

Innovation, originality and contribution to knowledge – building a record of doctoral research in geography and environmental education.

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Abstract

This article explores the possibilities for *International Research in Geographical and Environmental Education [IRGEE]* to facilitate the composition of a new strand of information on contemporary education research. The opportunities for further informing our community about successful doctoral research studies in geographical and environmental education, by providing brief synopses and related information about recently completed theses, are exemplified. The authors believe that *IRGEE* might enable thesis writers to communicate their research to others in and beyond their field, increasing our knowledge and understanding of the range of topics studied by geography and environmental educators. Twelve summaries of theses completed between 2011 and 2014 are appended to this article, as exemplars. It is hoped that publishing them might stimulate further interest in submitting summaries of recent and future theses for publication. Information about how to do so can be found on the International Geographical Union Commission on Geographical Education [IGU CGE] website.

Introduction

For some time certain members of the geography education community have discussed the possibilities of building an organised record of abstracts, or synopses, of doctoral theses in their field. Within the Geography Education Research Collective [GEReCo] - a small group of research-active geography educators based in English universities - colleagues have deliberated the practicalities of creating a national database of information about doctoral theses (and, indeed, Masters dissertations) since 2012. Similarly, the UK Committee of the International Geographical Union Commission on Geography Education [IGU CGE] has also debated such ideas since their Autumn meeting in 2013 – not entirely co-incidentally, given the overlap of membership between GEReCo and the UK Committee. At the international scale the full IGU CGE has ‘gone one better’, having organised the collection and collation of concise information on Masters (MA and MEd) dissertations, DPhil, EdD and PhD theses since 2014. This enterprise, one of six ‘programmes of work’ for the Commission from 2012 to 2016, has been conducted globally, with self-generated contributions being gathered online (https://docs.google.com/forms/d/1nrbVzveqZWDWWdouJfnKAK-ctHDdKwOdt7xxt34mee8/viewform?usp=send_form).

This article suggests the possibility of developing a further aspect to this initiative, which might best be described as ‘running in parallel’ to the IGU CGE online database. Its purpose would be to provide readers of *International Research in Geographical and Environmental Education [IRGEE]* with a regular digest of synopses of recently completed doctoral theses in the fields of geography and environmental education. On behalf of GEReCo and the UK IGU CGE Committee, Simon Catling made such a proposal to the journal editors, John Lidstone and Joe Stoltman, as well as to the co-Chairs of the 2012-16 IGU CGE Steering Group (John Lidstone and Joop van de Schee). To date twelve doctoral synopses have been gathered from around the world from successful doctoral students (who were awarded doctorates between 2011 and 2014), primarily through contact with their supervisors. We agreed that 2011 would be a convenient ‘start date’ for this exercise and do not propose seeking information

about doctorates written before this, although these can be provided for the IGU CGE website (noted above).

An earlier example of such an enterprise, similar to our intentions, is accessible in the journal *Environmental Education Research* [EER]. In selected editions from April 2013 EER has provided its readers with thesis abstracts in environmental education from around the world. The paper which introduced this venture (Reid and Payne, 2013) provided an introductory commentary and ten thesis synopses, with accompanying contact information and brief details about the theses' authors. Reid and Payne (2013) highlighted that the successful completion of a research degree represents a significant 'moment and marker' in the careers of researchers - which arguably begs wider communication through the auspices of appropriate journals. The tangible expression of this 'marker' – the thesis – is viewed as 'the principle catalyst for generating and encapsulating an initial, original, distinctive and durable contribution to researched knowledge' (Reid and Payne 2013, 243). They acknowledge, as we must also, that in a globalised world, across a wide range of institutions which have the power to confer doctoral awards, there will be variations in the expectations and characteristics of theses. The doctoral thesis remains an indication to the academy (and indeed to the wider public) that a person has reached a particular point in their intellectual journey, witnessed through the production and defence of a piece of sustained and original scholarly work – even though the nature of a 'doctorate in education', whether it be through a PhD or an EdD route, may vary somewhat. We note such differences but observe that when education doctorates from around the world are compared with those in (say) the natural sciences, these 'internal' differences may not be as significant as those across disciplinary boundaries. Inevitably there will be issues about whether the intellectual contribution made to the sum of useful knowledge by a particular thesis is noteworthy. There may also be questions about how insightful and original such work may be – in essence, whether or not its research enables an aspect of geography or environmental education either to 'advance intellectually', to 'revitalise', or to 'flourish' (Leonard, Becker and Coate, 2005). Such debates must continue elsewhere.

It is worthwhile to remind ourselves that in different countries access to undertaking a PhD – with respect to the funding required, the nature of the study, the research themes suggested and the types of doctoral programmes offered – vary considerably. Perhaps one of the most important shifts since the early 1990s (in some countries) has been the rise of the taught doctorate, or EdD, compared with the 'traditional' PhD route. To use a rather hackneyed distinction, the PhD is sometimes viewed as the most appropriate qualification for professional scholars, with the EdD best suited to scholarly professionals. Perhaps we should simply accept that both are equivalent doctoral awards and that despite their variations we must celebrate the fact that any doctoral thesis 'is both an idea and an account of a period of original research' (Anon, 2010).

What is the value of the doctoral thesis?

The question we pose is not a facetious one. There have recently been a number of articles in the popular press that have questioned the value of doctoral work – admittedly often written by unsuccessful, ex doctoral students! Many such writers harboured little intention of eventually pursuing an academic career – in which doctoral status has an elevated importance and is often an employer's expectation. Nonetheless, we should still take time to consider the general value and relevance of the doctorate. We must also remind ourselves that it is still possible to have a successful career in academia, and to be a respected scholar and researcher,

without the possession of a doctorate – although examples of such individuals are becoming increasingly rare. Additionally, for those working as teachers in schools or academics in university education departments, the process of gaining a doctorate is often more protracted than for those in other disciplinary areas. The demands of working full time, while also undertaking part-time research study, are substantial. Full-time doctoral research students, who are qualified and experienced teachers, remain few in number.

Sokol (2012) warns prospective doctoral students not only that doctoral research will consume between three to five years of their lives, but also for those studying in UK higher education institutions the failure rate on such programmes exceeds 40%. Comparisons with programmes in other jurisdictions reveal similar, equally alarming, statistics. In the US 57% of students obtained their doctorates 10 years after enrolment, this figure dropping to 49% for students in the humanities. Casey (2009, 219) points to research that suggests that acquiring PhDs in the social sciences, languages and arts ‘does not enhance earnings significantly for either sex’ – although his comment refers to *all* career paths taken, not solely those in higher education. In academia, where a doctorate is often deemed essential before progression beyond the ‘basic level’ of a junior researcher or lecturer, enhanced earnings are usually not the prime motivation for one’s doctoral research. Casey’s paper attempts to illustrate how doctoral research can generate benefits for wider society – both in terms of knowledge gains, from which everyone can take advantage, and of increasing the productivity of those who work with employees who possess doctorates. This is as true for education doctorates as those in any other discipline, although societal and employer gains often appear greater than gains achieved by the PhD holders themselves. In some countries the number of doctoral awards has outstripped the demand for university lectureships – Hacker and Dreifus (2011), for example, note that around 100,000 doctoral degrees were awarded in the United States between 2005 and 2009; a period when only 16,000 academic posts in universities became available. They conclude that an ‘over production’ of doctorates (admittedly on a very crude notion of ‘supply and demand’ for employment in academia) may be occurring. Even with the acceptance that not all successful doctoral students will want to enter full time employment in (higher) education, there still appears to be a mismatch between ‘production and consumption’ – with only relatively few countries, such as Brazil and China, witnessing shortfalls (Anon, 2010).

The importance of communication

Citing Austin’s (2009) work on cognitive apprenticeship theory, Reid and Payne (2013) note that the successful completion of a doctorate often signifies the ‘end of the beginning’ in the induction and apprenticeship of a scholar or researcher. However, they also identify that there are tensions surrounding how:

policy makers, curriculum specialists, pedagogical developers and various other versions of ‘stakeholders’, might make sense of the research work and its implications, most notably beyond the strictures, complexities and length of the document itself (p.244)

We would seek to pursue this point, picking up on Reid and Payne’s (2013) later comment about the most effective means of communicating the essence of a thesis to those within and beyond academia. Here two actions taken by the IGU CGE are significant: (i) the global call and online repository for thesis titles, and (ii) introducing the possibility for regularly publishing thesis summaries (as suggested in this article). To gather a first sample of

synopses (n=12) we directly approached the supervisors of doctoral students who had recently successfully completed their theses. We adopted a set format to request information to ensure consistency, asking contributors to provide us with the following:

- Title of thesis
- Author
- Key words
- Summary
- Language of thesis
- Principal supervisor(s)
- Geography or environmental education supervisor (if not the principal supervisor)
- Conferring university, department and address
- Year conferred
- Type of doctorate (DPhil, PhD or EdD)
- Email contact of author (unless withheld)
- Web access to thesis (if available)
- English language publications available (if applicable)

The guidelines for submitting a synopsis (not an abstract) can be found on the IGU CGE website at www.igu-cge.org. We would welcome further contributions – with the intention that these are either published in future issues of *IRGEE*, or made available on the IGU CGE website. Even when a doctoral thesis has been written in a language other than English, a synopsis for publication in English would be welcomed.

The twelve summaries which are included in this edition of *IRGEE* (2011: Favier, Jo, Kim, Oda, Wolff, Wood; 2012: Weeden; 2013: Ellis, Lemmons; 2014: Fargher, Leonard, Seow.) have all been peer reviewed. They cover a range of aspects of doctoral research in geographical and environmental education, including:

- Subject conceptions and practices
- spatial literacy
- sustainability and environmental education
- geographical information systems (GIS) in education
- active learning
- 16+ examinations
- Global educators
- Study abroad programmes
- School linking

Their inclusion in this journal recognises, records and celebrates the work of doctoral researchers who have recently added to the canon of knowledge in the fields of geography or environmental education. Contributions will hopefully grow in future issues to provide a record of contemporary research undertaken in a variety of areas that researchers (and supervisors) believe are significant and valuable to the creation of new geographical and environmental education knowledge. Our intention is to stimulate discussion about a range of research themes at the international scale, while providing a useful record of the trends,

questions, theoretical advances, activities and ‘hot topics’ that have attracted doctoral researchers in different parts of the world.

Conclusion

We do not suppose, nor intend, that the summaries will provide other doctoral students or established researchers with extensive practical guidance about completing their own research – even if themes and enquiries are broadly similar. There are plenty of excellent, readily available, generic texts for doctoral students which are expressly designed to meet such needs (see, amongst others, Butin, 2010; Dunleavy, 2003; James and Slater, 2014; Morrell, 2009; Murray, 2011; Petre and Rugg, 2010, Phillips and Pugh 2010). The summaries may give some methodological hints, or theoretical insights, but can only do so in a condensed form in the space provided – access to e-thesis or print versions of the researchers’ original work will obviously provide the reader with more detailed information. What these summaries *will* do is to alert readers to significant new work in areas they may be interested in pursuing further, or help to stimulate comparative studies, dialogue and innovative enquiries.

We look forward to, and encourage, future contributions to this growing collection of summaries of doctoral theses in geography and environmental education.

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- Petre, M and Rugg, G (2010) *The Unwritten Rules of PhD Research*. (2nd Edition). Maidenhead: Open University Press.
- Phillips, E and Pugh, D (2010) *How to get a PhD. A Handbook for Students and their Supervisors*. (5th Edition). Maidenhead: Open University Press.
- Reid, A and Payne, P (2013) Thesis summaries: an innovation, introduction, guidelines and invitation. *Environmental Education Research*. 19(2), 243-259.
- Sokol, D (2012) Is a PhD the right option for you? *The Guardian*. 12th September.

SUMMARY PhD THESIS INFORMATION

2011

Title: *GIS in secondary geography education: Theory and Practice*

Dr. T.T. Favier (t.favier@fontys.nl)

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Language: English

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Key words: GIS, secondary education, geography, inquiry, fieldwork

Summary: Since the 1990s, more and more people in business, government, and science have started using Geographic Information Systems (GIS) to analyze and solve spatial problems. However, the use of GIS in secondary geography education remains very limited. One of the main reasons for its limited use is that little is known about the characteristics of optimal approaches to teaching geography with GIS. This dissertation focuses on this issue, by discussing the outcomes of an Educational Design Research project. In this project, a GIS-supported geography instruction method was developed via several cycles of designing, testing, and evaluating.

The main conclusion of the research is that GIS holds many opportunities for modern education in which students learn geography by engaging in geographic enquiry. However, there are also many requirements for successful implementation of GIS. Students have to learn how to use the software, and have to learn how to analyze spatial problems systematically. In order to design good tasks and coach students in an optimal way, teachers need to be able to reorganise and transform their own geographic subject knowledge and geographic methodological knowledge so that it becomes accessible for students.

This dissertation presents a theoretical framework for geography education with GIS, and practical guidelines for designing and coaching GIS-supported instruction methods.

Publications:

Favier, T.T. & Van der Schee, J.A. (2009). Learning Geography by Combining Fieldwork with GIS. *International Research in Geographical and Environmental Education*, 18(4), 261-274.

Favier, T.T., Van der Schee, J.A. & Scholten, H.J. (2011). The diffusion of GIS in schools in the Netherlands: How to get things running. In A.J. Milson, A. Demirci & J.J. Kerski (Eds.) *International perspectives on teaching and learning with GIS in secondary schools* (pp.169-177). New York, NY: Springer.

Favier, T. T. & Van der Schee, J. A. (2012). Exploring the characteristics of an optimal design for inquiry-based geography education with geographic information systems. *Computers and Education*, 58, 666–667.

Title: *Fostering a spatially literate generation: Explicit instruction in spatial thinking for pre-service teachers*

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Key words: Spatial thinking, pedagogical content knowledge, teacher dispositions, pre-service teachers

Summary: This research proposes that the explicit incorporation of spatial thinking into teacher preparation programs is an effective and efficient way to foster and develop a spatially literate populace. This study's major objective was to examine the effect of explicit instruction in spatial thinking on the development of pre-service teachers' knowledge, skills, and dispositions toward teaching it.

A one-day workshop – Teaching Spatial Thinking with Geography – for pre-service geography teachers was developed as the intervention of this study. The primary focus of the workshop was to provide an explicit opportunity to learn about spatial thinking and to practice skills required to incorporate spatial thinking into participants' classrooms. Three assessments were used to examine changes in participants' knowledge, skills, and dispositions before and after the workshop: the spatial concepts test, the teaching spatial thinking disposition survey, and participant-produced lesson plans. Individual interviews were conducted to obtain a deeper understanding of participants' learning experiences during the workshop. It adopted a mixed-method research design in which both quantitative and qualitative methods were used to offset the weaknesses inherent within one method with the strengths of the other.

The major findings of this study include: explicit instruction about spatial concepts is necessary to the development of pre-service teachers' knowledge required for teaching spatial thinking through geography; the skills development required to teach spatial thinking should be approached as the development of pedagogical content knowledge; dispositions toward teaching spatial thinking should be differentiated from dispositions toward teaching general thinking skills; although explicit instruction about teaching spatial thinking contributed substantially to the pre-service teachers' acquisition of knowledge and skills and the development of positive dispositions toward teaching spatial thinking, each of these components develops at a different rate but affect each other; and a promising approach to the development of pre-service teachers' pedagogical content knowledge would be to offer geography education courses, not general geography or methods courses, in which the focus is explicitly on teaching geography with an emphasis on spatial thinking.

Publications:

Jo, I. & S. Bednarz (2014). Developing pre-service teachers' pedagogical content knowledge for teaching spatial thinking through geography. *Journal of Geography in Higher Education*, 38(2), 310-313.

Jo, I. & S. Bednarz (2014). Dispositions toward teaching spatial thinking through geography: Conceptualization and a model assessment. *Journal of Geography*, 113(5), 198-206.

Title: *Effects of a GIS Course on Three Components of Spatial Literacy*

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Language: English

Key words: Spatial literacy, Spatial habits of mind, Spatial concept, Spatial skill, Critical spatial thinking, GIS

Summary: This research investigated whether completing an introductory GIS course affects college students' spatial literacy as defined by spatial habits of mind, spatial concepts and thinking skills, and critical spatial thinking. This study employed three tests (spatial habits of mind inventory, spatial concepts and skills test, and critical spatial thinking oral test) to measure students' performance on these three elements and examined the relationships among the components. Pre- and post-tests were conducted at the beginning and the end of the 2010 fall semester, and US undergraduate students participated in the research. The following research questions were examined.

The first question investigated whether GIS learning improves spatial habits of mind (n=168). Five sub-dimensions of spatial habits of mind (pattern recognition, spatial description, visualization, spatial concept use, and spatial tool use) were identified. Overall, GIS students' spatial habits of mind were enhanced. However, variations existed when considering students' performance by dimension.

The second question explored whether GIS learning affects students' understanding and use of spatial concepts and thinking skills (n=171). This research found that the GIS course was beneficial in improving students' spatial cognition. Students increased their understanding of key spatial concepts and applied conceptual understanding into wider contexts with advanced spatial thinking skills.

The third question examined the effects of a GIS course through interviews about the three sub-dimensions of critical spatial thinking: data reliability, spatial reasoning, and problem-solving validity (n=32). The quantitative analyses indicated that participants developed their ability regarding these three sub-dimensions of critical spatial thinking. In particular, their ability to assess data reliability and problem-solving validity improved, an effect not likely to be enhanced by other coursework. Findings from qualitative thematic analysis confirmed these quantitative outcomes.

The final question probed the relationships among the three components of spatial literacy. Pearson's correlation coefficients, a 3D space (termed "score space"), a test for independence, and an exploratory factor analysis suggested that the three components are positively correlated. However, more research is necessary to confirm the results reported here.

Publications:

Kim, M. (2013). The role of gender and academic major on spatial habits of mind (SHOM) in GIS learning, *Journal of the Korean Cartographic Association*, 13(1), 73-86.

Kim, M. & Bednarz, R. (2013). Development of critical spatial thinking through GIS learning, *Journal of Geography in Higher Education*, 37(3), 350-366.

Kim, M. & Bednarz, R. (2013). Effects of a GIS course on self-assessment of spatial habits of mind (SHOM), *Journal of Geography*, 112(4), 165-177.

Title: *College students' GIS spatial concept knowledge assessed by concept maps*

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Language: English

Key words: Spatial Thinking, Spatial Concepts, Concept Maps, GIS Education

Summary: The development of spatial thinking proficiency has been increasingly demanded in Geographic Information System (GIS) education. Despite this educational trend, there is little empirical research on college students' spatial concept knowledge, which critically affects the quality of spatial thinking. This study addressed the following three research

questions: What differences may exist between students' understandings of spatial concepts at the beginning, middle and end of an introductory-level GIS course; What spatial misconceptions students may possess while taking an introductory-level GIS course; and Which spatial concepts are easy or hard for undergraduate students to understand.

The researcher asked twelve participants who were taking an introductory-level GIS course to create concept maps about space and revised their concept maps in three experiment sessions. For the first question, the researcher scored the sixty obtained concept maps and statistically analyzed those scores to examine if there is any significant difference among the scores of the three experiment sessions. For the second question, the researcher examined participants' misconceptions by analyzing the incorrect statements of distortion, map projection, and scale. For the third question, the researcher statistically analyzed concept-based scores to examine if there is any significant difference among the scores of three different complexity levels.

A main finding for the first question was that there was a significant difference among the scores of the concept maps created in the first session and the scores of the concept maps revised in the second and third sessions. This implied that participants could successfully revise their own original concept maps in the middle of a semester. The result of the study of the second question indicated that a half of participants misunderstood the concepts of map projections and scale. This suggested that some undergraduate students may have difficulty shifting from scientifically inappropriate spatial concept knowledge to appropriate knowledge. Analysis of the third question found that the concept-based scores of simple spatial concepts are significantly higher than the scores of complicated spatial concepts. This result inferred that participants' scores decreased as the complexity of concepts increased.

Publications:

Oda, K. (2011). Assessing College Students' Spatial Concept Knowledge in Complexity Levels. *Procedia Social and Behavioural Sciences*, 21, 63-72.

Title: *Nature and Sustainability: An Educational Study with Rousseau and Foucault*
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Amazon link: <http://www.amazon.com/Nature-Sustainability-Educational-Rousseau-Foucault/dp/3843387303>

Key words: Rousseau, Foucault, environmental education, sustainable development, ethics, nature

Summary: This study started from the premise that in most cases education has not succeeded in tackling environmental problems adequately. Despite many good attempts, there are still many gaps and tensions between human knowledge about how best to treat nature and the willingness to act in such ways. An increasing number of researchers have rejected the quest for changed attitudes and instead recommend more emphasis on what ethics entail in the context of environmental education.

This thesis contributes to the discourse about environmental education by focusing especially on the ethical dimensions of education from a multi-disciplinary cross-modern

perspective that comprises a blend of education, philosophy, and history. While education that deals with problems very strongly related to ethics eventually reveals contradictions both within particular individuals and among individuals, as well as conflicts at the societal level and on a global scale, important issues are ethical conflicts and power formations.

The main research question is twofold and focuses, firstly, on ethics and, secondly, on education and asks: What ethical dimensions are challenged by the enigma of sustainability? and What kind of education do these dimensions require?

Part One of this thesis investigates how education has dealt with nature and sustainability hitherto and identifies typical answers about why humankind has caused so many environmental problems. Part Two discusses how humans have dealt with their relation to nature in the Western tradition and made Europe the core of the world. This focuses specifically on the modern era, and on a particular representative of that age, Jean-Jacques Rousseau, and employs Michel Foucault's historical research methods. Foucault wanted the reader and the researcher to collaborate in a transformative process that raises doubt and considers things from completely new perspectives. Part Three concludes this process and brings the thesis back to a present day reflection.

The answer on the first part of the research question is: Human life has three basic dimensions: an individual, a social being, and a biological creature. All three dimensions interact constantly. To live responsible and free lives, humans need to understand and manage their own individual desires and requirements, and to feel comfortable they also need an understanding of their mutual interactions (personal relations, but also politics, economics, art, etc.), and the interrelationship between humans and the natural world.

The answer on the second part of the question is: Human life on earth calls for an education that emphasizes the human role as a biological species as the cornerstones in all of education. Knowledge about the world exists on the human border where nature and society meet; education and ethics can try to overcome and break down this border. The role of education is to train practical reason to consider the ethical conditions for mutual human undertakings and to identify the limits and terms nature sets for human life.

Publications:

Wolff, L.-A. (2011). *Nature and Sustainability: An Educational Study with Rousseau and Foucault*. Lambert Academic Publishing.

Title: *Developing an Active Learning Approach for the Geography Pilot GCSE – An Action Research Investigation*

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Principal supervisor: Professor Graham Butt

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Website access: <http://etheses.bham.ac.uk/1602/>

Key words: Action Research, Geography, Pilot GCSE, curriculum, learning, assessment

Summary: This study focuses on the degree to which an innovative GCSE course (the OCR Pilot GCSE in Geography) acted as a basis for active and innovative learning. Using a holistic framework intertwining curriculum, learning and assessment, a collaborative action research approach was used to develop an active and innovative learning environment, focusing on the work of two groups of GCSE students following the Pilot GCSE course. A conscious adoption of personalised learning approaches, linked to a radical notion of the nature and content of geography and an alternative assessment regime, led to the development of a course founded on the integrated use of information and communication

technology alongside independent learning approaches. These developments in active engagement were based on student perceptions of their own preferences with regards to learning and assessment. The action research took place over three cycles, and the results demonstrate that with the curriculum approach inherent in the Pilot GCSE specification, the development of active learning and authentic assessment opportunities were not only possible but in keeping with the philosophy of the course. There is less evidence that the emerging classroom pedagogy allowed students to deepen their investigation of geography, although there is some qualitative evidence for this.

Publications:

Wood, P. (2009) Locating place in school geography - experiences from the pilot GCSE.

International Research in Geographical and Environmental Education, 18(1), 5–18.

Renshaw, S. & Wood, P. (2011) Holistic Understanding in Geography Education (HUGE) - an alternative approach to curriculum development and learning at Key Stage 3. *Curriculum Journal*, 22(3), 365-379

Stevenson, H. & Wood, P. (2013) Markets, managerialism and teachers' work: the invisible hand of high stakes testing in England. *The International Education Journal: Comparative Perspectives*, 12(1), 42–61.

2012

Title: *An investigation of changing patterns of entry for GCSE Geography: Choice, diversity and competition*

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Principal supervisor: Professor Hywel Thomas

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Website access: <http://etheses.bham.ac.uk/3667/1/Weeden12PhD.pdf>

Key words: Subject choice, GCSE, Geography, England, entry patterns, curriculum, diversity, competition.

Summary: This study investigates issues of subject choice at 14 years of age. Geography is a popular optional subject choice in England and Wales at age 14, but between 1996 and 2010 numbers entering for the General Certificate of Secondary Education (GCSE) examination declined by 35.6% although total entries for GCSE had increased. This study sought to help the geography subject community better understand the reasons for this decline.

The research used NPD/PLASC data to investigate patterns of entry for geography at national level. This secondary data analysis was developed through the study of five schools which investigated curriculum diversity and competition between subjects at the school level. A conceptual model of the option choice system was used as the framework for analysis.

The results showed there was segregation in entry patterns with high attaining students and students in less deprived rural counties being more likely to study geography. Government policy had both direct and indirect influences on geography entries through curriculum decisions made by schools. Teachers and their pedagogy played a significant part in student choice but their influence on numbers choosing the subject can be constrained by whole school curriculum and option choice systems.

Publications:

Weeden, P. (2007) Students' Perceptions of Geography: Decision Making at Age 14. *Geography*, 92(1), 62-73.

Weeden, P. (2011) Inequalities of opportunity and the take up of GCSE Geography *Curriculum Journal*, 22(3), 401-422.

2013

Title: *The Personal and Professional Development of the Critical Global Educator*

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Website access: <http://ethos.bl.uk/SearchResults.do> [Type in the title of the thesis]

Key words: Global citizenship education, sustainable development, critical discourse, political literacy

Summary: The fragmented origins of global education in the UK and the development of Education for Sustainable Development and Global Citizenship separate from Citizenship Education mean that today the umbrella term 'global education' still covers a host of humanistic educations. In line with Huckle's arguments for investment in Citizenship Studies and Bonnet's 'Education for Sustainable Development as a frame of mind', this thesis adopts the acronym GCESD for Global Citizenship Education as Sustainable Development.

An acknowledged challenge for GCESD in its many forms is lack of explicit philosophical and theoretical foundations, resulting in low academic status, reduced prestige and peripheral impact. Though neglected by neoliberal instrumentalist discourses, a rich tradition of mainstream philosophy and theories does exist offering integrity to a conceptualisation of a critical global educator. Critical Realist philosophy, Critical Social Theory, psycholinguistic Frame and Positioning theories, supported by cognitive and sociolinguistic research, provide insights into the inherently political nature of education. Critical Discourse Studies and Critical Pedagogy present strategies for analysis and application. Engestrom's Cultural Historical Activity Theory (CHAT), centring consciousness and agency, encapsulates the synthesis.

Embodying this 'vision', an Interview Schedule provides critical global educators with a tool for self- and negotiated-evaluation. Analysis of eighteen semi-structured interview transcripts points to factors which determine the personal and professional development of the critical global educator.

In an increasingly heteroglossic world, the thesis argues for the crucial importance of Critical Discourse Studies as educators in every discipline honestly engage the individual learner's stream of consciousness. It asserts that consistent critical global education requires education policy which develops transition coherently, from personal transmission of global citizenship through transactional professional 'response-ability', to transformational political justice for all.

Publications available via:

<https://ioe-ac.academia.edu/MaureenEllis>

https://www.google.co.uk/?gws_rd=ssl#q=global+citizenship+maureen+ellis

Title: *Short-term Study Abroad Programs: Where they came from, how they work, and why the often don't*

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Language: English

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Key words: Geography education, study abroad, international education, intercultural competence

Summary: Through historical investigation this research establishes the ‘Doctrine of Study Abroad’ (DSA), a philosophy that has shaped and structured the American study abroad movement since its inception in the 1940s. This dissertation argues that the DSA was formed out of the political (liberalism) and educational (progressive education) movements of the late nineteenth and early twentieth centuries. The DSA teaches that any time spent studying abroad is beneficial in increasing tolerance, and in creating ‘good’ citizens. The historically established DSA and its assumptions (tolerance and citizenship) were tested against the contemporary short-term study abroad movement using three short-term study abroad groups from Texas A&M University.

Based on the results, it is shown that short-term study abroad does not hold up to the assumptions of the DSA. It was observed that student tolerance did not increase and that students only made shallow observations and interpretations of potentially meaningful cultural interactions when left to their own devices. It is suggested that ‘interventions’, such as ‘cultural coaching’ and time set aside for focused and directed reflection be made within the process of student learning while abroad to enable students to have meaningful cultural interactions. This dissertation argues that suggestions proposed in this research and by the ‘learning centred’ movement will not be incorporated into study abroad programs due to the historical inertia of the DSA and its influence within institutions of higher education.

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2014

Title: *A study of the role of GIS in constructing relational place knowledge through school geography education*

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Key words: GIS; place; relationality; knowledge construction; geography education

Summary: This thesis addresses a specific aspect of geography in school education, the role of geographic information systems (GIS) in supporting relational understanding of place. It does this by combining a literature-based conceptual analysis with schools-based empirical

enquiry. The main research question that steers the thesis is: What role does GIS play in constructing relational knowledge about place through school geography education?

The research offers new insights on the ways in which teachers can use GIS in geography education to construct relational knowledge about place. Following a discussion of place, relational knowledge and GIS in both academic and school geography, a methodology for the research is fully explained and justified. A qualitative enquiry approach is adopted via a multi-staged design consisting of case study and practitioner research. Analysis of interviews with teachers and pupils, lesson observations and document analyses yields ‘thick description’ of constructing place knowledge through GIS.

A synthesis of the conceptual and empirical analyses provides the basis for a discussion of findings. Findings identify GIS as a powerful medium for relational spatial analysis in school geography but also reveal its limitations on relational constructions and interpretations of place. A model of geographical knowledge construction in GIS is presented as a device for developing teachers’ critical engagement with GIS in school geography. The thesis concludes with a critical evaluation and recommendations for future study.

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Title: *School Linking: Southern perspectives on the South/North educational linking process: From Ghana, Uganda and Tanzania*

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Key words: School link, Educational Linking Process, Development Education, Global Learning, Cultural Education

Summary: This study investigated the South/North Educational Linking Process and set out to discover how the Global South is affected. It focuses on relationships described as links, partnerships and sister schools, or something deeper and sustainable. It argues that the terminology used is important, enabling relationships to be positioned on a “Linking-Partnership Continuum”. My research question is addressed using a qualitative interpretivist methodology, based on a mixed-methods case study approach. The empirical research is framed conceptually with ideas from Postcolonialism, Cultural Education and Development Education. The analysis is supported by Critical Pedagogical Discourse and draws particularly on work by Andreotti and Quist-Adade. The relationships investigated are set within a rapidly evolving literature, as well as UK policy decisions affecting Development Education. A Ghanaian pilot study is the starting point. Key themes are then explored through

in-depth studies of the S/NELP in eight schools in Uganda and Tanzania. The analysis draws particularly from two secondary schools and one children's centre.

The study found that in the context of school linking, teachers, students and schools' local communities are affected in several ways. Teachers' pedagogy develops through collaboration with UK counterparts, but reciprocal visits are rare. Science, Mathematics, Information and Communications Technology (ICT), English and Special Educational Needs and Disabilities (SEND) benefit. Students note less tangible outcomes, such as friendships with their UK peers. The S/NELP promotes engagement in development and Development Education/global learning. Capacity building identified includes physical infrastructure, library resources and facilities promoting income generation. Local communities are affected, contributing to progress towards the UN MDGs.

The focus of this study is Southern voices. The most important aspects emerging are those of power relations, funding arrangements and avoiding dependency. Southern schools must be able to set their own school linking agenda, without feeling obliged to fit Northern hegemony.

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Title: *The Subject Conceptions and Practice of Pre-Service Geography Teachers in Singapore*

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Language: English

Key words: Geography education, subject conceptions, discourse and power, pre-service teacher education

Summary: This thesis focuses on understanding the complex relationships between geography teachers' conceptions and practice. Through the use of a Foucauldian perspective on discourse, knowledge and power, it examines the discursive structures that produce

knowledge about geography and ‘good’ geography teachers in Singapore. The research explores why pre-service teachers conceive geography in particular ways, and the links between their conceptions and practice. It emphasises the ways in which discursive power affects this relationship.

The study focuses on six geography pre-service secondary school teachers over the course of one year of teacher education. Utilising concept maps, elicitation exercises and in-depth interviews, it highlights that the national curriculum was powerful in shaping respondents’ discussions of geography, but its impact was mediated by their own professional identities and past experiences of geography. The data suggests that these conceptions did not always translate into practice because of discourses operating in their school context, which placed respondents in asymmetrical power relationships with their mentors. The mentors’ conceptions of ‘good’ geography teaching usually influenced respondents’ practice more than their own conceptions of geography. Respondents sometimes resisted their mentors, especially if they experienced conflict between the type of teaching that was demanded of them and their own professional identities.

The research calls on teacher educators and policy makers to acknowledge that programmes to develop teachers’ knowledge in their academic disciplines can be undermined by powerful competing discourses that stress examinable content in school curricula. It highlights the need for teacher education institutions to examine their partnerships with schools for possible conflicts between discourses about ‘good’ teaching in schools and institutional intended outcomes. It suggests that there is a need to strengthen the professional identities of teachers as ‘geographers’ given that identity forms an important base from which teachers respond to discourse.

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