

**0666**

## **POISED: Perception Of Identity in Science Education Doing research with pupils in India and England**

Maarten Tas, Hugh Busher

*University of Leicester, Leicester, United Kingdom*

### **Background**

The idea for the POISED project developed from the partnership of the School of Education, University of Leicester, with X College, a comprehensive 14-19 school in Leicestershire, and the link of this school with a 4-19 academy in India (K College) following the English national curriculum.

Because of the notions of one of the Science teachers at X College was that the behaviour and interest in Science seemed to be very different from what he had seen in schools in India we decided to look at how students view themselves as science students and citizens, and possibly how carers/parents view their children in these areas. A collaborative project with a school in India would foster a greater understanding between students from India and England about school life and engage students with online technology. It would also help students and teachers to have a greater understanding of life, work and school in India and England, through considering students and teachers' perspectives on this.

When students at X College had been approached and attended meetings to discuss the ideas for this project it became clear that one of the objectives for this study could be to help students develop as researchers and communicators. The students were very excited about the cross-cultural dimension and the idea of developing their identity as Science students, Researchers and global citizens. They were very keen on helping to develop ideas of how to make this collaboration successful.

After completion of the first phase of this project, the idea is to involve Inner City Schools in Leicester with a high percentage of second or third generation of pupils from Asian immigrants, and an all boys school and all girls school.

### **Research Questions**

- How do students construct their identities as Science students?
- How does this relate to the context of the national curriculum?
- How does this relate to gender?
- How does this relate to ethnicity?

### **Methods**

On the virtual learning environment (VLE) of X College, a website has been allocated for POISED, accessibly only to the people involved in the project.

The website on the VLE used by X College is used for the following student activities:

1. Putting on photographs, audio clips and video clips
2. Diaries in the form of blogs
3. Surveys and questionnaires

#### 4. Discussion board for research ideas

Semi-structured interviews are conducted with a representative sample of students, teachers and parents/carers.

Bibliographic information of participants such as age (students)/ years of experience (teacher), sex, subject specialism (staff), father's/mother's/ family's job (students), active religious practice, and ethnicity, and demographic information are taken into consideration.

The main focus of this study is to analyse the development of identities of students using the following:

##### 1. Diaries / Narratives

- - Blogs - semi-structured, guided by questions/ prompts
- - Photographs (electronic, possibly arranged into story boards to explain student perspectives on school/ on science, possibly used to enrich interviews)(Prosser, 2006, Busher, 2009)

##### 2. Questionnaires

Change in perception of students (and maybe of teachers) of identities as Science students, as Researchers, of others (in the other country) as science students and citizens (maybe involving parents).

##### 3. Interviews

Group interviews: Skype, Video streaming/ Discussion Board

Individual interviews: semi-structured, Face-to-face, Online or by Telephone (Skype). These may be repeated after 6 months with:

students

staff involved with the project

parents / carers

##### 4. Attainment data (value added)

#### **Frame**

Students take part in two ways:

1. As Researchers: these students assist with the design and running of the project and support for the students enrolled in the study. They can also take part as Science students.
2. As Science students: these students will be predominantly KS4 students who communicate with KS4 students from K College about their life as Science students in their classroom, as peers, and as people in their community and at home. They will also work collaboratively on a project based on the 'How Science Work' (HSW) section of the National Strategies framework for KS4 Science.

For both student groups 'student voice' (Fielding, 2004, Rudduck and Flutter, 2004, Busher, 2009) 'collaboration' and 'identity' (Giddens 1991, Kearney 2003) are the main theoretical frameworks.

That will help us understand the development of their identities and impact on understanding this part of the science national curriculum.

Accessing students' perspectives in England is encouraged by DCSF (2008) and is framed by two major education policies. 'Working Together: Listening to the voices of children and young people' (DCSF, 2008) sets out how engagement in learning can be improved by giving young people a say in decisions that affect them and how it helps them develop a more inclusive school environment. How Science Works (HSW) is the key to the new KS4 Programme of study in Science. The section on 'communication' states the requirement that pupils learn to develop arguments, use scientific, technical and mathematical language, conventions and symbols and ICT tools, while the section on 'application and implications of science' states the requirement that pupils should be taught to consider how and why decisions about science and technology are made, including those that raise ethical issues, and about the social, economic and environmental effects of such decisions.

### **Research findings**

We expect this study to give insights in to how students begin to construct their identities as Science students, and respond to participating in developing learning projects in particular policy contexts. It will also give insights into the impact of online collaboration by students on their developing selves.

### **References**

Busher, H (2009) Is it Ethnography? Some students' views of their experience of Secondary schooling in England, ECER, 2009

DCSF (<http://publications.everychildmatters.gov.uk/eOrderingDownload/DCSF-00410-2008.pdf>) [accessed 22 Jan 2010]

DCSF (<http://curriculum.qcda.gov.uk/key-stages-3-and-4/subjects/science/keystage4/index.aspx>) [accessed 22 Jan 2010]

DfES (2008) Working Together: Listening to the voices of children and young people Change for Children, London: DfEs

Fielding, M. (2004) Transformative approaches to student voice: Theoretical underpinnings, recalcitrant realities, BERJ, 30, 2, 295-310.

Giddens, A. (1991) Modernity and self-identity: Self and society in the late modern age, Cambridge: Polity Press.

Kearney, C. (2003) The Monkey's mask: Identity, memory, narrative and voice, Stoke-on-Trent: Trentham Books.

Prosser, J (2006) Image-based Research: A Sourcebook for Qualitative Researchers, London:

RoutledgeFalmer Rudduck, J. & Flutter, J. (2004) How to improve your school: Giving pupils a voice, London: Continuum Books

Wall, K. & Higgins, S. (2009) Pupils' views of Templates: A visual method for investigating children's thinking, ESRC Seminar on visual methods, University of Leicester 13 & 14 Jan 2009