Quality Enhancement Themes: The First Year Experience

Practice-focused Development Projects - Number 3

Curriculum design for the first year

Literature Review

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1 Introduction: Curriculum design for the first year

This literature review was carried out within one of the practice-based development projects for the QAA enhancement theme on the first year experience. The project aims to investigate practices in the design of the first year curriculum in higher education.

The project team aimed to explore potential inter-relationships between curriculum design and student engagement and empowerment. In one direction, the process of curriculum design might be enhanced through the engagement and involvement of students; in the other direction, creative curriculum design may have the capacity to increase student engagement and empowerment. Both relationships were investigated through this literature review and informed the search strategy.

2 Literature Search Strategy

Two sources of information were used: a systematic search of library databases and search of relevant websites. First, it was important to define the search terms relevant to the study purpose.

2.1 Definition of Search Terms

Literature was sought that focused on the inter-relationships between curriculum design and student engagement and empowerment in the first year of higher education. The concepts were divided into:

- Process: relationships between curriculum design and engagement / empowerment
- Context: students in their first year of higher education

Searching for literature that addresses detail such as teaching and learning strategies would elicit a very large number of results, many of which would not be directly relevant to the focus of the study. Therefore, the key words focused on ‘curriculum,’ or ‘programme’ and on ‘design’ or ‘development’.

The project aims describe emphases on ‘engagement’ and ‘empowerment’. It was decided that additional words would be added to create greater flexibility. The process might be described as involving students, consulting with them, or receiving feedback to influence curriculum or programme design. Therefore, as well as ‘engagement’ and ‘empowerment,’ key words included ‘involvement,’ ‘consultation,’ and ‘feedback.’

In relation to context, it is important to refer to ‘higher education,’ or ‘university’ to avoid retrieving literature that focuses on primary or secondary education. While some authors are likely to refer to the ‘first year student,’ international research may also use the term ‘freshman.’

These choices have led to the development of combinations of search terms, used as a foundation for the different searches (Table 1). These were subject
to modification according to the idiosyncrasies of different databases. The search tips and thesaurus were used for each database. The final modified combinations of search terms are included in Appendix 1 to allow replication and extension of the search if required.

The search of relevant websites revealed many PowerPoint presentations from previous conferences and workshops in the UK. The names of presenters were also entered into Scopus to identify any papers contributing to, or resulting from, relevant presentations.

Table 1: Search Strategy – combinations of terms and limiters

<table>
<thead>
<tr>
<th>Search component</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search terms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>engagement OR empowerment OR involvement OR consultation OR feedback</td>
<td>'curriculum design' OR 'program* design' OR 'curriculum development' OR 'program* development'</td>
<td>'higher education' OR 'university'</td>
<td>'first year student' OR 'freshman'</td>
<td></td>
</tr>
<tr>
<td>Combinations of search terms</td>
<td>A + B + C + D</td>
<td>A + B + C</td>
<td>A + B + D</td>
<td>A + C + D</td>
</tr>
<tr>
<td>Limiters</td>
<td>1) English Language only</td>
<td>2) 10 year limit (full years): 1996 – 2007</td>
<td>3) NOT primary or secondary education therefore include ‘NOT school’</td>
<td></td>
</tr>
<tr>
<td>Selection Criteria</td>
<td>1) Focus on the relationship between curriculum design and student engagement / empowerment in first year students in higher education</td>
<td>2) If the search yields too many results, the focus will be on research carried out in Scotland first, then in the UK, and then internationally</td>
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</tbody>
</table>
2.2 Selection of Databases and Websites

It was anticipated that relevant literature might be sparse, locally and internationally. For this reason, a variety of databases and websites were used and are summarised in Table 2.

Table 2: Information sources

<table>
<thead>
<tr>
<th>Information source</th>
<th>UK-Specific</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library databases</td>
<td>• British Education Index</td>
<td>• Scopus</td>
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<tr>
<td></td>
<td></td>
<td>• Australian Education Index</td>
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<tr>
<td></td>
<td></td>
<td>• Emerald Full Text</td>
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<tr>
<td>Relevant websites</td>
<td>• Enhancement Themes – ‘The First Year’ page</td>
<td>• ERIC</td>
</tr>
<tr>
<td></td>
<td>• (ET: <a href="http://www.enhancementthemes.ac.uk/themes/FirstYear/links.asp">http://www.enhancementthemes.ac.uk/themes/FirstYear/links.asp</a>)</td>
<td>• Ingenta Connect</td>
</tr>
<tr>
<td></td>
<td>• The Higher Education Academy (HEA: <a href="http://www.heacademy.ac.uk/">http://www.heacademy.ac.uk/</a>)</td>
<td>• Google Scholar</td>
</tr>
<tr>
<td></td>
<td>• Quality Assurance Agency for Higher Education (QAA <a href="http://www.qaa.ac.uk/">http://www.qaa.ac.uk/</a>)</td>
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<tr>
<td></td>
<td>• Society for Research into Higher Education (SRHE: <a href="http://www.srhe.ac.uk/">http://www.srhe.ac.uk/</a>) – main content (e.g. conference papers) not accessible/searchable unless a member</td>
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<tr>
<td></td>
<td>US:</td>
<td>US:</td>
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<td></td>
<td>• The National Center for Public Policy and Higher Education (NCPPHE: <a href="http://www.highereducation.org/">http://www.highereducation.org/</a>)</td>
<td>• The National Center for Public Policy and Higher Education (NCPPHE: <a href="http://www.highereducation.org/">http://www.highereducation.org/</a>)</td>
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<td></td>
<td>• Higher Education Resource Hub (HERH: <a href="http://www.higher-ed.org/">http://www.higher-ed.org/</a>)</td>
<td>• Higher Education Resource Hub (HERH: <a href="http://www.higher-ed.org/">http://www.higher-ed.org/</a>)</td>
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<td></td>
<td>• National Resource Center for the First-Year Experience and Students in Transition (NRCFYE: <a href="http://www.sc.edu/fye/">http://www.sc.edu/fye/</a>)</td>
<td>• National Resource Center for the First-Year Experience and Students in Transition (NRCFYE: <a href="http://www.sc.edu/fye/">http://www.sc.edu/fye/</a>)</td>
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<td></td>
<td>• National Survey of Student Engagement (NSSE: <a href="http://nsse.iub.edu/index.cfm">http://nsse.iub.edu/index.cfm</a>)</td>
<td>• National Survey of Student Engagement (NSSE: <a href="http://nsse.iub.edu/index.cfm">http://nsse.iub.edu/index.cfm</a>)</td>
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<td></td>
<td>Australia:</td>
<td>Australia:</td>
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<td></td>
<td>• (HERDSA: <a href="http://www.herdsa.org.au/">http://www.herdsa.org.au/</a>)</td>
<td>• (HERDSA: <a href="http://www.herdsa.org.au/">http://www.herdsa.org.au/</a>)</td>
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</tbody>
</table>
3 Literature Search Results

A variety of articles were located, both published in peer-reviewed journals and on websites. A number of powerpoint presentations and conference or workshop summaries were also located, along with web pages, reports and newsletters. The results of searches through library databases and relevant websites are summarised in Tables 3 and 4, respectively.

After reviewing the selected abstracts, a number were included in the report as generally relevant to the topic. Very few provided specific examples of curriculum design to increase or involve student engagement and empowerment. The literature is synthesised in relation to the importance of engaging and empowering students, the potential role of curriculum, examples of innovative practice, and an analysis of influences on curriculum design. Research in the area is critiqued and suggestions are made for future practice and evaluation.

Table 3: Search of library databases: results

<table>
<thead>
<tr>
<th>Databases</th>
<th>A Scopus</th>
<th>B BEI</th>
<th>C AEI</th>
<th>D Emerald full text</th>
<th>E ERIC</th>
<th>F Ingenta Connect</th>
<th>G Google Scholar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of results</strong></td>
<td>Ai: 1 Aii: 31 Aiii: 50 Av: 8</td>
<td>B: 4874 used ranking → 50 descriptors → university curriculum 319 hits</td>
<td>Ci: 0 Cii: 20 Civ: 5 Dii: 0 Dii: 0 Div: 0 Dv: 33 Dvi: 23</td>
<td>Di: 0 Dii: 0 Diii: 0 Div: 0 Dv: 0 Dvi: 0 Ei: 0 Eii: 15 Eiii: 26 Eiv: 88 Evi: 88 Evi: 88</td>
<td>Fi: 15 Fi: 15 Fi: 54 Fi: 58 Fi: 0 Fi: 0 Fi: 54 Fi: 58 Fi: 54 Fi: 0 Fi: 0</td>
<td>2690 Looked at first 1000, then at recent articles: 648</td>
<td></td>
</tr>
<tr>
<td><strong>Number of abstracts for review (potential relevance)</strong></td>
<td>Ai: 0 Aii: 7 Aiii: 0 Av: 6</td>
<td>33</td>
<td>Ci: 0 Cii: 3 Civ: 1 Dii: 0 Dii: 0 Diii: 0 Div: 0 Dv: 0 Dvi: 0 Ei: 0 Eii: 0 Eiii: 3 Eiv: 1 Evi: 0 Evi: 0</td>
<td>Fi: not examined Fi: 0 Fi: 0 Fi: 0 Fi: 0 Fi: 0</td>
<td>10</td>
<td></td>
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<tr>
<td><strong>Number of articles to collect for review: of general relevance to the topic of curriculum design and student engagement / empowerment. (accounting for repetition)</strong></td>
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<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Specific examples of curriculum design to increase or involve student engagement / empowerment.</strong></td>
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<td></td>
<td>14</td>
<td></td>
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### Table 4: Search of Relevant Websites: Results

<table>
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<tr>
<th>Web Site (see Table 2 for full names and urls)</th>
<th>Results:</th>
<th>Links to:</th>
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<tbody>
<tr>
<td></td>
<td>Online article / report</td>
<td>Powerpoint / Seminar handout</td>
</tr>
<tr>
<td>UK:</td>
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<tr>
<td>ET</td>
<td>2</td>
<td>/</td>
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<tr>
<td>HEA</td>
<td>11</td>
<td>12</td>
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<tr>
<td>QAA</td>
<td>1</td>
<td>/</td>
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<tr>
<td>SRHE</td>
<td>/</td>
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<tr>
<td>US:</td>
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<td>NCPPHE</td>
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<td>NRCFYE</td>
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<td>/</td>
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<td>FYE: USyd</td>
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<tr>
<td>Number of references included in literature review:</td>
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<td></td>
</tr>
<tr>
<td>Specific examples*</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

N.B. where a site search has led to a link with more information, documents are listed under the link name.

* General relevance to the topic of curriculum design and first year engagement / empowerment, or specific examples of curriculum design and/or review
3.1 Emphasis on the first year experience

Recent years have seen increasing international emphasis on the first year experience, demonstrated in specific policy centres in the US and Australia and focused research through the Quality Enhancement Themes in the UK (Enhancement Themes, 2006). This focus has developed in response to increasing student drop-out in the first academic year, described by Reason and colleagues (2005) as leading to financial, cultural, societal and individual waste. In the US, statistics suggest drop-out rates of 25% of first year students in higher education (ACT, 2002, in Reason et al, 2005). This appears to be less in the UK, but still presents a problem. A recent survey of over 6000 students in 23 institutions found that 11% of full time students did not continue their studies (Yorke & Longden, 2006).

As well as retention issues, there is increasing concern regarding the quality of student work throughout the first academic year. This is being influenced by increasing student numbers, greater diversity and flexibility in course delivery (Beder, 1997). Successful working throughout a degree programme is important to provide high quality graduates who can contribute to economic and social growth. The first year is thought to be highly formative in the experience of higher education, contributing to the likelihood of continuing to second year, and of success (Piper, 2006; Flores-Juarez, 2005). Therefore, it is important to ensure high quality education with positive learning experiences.

Both performance and persistence appear to be linked with motivational factors such as interest, expectations of higher education and support for learning (Harvey et al, 2006). A recent study reported survey responses from approximately 6,700 students on 30 US campuses. Associations were found between perceptions of academic competence and self-reported student engagement (Reason et al, 2005). This association has led to increased interest in student engagement, and a related concept, empowerment.

3.2 Student engagement and empowerment

This review of the literature revealed much discussion of student engagement: what it is, why it is valuable, and how it might be enhanced. When discussing the meaning of student engagement, staff responses to a Higher Education Academy (HEA) workshop used words that related to behaviours (e.g. attending, appearing to understand, actively participating, note-taking, doing work out of class, interacting with peers and tutors) and attitudes (e.g. being open-minded, motivated, enthusiastic, interested, sharing responsibility for learning) (Solomides & Martin, 2005).

In a recent presentation, Bryson et al (2006) stated that “although rarely systematically explored”, the topic of engagement encompasses issues of retention, relevant curriculum, effective teaching, and facilitation of deep learning. They conceptualise engagement more specifically as encompassing “the perceptions, expectations and experience of being a student and the construction of being a student in higher education.” It is seen as being a
prerequisite for learning. The presentation continued by describing a qualitative study of students, with findings that suggest distinct but interconnected aspects of engagement at task, module, course, and institutional levels. Engagement in learning was influenced by: “students’ expectations and perceptions, balances between challenge and appropriate workload, degrees of choice, autonomy, risk and opportunities for growth and enjoyment, trust relationships, communication and discourse”. Factors thought to detract from engagement include assessment of, rather than for, learning; intensive structures that leave less time for reflection and activity; a competitive and detached culture, rather than a cooperative and inquiring culture.

While a recent briefing paper on the enhancement themes describes engagement as concerning “a students’ attitude and commitment to study,” empowerment is seen as being more competency-focused. It is described as a transformational process, carrying with it “the suggestion that learners will take more control over their own learning” (Piper, 2006, p. 1-2).

This concept of empowerment resonates in the principles disseminated by the Skills Plus Project, funded by the HEA Innovations Project (2000-2002). While it aimed to facilitate curriculum tuning to increase employability, Skills Plus focused on the development of transferable skills and positive attitudes. Helsby (2002) conducted more than 200 interviews with recent graduates and their employers. They identified specific attributes thought to be associated with employability, including intellectual qualities (e.g. analytical, independent, critical), transferable skills (e.g. communication, time management), personal characteristics and attitudes (e.g. confidence, enthusiasm, pro-activity), and career orientation. This project advocated the development of learned optimism or efficacy beliefs, use of reflection on learning and strategic thinking about the best course of action in a situation (Knight & Yorke, 2002). These attributes could be encompassed in the word ‘empowerment.’

Student engagement and empowerment are obviously admirable goals, but are they being achieved in higher education?

3.3 Current Levels of Student Engagement and Empowerment

The literature review suggests that there has been more study of engagement than empowerment. In a recent large Australian survey of the first year experience, a major indicator of engagement was seen as “time devoted to academic endeavours, including class attendance and time spent on campus” (Krause et al, 2005 p. v). 2344 responses from students in nine universities indicated that according to these criteria, student engagement had reduced since 1994. Although these outcomes are quite simplistic, students spending less time on campus were also found to be less likely to ask questions, contribute in class, work with their peers, or feel like they belong.

The US National Survey of Student Engagement (NSSE) annually measures aspects of the first year experience, including academic challenge, active and collaborative learning, interactions between staff and students, enriching
educational experiences and perceived support. In the 2006 report, responses were summarised from 131,256 first year students who had responded following random sampling from 523 higher education institutions (39% response rate). Student engagement demonstrated positive correlations with retention between first and second years and with performance measures. However, engagement levels were disappointing as indicated by mean time spent studying outside class. Women were more engaged than men in relation to individual study activities such as time in preparation for classes, email communications with instructors, and redrafting of assignments prior to submission. In contrast, men were more engaged in collaborative learning activities, interacting with peers and academic staff. Both sexes were equally engaged in class presentations and web-based learning. In comparison to traditional students, distance learners appeared more engaged in educational activities, but less in active and collaborative experiences. Adult learners were more engaged in class-based activities and in related preparation. Part-time students were less engaged with their peers and their tutors (NSSE, 2006).

It is important to know how educators can engage and empower students of all kinds in university courses. In their major literature review of the area, Harvey and colleagues (2006) describe the importance of “goal orientation and self-efficacy” (p. iv) as influences on persistence in the face of doubts or difficulties. Some researchers suggest that confidence and autonomous learning can be developed through appropriate and informed curriculum design (Chan 2001 cited in Harvey et al, 2006; Lines, 2005).

There is evidence of links between academic success and curriculum design. Reason and colleagues triangulated data from approximately 6,700 students, with responses from over 5000 academic staff. They found associations between staff reports of coherence in first year programmes and courses, and student perceptions of academic competence (Reason et al, 2005).

Flores-Juarez (2005) wrote his doctoral thesis on factors influencing student engagement at a Mexican university. A qualitative research design included approximately 30 students in both focus groups and individual interviews. Analysis indicated that eight main factors affect first year engagement, including personal aspects such as attitudes and behaviours, personal hopes and goals, relevant people, faculty, fellow students, the academic programme, extracurricular activities, services and infrastructures. The main influence relevant to curriculum design was the academic programme, which included issues relating to assessment, schedules and perceptions of connectedness. Although the structure of the programme is not the only influence on student engagement, it does present a modifiable factor that might facilitate the development of positive attitudes and behaviours, hopes and goals.

This research suggests that there is potential for creative curriculum design in the pursuit of student engagement and empowerment. However, as stated by McInnis (2001), it is not enough to implement ad hoc solutions without good understanding. It is necessary to explore the ways that curriculum design has been used to facilitate engagement and empowerment. On review of the
literature, it is evident that this is complicated by differing perceptions of the meaning of curriculum.

### 3.4 What is curriculum?

The word curriculum means different things to different academics. Many definitions derive from literature on school education, for example, stating that curriculum is: “a selection from the culture of a society to be passed on” (Lawton, 1996, in Lines, 2005 p. 113). This is a very broad definition that emphasises the influence of culture, and suggests that knowledge is imparted, rather than developed. However, when it comes to higher education, Stark and Lattuca (1997) explain that “understanding of the word ‘curriculum’ ... have commonly evolved at the local level, with little formal agreement about its definition” (cited in Fraser & Bosanquet, 2006, p. 7).

Descriptions of the meaning of curriculum in higher education have suggested it comprises information thought important for students to learn, experiences thought to be necessary, a set of courses on offer, selected discipline-specific content, or the structure of a course in terms of duration or credit (Stark & Lattuca, 1997, in Fraser & Bosanquet, 2006). Huberman provides a definition specific to higher education, with curriculum as “the embodiment of the educational philosophy of the university”, reflecting “what the academic community deems worthy of knowing” (1970 p. 41).

Fraser and Bosanquet (2006) carried out a phenomenographic study of varied conceptualisations of curriculum in higher education, through interviews with 25 academic teachers in a large Australian university. Thematic analysis led to four categories of conceptualisation of the curriculum as: structure and content of a unit or subject (A), or of a programme (B), learning experiences (C), and a dynamic interaction and collaboration between student and teacher (D).

In this study it was interesting that where academics conceived of curriculum at the unit or programme level (A & B), students were seen as external to curriculum, although they might influence it to some extent through feedback. Content was seen as prescribed and influenced by professional requirements and changing knowledge within the discipline. In contrast, the curriculum as an experience of learning (C) focuses on flexible processes, with room for students to explore their needs and negotiate their learning goals. Finally, the curriculum as a collaborative process (D) takes this model further to a view of the “teacher and student acting as co-constructors of knowledge” (Fraser & Bosanquet, 2006 p. 275). As a result, interviewees rejected the idea of documents in describing the curriculum, as the goal is empowerment, to be achieved through flexible and open collaboration. However, this conception was felt to be limited by forces internal and external to the institution, making implementation difficult.

This variety of conceptualisation was less evident in the review of website material. The HEA website (2007a) includes a page on curriculum design. It describes many different connected variables as contributing to curriculum
design, constructed as a model that “can be applied at the level of the whole curriculum (course or programme) or the individual curriculum building blocks (units or modules)”. A LTSN report summarised interviews with 10 academics and described their understandings of curriculum as being at a programme level, including “essential knowledge, concepts, techniques and values of their particular disciplines” and also ‘fuzzier’ aspects such as values and attitudes (McGoldrick, 2002 p. 5).

Currently the predominant model in the UK appears to be of curriculum as structure and content of a programme. This will be the assumption as the literature review progresses, unless stated otherwise. Structure and content of a programme could include the way that modules are chosen and constructed within the academic year (e.g. over one semester, or two). The content and assessment of individual units also have implications for overall curriculum design, if these are used in a developmental way throughout the first year and entire course.

### 3.5 How can curriculum design increase student engagement and empowerment?

This section synthesises and analyses literature directly relevant to the use of curriculum design at unit/modular or programme/course level to increase student engagement or empowerment, and the involvement of students in the process.

#### 3.5.1 Design of curriculum to engage or empower: at a module level

There are several suggestions relating to the use of individual modules or units to engage or empower students, and four practical examples or case studies, one of which incorporates an evaluation component, and one of which reflects on the possible reasons for student resistance to change. In several cases the aim is to improve transition; they include workshops prior to the start of the first academic year and support or orientation modules available on entry. They may or may not be credit-awarding. General aims include the development of learning skills and social networks and building a sense of context and identity in relation to the institution and the discipline.

Beder (1997) advocates one-week orientation courses at the start of the first academic year, following an increasingly popular US model that aims to increase social and academic engagement, facilitating the development of learning and communication skills and peer support groups, while encouraging a sense of connection to the university and sense of direction within the course and future career.

Mitchell and colleagues (2002) developed an additional non-credit-awarding voluntary first year workshop for US bioengineering students that was held twice per month. It incorporated peer mentoring and aimed to increase community interaction with staff and peers, engagement with the discipline and future career orientation. It had not yet been evaluated.
Oliver-Hoyo and Allen (2005) focused on a specific chemistry module within a US higher education institution. They modified the delivery to integrate lectures and practical work to generate a more active style of learning, with the aim of improving attitudes towards the subject. A comparative evaluation was integrated into their project, with analysis of pre and post survey responses from students on the traditional module (lecture and practical) with those on the integrated module (n=113 and 48 respectively). Responses indicated that the more active delivery style resulted in significantly better effects on attitudes and no increase in anxiety regarding the subject.

Orwin and Bennett (2002) presented an interesting conference paper addressing student resistance to curriculum change. The aim had been to increase student engagement by implementing a low credit, hands-on group work engineering design course with a competitive element. Students had negative attitudes and the work produced as a result was poor. The authors suggested that the students expected to be the recipients of information and also felt that there was insufficient reward for the workload. They conclude that it is important to understand and influence the expectations of students in first year.

Two studies have aimed to identify innovative curriculum design practices in the UK by interviewing academics in varied subject areas (McGoldrick, 2002: n=10; Oliver, 2002: n=8). Examples of innovative practice included accredited introductory modules in study skills that emphasise independent and group tasks, with discussion and problem-solving to counteract previous emphasis on regurgitation of facts. Others have incorporated exercises that aim to address different viewpoints and address the issue of short attention spans. Individuals discussed the creation of more space in the curriculum for thought and assimilation of information. More formative assessment was mentioned as a way of communicating standards and strategies for achieving them. However, this study did not address evaluations of suggested or implemented strategies.

Although some advocate the implementation of additional generic courses on study skills to facilitate transition into higher education (Lines, 2005), others disagree. Harvey and colleagues believed that the literature on support services suggests that facilitation of learning skills should be “embedded within the curriculum,” rather than as an add-on (2006, p. iii). This requires developmental use of learning, teaching and assessment strategies.

There is a wide literature base relating to learning strategies that aim to engage students. This has been thoroughly reviewed by Harvey and colleagues (2006), who identified studies that aim to improve the experience through active and collaborative tasks that involve problem-based learning, development of study and learning skills, learning communities, and an emphasis on e-learning. There has also been increased emphasis on personal development planning and portfolios in the UK, US and Australia (Meyer & Boulton-Lewis, 1999, in Lines, 2005). This may involve activities in modules, but is likely to be integrated with the entire course and careers beyond higher education.
There is a fine line between curriculum design on a modular or programme level, and learning and teaching strategies. For example, according to Harvey and colleagues, “research shows that students prefer student-centred, active learning rather than lectures. Problem-based learning, practical projects and team working seem to be effective provided the student is well prepared” (2006: p. iv). These approaches could be seen to be learning and teaching strategies. However, they can be implemented strategically across the breadth of the programme, which makes them highly relevant to curriculum design at a course level.

This could extend to the use of assessment throughout the first academic year. Yorke (2001) is highly critical of the use of assessment throughout the curriculum (cited in Lines 2005). The use of early summative assessment with little or no formative feedback is common in the first three months of higher education, but provides little opportunity for the student to understand and adapt to academic expectations. Yorke suggests that this can lead to perceived under-achievement and need for reassessment that is likely to impact negatively on further adjustment and assimilation. As for learning strategies, assessment should be viewed developmentally across the programme.

3.5.2 Design of curriculum to engage or empower: at a course level

When looking at curricular practices at a programme level, suggestions for, and examples of innovative practice generally involve strategic use of learning, teaching and assessment strategies. They often have similar aims of improving social and academic integration, and increasing independence and collaboration in learning. Several cases studies have been located that demonstrate redesign of an entire curriculum in response to input from a variety of stakeholders, rarely including students themselves. They often focus on the identification and development of competencies required to be successful in their discipline beyond graduation.

Barefoot (2002) provides a summary of a US national survey of first year curricular practices conducted in 2000. This was sent to 621 randomly selected academics, 54% of who responded. When describing best practice, there was a focus on guiding module selection and choice of a major. Learning communities are being promoted to ensure that students share more than one module with the same group of peers, enhancing their collaborative learning and sense of belonging. However, this may be less relevant in many UK courses, where students often apply to study specific courses and are likely to share some core modules with their peers. However, further issues were identified in relation to large class sizes and poor attendance, and these are more likely to be common with UK higher education institutions. Although many of our students are likely to be within ‘learning communities,’ they may not be encouraged to maximise the potential opportunities these communities provide. This is being addressed at Teesside University who are attempting the development of learning communities, described by Lines (2005).
The Skills Plus Project, which promoted the tuning of curricula to enhance employability, stated that programmes should be viewed in relation to likely messages and processes. They should, therefore, strategically distribute a variety of teaching and learning strategies across the three or four year course. These might include the use of different media, collaborative learning, formative and summative feedback, and clear explanation of expectations. Also advocated were space within the curriculum for deep learning and progression of skill development over the programme, for example, only assessing presentation skills in the fourth year where these skills have been developed over the preceding years. Sixteen academic departments participated in the Skills Plus project and reappraised their programmes based in these ideals, although within this literature review, no evaluation of this project was found.

According to Beder (1997), at the time she was writing, one or two courses in the US had completely redesigned their first year curricula to address the first year experience, integrating learning activities with connected disciplines or encouraging a more problem-based approach (Olds & Miller, 1993; Johnston & McGregor, 1997, in Beder, 1997). However, no further comment is given on the success of this approach, both of which were disseminated in conference presentations.

Lines (2005) documented several cases studies that had similar aims. La Trobe University in Australia had redesigned a curriculum to encourage a sense of identification with the relevant profession, developing purpose, direction and greater understanding of the rationales for different modules. Ryerson University in Canada had felt the need to increase students' sense of connection with programmes. They evaluated the course load and sequencing and redesigned the curriculum to promote learning and academic skills early in the course (in Lines, 2005). The London Metropolitan University had, aimed to integrate learning development into subject-based teaching, core modules to build group identity, while implementing support and mentoring systems, and personal development planning. However, this had not been evaluated at the time of the report.

In 2006 Lines and colleagues were involved in conducting cases studies of architecture and nursing courses at Robert Gordon University, Aberdeen. A longitudinal study was carried out with first year architecture students, making use of questionnaires, focus groups, reflective learning diaries and the learning styles inventory. Initial findings indicated that students had concerns regarding external pressures and time management, new ways of learning, and perceptions of the subject. As a result of this input, decisions were taken to make greater efforts to contextualise subject matter and to develop and implement a toolkit of strategies for the development of independent learners. It will be interesting to see the results of further evaluation of these measures and evaluate their success in impacting on student engagement and empowerment.

Jantzi and Austin (2002) redesigned their nursing curriculum by first developing five overall competency themes based on professional
documentation. They developed a curriculum to develop each of these competencies over the four-year course. Students were evaluated for knowledge, skills and attitudes on entry to the course, by writing for ten minutes in response to a specific prompt. They were introduced to the curriculum, explained in maps and diagrams. Students were regularly required to produce work that demonstrated relationships between specific activities and the programme expectations. These assignments were documented as ‘evidence of growth’ in e-portfolios. Students were to be re-evaluated for knowledge, skills and attitudes at the end of the course. None had reached this point at the time the article was written. Subjective feedback was reported from students suggesting benefits from reflecting on learning.

Kift and Nelson (2005) do not believe that it is enough to design or redesign a curriculum in line with current pedagogical principles. They advocate systemic, university-wide change that ensures administrative and support programmes that are integrated with the curriculum and in line with student needs. Working at the Queensland University of Technology in Australia, these authors developed six main principles for curriculum renewal to enhance student engagement (p. 230):

• creation of ‘engaging learning environments’ (e.g. authentic discipline-specific learning tasks)
• development of a long-term strategy rather than piecemeal modification, involving a view of the entire programme and student needs
• curriculum renewal with awareness of who students are, their weaknesses on entry, conflicting roles, and aims and goals
• design units to cumulatively develop skills and capabilities required on graduation
• ensure course and unit delivery facilitate reflection, independence and self-management to enable lifelong learning
• align curriculum, administrative and support services to ensure an institution-wide approach.

These authors proceeded with a programme of research and implementation to ensure the application of these principles. First, they mapped current university-wide activities, identifying and trialling innovations, and consulting with stakeholders to generate a staff development programme. They obtained ethical approval to involve 4000 students in the development process, although detail on the nature of this involvement is not provided. This was described as a ten-year process of cultural and structural change, therefore the lack of evaluation is perhaps not surprising. Although interesting, strategies were presented in a journalistic manner and therefore, it is difficult to identify specific evaluation. There was a short summary of student feedback that suggested the redesigned first year programme was considered successful by students, although the method of data collection was not presented in detail.

It is interesting that the majority of these suggestions and case studies do not strongly emphasise the involvement of students in redesign. The next section looks at student involvement in more depth.
3.5.3 Involvement of students in curriculum design

Few examples of curriculum design have overtly included students in the process. There seems to have been more emphasis on the consultation of stakeholders, primarily employers, in the process of curriculum design. Teng and Shelnutt (2002) described an ongoing process of involving local industries in the initial and ongoing design of their Master’s programme in Engineering Management (US). The feedback from industry was very positive, but students’ or graduates’ views were not sought.

Two Australian studies have redesigned the focus of their nursing curricula in response to changes in the professional context and designed their course accordingly. Perkins and colleagues (2001) identified new influences on nursing roles and the increased emphasis on primary care, rather than acute. Professional documentation was analysed and interviews conducted with academics, clinical nurses, students and alumni. This led to a vision of the ‘end-product’ of a nursing course – a nurse capable of operating well within the primary care context. As a result, competencies were written that were to be developed through the curriculum. The process used was interesting, but evaluation of its long-term success was not presented. Mann and colleagues (2000) collaborated with a community health service to develop a four-year curriculum that integrated primary health care principles. The conference abstract did not provide much detail of actual curriculum changes, although mentoring by community health nurses was included. The programme was evaluated for its effects on knowledge, understanding, and employment opportunities. The first phase was presented and critical outcomes demonstrated evidence of increased understanding in interviews with 22 students during their second academic year. Students also expressed greater engagement, empowerment and enthusiasm.

Two examples of overt student involvement have been located that appear to conceptualise curriculum at the experiential and collaborative levels (‘C & D’) identified by Fraser & Bosanquet (2006). Lundstrom and colleagues (1996) aimed to increase the quality of engineering design education in the US. They wished to increase student engagement and redesigned a course on the basis that students would be treated as colleagues and involved in setting ground rules for grading policies and deadlines and developing learning objectives en route to ‘terminal course competencies.’ They continually administered ‘use improvement surveys’ to allow immediate quality enhancement. These principles are interesting and it would have been useful to see an evaluation of their efficacy in improving student engagement and empowerment.

A second example was found in a book providing guidance on developing participatory adult literacy courses in the US (Auerbach, 1992). This provides a guide to facilitating students in the discovery of content relevant to their individual needs. It focuses on individuals’ contexts and situates their learning in relation to their experiences, values and priorities. Students are involved in decisions about what and how they will learn. This book does not provide an
evaluation of the approach, but it provides an interesting contrast to the predominant model of student involvement in UK higher education institutions.

Two studies have obtained qualitative and survey data relating to student feedback in the UK (Oliver, 2002; Davidson, 2005) and one has reviewed the grey literature of four UK higher education institutions, addressing their use of student feedback (Harvey et al, 2006).

In a LTSN-funded project, Oliver (2002) interviewed eight academics on their experiences of curriculum design. They explained that it was often necessary to first go through an orientation process, locating a module in the programme context and looking at the type of student attending. However, there was rarely consultation with students until the re-design stage. Discussion included reflections on past experiences of feedback from students. Where a curriculum had been redesigned during the progression of a course, some students were strongly resistant, inhibiting creative curriculum design. Institutional and student feedback were not always thought to be helpful by academics, as it is not always constructive and often displays a lack of insight into the whole curriculum.

In their review of grey literature, Harvey and colleagues (2006) found that module and course feedback is commonly collected, but not in a standard manner and not generally disseminated. There was a lack of standard systems for ensuring its use to continually improve the student experience. This was also found in Davidson’s survey of current practices in Scotland (2005). He found that the collection of feedback for quality assessment is standard, but less so for quality enhancement. He concluded that institutions should not do more evaluation, but alter the way they do it. They should train students in the provision of constructive feedback and ensure collection of and response to feedback during a module, generally ‘closing the loop’ by reporting back to students. He suggests that feedback should be less formalised, involving more dialogue and immediate response. However, this form of feedback would be less easily documented and used in a rationale for change and disseminated for the use of others – is this one reason for a lack of published work? In order to disseminate and evaluated their rationales for module and course redesign, academics would need to document their reflections on experiences and informal feedback.

3.5.4 Summary: the ‘ideal curriculum design process’

Figure 1 synthesises the various principles and practices advocated in the literature that suggest an ‘ideal curriculum design process.’ This process may or may not be carried out before a course is initially validated, but is it possible prior to review or re-validation of programme in the UK higher education context? The lack of work evaluating the principles or the process of curriculum design, leaves a lack of support for arguments presented to academic audiences, especially in the light of many conflicting influences on curriculum design. This literature review identified several analyses of the current context and influences on the process of curriculum design. The next
section addresses these influences and describes the current ‘reality’ of curriculum design in UK higher education.

Figure 1: Conceptual map of an ‘ideal curriculum design process’
3.6 Curriculum design – current ‘reality’ and constraints

More than 30 years ago Huberman argued for increased student participation in curriculum, focusing on development of learning skills and capacities rather than on ‘closed systems of thought’ (1970, p. 42). He emphasised the importance of skills for lifelong learning in the context of a ‘knowledge explosion.’ However, he also described the effects of governance and national workforce requirements on the university curriculum. It seems that this has not changed. The HEA describes contexts for curriculum design and implementation as rich and diverse, but subject to many conflicts of interest (HEA, 2007b).

Following a national review of curricular practices in the US, Barefoot concludes that there should be high staff-student ratios in first year classes, which should be delivered by experienced academics with support from senior students; learning opportunities should be cooperative and active, with provision of early feedback; and there should be staff-student interactions out of class. These ideals are likely to be viewed with some wry amusement by many academics. Several of these principles are subject to conflicts of interest within the UK higher education sector, which have seen reducing staff-student ratios over recent years (Bourner, 2004). These conflicting pressures lead to demoralisation of academics, demonstrated to some extent in several papers relating to constraints on the curriculum design process. Kift states that it is not surprising that the majority of higher educators have not embraced the first year experience concept; “many of the more engaged teachers are stretched and change-weary; while the balance remain, as they always were, change-averse” (2004, p. 2). However, some see the different pressures as opportunities to be creative, whilst recognising the constraints being faced.

Lines (2005) carried out a survey of Scottish academics in order to explore practices in first year curriculum design. The poor return rate makes conclusions tentative, but responses indicated that practices were highly variable. After interviews with eight academics, Oliver (2002) found that although in the literature the principle is to start from course aims and work backwards in the design of content and format, there was little evidence of this in practice, which was more influenced by pragmatic considerations and conforming to expectations. Oliver stated: “contrary to the rational models advocated in contemporary research, the accounts of participants in this study portray curriculum design as a social practice that involves orientation to historical precedents, accessible resources, local values and interpersonal micropolitics” (2002, p. 14).

The varied conceptualisations of curriculum described by Fraser and Bosanquet (2006) imply differences in the degree of control and power exercised by designers and providers of education. The implication is that reductions in specific documented structures and content provide more room to involve and collaborate with students in their learning, leading to greater engagement and empowerment. However, this flexibility appears to be influenced by a variety of factors, such as institutional and professional
standards, employer requirements and quality assurance measures for higher education. These can be differentiated into internal and external influences on curriculum design, summarised in Figure 2 and discussed below.

**Figure 2: Summary of influences on the curriculum design process**

<table>
<thead>
<tr>
<th>External influences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government</strong></td>
</tr>
<tr>
<td>Agendas / Aims</td>
</tr>
<tr>
<td>• employability &amp; lifelong learning</td>
</tr>
<tr>
<td>• widening participation</td>
</tr>
<tr>
<td>• transition, retention &amp; success</td>
</tr>
<tr>
<td>• student-centred</td>
</tr>
<tr>
<td>Governance</td>
</tr>
<tr>
<td>• accountability</td>
</tr>
<tr>
<td>• external feedback</td>
</tr>
<tr>
<td>Professional Stakeholders</td>
</tr>
<tr>
<td>• national and international competencies and standards</td>
</tr>
<tr>
<td>• changing knowledge base</td>
</tr>
<tr>
<td>International</td>
</tr>
<tr>
<td>• Competitive-ness</td>
</tr>
<tr>
<td>• Bologna process</td>
</tr>
</tbody>
</table>

| Student feedback / consultation / involvement |

| Intrapersonal |
| • confidence |
| • time |
| • energy |
| • creativity |

| Interpersonal |
| • conventions |
| • hierarchies |
| • relationships |

| Support |
| • administration |
| • information technology |
| • staff development / training |

| Infrastructure |
| • conventions |
| • politics |
| • bureaucracy |
| • resources |

**Higher Education Institution**

**Internal influences**

### 3.6.1 Internal influences on curriculum design

McGoldrick (2002) interviewed ten academics who described change in curriculum as constant, influenced by changes in: the discipline; feedback from, and observation of, students; employability factors; professional bodies; and resources. In order to be creative and innovative in curriculum design, enthusiasm and interest are needed in relation to the discipline, but also in relation to students and teaching. The interviewees believed that academics
are required to be flexible and critical of the status quo and of their own viewpoints. They need the confidence to listen to what students have to say, experimenting and revising strategies in response to evaluation. Creative curriculum design cannot occur without good leadership, enabling open and flexible discussion leading to decisions. Suggestions included more staff development in relation to curriculum issues that involves all team members, with space for brainstorming, integration of student feedback, and peer involvement from other institutions.

The same academics described negative influences on curriculum design, including internal resistance from leaders or team members, lack of resources, high student-staff ratios, insufficient administrative and technical support, lack of staff development and issues of professional autonomy. McGoldrick summarised the major issues as erosion of morale and of “space” for thought and implementation.” Both of which are thought to be at least partially counteracted by good creative leadership and management (2002, p. 22).

Additional internal influences were identified in interviews by Oliver (2002). These included interpersonal, historical and organisational issues. The administrative processes required for even small changes (e.g. within a module descriptor) were so laborious that it led to inertia. Even infrastructure issues, such as the size or type of teaching room could restrict change in curriculum design. Further constraints were similar to those previously mentioned, including over-commitment of staff and lack of resources. However, specific process issues were also emphasised.

Academics described issues relating to delivery of modules and courses in large teams with a high turn-over and lack of ownership. This can lead to a need for specific structures within the curricular content and provides less room for flexibility. There is also a lack of confidence in this context, which is less likely to be conducive to risk-taking. It was notable that many academics inherit courses, rather than designing them from a blank slate. This can lead to difficulty in engaging with the material and departing from existing conventions or expectations. The university framework is also felt to be inflexible, especially in relation to assessment. However, suggestions were made in relation to presentation of the curriculum for the benefit of internal and external authorities, while leaving room in the description for flexibility in delivery (Oliver, 2002).

3.6.2 External influences on curriculum design

McGoldrick described academic concerns regarding a ‘contradiction of creativity’ (2002, p. 1) – in other words, there are many demands to improve curriculum design in order to increase global competitiveness, but there are constraints from limited resources, time, reduced professional autonomy, and changes in political and professional drivers.

When considering government influences on universities and curriculum design, Becher (1994) describes three models of inter-relationships. The
‘command’ model specifies a highly directive role of government, while an ‘ideal’ model emphasises higher education as autonomous and trusted by government. Becher believes that the UK has operated primarily within an ‘exchange’ model, where resources are provided by government “in return for services provided to society.” However, he identified increasing influences from government on different aspects of university provision, such as emphasis on developing lifelong learning. These pressures may be exerted independently through professional bodies, but exist nonetheless. Bridges (2000) supports this analysis, describing the influence of government in enforcing an agenda that relates primarily to increasing concern with economic competitiveness. Specific skills are required from its workforce and universities are involved in their development.

This governmental influence is not necessarily negative for the sector. As Knight and Yorke (2002) note, although employability is an external pressure, it is not necessarily out of line with first year issues; increasing skills for employability is also likely to increase success in first year. In a recent article, Bourner aimed to explain these seemingly ‘fad-ish’ changes in the UK higher education curriculum, contending that “there is a coherence in these changes that is not always appreciated” (2004, p. 39). However, academics may feel assaulted by different dislocated demands and be unable to see how they fit into a big picture, at least part of which could be in line with their professional integrity. Innovative curriculum design requires a broad view and it may be too difficult for individual academics to see the ‘map’ of influences and negotiate a path through them that they can see as positive for their students.

Shaw (2002) identified a variety of external agendas and influences on curriculum design, including accountability, widening participation, increasing employability and lifelong learning, international competition, professional stakeholders and emphasis on student ownership of their education. However, Shaw also discussed ways of meeting the challenge by encouraging curriculum designers to identify the different pressures and be creative in developing solutions that address multiple concerns effectively.

3.7 Critique and Further Directions

To summarise, the literature suggests that it is important to empower students by facilitating the development of transferable skills for learning and employability. It is also important to engage students, increasing their social and academic integration with the institution and their subject or discipline. Both of these aims may be best achieved through emphasis on student-centred, active learning tasks that increase independence and collaboration. Although learning, teaching and assessment can be implemented only at a modular level, they can also be viewed across the first year and the three or four-year course. Several case studies took the view of identifying core competencies to be developed by graduation, and then understanding the point students are at on entry to the institutions. Careful use of learning, teaching and assessment strategies can then facilitate the development of core competences across and between years. It was notable that there were
very few examples of students being involved in the process of curriculum design and far more examples of consulting employers.

The principles advocated in the literature are intuitively appealing, but were frequently promoted with a lack of evidence for success in practice. There were several large and robust surveys relating to student engagement, but the curriculum design literature more frequently involves discussions, opinions, and descriptions of changes that have been implemented without evaluation. There were numerous online conference papers and reports that did not present detailed methodologies. It is possible that these were presented, or that the report did not require this detail. However, it seems that such work rarely results in peer-reviewed articles with useful detail of rationale, process and evaluation, required for thorough understanding. More research exists in relation to specific learning, teaching and assessment strategies, but evaluations of their use across the curriculum are needed. It is important to develop a case study that implements curriculum design principles in a thoroughly designed and disseminated process, with an integrated evaluation that uses qualitative and quantitative research design.

This lack of research is likely to have several causes. McInnes states that there are “very few scholars specialising in the study of higher education,” resulting in a fragmented knowledge base and lack of synthesis (2001, p. 109). The frequent use of contract-driven researchers, who typically leave the subject matter behind, leads to a lack of in-depth papers disseminating and analysing studies that have been carried out. Although McInnes has seen an increase in conference papers and publications relating to the first year experience, reviews and evaluations rarely aim to provide generalisable findings. When discussing examples of good practice, he states: “there is little systematic research or evaluation on which to base judgments about the effectiveness of these programmes or their potential for adaptation in other settings.” (p. 112). This leads to a “danger of building a ‘massive but trivial literature’” (McInnes, 2001, p. 112).

As well as analysing the credibility of information, it is important to be aware of the context of suggestions or guidelines before deciding on whether to implement suggestions or guidelines. McInnes states “research on first year students from the United States does not translate as readily to the Australasian context as might be assumed… US colleges have been explicitly concerned with the broad development of undergraduates while Australian universities have been more directly vocational and academic in their aims” (2001, p. 100). The analysis of national priorities and agendas is relevant to the appropriate application of research. It is also important to be aware of baselines from which principles are being applied. For example, there is a strong message from US-based research that student-staff interactions should be increased. However, what level should this be increased from? Do UK-based courses compare favourably with the baseline or not? Individual courses within the UK differ on student-staff interaction levels. It is important to have full information about concepts before applying guidelines.
The literature review revealed a lack of research into specific issues. Frequently there appears to be an assumption first year refers to an undergraduate degree, despite the importance of improving persistence and performance in postgraduate courses. In a large Australian survey, Krause and colleagues (2005) found that postgraduate and international students are frequently less satisfied than domestic students. McInnes (2001) also raises the issue of student diversity, calling for more research into its effects. He also suggests that comparative studies should be carried out, and academics should make use of increased funding for international collaborations.

It is important to note the limitations of this literature review. The detailed search strategy is presented to enable the reader to evaluate its credibility and to enable other researchers to extend the search if required. The strategy used to locate literature was rigorous but cannot claim to have been exhaustive. The short timescale led to several limitations. Firstly, there was insufficient time to thoroughly cross-reference all of the documents obtained. In addition, several inter-library loans were either unavailable or could not be retrieved within the timescale (Gershensen et al., 2002; Jollands et al., 2005; Reidsema, 2005; Savage, 2005). The article titles suggest that they may provide specific examples of curriculum design. Finally, when using search engines associated with different web pages the first five pages of results were searched, after which results appeared to be irrelevant. However, this was not confirmed.

Despite these limitations, the literature review has demonstrated that more rigorous research is needed. The aim of the quality enhancement themes is to improve education provision by communicating best practice in learning and teaching to academics in a variety of disciplines. As Bourner explains, “teachers in higher education are the gatekeepers of curriculum change” (2004, p. 39). Many of these educators are, themselves, actively engaged in critiquing and conducting research. It is not enough to communicate principles that have intuitive appeal. Academics with many workload pressures and different interests must be convinced of the need to implement change, and arguments will be more persuasive if supported by rigorous research. Most are accustomed to reading research as a basis for change within their disciplines. Without research-based support for suggestions, it will be hard for academics to differentiate one suggestion from another in the multitude of agendas imposed by external authorities. If it is not possible to convince the people who are involved in curriculum design, the work will be wasted.

4 Conclusions

To conclude, this review has identified much literature that supports the need to engage and empower students, increasing their persistence and performance over the first academic year and beyond. This is advocated for different reasons, including the need to maximise national and institutional competitiveness, and the development of individual students. Various authors advocate creative design of the curriculum to achieve these aims, involving students in the process. However, there are fewer examples of practice and
fewer that include evaluation of the success of strategies or interventions.

In synthesising the literature there appears to be an ‘ideal’ curriculum design process. Students, graduates and employers should be consulted to inform the overall programme aim and to identify students' abilities on entry. A ‘birds-eye’ view is advocated where discipline-specific and transferable knowledge and skills are developed within, and across modules or units. Current pedagogical principles should be used developmentally to facilitate a progression of learning over the first year in particular and throughout the course. The success of this as an overall strategy should be evaluated in relation to student engagement and empowerment.

In contrast to the ‘ideal’ curriculum design process, literature relating to actual practice suggests that most academics are overwhelmed by the different agendas being promoted in higher education, and may lack the time, confidence and support to initiate change within current higher education infrastructures. More rigorous research is needed to convince academics that a more creative approach is worthy of their time and energy, addressing national agendas, but also benefiting their students as individuals.
Reference List


Appendix 1:

Combinations of search terms used in each database are included below:

Search Words:

**A1**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "higher education" OR "university" AND "first year student" OR "freshman" AND NOT school; limit: 1996-2007; all document types; search in article title, abstract, keywords

**Aii**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "higher education" OR "university" AND NOT school; all document types; search in article title, abstract, keywords

**Aiii**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "first year student" OR "freshman" AND NOT school; limit: 1996-2007; all document types; search in article title, abstract, keywords

**Aiv**: engagement OR empowerment OR involvement OR consultation OR feedback AND "higher education" OR "university" AND "first year student" OR "freshman" AND NOT school; limit: 1996-2007; all document types; search in article title, abstract, keywords

**Av**: search for publications by specific named presenters identified through a search of relevant websites

**B**: engagement AND curriculum AND design AND higher AND education OR university NOT school 4874 ranked by descriptors; selection on 1 thesaurus item: 'University Curriculum'

**Ci**: Use of thesaurus → first-year-students AND curriculum-development AND feedback

**Cii**: Use of thesaurus → first-year-students AND curriculum-design AND feedback

**Ciii**: Use of thesaurus → first-year-students AND curriculum-development

**Civ**: Use of thesaurus → first-year-students AND curriculum-design

**Di**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "higher education" OR "university" AND "first year student" OR "freshman" NOT school; limit: 1996-2007; all document types; search in all fields

**Dii**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "higher education" OR "university" NOT school; limit: 1996-2007; all document types; search in all fields

**Diii**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "first year student" OR "freshman" NOT school; limit: 1996-2007; all document types; search in all fields

**Div**: engagement OR empowerment OR involvement OR consultation OR feedback AND "higher education" OR "university" AND "first year student" OR "freshman" AND NOT school; limit: 1996-2007; all document types; search in all fields

**Dv**: "curriculum design" AND university AND engagement

**Dvi**: "curriculum design" AND university AND empowerment

**Ei**: Use of thesaurus → curriculum design AND student attitudes

**Eii**: Use of thesaurus → curriculum design AND student evaluation

**Eiii**: Use of thesaurus → curriculum development AND student attitudes

**Eiv**: Use of thesaurus → curriculum development AND student evaluation

**Ev**: Use of thesaurus → curriculum design AND student attitudes AND student evaluation

**Evi**: Use of thesaurus → curriculum development AND student attitudes AND student evaluation; Search in Title & Abstract only

**Fi**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "higher education" OR "university" AND "first year student"

**Fii**: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program design" OR "curriculum development" OR "program development" AND "higher education" OR "university" NOT school; limit: 1996-2007; all
document types; search in all fields → full search list does not appear to lead to appropriate results, therefore – separate out all combinations of terms
Fi: - all combinations of terms in Fi as separate input
limit: 1996-2007; all document types; search in all fields
Fiv: - all combinations of curriculum design / development, or programme design / development, and student empowerment / engagement
"curriculum design" AND "student engagement"
G: engagement OR empowerment OR involvement OR consultation OR feedback AND "curriculum design" OR "program* design" OR "curriculum development" OR "program* development" AND "higher education" OR "university" AND "first year student" OR "freshman" AND NOT school