

Measuring Attitudes Towards Global Learning Among Future Educators in England

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Abstract

This paper reports upon a multi-agency approach to measuring attitudes towards global learning among future educators at a university in the north-west of England. This study provides a response to concerns that global learning research and evaluation of global education interventions tend to focus upon short-term, observable outcomes rather than longer-term changes in behaviour, attitude, and practice. It is based upon the assumption that global learning in teacher education must focus upon the development of who the educator is as a person, including his or her values, attitudes, and associated dispositions. This paper will outline the process of constructing an attitude inventory, based upon Thurstone scaling, by a range of professionals working in local government, teacher education, and non-government organizations that promote global education. It reports upon the use of this survey at the beginning, middle, and end of a compulsory course completed by a cohort of 154 undergraduate students of primary teacher education. The findings show positive changes in attitudes towards global learning among females and eradication of the most negative attitudes towards global learning during the course of study. Causal factors relating to cultural practice are suggested. The

limitations of this particular tool for researching global learning are discussed alongside the insight gained from this collaborative process of evaluation.

Keywords: measuring attitudes, teacher education, global learning

Introduction

This paper begins by proposing a renewed focus upon values and attitudes within global learning research, evaluation, and practice. The role of nurturing and measuring the attitudes of teachers towards global learning will be highlighted as an area of particular concern. This will be followed by a contextual discussion of Liverpool Hope University (LHU), a large provider of initial teacher education in the UK, which supplies the setting for this study. This exploration of the mission and ethos of LHU illuminates a context supportive of pedagogical approaches that nurture particular values, attitudes, and dispositions associated with global learning. An outline of, and rationale for, the curriculum intervention under investigation here is provided to help develop further an understanding of the conditions necessary for changing teacher attitudes towards global learning. This provides a qualitative response to recent calls to capture empirical evidence of the nature of such conditions (Scheunpflug, 2011: 38). The methodology section documents a collaborative process to construct an attitude inventory, based upon Thurstone scaling, by a multi-agency team. This included development education practitioners and consultants along with teacher education tutors both familiar and unfamiliar with global learning approaches. The findings and discussion section reports upon the use of the inventory by students in initial teacher education at three different time points over the period of an academic year. Detailed here are the conclusions reached by the multi-agency team regarding the process of constructing an attitude inventory, the utility of this particular evaluation tool, and their own understanding of global learning.

Evaluating global learning and the role of attitudes

The paucity of research and evaluation into the impact of global learning has been attributed to the embryonic nature of work in this field. O'Loughlin and Wegimont (2007: 9), in their background paper on evaluation practice and policy in relation to global education and public awareness-raising on development issues across a range of European contexts, suggest that 'evaluation in global education and development education is still very young and new, and its future looks very interesting and potentially fruitful'. In a more nuanced account, Bourn and Hunt (2011: 7) cited a number of factors, including its relatively marginal nature in education, short-term funding of projects resulting in a tendency to focus on effectiveness and efficiency rather than impact, and a tendency to pursue practice rather than theory.

Support for research and evaluation has, however, been available to practitioners and researchers for some time. A major UK project, 'Measuring Effectiveness in Development Education' (McCollum and Bourn, 2001), highlighted an increased emphasis upon measuring learning outcomes. It also warned against a tendency to focus on short-term observable outcomes, rather than longer-term impacts affecting changes in behaviour and practice. This report therefore recommended that approaches to evaluation must 'respond to understandings of attitudinal change and the relationship between processes and learning outcomes' (*ibid.*: 19). Finding that the main objective for projects tended not to be changing attitudes but rather achievements such as 'improving the capacity to deliver effective programmes' (*ibid.*: 5), this report urged a focus upon linking specific programme objectives with broader global learning goals.

Recent guidance for evaluating global learning outcomes also concludes that 'changes in knowledge, attitudes and actions are at the heart of global learning' (Think Global, 2011: 12). Moving beyond evaluation of short-term effectiveness, there have been attempts by UK-based non-government organizations to assess long-term impacts, for instance, in a tool-kit for measuring attitudinal change in global citizenship (Allum *et al.*, 2008). Nevertheless, in a case study of the Canadian 'Signs of Change' initiative, which explored the assessment of public engagement, O'Loughlin and Wegimont note that particular difficulties and challenges include 'defining, capturing and monitoring value change' given that it is long term and 'difficult to predict how individuals will manifest their values' (2007: 31).

That researching broader values, beliefs, and character associated with global learning is only now emerging belies the fact that related curriculum developments over the past half-century (see, for example, Richardson, 1976, and Fisher and Hicks, 1985) have been underpinned by the premise that global education 'should be affective as well as cognitive' (Lister, 1986, cited in Hicks, 2008: 12). These pioneering initiatives used active and participatory teaching methods to explore the development of particular values and perspectives towards global issues. A significant contribution in this area was the work of Robert Hanvey (1976: 2), which explored the notion of 'an attainable global perspective'. Hanvey proposed five dimensions, which were subsequently adapted by Pike and Selby into five aims for global education in developing an 'irreducible global perspective':

- systems consciousness
- perspective consciousness
- health of planet awareness

- involvement consciousness and preparedness
- process-mindedness.

(Pike and Selby, 1988: 34–5)

While the work of Hanvey, and of Pike and Selby and others, has informed understanding of the ‘dimensions’ that make up a ‘global perspective,’ it has not been considered extensively how these develop and can be measured. However, there have been a number of attempts to develop measurement scales from different academic disciplines in the USA. Sampson and Smith’s ‘Worldmindedness scale’ (1957) has been particularly influential. Developed in the wake of the Second World War, this instrument assesses predisposition towards eight dimensions of ‘worldmindedness.’ Although the scale has been widely used, it is now outdated in terms of its statements and values. It has also been criticized for measuring responses to particular ‘dimensions’ or global issues rather than a world(minded)view (Parker *et al.*, 1997). More recently, Hett (1993) developed a ‘Global-mindedness Scale’ to measure ‘attitudes, beliefs, and behaviors’ (Hett, 1993: 143) across five dimensions: responsibility, cultural pluralism, efficacy, globalcentrism, and interconnectedness. The utility and validity of such instruments must be carefully outlined by researchers, for example, through reporting relevant contextual information. For instance, reporting on their own attempt to measure outcomes relating to global citizenship following a period of education abroad, Morais and Ogden highlight the potential for bias in surveys that rely solely upon self-report (2011: 462).

Recent guidance on integrating a global dimension into formal education in the UK (DfES, 2005) draws upon earlier models (Richardson, 1976; Pike and Selby, 1988), with explicit focus on developing skills and attitudes as well as knowledge and understanding (DfES, 2005: 1). The Australian government (Quittner, 2008) has also identified the following values and attitudes to be promoted in schools: a sense of community with people around the world; a recognition of shared responsibilities and a willingness to co-operate with others in fulfilling them; a positive attitude towards diversity and difference; an appreciation of and concern for the environment and a commitment to sustainable practices (*ibid.*: 6). Nevertheless, guidance in the UK and Australia remains much more specific on how to promote knowledge and understanding than on skills, values, and attitudes and how these might lead to action.

A concern that young people in the UK lack the capacity to act upon a new-found understanding of social injustice cultivated through global learning (Bourn, 2008: 12) has underpinned initiatives such as ‘active citizenship’ (Crick, 2002) and ‘global citizenship’ (OXFAM, 2006) in schools. While the dominant perspective in development education policy and practice has emphasised participation and action,

it has recently been acknowledged that this 'can mask the importance of the learning processes and the complex relationships between learning and behaviour' (Bourn and Brown, 2011: 5). Attempts to explicate and evaluate the knowledge, skills, and attitudes required for global learning may usefully draw upon research in associated fields such as transformative learning and character education. For instance, Johnson and Morris draw on a range of prevailing models of 'critical pedagogy and citizenship education' to develop a conceptual framework that identifies particular values and dispositions foundational to critical citizenship education (2010: 88–90).

To conclude, while 'the value base to be able to interpret the impact of the global society on the learner' (Bourn, 2008: 11) has been identified as an established strength of development education and global learning practice, associated research continues to be limited in its depth and breadth. This is particularly lamentable given that values and attitudes play a significant role in translating aspirations to practice and as such must become a focus for research and evaluation in this field (Storrs, 2010: 18). A recent call for developing a research-based approach to teacher education in global learning highlighted how little is known about teachers' values in relation to global education in particular (Scheunpflug, 2011: 37) and this therefore provides the focus for this study.

Attitudes towards global learning in teacher education

An international survey (Tye, 1999) found that only a small number of teacher education courses in the world promoted global education explicitly. In the UK, a number of initiatives have taken place since 2000 that sought to 'embed' a global perspective in teacher education (Barr, 2005). Supported by a positive political climate, as demonstrated by the 'Sustainable Schools' initiative, and the duty placed upon schools to promote 'community cohesion,' teachers have been encouraged to raise young people's awareness of global issues such as poverty and climate change, and promote opportunities for future action.

At the same time, substantial evidence has been collated in the UK to advocate global learning in teacher education (DEA, 2008, 2009, and 2010). Research has found that exposure to global learning improved secondary school students' attitudes towards those from different backgrounds and the role they could play in making the world a better place (DEA, 2008). A survey presented as evidence to a national review of teacher education (DEA, 2009) found that although the vast majority (94 per cent) of teachers agreed that schools should prepare pupils to deal with a fast-changing and globalized world, only 58 per cent felt that the current school system actually does this. The report concluded that this may be due to teachers' lack of confidence in teaching specific global issues, a finding echoed in earlier studies carried out by Robbins *et al.* (2003) and Holden and Hicks (2007) on training teachers' experiences

of global education. Emergent evidence indicates that the promotion of global learning in teacher education does indeed increase the confidence of future educators in taking this forward in practice (Gadsby and Bullivant, 2011a: 4).

Holden and Hicks identified two key factors that, they argued, underlined 'the importance of research into student teachers' knowledge, understanding and motivation if we are to have a new generation of teachers able and willing to address the concerns of young people about world issues and events' (2007: 4): lack of education on global issues in formal education prior to entering training programmes and lack of time to focus on these issues in teacher training. While they found that many trainee teachers demonstrated both motivation and confidence to teach about global issues, there was considerable variation between sample groups, for example, secondary trainees were more confident than primary trainees. Factors such as subject specialism, prior experience of living or working abroad, and contact with other cultures have also been found to positively influence confidence levels (Holden, 2003: 364; Thomas, 2001: 9).

In a study of 'pre-service' secondary teachers' knowledge, skills, and values of global education, Bliss and Horsley (2005) used a socio-cultural framework to explore the role of prior learning in subject discipline in student teachers' responses to global education. They found that values reinforced previously in subject disciplines influenced student responses towards specific attitudes and values associated with a global perspective. For example, history students focused on empathy and cultural awareness, whereas geography and other social science students focused on areas such as sustainability, the environment, and appreciating diversity, although geography was most 'closely related to global education knowledge, skills and values' overall (*ibid.*: 16–19). The findings of these studies reiterate the importance of understanding the context that frames any research in this area.

Context for this study

(i) Liverpool Hope University

In this section, it will be suggested that a concern for cultivating particular values, attitudes, and associated dispositions of future educators underpins the mission and ethos of the institution that is the focus of this study. Liverpool Hope University (LHU), situated in the north-west of England, is a relatively small British university: the 115th largest higher education institution (HEI) out of 165 when measured by total student numbers. The foundations and driving force of this ecumenical institution lie in a Christian mission to tackle poverty and reduce inequality through education. The university's mission and values are grounded in the Christian tradition and it claims to be the only HEI with an ecumenical foundation in Europe (LHU, 2007). Although LHU's heritage is now over 168 years in the making, it received the title of

university only in July 2005. LHU aspires to be a 'teaching-led, research-informed, Mission-focused, liberal arts inspired university' (LHU, 2007: 1) and as such is clearly focused upon the formation of 'well-rounded' graduates alongside their study of discrete subjects.

The philosophy of education to which LHU subscribes has a holistic orientation as reflected in the university's mission, which has stated that it strives to 'provide well-rounded personal development ... educating the whole person in mind, body and spirit' (LHU, 2012) since Liverpool Hope University College was established in 1995 (Pye, 2009: 30). Furthermore, the values to which LHU aspires, and which it states are integral to the fulfilment of this mission, include that it 'strives to be well-rounded, holistic, integrated, a team, a community of communities, collaborating in wider partnerships' (LHU, 2012). This emphasizes the importance of relationships, collegiality, and collaborative working.

A recent audit by the universities' watchdog identified 'the ethos, culture and mission of the university' as being a feature of best practice, concluding that the mission 'is understood, acknowledged and appreciated by both staff and students and ... clearly underpins the work of the institution' (QAA, 2009: 4). This suggests that the mission and ethos of the institution are not simply 'intended' but also 'experienced' (McLaughlin, 2005: 313). This is validated by a recent inspection of initial teacher education at the institution that concluded, 'Trainees demonstrate a strong moral purpose ... and the strong sense of vocation embodied in the provider's vision for the Hope Graduate' (Ofsted, 2011: 4). Additionally, this report suggested that LHU's mission and values underpin a 'strong' partnership with local schools and non-governmental organizations 'where all have high levels of commitment to the Hope vision' (Ofsted, 2011: 4).

The marketization of higher education in the UK has renewed focus on graduate employability. Rather than being a 'view from nowhere', this represents a particular philosophy of education. LHU has sought to balance the promotion of skills sought by employers alongside attributes that are important to life in a humane, educated democracy. An aspiration to be 'market-informed, rather than market-driven' (LHU, 2007: 4) is also reflected in the university website's section on 'what makes LHU different':

We do not believe that education is just about equipping people for the world of work; we also educate students for the work of the world. We believe that only students educated within a global context can constructively, fairly and bravely make the changes the world needs.

(LHU, 2011)

The 'work of the world' reveals an aspiration to catalyse personal growth that makes social change possible. This is reflected in the visioning statement of the Faculty of Education, which states 'the guiding orientation of the Faculty is to develop educational thought and practices which promote education as a humanising influence on each person and on society locally, nationally and internationally' (McGettrick, 2010: 2). This mission is exemplified through a series of initiatives that have sought to embed global learning within teacher education and are the focus for this study.

(ii) 'Wider Perspectives in Education'

'Wider Perspectives in Education' (WPE) is a compulsory 30-credit module introduced into the third year of the BA Primary Teaching four-year degree in September 2009. The authors of this paper played a critical role in establishing and validating this module within the undergraduate teacher education provision at Liverpool Hope. All three authors were responsible for delivering this course and providing support to tutors and students to maintain the profile of global learning within teacher education and promote meaningful connections between theory and practice. Previously, students completed a seven-week placement in schools as part of their third year of this degree. Instead, in 2009–10, students completed a five-week school placement and ten days of community engagement as part of this module. The overall aim of WPE is to provide students with a broader experience of education beyond traditional teaching practice or school-based learning (SBL), develop their understanding of education for global citizenship with respect to their role as teachers, and promote a sense of themselves as active global citizens. At the same time, WPE supports students as they seek to gain evidence of attaining the professional standards for teaching (DfE, 2012). Beyond this, it aims to consolidate and deepen their understanding of and disposition towards global learning. The module introduces them to global education policy and practice in the UK, and students are encouraged to incorporate global learning methodologies within their teaching practice. In doing so, it aims to transform student perspectives on the role of education and their own philosophy of teaching.

'Wider Perspectives in Education' fuses problem-based learning and reflective practice with a period of community engagement to broaden and deepen the impact of the teacher education course. The ten-day community engagement project aims to address an education issue in a local or international setting and is a key element of the module. An introductory theoretical component is followed by a project-planning phase. In recognizing and supporting the diversity of learning needs, students are encouraged to organize their own project and pursue issues with which they are concerned. Examples include researching a police programme to promote community cohesion and monitoring the support offered by housing association

trusts to adults with learning difficulties. One group of students worked closely with SOS Children, an international NGO, to produce educational materials that challenge approaches to education about the global South which reinforce patronizing and charitable perspectives.

Placements in diverse educational settings challenge student assumptions that underpin their own philosophy of education. They also reconsider educational issues beyond the school campus such as child poverty, sustainability, diversity, disability, racism, and terrorism. At the end of the project, students share their eclectic experiences through group presentations at a conference to celebrate their community engagement work.

Community engagement affords numerous opportunities for students in teacher education (Tellez, 2000) and is more widely practised in the USA. Barr (2005) highlights the power of personal experience in encouraging and educating advocates of global learning. Engagement with 'the other' arouses curiosity and can stimulate and inspire learning. He suggests that structured opportunities, such as international exchanges and linking programmes (Barr, 2005: 12), are particularly successful in changing attitudes to global education among teacher educators and their students. This course team contests the commonly held view that immersion in local settings cannot provoke similar outcomes.

For this experience to be mutually transformative, it is important that students work in conjunction with providers in the setting to develop a project that meets the educational needs of children in the setting or members of the local community. This also enables community engagement to be a critical learning experience, as advocated by Rosenberger, who argue that students need the opportunity to:

- choose needs or issues in the community that connect to the course content
- initiate a dialogue with stakeholders in framing and defining the problem and action
- engage in problem-posing education around the social, political, and economic issues that arise in the community experience.

(Rosenberger, 2000: 40)

This approach is supported by research which has found that opportunities for participation and self-efficacy play an important part in changing the attitudes of teachers towards global issues and multiculturalism (Scheunpflug, 2011: 38).

Methodology

This section seeks to outline the process whereby a group of multi-agency professionals working in various roles to support the particular context outlined

above sought to measure the attitudes of future educators towards global learning. Although future funding for development education and global learning may be dependent upon more robust evaluation and measurement systems (Bourn, 2008), the process embarked upon here aimed to support staff in the Faculty of Education at LHU and their partners in 'maintaining purpose and clarity around their mission, goals and objectives and to sustain them in the delivery of their desired outcomes' (Storrs, 2010: 7). The team of 20 convened to construct this survey comprised tutors working on initial teacher education courses, students, practising teachers, local authority educational consultants, employees of local NGOs, and a professor of education with expertise in evaluation of social and health interventions. No particular expertise in global education or global learning was required to be part of this group, and although some members did have this background, it was not the case for the majority. The rationale for this was a belief that global learning interventions should permeate the curriculum (Bourn and Hunt, 2011) and work across phases (Gadsby and Bullivant, 2011b) to enable 'deep critical engagement with issues of global injustice' (Bracken and Bryan, 2010: 36). The project team attended a series of seminars that drew on various stimuli to provoke discussion around conceptions of global education and global learning and agreed upon the structure and methodology for the evaluation. This process enabled the diverse, multi-agency team to develop a shared understanding of the characteristics of global learning pertinent to this setting. This demonstrates a useful strategy that engaged stakeholders in dialogue to co-create a 'participative evaluation system' (Storrs, 2010: 19).

The approach developed is based upon the assumption that the relationship between attitude and behaviour change is of particular concern to global learning researchers and practitioners. As outlined earlier, attitudes both shape and are shaped by our actions and behaviour. Attitudes may catalyse or obstruct action at various personal and professional levels. Similarly, action changes may lead to transformed attitudes towards actions already taken. The attitude inventory constructed here aimed to measure feelings and dispositions towards global learning determined by self-report. Contextual detail has therefore been provided to qualify the utility and validity of the findings.

Measures of attitude are arrived at by inference. Although self-report approaches to measuring attitudes proliferate, this approach was decided to be most appropriate for this study. Direct participant observation, through recording the behaviour of those whose attitude you are studying, is impractical when studying large groups. Furthermore, such approaches fail to ascertain the magnitude or strength of an attitude and the observers' perception needs to be accounted for. Similarly, direct questioning via interview lacks subtlety and may be unsuitable when the focus of the study is in some way controversial.

The approach adopted here is redolent of Thurstone's method of equal-appearing intervals (Thurstone and Chave, 1929), which attempts to indicate rather precisely the difference between two respondents' attitudes towards a particular entity – in this case, global learning. It involves a series of statements regarding global learning ranging from highly positive to highly negative with shades in between. Each statement has a value scale, not shown to the respondent. Respondents tick only the items with which they agree and leave the remainder blank. The scale values for the statements ticked are added together and divided by the number of statements ticked. This provides the respondent with a score for the inventory that indicates their overall feelings and action dispositions regarding, in this example, global learning.

Unlike the Likert scale, where respondents indicate their degree of agreement or disagreement for each of the items in the scale, the Thurstone scale involves respondents checking only those items with which they agree. The Likert scale is ordinal and therefore can show only who has more or less of the attribute under study but not how much more or how much less. It does not give any indication of the magnitude of differences between respondents. Furthermore, unlike the construction of the Thurstone scale methodology, the Likert scale demands an item analysis to establish whether all items in the scale measure the same attitude (Edwards, 1957).

The first stage in developing the attitude inventory involved the project team constructing over 150 statements regarding global learning that covered the spectrum of orientations from extremely positive to extremely negative. The aim was to focus initially on statements of feelings towards global learning. These were designed to assume a certain level of conceptual understanding of 'global learning', as illustrated by the item 'I am passionate about global learning'. The team then developed attitude statements towards different aspects of global learning, such as critical thinking, creativity, and education for sustainability.

The second phase involved a small 'global learning expert' panel independently ascribing a value from 1 to 7 to each of these statements. For example, the 'expert' group ascribed a 1 if they felt that statement reflected a most negative attitude towards global learning, a 4 reflected a neutral stance towards global learning, and so on. The expert group comprised staff from development education centres in the north-west, NGOs concerned with global learning, and tutors at Liverpool Hope University with experience in this field. These 'judges' disregarded their own attitude towards the topic and considered instead only how favourable or unfavourable the statement was towards the attitude object. Each individual in this group ascribed values to the 150+ statements and this information was tabulated in a spreadsheet. The project team analysed this data for statements where there appeared to be the strongest consensus regarding the ascribed values. Statements on which the 'judges'

showed substantial disagreement were discarded as ambiguous. Some statements were abandoned by the judges as being irrelevant to the topic.

Two statements were then selected for each point in the seven-point scale. For example, two statements were selected that had mostly been ascribed a 4. The actual scale value used in the survey is assigned by calculating the mean rating ascribed to that item by the expert panel. For example, if a statement was ascribed 5,4,4,4,4,3,4,4,5,5 by the expert group then the scale value for the survey would be $(5+4+4+4+4+3+4+4+5+5)/10 = 4.2$ (see Appendix 1 for the final 14 items, along with their scale value). The 14 items selected were then randomly arranged on the questionnaire form without any indication of their scale values. Prior to evaluating the WPE module, the inventory was then pilot tested among two groups – those who are known to have positive views (teachers attending continuing professional development (CPD) sessions on global learning) and a group of students who had shown resistance to global education featuring as part of their teacher education qualification.

In choosing to investigate the impact of WPE, a compulsory component of the BA Primary Teaching degree, this study cannot be accused of a self-selection bias that would undermine the significance of any findings. For instance, a recent study investigating differences in the individual characteristics between those students who participate and those who choose not to participate in a widely advertised and encouraged extra-curricular programme of global citizenship education (Bamber *et al.*, 2012) found that these groups of students differ significantly in a number of important ways (for example, regarding conscientiousness, extraversion, openness; Machiavellianism, prosocial behaviour; self-esteem; skills relating to social action and tolerance and understanding, and their concern regarding social problems). This study, with a longitudinal dimension, also provides a response to research which concluded that most studies attempting to profile students involved in citizenship activities collect data either retrospectively and/or cross-sectionally (Cemalcilar, 2009).

Findings and discussion

A total of 154 students training to become teachers participated in the study, 83 per cent of a cohort of 184. Most were female (88 per cent, Table 1) and most were in the age bracket 21–30 years (96 per cent, Table 2). This reflects the fact that LHM has significantly more female than male students. This has gradually increased to 72.7 per cent of full-time entrants in 2009–10 compared with 68.3 per cent in 2004–05. In 2011–12, 89.5 per cent of undergraduate teacher education students were female.

Table 1: Sample gender

	Number	Percentage
Females	135	88%
Males	19	12%
Total	154	100%

Table 2: Sample age distribution

	Number	Percentage
21–30	147	96%
31–40	5	3%
41–50	2	1%
Total	154	100%

Table 3: Total number of inventory completions at each time point

Time point		
Time point 1 (TP1)	$17/89+17+14+21=$	141
Time point 2 (TP2)	$35/89+17+7+3=$	116
Time point 3 (TP3)	$48/89+14+7+3=$	113

Table 4: Number of students completing the inventory at different time points

Time points	
1 & 2 & 3	89
1 & 2	17
1 & 3	14
2 & 3	7
1 only	21
2 only	3
3 only	3
Total	154

Participants completed the inventory on three occasions (see Table 3 for further details): before the course started (time point 1), after the taught element of the course had been completed but before the community engagement project (time point 2), and at the end of the course after the community engagement project (time point 3).

Full data sets of three completed inventories were obtained from 89 students (see Table 4 for further details). In addition, 38 completed inventories at two out of three time points and a further 27 students completed the inventory at one time point. The inventories were completed during the teaching sessions so that students who missed a class also missed a data collection time point. All data were included in the calculation of the averages for individual time points, but only complete sets of inventories at three time points were compared in the analysis of change-over-time. This is consistent with an assumption that data were missing at random.

Students were generally positive in their attitude towards global learning. There was little variation in the mean inventory score for the group at time point 1 (5.50), time point 2 (5.39), and time point 3 (5.50). It was notable that most students started the course with a broadly positive attitude towards the importance of global education, with the overwhelming majority (129 responses out of 141) agreeing with the statement *'I think that it is really important for young people to know what's going on in the world.'* Similarly, only four students agreed with the negatively framed statement, *'I hate the whole idea of teaching about global learning'*, and only one student agreed with *'Having a global dimension to my education is totally pointless and would detract from my important learning'*. None of the students marked these statements at TP3, which is significant given a recent study where 'only a small minority of students expressing apathy, scepticism or antagonism' towards delivering development education, found that 'disparaging comments appeared to have a disproportionately strong effect on teachers' motivation and confidence' (Bracken and Bryan, 2010: 35–6).

The responses to the two items with greatest weighting were investigated as they related most closely to the key objectives of WPE. One relates to the priority students intend to give global learning in their teaching, and the other is about their enthusiasm for this educational approach. These were: S3, *'Global education is absolutely essential for the development of myself and those I teach'*, which was weighted 6.85 and indicates the importance attached to global education by students, and S13, *'I am passionate about global education'*, which was weighted 6.85 and indicates the motivation of students to use global education.

Just over half of the students (51 per cent) marked S3 at the start of the course, a figure that increased to 64 per cent at TP2 and remained higher at 63 per cent at TP3. Although students considered global education to be important, they did not indicate personal investment at the start of the course. At TP1 only 13 per cent agreed with S13, *'I am passionate about global education'*; however, this figure increased to 31 per cent at TP2 and 40 per cent at TP3. The change in agreement with this statement was attributable to three times as many females agreeing with this statement at TP3 than at TP1 (Table 5), recalling Schuerholz-Lehr's study of literature on teaching for

global literacy in higher education (2007). She draws upon a range of studies (Deng and Boatler, 1993; Hett, 1993; Hosseinali, 1995), which all conclude that females are significantly more ‘world-minded’ than males (Schuerholz-Luer, 2007: 199). This research is not as decisive, given the relatively small and predominantly female sample. Nevertheless, these findings suggest that the WPE initiative was in some way responsible for enhancing a positive attitude towards global learning among females. The limitations of any survey work must be further acknowledged here. It is not possible to attribute impact to WPE when engagement with this course is only one aspect of the complex lives of participating students, as evaluated by this instrument at any one particular point in time.

Table 5: Agreement with S13, ‘I am passionate about global education’ by gender at time points 1, 2, and 3

	Males agreeing with S13	Females agreeing with S13	TOTAL agreeing with S13
TP 1	6	13	19
TP 2	5	31	36
TP 3	6	39	45

In order to assess beyond levels of positivity towards a narrow conceptualization of global learning, the team purposefully included statements that referred to ideas underpinning this educative approach. The finalized instrument therefore included the following statements related to critical and creative thinking as well as openness to different perspectives: S5, ‘*Whilst creative thinking is important there are things which take a higher priority*’, S8, ‘*Young people should be aware of different perspectives*’, and S14, ‘*Global learning is possibly one way to promote critical thinking*’. It is of particular interest that there were no significant variations of student responses to these three items across the three time points and by different age/gender groupings. Arguably, this reflects a failure of the WPE programme to engage students with these aspects of global learning.

The Thurstone scaling methodology ensures that an individual’s inventory score decreases when statements with a lower weighting than their existing score are ticked. In such cases a student’s inventory score decreases as he or she agrees with more statements. Of the 127 students who completed the survey on more than one occasion, 62 agreed with more statements at subsequent time points, while only 29 agreed with fewer statements at subsequent time points. Given that, on average, students were broadly positive towards global learning (with the mean score of 5 and above as outlined earlier), this had the effect of reducing the overall mean due to the weighting of the items in the inventory (see Table 6 for further details).

Table 6: Changes in the number of statements with which participants agreed and effect on individual inventory score

	Agreed with more statements at a subsequent time point	Agreed with the same number of statements at a subsequent time point	Agreed with fewer statements at a subsequent time point	TOTAL
Increase in individual inventory score	27	15	17	59
Same individual inventory score	0	9	0	9
Decrease in individual inventory score	35	13	12	60
TOTAL	62	37	29	128

The potential for a student’s inventory score to be reduced as he or she indicates agreement with more statements in a subsequent completion of the inventory is illustrated by a student who at TP1 ticked four statements – S1 (6.31), S6 (5.69), S8 (5.85), S14 (5.15) – scoring a mean of 5.75. At TP3 she marked all of the same statements and added S12: ‘*Whilst global perspectives in learning could be important the concept may need further clarification to be usefully applied to the curriculum*’ (4.32). Her inventory score therefore reduced to 5.45 at TP3. In constructing the inventory, the project team gave S12 a weighting of 4.32. This score of greater than 4 (which would have meant neutral) indicated that the team understood this statement to represent a marginally positive attitude towards global learning.

This case exposes a feature of the Thurstone scaling approach of which practitioners must be aware, but it also, in this case, prompted the project team to review the weighting given to S12. This provoked detailed discussion among project team members upon review of the data collected and usefully helped nurture a shared understanding of the ‘mission, goals and objectives’ (Storrs, 2010: 7) of WPE. The project team concluded that it was unfortunate that such an orientation as represented by S12 impacted negatively upon a student inventory score as illustrated here. They concluded that, given the complex nature of global learning and concern that propagation of ‘overly-simplistic, sanitised and easily solvable’ (Bracken and Bryan, 2010: 36) conceptions can be detrimental to practitioners’ aims, it is perhaps extremely desirable for students to acknowledge the need for greater clarity, as indicated by S12. This discussion also provided one possible explanation for the dip in mean attitude inventory scores at TP2 following the taught component of the course. As students acquire knowledge and understanding regarding global learning, they assimilate and accommodate new information, and learning takes place. Constructivist theory suggests that as learners are exposed to more knowledge, they

can become more confused before they restructure their understanding and begin to acknowledge that their first ideas are too simplistic.

Conclusion

Although the results here showed an insignificant variation in the mean inventory score for 89 students who completed the survey across all three time points, analysis of responses to individual items revealed important findings. Investigation of responses to the items with the highest weighting and most relevance to the objectives of the WPE course indicated that students arrived at the course with strongly positive views about the importance of global education, which were reinforced and deepened during the WPE course. Although few students starting the course indicated a strong personal commitment to global education, this increased significantly during the course, particularly among female students. This is consistent with the findings of earlier studies highlighted by Schuerholz-Lehr (2007) and Welch (1997) that identified gender differences in 'world-mindedness', suggesting that this is an area of global learning research worthy of further exploration. This research therefore provides further insight into the conditions effective in changing teacher attitudes towards global learning, although identifying attribution is clearly problematic.

In order to explicate implications for future research, this paper will conclude by suggesting a relationship between the ethos of the institution and the collaborative approach developed as part of WPE in nurturing a positive attitude towards global learning. In exploring an 'attainable global perspective', Hanvey noted that such a perspective may consist of a combination of many elements present in varying degrees between individuals, in which case 'the educational goal broadly seen may be to socialize significant collectivities of people so that the important elements of a global perspective may be a variable trait possessed in some form and degree by a population, with the precise character of that perspective determined by the specialized capacities, predispositions, and attitudes of the group's members' (1976: 2).

Bliss and Horsley point to socio-cultural theories of teaching and learning in attempting to understand this process. They draw on Rogoff's 'cultural practice approach', which suggests that 'as individuals are enculturated into the practice of a community ... their identity can undergo change as ... [they] contribute to change' (Rogoff, 1998, cited in Bliss and Horsley, 2005: 3). As highlighted earlier, the origins of the curriculum innovation investigated here lie in a series of initiatives to promote global learning across the Faculty of Education. It aims to transform student perspectives on the role of education and as such makes explicit connections with the distinct ethos of the institution, embodied in the idea of the community engagement projects that play a key role in influencing students'

positive attitudes towards the course and global education broadly (Bullivant and Gadsby, 2011). This is enhanced by support from a module teaching team of 'global learning champions', a strong partnership with a local development education centre, and close collaboration with schools and community-engagement project providers who all act to endorse the module's aims, nurturing 'a shared vision of developing practice ... vital for meaningfully connecting theory and practice' (Ellis and Hogard, 2010: 6). This illustrates a 'community of learners' of the sort envisaged by Rogoff, involving students as 'active learners' who are encouraged to lead projects, negotiate with teachers and other 'more skilled partners' (Rogoff *et al.*, 1996: 388), and to contemplate possibilities for action for change. Bliss and Horsley draw upon transformative learning theory to emphasize the 'integrative' nature of global learning concepts such as 'environment' and the way in which they may act to free people from 'oppressive ideologies', which for some students may result in a sense of liberation from the 'constraints' of their teacher-training experience to date (Mezirow, 1978, 1991, cited in Bliss and Horsley, 2005: 3).

This highlights the importance not only of collaboration and partnership to global learning research and practice but also reiterates a need to focus upon individual change: the importance of who the educator is becoming as a person, including his or her values, virtues, and associated disposition. Given that character education is founded upon the Aristotelian principle that 'character is formed in large part through habitual behaviour that eventually becomes internalized into virtues (character)' (Berkowitz and Bier, 2004: 80), this study points towards a congruence between this field and global learning research worthy of further investigation.

That an increased passion for global learning is, for a significant number of students, an outcome of the course studied here suggests that further research is required into the aesthetic and affective dimension of global learning. Such research may also provide insight into the 'disconnects between curriculum intent and practice' (Bracken and Bryan, 2010: 38), which is an area of interest to this field. Certainly, this research substantiates a recent report by NGOs involved in development awareness that identified an urgent need to shift the balance of NGO public engagement activities away from 'transactions' and towards 'transformation.' This demands less emphasis on simple campaigning actions, and more emphasis on providing supporters with opportunities to engage increasingly deeply over time through a 'supporters' journey' (Darnton and Kirk, 2011: 10). Finally, as detailed in the previous section, it should be noted that review of the construction of particular items and their weightings by the project team deepened a shared understanding of the purpose of global education and global learning in this context. The process of constructing and reviewing the attitude inventory, as documented here, exemplifies an approach to evaluation that is an 'integrated, on-going, participatory process of

measurement, reflection, adjustment and learning' (Storrs, 2010: 8) by a committed community of practice.

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Appendix 1:

Weighting	Statement
6.31	<input type="checkbox"/> I think it's really important for young people to know what's going on in the world
1.00	<input type="checkbox"/> Having a global dimension to my education is totally pointless and would detract from my important learning
6.85	<input type="checkbox"/> Global learning is absolutely essential for the development of myself and those that I teach
2.00	<input type="checkbox"/> Global learning is a low-priority issue on the scale of what is important in my life and my work
3.08	<input type="checkbox"/> While creative thinking is important there are things which take a higher priority
5.69	<input type="checkbox"/> Global education adds to pupil learning
4.00	<input type="checkbox"/> I think global learning is significant but honestly don't know if it is more or less important than Mathematics or English
5.38	<input type="checkbox"/> Young people should be aware of different perspectives
2.08	<input type="checkbox"/> Global learning is too complex to engage with
2.46	<input type="checkbox"/> Incorporating global learning is beyond the role/scope of being a teacher
1.00	<input type="checkbox"/> I hate the whole idea of teaching about global learning
4.23	<input type="checkbox"/> While global perspectives in learning could be important, the concept may need further clarification to be usefully applied to the curriculum
6.85	<input type="checkbox"/> I am very passionate about global education
5.15	<input type="checkbox"/> Global learning is possibly one way to promote critical thinking

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