

CHERIL Report: Evaluating Field-based Learning: Multidisciplinary Mobile Mapping Methods

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Project duration: January – July 2015

1. Brief description of project:

The project was designed to provide insights into novel approaches to field-based learning, which are relevant to many disciplines and the wider student learning experience. It comprised the initial evaluation of the GoGoGozo course, a field course conducted as part of a 3 year Erasmus+ funded project based at Manchester. The course, which takes place over 10 days in the Maltese island of Gozo, delivers personalized and playful research experiences to students from 5 different institutions (Manchester, Warwick, Malta, Utrecht (The Netherlands) and Olomouc (Czech Republic)) and from 7 different disciplines (Geography, Sociology, Island Studies, Development Studies, Geoinformatics, Game Studies and Interdisciplinary Studies). Learning is focused on playing and designing a series of location-based 'serious games', which employ mobile and ICT technologies and mapping methods to facilitate a participatory pedagogic encounter. Students are exposed to different ways of 'doing' research, involving a complex and personalised dialogue with methodology and the field. The evaluation conducted through the Cheril funding aimed at assessing these novel field practices on the first iteration of the field course (23 March – 02 April 2015), with regards to specific improvements for subsequent years and their potential as broader innovations in Higher Education. As such, it sought to contribute to the University of Manchester's goal of excellence and innovation in teaching. The aims of the evaluation were as follows:

- auditing digital, mobile and map-based research methods and skills in the field;
- assessing the potential of playful, experiential and participatory learning in this context;
- reflecting on student feelings and feedback about the innovation;
- evaluating impacts and benefits vis a vis HE quality improvement.

2. Project methodology:

The research on this project entailed three main parts: a review of existing courses and their methodologies at the UoM; the detailed documentation of activities, student experiences and reflections in the field; and an analysis of the findings with regards to conceptual discussions around mobile, playful methodologies. Student participants were recruited on a voluntary basis from the Manchester group (7 out of 13 students in total). Most of the field research was conducted by the Research Associate, who was not involved in the assessment elements of the course. However, she did have some input into pedagogical elements, for example in facilitating some game activities and giving advice on projects.

The full methodology of the project is outlined in the following table:

Research Activity	Methods	Participants	Time scale
Audit of residential field courses at the University of Manchester	Desk-based search	N/a	Pre-field course (Feb 2015)
Review of Geography field course teaching and learning methods	Desk-based search	N/a	Pre-field course (Feb 2015)
Review of teaching and learning on previous Gozo field courses	Desk-based review of course materials, student reflections and feedback Interviews with staff	2 key staff	Pre-field course (Feb 2015)
Survey of student expectations on field trip, and their familiarity with play-based teaching methods	Pre-field course email questionnaire to students	6 UoM students	Pre-field course (mid-March 2015)
Documentation of innovative learning and teaching tools employed on Gozo field trip	Interviews with staff facilitators Review of course materials In-the-field observation with a detailed diary of activities	2 staff facilitators	During field course
Analysis of student experience on field course	Participant observation with audio-visual recording Review of reflective student diaries Individual interviews Evaluative focus group at end of field course	6 UoM students	During field course
Evaluation of achieved learning aims and post-assessment reflection	Review of submitted reflective pieces Post-field course meeting	6 UoM students	Post-fieldcourse (April / May 2015)
Analysis of findings with regards to conceptual and theoretical framings	Preparation of academic Recommendations for further course development Other dissemination activities	N/A	Post-fieldcourse (May/ June 2015)

3. Findings

Review of existing field courses

Fieldwork is an essential element of many higher education courses. In Manchester, residential field courses are offered in all but one Faculties, ranging from first year introductory excursions to Masters Level courses and extended research trips. For this project, we reviewed 21 residential field courses (11 in the Faculty of Humanities, 9 in the Faculty of Engineering and Physical Sciences, 2 in the Faculty of Life Sciences) in greater detail based on course outlines, handbooks and, where possible, conversation with course leaders. General insights from this are as follows:

- Residential field courses are considered an integral element of the degree programmes
- There are a number of main functions and goals of residential field courses: the practical application of theoretical and conceptual knowledge in a real world setting; the development of research skills; the development of specific field techniques; increasing social competencies
- While the specific set-up of the courses vary, they generally include a mix of teaching methods, such as lectures, excursions, talks from practitioners or local experts and hand-on learning.
- Almost all courses feature a student-led research project which includes some independent research design and primary data collection.
- Assessment usually takes place in the field, often with a mix of individual assessment and group presentations focused on the independent project.

These points emphasise the importance that is given to field work, with regards to both practice-based learning and research training. The central role of student-led projects also confirm a recent shift towards more independent modes of field learning in which students take an active role. At the same time, many residential field courses reiterate traditional notions of the field as a fixed site to be discovered and researched by students. They also tend to emphasise traditional disciplinary methodologies and approaches, even if the field course activities can be lively and innovative.

A more detailed evaluation of Geography field-based courses highlights many aspects of best practice. These include:

- a systematic and ongoing attention to the integration of the field experience into wider curricular structures;
- a progression in scale and reach of courses from first year local experiences, through to second year overseas and residential courses and third year options;
- a focus on research training in preparation for dissertation work;
- a critical emphasis on student-led and deep learning;
- the central role of the student experience in field work (with high UEQs);
- the importance of field work in the branding of Geography@Manchester;
- where possible student choice of theme and venue;
- a recognition that the field experience required both preparation and follow up work.

A more detailed evaluation of an innovative third year field experience was incorporated into this research, in order to evaluate the potential of radical rethinking of field practice.

GoGoGozo: substituting field 'work' with field 'play'

The GoGoGozo course starts from the assumption that fieldwork needs to be understood as a relational, situated cultural practice which takes place in a wider context. The field is not a fixed site but emerges in a series of encounters that include local configurations, disciplinary identity, the material and the experiential. The course aims to introduce students to the contested nature of 'islandness' through a focus

on the hybrid and ambiguous ways in which islands are practised. What is unique, however, is that it does this through a fundamentally playful approach. In this initial year, students worked in multi-disciplinary and multi-national groups to investigate a research theme of their choice, from food to surveillance. They do so through three 'big' games (a mobile location-based game, a smell walk, and a *dérive*) and a series of other playful activities (island-focused board games, quizzes, social physical games). Each of these subvert traditional research encounters in interesting ways and foreground the mutability, mobility and partiality of research practice. During their research the group use a variety of techniques to document their experiences, including video, GPS tracking and reflective diaries. The interplay of digital and non-digital media adds to the learning experience. The final presentation of the research outcomes takes the form of a game or playful experience. Assessment was not focused on this specific research outcome but on the process, split into a reflective diary and a final piece of coursework in which students address their research question in relation to both the wider themes and their personal experience of the course. The other novel aspect of this field experience was the interdisciplinary and multinational context in which it was practiced. Encounters between students and staff from different contexts were designed to focus attention on the ways in which field knowledge emerged.

Main themes emerging from the evaluation

1) Alternative modes of knowledge construction

The emphasis in GoGoGozo lies on exploration, on multiple and partial perspectives in research and learning, which stands in contrast to most other forms of methods and research training experienced by Geography (and indeed other) students in Manchester. Students appreciated this alternative perspective but also struggled to set it against existing training – this emphasises the need for solid traditional methods training but also a process of 'un-learning' as a grounding for more experimental approaches. It also became clear that the playful learning encounters created their own tensions. Exploration and openness need to be balanced with depth and rigour. This in turn requires targeted and well-supported periods of reflection that allows the students to re-engage with their often fleeting and highly performative encounters and experiences in the field.

2) Co-creation of fieldwork encounters

The set-up of the field course and its underlying assumptions and directions emphasise that the field is not a fixed site but is multiple, practised and performed through the engagements of all the field course participants in the widest sense. This firstly highlights the crucial role of practicalities, and logistical set-ups in field trips. The common social space in the hotel in Gozo, including joint meals and board game evenings, played an essential role in facilitating the positive social dynamics. These spaces also served as sites of informal reflection and advice, with activities from the day being discussed and shared. Employing a game-based learning structure also highlighted the co-creation of the field course from local elements: through serendipitous encounters with the population, embodied immersion in local stories or moments of 'getting lost'. Rather than trying to fix and control these encounters pre-emptively in the course design, the course actively made use of these unpredictable events as learning moments.

3) Interdisciplinarity

An important objective of the GoGoGozo course is to introduce students to a genuinely interdisciplinary way of working in the inherently multi-disciplinary field of island studies. This is reflected in the mix of students in each group, the mix of the staff and disciplinary influences, and the openness of the games towards different modes of playing. The course revealed the challenges of this approach. Firstly, disciplines can become dominant through a variety of social and methodological factors. A vernacular command of English gave Manchester students certain advantages over non native English speakers. Secondly, attempts

at working across approaches can result in flattening all diversity to a lowest common denominator, or conversely, in students essentialising the approaches they are most familiar with. Yet the evaluation also brought to light moments of true interdisciplinary practice and insight. These emerged in particular where all students were exposed to a new method or idea (in this case for example the practice of the smell walk as a sensory method), or during periods of creative 'making' (the creation of the smell maps, the final game presentation).

4) Temporality

Field courses generally follow a well thought-out sequence of activities that build upon each other towards a final, often assessed, outcome. Yet in practice this temporality is a lot more fluid and subject to different rhythms. Several points emerged here from the evaluation. Firstly, the field course, even if mostly taught in the field, also includes the before and after as integral elements. Here, the decision to pre-choose the teams, to give little preparatory material, and to have a final assessment several weeks after the return to Manchester all mattered and changed outcomes. Secondly, the question of how to sequence games is an important one such that open encounter and exploration are not stifled by rules, but deeper engagements can develop. Thirdly, the students' learning journey throughout the course cannot be understood as a smooth progression. It fluctuated through periods of excitement, confusion, frustration and understanding, which were different for different students. Allowing the course activities, assessment and evaluation to respond to these rhythms can open up new and exciting learning patterns for the students.

5) The ambiguous role of technology

One focus of the course lay on mobile mapping methods, and the many technologies, both digital and non-digital. Students were introduced to field diaries, paper maps, GPS trackers, video cameras and Fitbit performance trackers, as well as using their own smart phones and other equipment. The course was not focused on skills training with these tools, rather they were introduced as elements that groups could freely enrol into their research practice. However, it emerged that a dedicated introduction to these technologies and especially their integration and subsequent analysis is necessary. Students at times felt overwhelmed without being able to explore all the possibilities of these tools, or ended up collecting data without thinking of it as part of a wider process. At the same time, diverse technologies also harbour clear possibilities for mobile research that builds different spatial relations. Some groups employed different technological capabilities as a way to manage interdisciplinarity, others were less able to engage with differing technological literacies that different members brought to the field experience.

4. Future areas of improvement

One of the unique features of the GoGoGozo course is its iteration: the course will take place with similar aims over three years, allowing different elements to be trialled, evaluated and improved. From this first year, great number of recommendations for improvement have been developed. Some of the key areas include:

- *Changing Group Selection and Dynamics*
 - greater flexibility in group work, with potential shifting team composition;
 - a period of getting to know one another before setting up groups, and more opportunities to reflect on change over the course;
 - a period of skill exchange within groups to appreciate different backgrounds and approaches.
- *Overall structure*
 - more pre-course preparation;
 - change order of games to give more value to free exploration;
 - set aside more structured but creative reflection time;

- provide clearer technology training to encourage own exploration;
- a rest day earlier on.
- *Conceptual issues:*
 - clarify goals and activities towards attaining them;
 - re-thinking the role of the island in the course themes;
 - more creative activities of design and making;
 - greater integration of staff.
- *Practical issues:*
 - more clarity on structure of activities and assessment;
 - better communication with students and between staff members.

5. Reflections on evaluation practice

Alongside these points, the project also revealed interesting observations about the practice of evaluation itself. Most residential field courses, like other modules, are evaluated through a standard final course unit assessment. The Cheril project allowed us to introduce a completely different form of ongoing evaluation that started before the course itself and extended into the time after, and which captured very different aspects. Rather than providing an aggregate or average score across different and largely questionnaire generated questions, the researcher was able to trace a multiplicity of student voices in some qualitative depth, revealing nuances and differences easily lost otherwise. The processual approach also highlighted the learning journey of students (and staff), revealing the importance of temporality in evaluation and the need to perhaps trace developments which would not be revealed by a one-off snapshot. This then raises questions about the potential of evaluation in making immediate adjustments to the practice and conduct of the field course.

6. Dissemination

The findings of the research have been and continue to be disseminated along diverse channels:

At the University of Manchester:

- creation of a website presenting the course and its unique pedagogical approaches: <http://www.seed.manchester.ac.uk/subjects/geography/research/impact-cases/mobile-mapping-methods/>
- Publication in Geography newsletter April 2015
- Departmental seminar on field-based learning October 2015
- Presentation at CHERIL conference (forthcoming, December 2015)
- Publication in Teaching and Learning Newsletter (forthcoming, January 2016)
- Workshop at Teaching and Learning Conference (forthcoming, January 2016)

For other institutions and global audiences:

- Conference papers at American Association of Geographers Annual Meeting (Chicago, April 2015) and Royal Geographic Society (Exeter, September 2015)
- Conference panel and paper at Small Island Studies Conference (Gozo, June 2015)
- Seminar at the Education and Social Research Institute, Manchester Metropolitan University (November 2015)
- Workshop for the Games and Learning Special Interest Group of the Association for Learning Technology (November 2015)

7. Summary reflections on the project itself

The field experience will continue as an Erasmus+ fully funded innovation and the intention is to continue to evaluate the experience for participants. As such it is sustainable beyond the first year of CHERIL funded evaluation.

The most important lessons learnt from this year's CHERIL finding are as follows:

- the key role of researcher positionality when assessing pedagogic practice;
- the challenges of rolling out innovation beyond discipline silos;
- the differences that stem from different degrees of student enrolment;
- the difficulty of generalizing from a single in-depth case, to other and very differently structured pedagogic field experiences;
- the huge potential of a processual and student centred evaluation process.

Different mixes of students and staff and enacting changes in the light of last year's research will inevitably alter next year's field course and will make direct comparison with this year challenging. We have gained research support to investigate the design of a proof of concept mobile app to deliver field based pedagogic investigation and will continue to evaluate Gozo based practice. However, without follow-on CHERIL funding (a bid for second year funding having failed) the nature of evaluation will inevitably change.