

Student Teachers' Perceptions of Geographical Enquiry

John Halocho

Reader in Geography Education and Head of Geography

Bishop Grosseteste University College, Lincoln

Introduction

The thinking behind the enquiry process and practical ways of developing it with pupils are a central part of many primary geography courses in initial teacher education. At several higher education institutions a '3+1' degree is offered in which students study a main subject and education studies with equal weighting for the first three years of the programme, completed by a fourth year PGCE qualifying them to teach. Students studying Geography as their main subject are prepared to become effective subject leaders. The research described here was set up to investigate the students' level of understanding of geographical enquiry in order to make some assessment of the effectiveness of the geography modules taught in the 3-year programme. These students may have an impact on their future colleagues, who may well have limited experience and little expertise in geography, and it was considered important to investigate how the students understood, defined and explained the nature of geographical enquiry.

Year three undergraduates were selected as they had completed both a level 2 module called 'Children and Places' and a level 3 module focussing on geography subject leadership in primary schools. In these modules, they consider the rationale for geographical enquiry and have opportunities to develop their practical skills in planning, conducting and evaluating enquiries appropriate to the primary curriculum.

The research was carried out in order to assess their levels of understanding of enquiry, as well as some of the issues that arise when such approaches to learning are adopted. The findings were intended to inform the geography tutors on the programme of the effectiveness of inputs on enquiry in order to improve the quality of training for future geography subject leaders.

Literature review

The concept of geographical enquiry may be traced back to secondary school curriculum development activities in the 1970s and 1980s (Roberts, 2003). The Geography 16-19 Project used the phrase 'enquiry-based teaching and learning', while The Geography for the Young School Leaver Project included the words 'areas of enquiry'. Although the contributors to Geographical Work in Primary and

Middle Schools (Mills, 1988) make no direct reference to it, an embryonic form of enquiry is provided in Williams & Catling (1985) in which they identify basic communication skills, intellectual skills and social skills as experiences children should be systematically exposed to in order to carry out geographical studies. Storm (1989) perhaps set the framework for geographical enquiry with his five key questions to be used to focus the study of places (Figure 1), building on an outline of geographical questions first put forward in Storm & Catling a year earlier (1988, 306-307; see also, Catling, 1988, 253). These enquiry questions have been included in the key texts that focus on the methodology of primary geography teaching since the late 1980s (eg Blyth & Krause, 1995; Foley & Janikoun, 1996; Owen & Ryan, 2001). By 1991 the Geography orders stated that 'Enquiry should form an important part of pupils' work in Key Stage 2' (DES, 1991, 35). Foley and Janikoun (1992) argued for the addition of two further questions in the light of the wording of the 1991 geography orders. The 1995 revised Geography order actually included some of the enquiry questions developed by Storm. The Handbook of Primary Geography (Carter, 1998) includes a whole chapter on geographical questions and enquiry. QCA (1998) commences their discussion paper No. 3 on geographical enquiry with the statement that

Geographical enquiry is an integral part of the geography national curriculum requiring pupils at key stages 1, 2 and 3 to be given opportunities to ask geographical questions and investigate places and themes. (QCA, 1998, iii)

The current order, published in 1999, states clearly that 'teachers should ensure that geographical enquiry and skills are used' at both Key Stage 1 and 2 (DfEE/QCA, 1999, 16, 18). Foley (1999) suggests that English primary teachers should see geographical enquiry in much the same way as they do mathematical and scientific investigations.

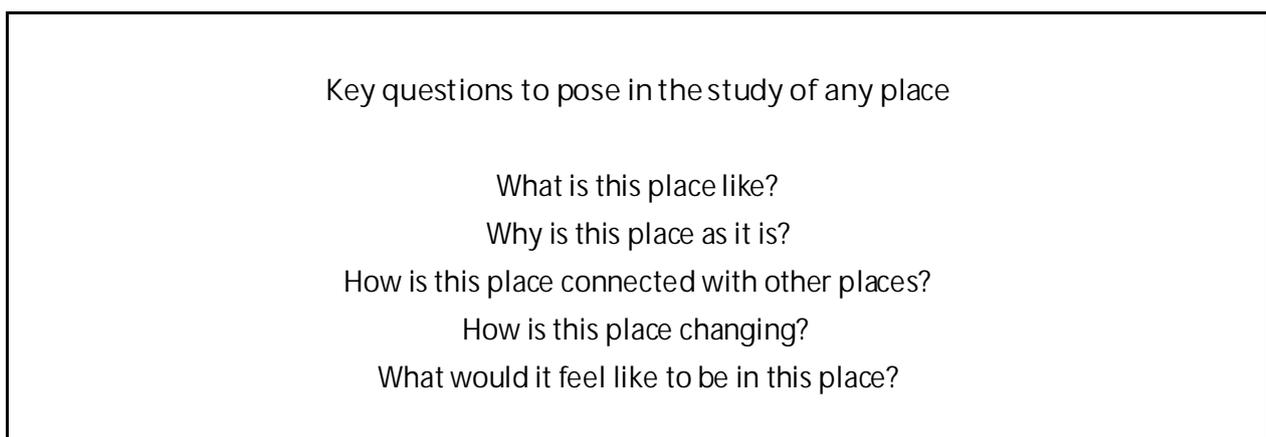


Figure 1: Storm's five geographical enquiry questions for the study of places (Storm, 1989, 4)

Although the enquiry process was being adopted in geography teaching in primary and secondary schools, the only published research into how teachers actually put it into practice was conducted in some secondary schools by Roberts (1998, 164-167; 2003). The findings were used to inform the 1998

QCA discussion paper. Her data revealed that secondary school teachers of geography interpreted the term enquiry in a variety of ways. She suggested that these teachers had been affected by their own past geographical experiences as both students and teachers.

Most recently, Lambert argues that with the many changes which have taken place in the national curriculum since 1991, and alongside other issues affecting schools,

Despite lip service paid to techniques to promote 'enquiry learning', geography fundamentally fulfils the requirements of an 'answer culture'. (Lambert, 2004, 78)

If Lambert is correct, then attention should be paid to how trainee teachers are introduced to the concept of enquiry and develop their understanding of the term. The research reported here examines this within the context of a course for primary geography specialist students.

Research method

In year 2 of the Bishop Grosseteste College '3+1' honours degree programme, geography students follow a module entitled 'Children and Places', in which they examine the practicalities of teaching the National Curriculum orders in primary schools. The year 3 module 'The Geography Subject Leader' examines in depth the role of a subject leader. Towards the end of their 3-year degree programme, seventeen geography subject specialists were asked to complete a questionnaire designed to collect data on their understanding of the term geographical enquiry.

Students were told that the questionnaire was designed in order to help the course team improve further the quality of experience offered to geography specialists. It was handed out towards the end of a timetabled teaching session in the module 'The Geography Subject Leader'. Students were asked to sit alone to complete the form. No tutor was present while the forms were completed. The forms were designed to be anonymous. Students were asked to leave the completed forms in a box when they left the session.

The questionnaire consisted of five questions. Each question is stated below, together with the reasons for the use of that question.

Q 1. As a geography specialist, what does geographical enquiry mean to you for your work so far with official sources?

This question was designed to assess the extent to which students' reading of a wide range of statutory and non-statutory documents may have influenced their understanding of the concept of enquiry.

Q 2. How would you know when enquiry was actually being used in primary school geography lessons?

Here, students were encouraged to consider the evidence they thought they would need to show that children were engaged in an enquiry process. It was also included to help them think about the evidence they might collect as geography subject leaders.

Q 3. What evidence have you seen of geographical enquiry during school placements?

If Roberts (1998) is correct, it was considered to be relevant to consider the possible impact of what students observe taking place in schools.

Q 4. Many sources suggest that the most effective enquiries are those generated by the pupils themselves. How can this actually be achieved, while at the same time ensuring the national curriculum orders are covered in full?

This question encouraged students to comment on the extent to which pupils' own questions about the world may or may not be connected with the statutory content of the national curriculum. It was also included to see if students challenged the validity of a centrally imposed curriculum.

Q 5. Just imagine that in a future review of the foundation subjects, it was decided that teachers could re-define the concept of geographical enquiry. What would you do and why would you do it?

The final question was included to encourage students to break away from what they had read and seen in schools. It was intended to be an opportunity to express their own views on what geographical enquiry might be.

The replies to each question were analysed separately and collated to build up a picture of the range of responses. This also provided an opportunity to identify patterns of response. Words, phrases and ideas were grouped together where similarities were identified. Students' comments were read carefully for any evidence of how tutor opinion may or may not have been transmitted during the taught modules.

Links across the questions were also examined; for example, if a response to one question might also be linked to a similar response to another question. An example of this was whether students who had seen very little enquiry taking place in schools had a particular picture in their minds of what they might actually identify as enquiry.

The data was examined for any evidence of language from various sources being drawn on or used in the students' own writing. For instance, were Storm's original set of enquiry questions (Figure 1) a major part of their vocabulary?

Written responses can only provide part of the picture of student understanding. However, it was decided not to interview students since it was felt that anonymous replies might result in more honest and realistic answers. At the time the research was conducted, the cohort still had to have an interview as part of their assessment for the year 3 module and the subject team decided that it would be inappropriate and unethical for students to feel that interviews for the research might influence how they were formally assessed.

Findings

Overall, there was considerable conformity across the responses. This created a number of patterns that are discussed below. However, some interesting individual statements offer insights and raise issues about the teaching and learning in the 3-year programme.

Question 1: Personal understanding of the meaning of 'geographical enquiry'

Almost all students placed emphasis on the need for children to pose geographical questions based on their own interests. They justified this by the need for children to 'make it their own learning', 'to try out their ideas', and how such enquiry 'promotes curiosity'. They did not go into detail about the questions and there were no examples of Storm's enquiry questions used for illustration. The emphasis was very much on children posing their own questions. They did, however, suggest that the pupils' questions would be of a 'geographical nature'. They did not discuss how pupils might actually know what type of questions to be asking.

Although this liberal approach dominated their replies, more than half the students also stated that the teacher would have some form of control over the process of selecting the questions that children would follow. The process would be 'structured by the teacher', 'discussion - directed by the teacher although children would not realise this', and 'can be structured as much or as little as a teacher thinks necessary' are examples of their thinking on this process. There appears to be some tension between wanting children to learn how to pose questions independently while at the same time allowing the teacher to control the process in some way. This is developed further in replies to question 4.

Question 2: Knowing geographical enquiry is being used in a geography lesson

This question asked students to identify evidence they might see in school to show whether or not enquiry was being used. It was also included to encourage students to think for themselves how they might do this as a geography subject leader.

Although they stated that they would be looking for pupils asking geographical questions, they included more precision by suggesting that the types of questions should be studied: were they open or closed? Replies to this question also showed more detail about the role the teacher might play in developing enquiry questions. The majority of answers suggested that pupils would ask the initial questions and teachers would help them to clarify what they wanted to find out and how they might do it. The teachers' role appears to be one of ensuring that geographical learning is developed and that it is clearly focussed. Further evidence, they suggested, would come from seeing much practical activity and the use of a wide range of resources. A further trend was that there would be evidence of pupils demonstrating a change in their thinking about the area of geography being investigated. For example, after studying a river they would have clear ideas about how water flows and changes the landscape.

Question 3: Evidence seen in school of geographical enquiry in practice

Just over half the replies stated that no geographical enquiry had been observed during school placements, nor had they been asked to teach any themselves. These responses were followed up in some cases with examples of practice they had observed: 'most geography prescribed - little or no scope for geographical enquiry', and 'children answering questions set by teacher'.

However, those who said they had seen effective enquiry work gave examples taken from practical fieldwork activities in schools, for instance 'asking questions about why Cleethorpes had developed as a tourist place' and 'traffic survey - parking controls - testing ideas against reality'. This cohort of students appears to have had strongly contrasting experiences on school placements.

Question 4: Involving pupils in geographical enquiry generation

This question allowed students to respond in more depth to the tension between the need to provide a learning environment in which children can develop geographical enquiry, while at the same time ensuring the geography national curriculum was covered in full.

The majority of replies suggested that the teacher creates the overall framework within which pupils develop their geographical enquiries. They justified this by recognising that time was limited. Most replies provided evidence of how teachers might do this: 'teacher guides children's thinking', 'teacher gives children ideas of the issues', 'teacher is the most important person', and 'teacher checks children's enquiries before they go off to ensure within guidelines'. The overriding message to this question was that the teacher creates and controls the overall framework for enquiry learning to ensure statutory requirements are met. Alongside this, students also expressed the clear desire for children to develop their own questions and interests within this framework.

Reading the detailed responses to this question gave a sense of how students were trying to ensure that the nature of geographical enquiry would not be lost within the demands of legal requirements and other school pressures. Some were able to suggest ways of achieving this. Using literacy time to develop enquiries that also fulfilled NLS objectives and to think creatively and be flexible. Some replies also suggested that teachers could be secretly directive in making children think they had chosen an enquiry when they had not: "this will actually be decided by the teacher who will lead the children in a certain way during their discussions". Other replies were not as direct as this but perhaps suggested this method may be behind some of their thinking.

Question 5: Redefining geographical enquiry

Half the students wrote that they were 'unsure' about how to respond to this question.

Those who did offer some ideas covered a range of ideas. The predominant word was 'freedom' for teachers to allow children to develop their own lines of enquiry based on their interests. This would then require more time for meaningful enquiries to develop. It is interesting to compare this with recent views expressed by the chief HMI on how the primary curriculum might develop, particularly in relation to increased cross-subject interaction (DfES, 2003).

Discussion

A recurring theme throughout the responses was how the teacher reconciles the need for genuine geographical enquiry within the practical constraints imposed by the school and legislation. Many geographical sources (eg. *Primary Geographer*, No.38, July 1999) provide extensive and challenging ideas on how enquiry can be developed in school, while perhaps not taking into account the context in which this teaching might take place. Perhaps specialist courses need to take this reality into account and provide opportunities for students to reflect on how they might respond. Rawling (2001) points out that the time available for proper and in depth consideration of both theory in education and the basis for academic subjects is limited in initial teacher education courses. As geography discipline specialists, may this be an appropriate time to ask critical questions about the nature of geographical enquiry? Might there be new ways of looking at how primary children develop an understanding of the world? Indeed, Catling (2003) argues that the time may be right for teachers and researchers to look more critically at such concepts as enquiry by considering how children view their worlds. If we are to develop a curriculum that takes into account what children wish to find out, we may be able to offer experiences they can see the point of pursuing.

The responses to Question 2 suggest that students are developing some critical skills in assessing how enquiry may be identified in school. The programme appears to be successful in preparing them to judge practice against some currently held views on the nature of enquiry. However, responses to Question 3 raise some concerns. Half of these specialists did not observe or teach enquiry methods on

placements experienced by all students. The placement of students may need to address this, for both geography specialist students but equally with regard to non-geography specialist students. Should, as a minimum, geography-based school experience be built into the specialist course in years 1 and 2?

Responses to Question 4 included phrases such as 'guided by the teacher' and 'teacher guides thinking right direction'. They reveal opportunities to draw out the underlying meanings of such statements to enable students to justify their points of view and understand more deeply why they hold them. This in turn may enable them to work alongside colleagues in school with greater confidence, having worked through their own positions on these issues. This in turn may help them raise questions about the essential nature of enquiry and why we actually believe it aids the development of geographical thinking.

Half of replies to Question 5 suggested students had difficulty in making a response. Initial teacher educators have become experts in training students to meet the Standards for QTS. But, surely a reflective practice model also needs to ensure that students have the ability to think and reflect on current received wisdom and educational theory? Are current programmes really preparing students for a world in which they may be able to influence the nature of primary education? Catling's (2003) notion of starting from the child's perspective may help students avoid taking for granted official notions of concepts such as enquiry. However, is this an approach that students will find in other modules in their programmes and, indeed, when they are on school placements?

Conclusion

Taking all the responses together, it appears that students are increasingly aware of what enquiry might look like if the model of primary geography suggested by Catling (2003) were to be adopted in schools. However, they may be reluctant, or indeed feel powerless, to challenge 'the current adult-orientated sense of geography' (Catling, 2003, 204) as their awareness grows of the influence of teaching for SATS, inspections and the current perceptions of some headteachers and teachers. However, many programmes do work with some partnership schools where increasingly the headteachers and governors are encouraging and supporting their staff to adopt new approaches to learning and teaching, now encouraged by the recently published strategy for primary education, which seeks to support children's learning and experience more explicitly and to see teachers engage in thinking about learning and teaching across the curriculum, not simply in subject boundaries (DfES, 2003). As a result of this research, the geography team is looking at ways to ensure that geography students have the opportunity to meet people from primary schools who are working to develop critically and imaginatively the nature of primary education. Hopefully, the lack of confidence that came through in many of the responses may be addressed by meeting people who have the confidence and initiative to innovate and show that it can work in the real world. In this way it may then be possible to look afresh at the notion of enquiry.

Asking questions about the world, investigating and exploring it directly and discussing one's discoveries with one's peers, are surely survival skills programmed into the young of our species. (Spencer, 2003, 233)

Spencer argues for education to work with children rather than to be about imposing concepts, knowledge and systems from outside upon them that in many ways are alien to the worlds in which children, in reality, live. However, one of the main structures imposed from beyond the child is the current Geography Order. We have a rapidly growing body of literature (Catling, 2003, 205-210) in the world of geographical education that argues for us to develop geographical experiences based more on children's own worlds and questions. Perhaps it is now time for the geography education community (teachers, researchers, headteachers etc.) to research and develop a very clear model of what an alternative to the current order might look like in practice and how geographical experiences really are a vital part of children's education in the primary school.

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