Anthropology.

already present in students who have just entered university and are taking first year classes, before they have taken their first university statistics or research methods course” (Uttl et al., 2013). Uttl et al.’s solution to this, to introduce quantitative studies early on in primary school, comes too late for current Anthropology PGR students.

That is why we ask how skills in quantitative methods serve social anthropologists and what challenges to teaching need to be addressed. Our goal is to contribute to discussions around multimodal, interdisciplinary approaches in social anthropology and to improve the student experience with quantitative method modules. To make this tangible, we give six recommendations: 1) focus on data literacy, 2) make quantitative concepts applicable to research practice, 3) situate quantitative methods in social anthropology, 4) address quantitative methods problematic aspects, 5) introduce it with care, and 6) facilitate collaborative learning and peer-support.

We are no experts in education, so our writing is not purely pedagogical. It includes autoethnographic reflection to illustrate how our recommendations are situated in the student experiences. In general, these reflections encompass notes we took during class, musings that were removed from the learning experience or in our self-help group settings, where we collectively tackled the course's homework. Our decision to work primarily with self-narratives and autobiographical experiences aligns with a broader mindfulness around make quantitative methods more inclusive as these approaches “may be open to more radical ‘queering’ as they uncover embodied emotions and lived experiences” (Zwiener-Collins et al., 2021). This is also reflected in our efforts to decolonize readings for this article, on which we consulted with our programme convenor and quantitative methods lecturers.

With the autobiographical approach, positionality emerges as a lens to engage with the topic. Backgrounds influence the relationship to quantitative methods, so we want to introduce the cohort of learners represented in our article. The five social anthropology students involved in the quantitative methods course that contributed data to the paper were in various stages of their PGR journey in 2021: three had enrolled in a MRes programme with no previous quantitative method experience and two MPhil students, who had previously completed the quantitative requirement at different universities, were re-taking the course for funding applications. In contrast to our varying levels, all of us have extensive training in qualitative methods from an undergraduate level through to professional experience in industry. The classmates included students of various genders, nationalities, ages, and abilities. We drew on reflections and insights collected from our classmates’ and our own experiences to develop our recommendations.

To provide context we reflect on the place quantitative methods hold in the curriculum and how it fits into the broader context of anthropological research. We then move on to discuss our experiences of learning quantitative methods before making recommendations on how quantitative methods can be better taught to PGR students in social anthropology.

Quantitative Methods and Training

(Or for statistic lovers: Rejecting the null hypothesis "Quantitative methods are necessary in social anthropology"; social anthropologies type1 error)

Why do I need this? I want to do a course on creative writing, maybe multimodality, budgeting for fieldwork proposals, carpentry; anything but this – Student 4²

I wish they would teach us more about keeping the numbers and interpretations separate, instead we spend hours learning to code. This really isn't helpful at all to most of our projects. – Student 3

A theme throughout this paper is that quantitative research methods were considered part of basic training for social researchers. Firstly, quantitative methods and analyses are often asked for not just the academic job market, but several others. Another significant reason, especially for us as postgraduate students, is for funding. We were told that knowledge of quantitative research is essential, but with the underlying implication that we would not use it in practice as social anthropologists. We encountered many professors who, like many students, do not enjoy numerical components and have trouble explaining why it might be relevant for people practising anthropology to understand graphs and statistics and how they are made. We found there to be a clear

² In order to maintain anonymity, all quotes will be labelled student, even if they are by one of the authors.

disconnect between our question of *why* quantitative methods were important for *us* to learn and the limited justification given. So, we set out to examine each justification in depth.

Necessity for Pre-Doctoral Training and Funding

As a person with a brain injury, I knew I would be significantly disadvantaged, especially since the part of my brain that was affected, the parietal lobe, deals with processing and calculating numbers. Coding was never going to happen. And yet, it seemed to be the only option. What I had to ask myself was: how do quantitative methods fit into pre-doctoral training, and more widely into anthropological methods? – Student 1

There are a lot of things that can dishearten a postgraduate student. Student debt is certainly one example. For some, another disheartening factor is the basic requirement of studying, understanding, and processing quantitative data. We know and understand the importance of these methods in the wider discipline of anthropology. There is no denying the importance, and the practical reasons for teaching quants. Williams and Quave note that,

...[i]n some contexts, quantitative analysis represents the focus of a research project, especially those aiming to assess methodological accuracy or create predictive models. In other contexts, quantitative data are complements to robust qualitative analyses, providing context and additional explanatory power to work centred by nonnumerical data. (2018, p. 2).

They also point out that quantitative analysis gives us tools for “identifying patterns based on actual human difference and sameness and/or for connecting those ‘real’ and measurable patterns to each other to develop new understandings of human behaviours and biology” (Williams & Quave, 2018, p. 2). Funders are always searching for students who have rounded methodological skills exactly for that reason, and yet quantitative methods requirements can feel like a ‘box-ticking’ exercise rather than an opportunity to really develop our skill sets. This is not to say that quantitative methods cannot be part of anthropology research, however, for some, learning these skills can be more of a challenge than for others. It is very easy for abled anthropologists to take for granted the skills they possess, specifically when it comes to understanding and conducting quantitative analysis. But what if a disabled student³ has a disability that impacts on their ability to learn or interact numerically wanted funding for a wholly qualitative research project? Would they be excluded? Would they be able to achieve funding? Or would they have to give up? And if they had no choice, what does that say about anthropological funding institutions? That they only approve able-bodied students? These questions complicate the way we see and perceive the ‘requirements’ of funding bodies and post-doctoral training, and pose the question of how we can make this more accessible.

Advantage in the Job Market?

I began my career as a social psychologist applying anthropological research methods in my work with Batik (Indonesian traditional textile) communities in Indonesia. I must admit that my basic knowledge of quantitative methods, particularly understanding statistics, did help in doing my job. My basic understanding allowed me to capture and see patterns (such as population density, number of batik crafters in a village etc.), but it also brought out the questions that would open the research to qualitative data. – Student2

Of course, quantitative research has its strengths when applied alongside qualitative research in a complimentary sense. “Quantitative data are very useful when they are available (they)...supplement the qualitative data ... They provide a corrective to researcher biases and suggest topics for further investigation” (Schlegel & Hewlett, 2011, p.282). The key point of quantitative data⁴ is to present a simplified, collectively analysed set of information from which to make decisions. In the case of development organisations, particularly those that work with communities, the impact of their work is often dependent on how they engage with people. Their approach cannot be directed by quantitative data alone because it does not give them the *why* or *how* to the *what*, *when* and *where* answer it provides (Pretnar & Podjed, 2019).

³ One author identifies themselves as a ‘disabled student’ in their own life and advocates for an identity first approach, which is why this specific term is being used.

⁴Our understanding of quantitative data is that it is “collected and recorded systematically, so that it can be analysed within a computer database, as well as tables and graphs to uncover large-scale trends and patterns [i]t can be used to either challenge a viewpoint derived from theory or more accurately estimate the potential scope of a particular area of interest” (Business & IP Centre, 2023).

There are obvious pitfalls in working primarily on quantitative data, especially those that was collected through questionnaires or tests. These tests rely heavily on an accurate representation of real populations and on how truthful each respondent is willing to be. For researchers whose starting point is human culture and behaviour, there are too many factors such as reliability, relevance, and trust (among many others) that cannot be generalised.

One example I can provide is from a simple catch-up meeting I had following a field research trip when I was working for an international non-profit organisation in Indonesia. In the meeting, we were discussing the success of a programme launch event that had happened in the week prior. Part of the organisation's policy is to collect feedback forms to measure the success of our event and within these forms, they wanted to measure the diversity of the attendees. This organisation is from the UK and their measurement for diversity was solely through the question of ethnicity (e.g. White (Caucasian), Black, Asian etc.) which would not work in Indonesia where the population is predominantly Asian. Whilst the category of Asian was not wrong in representing our population, but it does not come close to defining how diverse we are. – Student2

Indonesia's diversity is defined through cultural identity; to accurately represent the country's diversity, the measurements should include ethnicity, city of birth, first and second language, religion and more. Whilst a simple question to tick off race/ethnicity in a questionnaire can work for regions in the global north (Europe, North America etc.), the data this question collects cannot be equally as useful in the global south where cultural identities are more complex. Coming from a development organisation perspective, specifically an international one, quantitative methods cannot be a single formula that is applied across the globe and broad data may do more harm than good. In the practical sense, quantitative data is complementary to a certain point, but cannot be complete without the in-depth understanding qualitative research can provide. Thus, as we recognise this, quantitative research training for anthropologists should focus on how we can draw out the complexities underneath quantitative data and use that to inform policies and development.

The Numerical Skillset

I believe there is something to be said for having a visual representation of data, much like when reading an article or story, there is a picture of something you encounter in the field. It, in a way, bridges data to real life. - Student2

In theory, we should all be able to use quants to think through our own projects, use it as negative space to see what we're not looking at, to address difficulties in scale and content with different temporalities and focuses. It's a different way of grasping the world. – Student 3

Using quantitative data as a tool to inform qualitative work, going beyond considerations of job markets and funding applications (where it is clearly not as relevant to many of us), means moving away from seeing it as 'necessary evil' and towards conceptualizing the goal of anthropological training as a well-rounded skill set. However, the difficulty is that many students choose anthropology for its qualitative approach, explicitly uninterested in acquiring numerical skills. Our personal experience with the quantitative module demonstrated this many times and we found that students' internal resistance towards anything quantitative became an obstacle in engaging with the quantitative methods requirement.

Although frustrated with the course, we were able to identify some benefits to quantitative methodologies that we believed could be better communicated to social anthropology students.

First, quantitative methods can help us get our message across and illustrate important arguments. It can bridge data to real life and build connections between different disciplines and research perspectives. Most of the readings that best illustrate this come from business studies, psychology, or sociology, but there are also examples of the use of quantitative methods in research done by anthropologists (for example Williams and Quave's 'Quantitative Anthropology: A Workbook', 2018), which can be introduced to students to make the point about relevance early on.

Including a quantitative point of view can not only make qualitative research arguments stronger but also point to things we and potential interlocutors are missing because it is completely outside our frame of reference, but important for policy makers.

In practice, this requires skills necessary to treat quantitative training as 'emic' contribution, which Seaver (2017, p.3) describes in his work on algorithms: "If we want to understand engineers and get them to listen to us, then we need to use terms as they do; it is a matter of ethnographic responsibility and practical politics" (Dourish, 2016, p.2)".

To do so, we need training that is accessible to anthropology students who start out with little numerical affinity. Offering a single, overarching class for sociology, psychology, and anthropology departments together to address knowledge gaps does not work. Making learning experiential, i.e., looking to organise field trips to see statistics applied/misapplied or re-reading statistics literature through an anthropological lens can bring a more active engagement for students at various levels of skill sets and make the teachings more relevant to our experience. The goal should be to build data literacy – a crucial skill for critical engagement, no matter what kind of research is being done, job or funding applied to. In this vein, Zwiener-Collins et al. (2021, p.7) found that:

Gillborn's (2010: 267) fictional character summarises the idea: 'What's really dangerous is that non-statisticians are intimidated by the numbers. They don't have the confidence or expertise to challenge the conclusions or the methods that generated them'. It falls on methods teaching to produce critical data users, raising awareness about processes of data production and assumptions underlying data analysis.

Data literacy would ideally run through the entire curriculum, "viewed together as a package of research training and practice because quantitative methods, qualitative methods, and scope and methods/research design all complement and reinforce each other" (Williams & Sutton, 2011). We now turn to why this resistance in the discipline to deal with statistics exists in the first place.

Quantitative Methods and Anthropological Praxis

(Or for statistic lovers: Use of quantitative methods is not a categorical variable (useful/not useful) but a continuous variable with broad range of values observed)

While other social sciences participated in paradigm wars and debated the importance of quantitative and qualitative studies "anthropologists worried about whether culture even exists (Ortner, 1999), not just how to study it" (Hall & Preissle, 2015, p.361). This difference in the fundamental approach to our research subjects can create barriers.

The resistance we felt approaching quantitative methods was most strongly evoked by overarching categorisations that we felt inappropriate in this political climate. After classes and in our WhatsApp chat, we discussed how unethical, harmful, and careless phrasings like 'Chinese tourists' in relation to Covid, 'Interaction with a black person' in relation to armed violence, 'Extermination of Jews' or broadly 'Cancer' seem to us. We addressed what we perceived as lacking nuance and loaded language in class, but these points were dismissed as they do not pertain to what the curriculum views as quantitative methods. We take issue with this. How can we integrate quantitative methods into our view of what it means to be anthropologists? Highlighting this to students is equally important to talking about how this enhances their academic training. We will look at three key issues we encountered to warn against pitfalls of our learning experience. These points inevitably make more general points from the specificities of our experiences, we recognise there are many quantitative researchers who approach similar topics in other ways and that many of these issues will be experienced differently in education settings and anthropological configurations that differ from the UK.

Positivist Understanding of Data

As anthropologists, we are taught not to walk blindly and unquestioningly into data, but to question. Data comes from somewhere because data is made by people, data is social. They ask us to run p tests t-tests, Cronbach alphas, who makes these numbers? And codes? Where the hell do they come from- not sure, no one knows. Secrets? Maybe. – Student 4

Quantitative methodologies feed this notion of objective truth and that valid data comes in the form of numbers. As discussed in the previous section, there is a world where quantitative and qualitative methodologies complement one another, but there is a hierarchy of data when it comes to the comparison between quantitative and qualitative: "Numerical data is often more persuasive in knowledge translation to policymakers within the Western system, and thus, often has more potential for agendas of social justice" (Hayward et al., 2021, p.3). In contributions to academia and even to policies, social data proves to be valuable. Taking advisory roles, anthropologists can be in a position of influence to inform policy decision makers. This often requires both qualitative and quantitative information, with numerical information bearing more weight. The proof is in the

requirement for anthropology researchers to be trained to produce quantitative data, not only analyse it. Why is there a need for us to know the codes and formulas?

In my youthful innocence and admittedly rather 'black and white' understanding of what research or even science was, I must admit that the incorporation of statistics or quantitative methods added validation and weight to any social science research as a 'science'. There is the perception of 'the numbers don't lie' that fed this idea and the fact that most of the research papers I had read up to that point had some sort of graph, table or numerical data which I then perceived as 'strong' data. Why do policymakers, organisations, media, or even general populations trust quantitative data and numbers more than qualitative research? If this one example shows how wrong quantitative data can be, doesn't that mean that this hierarchy in data collection and research can be damaging? This is social science, in this field we have the opportunity to make it more holistic. – Student 2

The quantification of qualitative data has been present throughout the social sciences, particularly in psychology and social psychology. Young researchers are taught basic quantitative tools such as SPSS and NVIVO as a way to incorporate analysis techniques that were mainly used for numerical data to social behaviour. Validation of data and its analysis does not come in the form of a graph or statistics for an anthropologist, but in real social and cultural experiences. The point is to examine the complexities hidden behind the numbers, not simplify them. Hayward et al. (2021, p.3) discussed that "though numerical data is often presented as true, verifiable, and more accurate than other qualitative forms of data collection, we must be careful to examine what the data signifies and who benefits from the results."

In a move towards decolonization and diversifying research directions, anthropology can be productive in offering a critical viewpoint on how to analyse data and offers a perspective that flips the script to dismantle the hierarchy of data. Thus, learning quantitative methods can be beneficial when observed and applied across disciplines. Offering an opportunity to not only know the methodology, but also understand the ways the data can be (mis)interpreted or manipulated. It is important to always ask the why questions of data. It is important to not just teach how to perform quantitative analysis but also how to utilise it critically.

If we want to debate that numbers aren't facts, we need to first accept that in some social realities, they are, resisting that is futile. However, there is a difference between acknowledging that other social realities exist and adopting them as one's own. Are we by doing quants, part of a 'forced' ethnographic immersion in a 'other' we (morally and intellectually) disdain? If so, are we, by learning quants, learning about the violence of ethnography which is what is really startling us? – Student 3

Data Decolonization

The second of these grievances is that quantitative methods put things into neat categories (even better for coding – binary ones) that do not unfold into the messiness that is life. Ticking boxes for ethnicity or sexuality on surveys is necessary to sort data and make it readable. This runs counter to qualitative instincts we train. Even a non-binary scale in surveys can still lead to harmful statistics as it might invoke and uphold categories that don't apply as participant 2 has detailed before, which becomes especially problematic when combined with political projects behind collecting statistical data, to run with our example encoding ethnicity can be the base for further discrimination of a region. In that sense, participant4's intuition applies that numbers are a colonial technique of regimentation and categorisation.

Like any discipline that was once entwined with the concept of nation states (Davies, 2017), quantitative methods and statistics have a racial legacy - anthropology knows what that is like. We learn and enter conversations about it and in quantitative methods these discussions are emerging too. Teachers should familiarise themselves with ontological, epistemological frameworks to decolonize quantitative studies like quantitative critical race theory (see Crawford, 2019; Garcia et al., 2018; Hayward et al., 2021; Zwiener-Collins et al., 2021). Crawford (2019, pp. 427-428) introduces five guiding principles for quantitative critical race theory:

(1) Centrality of racism [...] (2) Numbers are not neutral [...] (3) Categories are neither 'natural' nor given [...] (4) Voice and Insight: Data cannot 'speak for itself' [...] (5) Numbers for social justice [...] commitment to use quantitative data as an anti-oppressive praxis, to support social justice and challenge dominant narratives that usually treat race as a marginal or specialist concern.

Many of these authors also give practical examples how such a decolonized quantitative analysis can help shift popular discourse and policies, e.g., Hayward et al. (2021) pointing out the OHC-NET, a Canadian Indigenous applied epidemiology training program as Indigenous-partnered approach to quantitative methods. Providing this literature and examples showcasing how harmful effects of categorization can be minimised, is helpful for students to see how quantitative analysis can fit within anthropology. This can expand to other inequalities, that are not yet addressed by quantitative methods scholarship at length (applications might be queer studies, disability studies and so on) where anthropologists can make advances in representation and re-interpretation of data.

Othering

The concepts of quantitative data I understood, doing similar work throughout my psychology A-Level. The coding, however, was something that I had not anticipated. In my years of hospitalisation, I was tested numerous times in many ways. Significant to this was my Neuropsychology Report, performed by a Clinical Psychologist in 2017. This report confirmed that I struggled with processing speed, most specifically symbol searching and coding. Hence my frustration. Even more frustrating was the fact that I was told an alternative assessment would be very difficult to work out, as requirements for the module include ‘the ability to conduct and report basic quantitative analyses’. After several months of having to disclose medical information to ‘prove’ I had this disability, and liaising with various departments, and following up emails numerous times, I was finally given alternative assessments that were language based, yet reflected an understanding of the issues that quantitative analysis raises for social science. Why did it take so long? Why do I constantly have to prove my disability? Why is quantitative data so inaccessible as a disabled person? Musings from my fellow students echo the frustration, and they are able bodied. Something has to change. – Student 1

Quantitative data creates Othering. I do not mean in the sense of splitting people, either as individuals or as groups, into data sets, but it creates Othering in terms of who can produce quantitative data and who cannot. Historically, “only centralised nation states had the capacity to collect data across large populations in a standardised fashion and only states had any need for such data in the first place” that “carried extraordinary potential for governments” (Davies, 2017). Crawford mirrors this statement, stating that “data generated by government bodies are likely to embody dominant (racialised and racist) assumptions” (2019, p. 433). Asking about who the data serves is essential, and it’s not just true for racialized assumptions but also assumptions about disability.

As researchers, specifically cultural researchers, the close relationship we have with communities is very important and is key to the impact our programmes have on the populations they involve. It trains us to be critical of quantitative totalizing approaches. Davies (2017), who writes on the declining ability of statistics to accurately represent the world, argues that from one perspective using statistics to guide legislation is elitist as it omits emotional investments or assume commonality and dictate uniformity regardless of lived cultural identities but, on the other hand, statistics provide everyone with validated data about society that we can use as a tool for social change.

Teaching needs to challenge that “quantitative methods continue to be viewed, broadly, as the application of mathematics to social concepts” (Zwiener-Collins et al., 2021, p.6). In practice that means treating categories as social. Anthropological approaches are well equipped for that, offering “ongoing self-reflexivity and engagement with the historical, social, political, and economic structures and power relations [needed for] quantitative approaches [to] be re-imagined and rectified” (Garcia et al., 2018, p.150). Participant2’s work and pointing out how categories did not serve the Indonesian population is part of the decolonizing of quantitative studies. If we apply this view of quantitative data to other fields, like disability studies, it could be even more beneficial. Achieving this will be a team effort.

Quantitative Methods Building Community

(Or for statistic lovers: Pearson correlation coefficient between level of quantitative method skill and group learning $r = .99$, establishing a positive linear relationship)

Anthropology contributes to the ‘in-depth’ side of cultural research, providing the knowledge that we cannot get through numbers and graphs. We engage with people and communities to learn and understand their values, behaviour, ways of expression, creativity, and practices (Schlegel & Hewlett, 2011). Coming from this perspective, accepting pure quantitative data is a challenge, especially when we consider the aspects of human life

that anthropologists engage with in our work cannot be quantified. Unfamiliar expectations and a shift from Anthropology Departments regular teaching program towards numerical skills can be a shock, so what support systems are in place for students to take the most out of their experience?

Collaborative Learning

At least, I'm not alone in this experience. [...] My fellow r-detectives and I will make it out alive. Though, statistically not all of us, since 1/3 has to perish as a male on our quants cruise [based on data of survivors of the Titanic] that inevitably crashes and burns more often than not. – Student 3

I unmute: “maybe we could see a graph of someone getting older and someone ageing backwards”. I start laughing before I finish my sentence, quick mute, mute, mute!! What the hell am I saying? Benjamin Button turned into statistical analysis? My classmate saves me, “oh yes we could look at Leonardo Dicaprio's ageing whilst his girlfriends get younger.” Thank you for this kindness, classmate. Every quants class I get increasingly unhinged. – Student 4

Let me try and describe a memory from when my friends and I were studying for the exam. We were a group of four in our first year of university; [...] Imagine trying to teach statistical formulas and mathematical equations to a group of people who not only felt like they were not good at maths but also had little to no interest in it [...]. It was an exercise of patience for me and an exercise of trying out new methods of teaching, I remembered that at school my maths teacher would introduce equations by literally breaking it down to individual steps,[...] We went old school (of course this was also 2007...relatively old) and made flashcards. – Student 2

In social science research, and specifically anthropology, collaborative approaches and methodologies are often part of our work and learning is no different. Collaborative learning of practices and methods allows us to learn with the support of different perspectives. We took this approach into our quantitative methods class, mainly because of our pessimism going into it. Collaboration was the only way we could motivate ourselves to do the classes, it was also the only way we were able to make sense of the material.

The way our quantitative methods class was structured meant that individual students were isolated when attending. Conducting the lessons 100% online also meant that there was little engagement from other students, whether it be because of insecurities, lack of interest or confusion around the topic. The introduction of coding into the course added an extra element of unfamiliarity. Remembering statistics and reading quantitative data was one thing, but learning an entirely new technical skill is another.

We addressed this challenge by working on tasks together and collaborating. We combined our different levels of understanding of quantitative methods and abilities with the coding programme to try and collectively learn. We used each other as sources of information (Hmelo-Silver, C.E. and Chinn, C.A., 2016).

The communal approach to learning quantitative methods is a nod to the call for decolonising quantitative methods (Hayward et al., 2021). Combining each other's strengths whilst also identifying our weaknesses address the inequalities in the learning resources we were given. An example is in the introduction of the data analysis programme that required coding. This coding programme introduced disparities in our capabilities; whilst two of our group seemed to be able to follow, two others could not, and one was not able to use the programme at all due to their disability. To overcome this challenge, we collectively worked together to find creative ways to make sense of the material.

A study on increasing data literacy among Canadian psychology students stresses collaboration and peer support (Counsell et al., 2016) as effective approaches to learning, an approach we intuitively leaned towards. Beyond psychology, there are further benefits of a collaborative approach to quantitative methods in the social sciences. If research stays within one field, disciplinary expertise will be counter-balanced by disciplinary blind spots. Collaboration across disciplinary contexts can be beneficial for all, such as anthropologists might offer alternative perspectives on quantitative methods. “Data analysis is great for scratching the surface, while ethnography excels at digging deeper” (Pretnar & Podjed, 2019). Social sciences like anthropology and sociology have played a key role in critically examining quantitative data – starting with W.E.B. Du Bois' re-reading of data (Davies, 2017; Garcia et al., 2018; Zwiener-Collins et al., 2021). This shows that different methodological approaches can enrich each other and highlights the importance of working against disciplinary silos.

Overcoming Obstacles

I believed that with help and some extra work I could pull through. Then the course started. – Student 1

When it came to writing up our quants assignments, most of us were reluctant to get on with it. Maybe this is because we all feel especially vulnerable when confronted with our own failure. Also a failure to grasp whether the discomfort we feel comes from our own inability to compute data or the inner struggle with what is asked of us. – Student 3

Throughout attending this class, I dreaded the second half every time, until eventually I just left during the break. [...] Every class I felt really isolated and lost. One evening I tried to challenge myself and stay for the R part of the class [...] I ended up with Harry. At first, I felt relieved, because well, I felt like we were on the same boat with our feelings about this module. But that ultimately became the issue because we were both COMPLETELY lost and could not even start the task. – Student 2

Besides tackling problems quantitative methods posed to us together, the experience also provided a shared emotional connection. Two prevalent emotions stand out of the ethnographic accounts – desperation and frustration. Many of the causes of frustration have been addressed above: the new expectations we were confronted with, the data that was presented in a way different to what we were taught, harmful categories and exclusiveness.

The desperation on the other hand, came from a helplessness as we felt the course did not equip us to deal with these frustrations. While some of us were hopeful at the beginning, these hopes disappointed.

Classes were usually split into two parts, one to discuss the key concepts, another to apply them to data examples through coding. We motivated each other, joked in our WhatsApp Group, and studied for assignments together to be able to pass at least the first part but all our co-learning could not support us sufficiently for the second part – Cue to our desperation of not being able to follow soon turning into resignation. But by sharing that frustration and desperation, we built a community. Taking the quantitative methods course brought us closer together than any team building exercise sharing each other's tears, strengths, and weaknesses. We have shared aha-moments, we have had frustrations leading to decompression through stretching sessions, and we have given up and walked out of the room. These elements were a unifying experience in an otherwise unsatisfying module, but this is not the way it should be. It is not the experience we want others to have.

Milligan et al. (2014) introduce a typology of learners in quantitative classes: quantitative junkies, quantitative avoiders, and quantitative converts. We align with their conclusion that while it might not be possible to *equally engage* all students, designing classes that *engage* all students is possible and should be the goal. As stated above, our experience leads us to believe that teaching tailored to anthropologists that engage with concerns about the nature of the data can help with frustrations. To help teachers design these classes, we conclude with our recommendations.

Conclusion

Quantitative studies are a requirement in the social sciences, but greater attention needs to be paid to how students experience it, especially within social anthropology. Having experienced this directly, we wanted to share what we learnt in order to support improvement to quantitative methods courses, so students fully engage rather than treat them as a box-ticking exercise.

I actually enjoy coding. I'll give it some slack. I forgot how nice it is to get a correct answer. [...] The green tick, gold star moment of "ding" — YOUR CODE WORKS! — is nice and rewarding after being entrenched for so long within a discipline that is pretty washy, highly interpretive and subjective – Student 4

Having quantitative methods as a training requirement makes sense because it is an important methodological skill that can be applied to research in many fields and is also transferable to the job market (especially the use of statistical software). However, this requires going beyond basic statistical teaching to encouraging broader data literacy. Doctoral social anthropology students often feel like their quantitative methods are not contributing to their specialisation, which naturally reduces interest in the subject. Teachers must be able to effectively communicate the relevance of training components to their students for it to be fully effective. Training has to be made more accessible in itself and made applicable to anthropological practice. It should be noted that our 2021 class took place during COVID restrictions, which undoubtedly informed how the class was taught.

The anxieties around the quants/qual divide are centred in an artificial separation of reality, neither of them can ever be accurate on its own. We have to ask who collects data, who uses it and what it does for all methods approaches. – Student 3

British social anthropology often privileges qualitative fieldwork, which makes quantitative analysis appear irrelevant. Therefore, it can invoke bigger concerns about who this kind of data serves, who it includes and who is left out. As a result, students of anthropology might experience resistance and have trouble integrating quantitative methods into their research ethos. Analysing quantitative data must not be harmful, it can also be productive for inquiries that usually embrace a qualitative approach. Quantitative methodology can be integrated the same way as any other perspective or controversial topic anthropologists' study, as a way of experiencing the world that is not necessarily more right or wrong than our own but comes with its own ideology that needs to be untangled. Using quantitative methods is probably not plausible to use for many anthropological projects but understanding it might help us gain a clearer picture of other worldviews, professions and subjects. It can also help make quantitative research better by pointing out blind spots. The potential to make a social impact through this needs to be more visible to students through a critical engagement with the methodology in their learning.

This is not an individual feeling, it is a group feeling, an anthropology feeling, quants- be better, do better. – Student 4

Struggling with quantitative methods is not a singular experience, our accounts echo that of cohorts before us but it does not need to be the same experience for students coming after us. We struggled with the challenges outlined above, our way to cope was to form a 'self-help' group and learn collaboratively what we couldn't tackle alone. This helped us to avoid frustration and focus on fostering data literacy, which makes coding/software use rudimentary. We gained something from the experience and want to encourage other students that are struggling - you are not alone and your concerns about learning quantitative methods are valid, but it is doable (all of us managed to pass) and can even be beneficial. Changing the focus from individual learning to peer-supported engagement with the subject was key in our experience, even for those of us who were not convinced of the value of quantitative methods. This echoes findings from other research into teaching and learning quantitative methods (Counsell et al., 2016; Milligan et al., 2014).

To sum up, we end with a concise list of six recommendations:

- 1) Focus on data literacy. quantitative methods are not first and foremost about numbers, but data literacy.
- 2) Make basic concepts applicable to social anthropological research. Show a range of articles and ways to use these methods to improve data use in social science, like critical race theory examples, to help students build a toolkit relevant to their field and encourage interest.
- 3) Situate quantitative methods in anthropology. Just like any method, it can have helpful and harmful impacts. Demonstrating how anthropology can enhance quantitative methods and the merits of interdisciplinary collaboration towards the holistic study of human life.
- 4) Address some of the concerns that qualitative researchers have about quantitative research. Engage with perceptions of statistical and STEM subjects as being more objective and the inequalities that follow on from this. Explore the potential of quantitative data collection to affect social change.
- 5) Introduce the subject with care. Keep students' backgrounds in mind, be aware of wider movements to decolonize the curriculum, use accessible language and draw examples from usefully applicable research to support the learning experience.
- 6) Facilitate collaborative learning and peer-support.

Many challenges for quantitative methods in social anthropology have been presented and changing teaching is a process - we want to encourage committed, passionate teachers to engage with the issues we have raised and hope to give them at least an idea of where to start to make quantitative methods more accessible to social anthropology students.

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