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A Mixed-Methods Approach to Researching Friendships and Social Interactions in Mainstream Schools in England and Cyprus

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Contributor Biographies

Christoforos Mamas completed his PhD at the University of Cambridge in 2009 under the supervision of Dr. Kristine Black-Hawkins and Prof. Lani Florian. After a few years of working as a school teacher, Christoforos got his first academic post in 2011 as an educational researcher at Plymouth University, and in 2013, he joined the Early Childhood team at Plymouth as a lecturer. In September 2015, he moved to the University of California, San Diego to pursue a 3-year Marie Skłodowska-Curie Fellowship.

Janet Georgeson is a research fellow in Early Education Development at the Plymouth Institute of Education (Faculty of Arts and Humanities), Plymouth University. Her research is strongly influenced by sociocultural and activity theory, in particular when applied to organizational structure, interactional style, and approaches to pedagogy. Janet has been involved in research projects investigating the experience of disabled students in Higher Education and the collection of data on disability in schools, with a particular focus on ways to access pupils' views.

Irene Kaimi took up a lectureship in Statistics at Plymouth University in September 2011. Previously, she worked as a visiting lecturer at the University of Cyprus and as a research associate at Lancaster University

where she also obtained her PhD. Her research interests include spatial and spatio-temporal methods for environmental and medical applications, time series analysis, and social statistics.

Abstract

In December 2011, I was thrilled to embark on my first job in academia at the then Faculty of Health, Education and Society, Plymouth University. A few months later, I applied for my first small research grant with Janet Georgeson to undertake a research project on children's social interactions and friendships in the context of inclusion within four mainstream primary schools in England and Cyprus. This project was a natural progression from my PhD research that concerned how children identified as having special educational needs and disabilities in five mainstream primary schools in Cyprus got along with their peers (Mamas, 2012; 2013). Due to my existing links and connections with Cypriot schools and an increased interest in comparative studies, Janet and I decided to compare inclusive and special education across the two countries in the context of friendships and social interactions. Along the way, we needed help analyzing the quantitative part of our questionnaire. It was at that point that Irene joined the team and became a vital member of it due to her mathematics and statistics background. This case study provides a brief account of a relatively small-scale research study conducted within a mixed-methods approach. In particular, we will focus on the challenges and advantages of undertaking a

mixed-methods study and the importance of interdisciplinary collaboration. The case is useful for students undertaking educational research in schools and equally beneficial to early career researchers.

Learning Outcomes

By the end of this case, students and early career researchers should be able to

• Gain a better understanding of the methodological challenges and advantages when involved in conducting mixed-methods research in schools

• Be able to examine the role of different methods of data collection and analysis with children and teachers

• Begin to understand the importance of interdisciplinary research in education

Case Study

Project Overview and Context

The study took place between 2013 2012 and 2014. Data collection and analysis have been completed and the results were presented in national and international conferences. A research paper is also being prepared. We managed to recruit one English and two Cypriot primary schools. The relevant challenges in recruiting schools are discussed below. Overall, 197 children aged 8-10 years completed a social network questionnaire; 7

classroom teachers and 41 children took part in follow-up semi-structured interviews. More details on the data collection methods are provided in subsequent sections. The study had two main research questions:

1. What are the social interactions and friendships of children aged 8-10 years in English and Cypriot mainstream schools?

2. What are the underlying reasons of children's inclusion or exclusion in the peer group?

Since the Salamanca Statement (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994), inclusive education has gained momentum internationally. The Statement began with a commitment to "Education for All" children, young people, and adults within the regular education system. The guiding principle of the Statement was that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic, or other conditions calling for inclusion to be the norm. Both the English and Cypriot educational systems have embraced the idea of inclusion so as to cater for the needs of diverse student populations within mainstream settings, especially those identified as having special educational needs and/or disabilities. Many, including parents and teachers as well as policy makers, stress the importance of friendships and social interactions of these children with peers as the main drive behind inclusive education. Despite this rhetoric, not many research studies have addressed the social inclusion of children within mainstream settings. Our study was designed aiming to provide some fresh comparative

research evidence on how Year 4 and Year 5 children identified as having special educational needs and/or disabilities are socially included and participate in primary schools in England and Cyprus.

When undertaking comparative, cross-cultural studies, it is important to have a good understanding of both cultural contexts. In terms of the inclusive and special education context in England within the past two decades, there has been an attempt to make a shift away from the "integration" of pupils with special educational needs within mainstream schools toward a more fully inclusive education system where each individual's differences are acknowledged and celebrated. Key policies include Green Paper on Special Educational Needs (SEN) in 1997, the 2001 SEN and Disability Act, Every Child Matters in 2004, and the 2010 Equality Act. Warnock's (2005) policy paper encouraged a reconsideration of special education policy and practice in England, not least of which was a clear definition of inclusion to enable a sound embodiment of policy within the practice of teachers.

Cyprus has adopted a dual model of provision. On one hand, special units provide education for pupils identified as having more complex special educational needs and/or disabilities. These children mostly share the playground during break time, attend assemblies, and are expected to form some basic social relationships with peers and be socially accepted and respected. On the other hand, "pupils with special needs," as they are

referred to within the Cypriot context, comprise the largest portion of pupils within the context of special and inclusive education, currently around 5% of the school population. These pupils attend both mainstream and special support classes. The key policy which is currently being implemented is the 1999 Education Act for Children with Special Needs.

This study is both innovative and interdisciplinary. We employed social network analysis in exploring friendships and social interactions of children in schools coupled with systematic qualitative data collection and analysis from teachers and children in the form of interviews. Indeed, not many studies so far have employed this kind of methodology in studying children's peer relationships—a combination of advanced social network analysis and qualitative methods. This had been made possible through the interdisciplinary nature of the research team.

Research Practicalities

This research project was carried out between April 2012 and July 2014. The work was supported by the Institute of Health and Community (IHC) of Plymouth University. At the time, Janet and I were based at the Faculty of Health, Education and Society within the educational research team, whereas Irene was based at the Department of Computing and Mathematics. The actual fieldwork was conducted between June 2013 and April 2014. All children across the three primary schools in England and Cyprus completed a

social network questionnaire. The classroom teachers and some of the children were invited to take part in follow-up semi-structured interviews. Interviews with children were in pairs in an effort to reduce unequal power relationships and make children feel at ease when talking to us. The latter worked really well, but it was slightly challenging selecting the pairs. In some cases, we invited three children at one time. In terms of reducing the unequal power dynamics between the researchers and children, pairing the children up has proved to be a good strategy as children gave positive feedback about it. Overall, the main issues while conducting this study were as follows.

Sampling and Access to Schools

Finding participants (schools) was not easy, especially in England. First, we had planned on conducting random sampling of the two schools in each country. We found the details of all schools in two particular educational districts (one in each country) and invited them to participate through emails. None of the schools got back to us. I then picked up the phone and started getting in touch with schools. Luckily, a couple of schools in Cyprus were willing to participate but none of the schools in England. A typical response would be to email the details of the project (again) to the school. However, none of the schools got back to us in the second time either. At this point, we decided that we could not implement random sampling. Instead, a decision was made to employ purposeful sampling and invited one

school in England that we had established links with. They said yes, but we could not convince another school to participate. Therefore, we had two schools from Cyprus and only one from England. In total, 197 children aged 8-10 years completed the questionnaire; 7 classroom teachers and 41 children took part in follow-up semi-structured interviews. It is worth noting that we had not anticipated gaining access to schools would have been so difficult.

Ethical Clearance

Not only gaining access to schools but also receiving approval from the university's ethics committee was challenging. The primary reason for this was the opt-out consent for children's participation in the social network questionnaire. In order to conduct effective social network research, a very high response rate is required within a classroom. Ideally, all children must complete the questionnaire if they are present on the day. As a result, an opt-out consent from parents was suggested to the committee. The committee asked for numerous measures and safeguards to be put in place so as to allow this. One of those measures was to send the information letter and consent form to parents via post. Inevitably, this process has taken a longer than usual time to be completed.

Questionnaire Design

Designing the social network questionnaire to capture children's nominations had also proved to be challenging. A social network questionnaire has to be worded simply for children to understand it and also designed in such a way so that it does not provoke any unnecessary negative feelings to children. Therefore, we had to be very careful with wording our questions. The questionnaire was translated into Greek (for Cypriot schools), piloted in both languages, amended, and the final version was submitted to the ethics committee. We included two basic questions within the questionnaire. First, we ask the children to nominate their top 5 friends within their classroom and, second, to nominate up to three of their classmates that they most want to play with during break time. A social network questionnaire usually asks children to nominate classmates based on a number of criteria, such as friendship (who are your friends in this classroom?) and social (who would you most like to play with?) criteria.

Research Design

A mixed-methods research design was employed in collecting and analyzing the data. In particular, the sequential transformative design (Creswell, 2009; Greene, 2007) with two distinct phases of data collection was utilized. Within the first phase, a social network questionnaire was distributed to all children of Year 4 and Year 5 across the three schools. According to John (2013), social network analysis conceptualizes individuals as "points" and their relations to each other as "lines" or "ties." Friendship and social criteria were

employed to ascertain children's friendship networks and social interactions. To put it simply, we asked the children to choose their five best friends within their classroom (friendship criterion) and to choose up to three classmates that they would most like to play with during break time (social criterion). The findings from this phase were analyzed by employing tools and metrics of social network analysis (i.e., popularity, centrality, density, homophily), and appropriate visual sociograms were developed. A sociogram is a visual representation of the network of friendships and social interactions. In particular, the R software was employed to analyze the questionnaire findings.

In the second phase, classroom teachers and children took part in follow-up semi-structured interviews to further explore their views. Interviews with teachers were individual, whereas children were interviewed in pairs. The selection of pairs was accomplished based on the results from the first phase. The second phase enabled for a deeper understanding of the reasons that shape social inclusion or exclusion of all children and particularly those identified as having special educational needs and/or disabilities. The combination of quantitative and qualitative data collection and analysis enabled for a more complete picture to be drawn and for both research questions to be addressed.

Mixed Methods in Action

There were a number of strengths and challenges involved in conducting this piece of educational research within a mixed-methods approach. These strengths and challenges are described and discussed in this section.

The use of mixed methods neutralized or canceled out some of the disadvantages of solely using questionnaires or interviews. By combining the methods in our study, we were able to broaden the dimensions and hence the scope of our project and obtain a more complete picture of children's friendships and social interactions. Hence, we managed to address both research questions. However, as noted above, mixed methods are neither a panacea nor necessarily able to provide a full picture of social inclusion. This approach might be tempting, but the feasibility of it has to be considered carefully. If you choose a mixed-methods strategy, you should be or become familiar with both quantitative and qualitative forms of research. Multiple sources of data require more time for collection and analysis, broader data analysis skills, and an understanding about the integration or implementation of the different elements. Overall, a student has to be aware that a greater number of methods do not automatically translate into a stronger study.

Implementation

A number of key decisions had to be made with regard to implementing the sequential transformative mixed-methods research design. First, we had to de

cide about the sequence of collecting our data. For example, do we collect some qualitative data first, then distribute the questionnaire and finish off with more qualitative data collection? This is described as the "ethnographic sandwich" (Borgatti, Everett, & Johnson, ~~2012~~2013, p. 47) which refers to the sequence of data collection phases. We thought it was best to collect the quantitative data first in the form of questionnaires to children. This enabled us to partly address the first research question and take a snapshot of children's social interactions and friendships. Then, we analyzed these data and proceeded to the second qualitative phase. It is important to note that interview data collection from teachers and children was driven by the insights generated from the questionnaire. For example, we decided upon pairing up the children in the interviews and customize the interview questions for both teachers and children, based on the questionnaire findings. This is a particular strength of a mixed-methods design, but, at the same time, it constitutes a significant challenge.

Second, we had to think and decide about priority to be given on the quantitative and qualitative sources of data. For this study, we decided that it was best to prioritize the qualitative data (interviews with teachers and children) and use the quantitative data (questionnaires) as a way of "starting to scratch the surface" of social inclusion. Third, integration of the mixed data sources was another key issue. Integration of quantitative and qualitative data occurred at several stages. For example, it occurred within the research questions (both quantitative and qualitative questions), as well

as the data collection, analysis, and interpretation stages. By combining both sources of data, the primary purpose was to complement quantitative with qualitative data and vice versa and, to some extent, to look for convergence of findings.

Interdisciplinarity

In the case of this study, crossing the boundaries of disciplines and thinking across education, psychology, sociology, and statistics was necessary. In order to implement social network analysis, a new set of skills involving advanced programming and statistical background was necessary. Working with Irene was vital in achieving this interdisciplinarity. This is a particular strength of the study, but also it was challenging working outside our disciplinary boundaries. Therefore, if a student is thinking of employing a mixed-methods design, they should take this into consideration.

Translation

Collecting data from another country or cultural context poses additional challenges within a study due to translation issues and cultural adaptation. However, the potential benefits certainly outweigh these challenges. According to Jeffrey and Jeffrey (2006), translation into and out of academic English is always problematic. In our case, research instruments were developed in English, then translated and piloted into Greek, and finally, the analysis and reporting of findings were accomplished in English. Drawing on

this research, what is best is a thorough understanding of both languages (English and Greek) and, more importantly, the cultures within which they are being used. A good knowledge of both cultures has enabled us to increase the trustworthiness of the data. The issue of translation is indeed very important in cross-cultural studies, and in our view, it is vital that the researchers are open, honest, and, indeed, ethical. This reduces any risks of false translation and improper use of the unequal power that an educational researcher potentially has on participants in a research environment.

Practical Lessons Learned

Based on the discussion so far, we would like to offer some practical tips to students when conducting mixed-methods research. Indeed, this kind of design is both challenging and rewarding. It requires more time and additional sets of skills, but it can provide more insights and answer research questions that would otherwise be impossible to address.

1. *The research questions should be central in the research process*. Your research questions should determine the research design. You should not conduct mixed methods for the sake of it but for its added value. Therefore, if your questions require both quantitative and qualitative insights to be addressed, then you should employ a mixed-methods approach. Make sure that you have a clear understanding of what you want to find out and that this is reflected on the research questions. You should also be able to

describe in simple language your research aims and questions to your participants.

2. *Know your participants well*. If you are conducting cross-cultural, comparative research, make sure that you know enough about the specifics of each cultural context. This is important in many ways and enables you to develop rapport with your participants. Cultural awareness will also help you analyze your findings and understand the new knowledge resulting from the research insights. Ethical processes also might differ across cultures, so the research team should ensure that all ethical considerations are taken fully into consideration from Day 1 of the project.

3. *Try out your research tools*. It is always a good idea to pilot your research tools before any data collection has taken place. This is particularly important when conducting data collection across cultures and translation is required. As we noted above, the researcher should know that translating for research purposes is a challenging process that requires increased cultural awareness and not just linguistic ability. Questions should be culturally and linguistically adjusted, so the validity and reliability of the research instruments remain as high as possible.

4. *Work with others*. A mixed-methods approach is likely to require additional sets of research skills due to the quantitative and qualitative nature of data collection, analysis, and presentation of findings. It is therefore imperative to work within an interdisciplinary manner and be ready to work with and learn from others outside of your disciplinary boundaries. However, working with

others requires good planning, openness to new ideas, and challenging one's own established ideas. We find this as one of the most powerful advantages of interdisciplinary mixed-methods research.

5. *Recruiting participants*. Gaining access into schools and collecting data from children can be very challenging. Even if you think that your project idea is brilliant and all schools would want to take part, you should not underestimate the time needed to get into schools. Schools are organizations with very busy and tight schedules. Therefore, you should have a plan (or maybe more than one plan) on how to approach schools asking them to participate in your research. In our view, the interruption time should be as minimum as possible to both schools and individual participants. Researchers should invest time in developing a relationship with schools and research participants before collecting any data. They should also ensure that a school's participation should generate some kind of specific benefits to the school and not just the wider educational benefits of conducting educational research. For example, the researcher might debrief the school about the study's findings. There are many ethical ways of doing this without critiquing the school.

Conclusion

This case study is illustrative of a relatively small-scale mixed-methods study. We presented and discussed a number of advantages and challenges encountered in our study along with practical tips for students and early

career researchers. In order to address the two research questions, we decided that a mixed-methods approach was the most comprehensive. We were not only interested in the *what* of children's social interactions and friendships, but we wanted to find out the *why* of children's inclusion or exclusion from the peer group. The mixed-methods approach has enabled us to address both questions and provided increased insights into both the *what* and the *why* of children's social inclusion. In this study, children, identified as having special educational needs and/or disabilities, have primarily been found to be marginalized and isolated within their classrooms for a number of reasons. The analysis of the classroom social networks revealed that these children were primarily on the periphery with less friendships and social interactions compared to their peers. Interview data also showed similar findings and enabled us to unpick the reasons for the social exclusion. Schools seem to be concerned more with the physical inclusion of these children rather than their actual active participation in teaching and learning. Moreover, it has been found that a deficit view of disability is still prevalent within the educational settings where this study took place. Students considering of conducting educational research by applying such an approach may think that this is a comprehensive way of doing research but should take into consideration the additional challenges, research skills, and time involved.

Exercises and Discussion Questions

1. In our study, we use the terms friendship and social interaction. What is the difference between the two?

2. Interviewing children in pairs had a number of advantages, but can you think of any disadvantages or criticisms?

3. We briefly present inclusive and special education in England and Cyprus in this case study. How does inclusive and special education compare within your context?

4. What other methods might we have used to collect our data?

5. If we want to find out about young children's friendships and social interactions, what kind of methods are appropriate to do so?

6. What are your views on the opt-out consent form from parents?

7. Consider the case a child wants to take part in a research but their parent/ guardian did not provide consent. How should this matter be dealt with by the researcher?

Further Reading

Mamas, C. (2009). *Getting along with peers in mainstream primary schools: An exploration of the social status of pupils identified as having special educational needs in Cyprus* (Unpublished doctoral thesis). University of Cambridge, Cambridge, UK.

Web Resources

http://www.socionetnography.net

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