

Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/13927/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Roberts, Andrew Simon and Yoell, Hannah Eliza 2009. Reflectors, Converts and the Disengaged: A study of Undergraduate Architecture Students' Perceptions of Undertaking Learning Journals. *Journal for Education in the Built Environment (JEBE)* 4 (2) , pp. 74-93. file

Publishers page: [http://ctiweb.cf.ac.uk/jebe/pdf/AndrewRoberts4\(2\)....](http://ctiweb.cf.ac.uk/jebe/pdf/AndrewRoberts4(2)...)
<[http://ctiweb.cf.ac.uk/jebe/pdf/AndrewRoberts4\(2\).pdf](http://ctiweb.cf.ac.uk/jebe/pdf/AndrewRoberts4(2).pdf)>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies.

See

<http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



Reflectors, Converts and the Disengaged: A study of Undergraduate Architecture Students' Perceptions of Undertaking Learning Journals

Andrew Roberts & Hannah Yoell: Cardiff University, UK

Abstract

The benefits of encouraging students to reflect on their learning are widely extolled, since reflection aids learners in understanding new information and forming new conceptions. Learning journals are used in a number of schools of architecture as a means to promote awareness of the design process, through encouraging students to reflect on their learning experiences.

This paper outlines the findings of a small scale research project, looking at students' perceptions of the use of learning journals within a school of architecture and sets out to identify the subsequent learning approaches and attitudes that they adopt. The research identified three possible attitudes towards journal keeping held by students: natural; convert and disengaged. Natural types were pre-disposed towards keeping learning journals and found them beneficial. Convert types were initially sceptical about the use of learning journals, but through their use became more convinced. The disengaged students showed misconceptions of the purpose and potential benefit of the learning journal and did not find them to be beneficial. The research highlights the importance of how staff implement learning journal projects and support students in developing the confidence and ability to reflect.

Keywords: Reflective Practice, Learning Journals, Architectural Education, Design Studio

Introduction

Architectural studio projects enable students to develop and explore design propositions whilst engaging in a process of critical reflection. This they do through dialogue with tutors, peers and themselves and through exploration and interaction with materials and media. Reflective practice is often considered by teachers of architecture to be a key element of studio activity and for many this is in response to Donald Schön's (1983; 1985) use of an architectural tutorial as an example of his theory of reflective practice. Although Schön's work is frequently cited in writings on architectural education it might be argued that his ideas have been adopted somewhat uncritically by teachers of architecture (Webster, 2008). It is also questionable whether students of architecture actually engage in reflective practice to the extent described by Schön or indeed to the same extent as other disciplines, such as healthcare, teaching and management. Certainly the academic literature, exploring how reflective practice might be taught, encouraged and measured, is much more prevalent in those areas.

Although the concept of reflection as an intellectual activity has been recognised since ancient times, John Dewey is commonly credited as being its key originator. Dewey saw reflection to be a particular form of thinking that could be used to resolve particular problems. Dewey distinguished reflection from more general thinking, by suggesting reflective thought was underpinned by evidence. Reflective thinking, rather than being a random chain of thoughts, relied upon each thought carefully relating to its predecessor and successor. He saw reflection as a deliberative process that can profoundly influence one's experiences (Dewey, 1933, p. 104).

Since Dewey, many authors have proposed a range of definitions of reflection, which represent differing conceptions of the term itself (Moon, 1999). For the purpose of this paper we will adopt the definition provided by Boud and colleagues as "those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations" (Boud *et al.*, 1985, p. 19).

A wide body of literature has been developed on the subject of reflective practice particularly in the subject areas of education and healthcare, with writers arguing that reflection facilitates the linking of theory and practice, and encourages critical evaluation (Calderhead, 1988; Bain *et al.*, 1999). It provides the link between an experience and learning from that experience (Blackwell *et al.*, 2001), providing meaning to something that is personal and subjective (Platzer *et al.*, 1997).

As mentioned previously, Schön (1983) argues that reflection is a key element of professional thinking, suggesting that this is how professionals deal with complex and often ambiguous problems. Rather than attempt to apply some readily available theory or procedure, he argues that professionals use more intuitive processes which he refers to as 'reflection on action', and 'reflection in action'. Both suggest that reflection is closely bound with action, but the latter suggests reflecting on something whilst doing it, rather than at some subsequent period in time. Hatton and Smith (1995) suggest that it is this reflection in action that is the ultimate goal for the development of reflective capacity in students.

For Kolb (1984), reflection represents a key element of his experiential learning cycle. He suggests that students reflect upon a concrete experience that they have undertaken. They then use this reflection to draw conclusions and further conceptualise what they have experienced, which they can feed into further concrete experience through experimentation. Again reflection is closely bound up with action, and Kolb claims that the pursuit of this cycle leads to new learning. Moon (1999) provides a more sophisticated cyclical model based around how meaningful learning is assimilated and subsequently accommodated into what Ausubel and Robinson (1969, cited in Moon 1999) refer to as the cognitive structure. This implies the network of "facts, concepts, propositions, theories and raw perceptual data that the learner has available to him at any point in time" (p.108). As the cognitive structure accommodates new material, students are able to progress to further levels of learning and cognitive challenge. Moon (1999, p. 147) argues that by reflecting, students are able to 'upgrade' their learning to even higher levels after the original time of learning.

Constructivist theories of education see reflection as an aid towards achieving deep learning (Marton and Saljo, 1976). Deep learning is likely to occur at a point when students start to reflect on the information that they are being given. They adopt an approach towards learning which seeks to attach meaning to the information that they are being taught.

According to Moon (1999) reflection has the potential to make students aware of their learning and more importantly their approach to learning. Moon is particularly interested in the role of journal writing as a learning tool which promotes reflection. She suggests that journal writing, when done in a reflective manner, can be considered meta-cognitive (Moon, 2006, pp. 31-33), meaning that the student becomes aware of their learning process. She presents learning journal writing as a way to achieve deep learning. Whilst for many educators, encouraging reflection might be considered as a means to develop students as more competent practitioners, some would argue that the development of reflective skills might be considered to be an end in itself (LaBoskey, 1993; McIntyre, 1993). More negatively, Betts (2004) argues that if handled incorrectly reflective practice can have no greater benefit than providing a form of personal therapy for an individual, or as a means to encourage conformity to a corporate norm.

Contemporary discussions on architectural pedagogy suggest the need for a move from a model of architectural education where the process of learning is one of transmission and replication to one which is considered more student-centred (Dutton, 1991; Till, 2009). In an earlier keynote presentation at the 2004 Studio Culture conference, Jeremy Till argued that much teaching in architecture in the past has been about the generation of 'little architects' in the mould of their 'master' teacher rather than allowing students to develop as individuals. The little architects were illustrated by way of puppets, controlled by a puppeteer (Till, 2004). Webster (2004a, p.108) argues in a similar manner that it is common for design tutors to act as "hegemonic overlords", dominating design thought and discouraging critical reflection amongst (particularly the weaker) students. She argues that Schön's (1983) example of Mr Quist teaching student Petra, seems to exemplify this domineering relationship and suggests that the reflection that Schön so values, may not be practised by the students .

A key paradox of architectural education is that, whilst much emphasis in teaching is placed upon the development and exploration of ideas and concepts, assessed credit is typically based on the final product of a student's endeavours, usually a set of drawings and models representing a set of design proposals. Little account is taken of the learning, or indeed reflection that has occurred whilst reaching that conclusion (Anthony, 1991; American Institute of Architecture Students, 2002). This implies that an assumption is made about the learning and reflection achieved, that if the design proposal is of a high quality, then students will have reached the required educational standards. Salama (2007) argues that as a result, architecture stands accused of focussing more on form issues while over-simplifying programmatic and contextual contexts. Whilst students may engage in high levels of cognitive and affective thought during their explorations, by not taking account of process issues, students may receive little credit for the learning that might occur as a result of this. In research reflecting on the project work outcomes of art and design students, Davies (1998) noted that some students could appear to be engaging with deep learning, but evidence from reflections on their process contained within a learning journal suggested that their level of learning was much more superficial. Conversely Davies discovered that some students, who were generating visually mundane outputs in their project work, were engaged in meaningful dilemmas in their thinking as part of the design process which only became apparent through their learning journals.

Asking students to reflect on their process is seen by some as a means to raise the priority of design processes (Davies, 1998; Webster, 2004b; James, 2007) and to encourage students to think about their conception of what it means to be a designer (Davies and Reid, 2000). Learning journals (Moon, 2006) are vehicles for students to record their learning experiences and to reflect upon them. They can take a variety of formats but might typically contain notes, diagrams, sketches and reflective thoughts. Generally they contain an element of unstructured writing, commonly formatted in a similar manner to a diary, allowing the writer to reflect on experiences from a particular day or event. James (2007) argues that little research has been conducted in graphical reflection. Her research in the area of fashion design suggests that the process of drawing and assembling a sketchbook or portfolio of images is in itself a reflective activity. Similar conclusions are drawn by Webster (2004b) within architecture. Nevertheless, it is difficult to collect empirical evidence to suggest that visual reflection helps students to understand the design process, or whether it can help students sub-consciously identify areas for future improvement. Perhaps the distinction made by Schön (1983) between reflection in action, a rapid sub-conscious process conducted whilst performing an action (in the case of architecture, drawing and making) and the more retrospective reflection on action conducted at a later stage, is of relevance here with graphical reflection being more akin to reflection in action, and text based reflection being an example of reflection on action.

Learning Journals at the Welsh School of Architecture, Cardiff University

Learning journals were established in the Welsh School of Architecture as a tool for developing critical awareness and to encourage the valuing of process work amongst architecture students and staff and to provide an opportunity for students to reflect on their experiences of design project work. The learning journal was set up as a mechanism to support creative experimentation by providing a means for crediting design process work in addition to the final product, which was traditionally the focus of assessment. This was done partly to encourage students to take more risks within their design thinking, such that they could be credited even if a creative idea was ultimately unsuccessful. Furthermore by providing a mechanism by which process could be evaluated students could consider their learning to design, to record their thoughts about the processes and crucially demonstrate meta-cognition and a deep approach to learning. In completing their journals students were asked to record and reflect upon a wide range of experiences and influences; look critically at design precedents and the influence they had on their project work; identify their preferred working habits; show evidence of independent thinking; develop their own critical stance and present a well crafted and carefully composed portfolio of processes and final work and these formed the criteria for assessment for the journals.

The learning journals were initially introduced as part of a university funded project into personal development planning, and the exercise was undertaken by an entire cohort of 63 second year architecture students. It formed part of an 80 credit module, Architectural Design 2, which contained all of the design project work within that particular year, and occupied the majority of the students' time. In itself, the learning journal was not intended as a means of demonstrating student achievement against any one particular learning outcome. Rather it was seen as a tool, by which students could evidence and reflect upon their achievement over a full range of the module learning outcomes. The journals were assessed and whilst they only contributed to 2% of the total marks for the module, alongside design project work the journal's contents could provide valuable evidence of the extent to which students have met the wider module learning outcomes. The learning journals were introduced at the start of the second year by way of a lecture and hand-out to students. As this was a new initiative, students were not able to see examples of a previous cohort's journals. To support the process of journal writing, tutorials were held with the students at the start, middle and end of each semester where advice could be given as to how the journals might be developed. The journals were typically produced in small sketchbooks and students worked on them throughout the academic year.

There was no specific content or format requirement for the journal, but the students were advised that they would be likely to want to include design process work; any material that has a bearing upon the development of their designs; sketches, comments, reflections and evaluations of taught courses, records of personal reading and any useful points that emerged from it, reflections on study habits and significant events, decisions and insights. It was intended that the learning journal would provide evidence of how students have learned from their educational experiences, thus encouraging them to think critically and develop a

questioning attitude towards their learning. It was also hoped that the learning journal would enable students to recognise the key skills that they had developed, which would assist them in their future careers.

Students' Attitudes towards Reflection

It was recognised from the experience of the authors as a course tutor and former student, as well as through end of year teaching evaluations, that many students found using learning journals beneficial, whilst others were often more negative about them (sometimes considerably so) and struggled to see the purpose of completing the journal. The aim of the investigation reported here was to gain an understanding of the range of student attitudes towards their use of learning journals as a form of reflective practice and to uncover some of the reasons for those differences. Particular interest was given to whether there were different conceptions between staff and students, how aware students were of the purpose and potential benefits of the learning journal and whether students with particular attitudes found the learning journals more beneficial. Laboskey (1994) had previously conducted research in the field of teacher education that suggested that in terms of their approaches towards reflection, students could be categorised into those who adopted a reflective approach and those who were more inclined to adopt an uncritical approach informed by what they saw as common sense. Research by Ellmers (2006) suggests that within graphic design approximately 40% of students were uncertain or dismissive of the value of reflection. Paterson (1995) in nursing also noted that some students struggle with the concept of reflection and argues that levels of reflection are partially determined by what she describes as a student's reflective skill. If that level is insufficient, then frustration is inevitable. It was initially hypothesised that a similar reflective – non-reflective dimension existed amongst architecture students.

The research was intended to be exploratory and qualitative in nature in order to uncover the range of student attitudes towards and perceptions of reflection and the reasons why certain students adopted particular attitudes. The purpose of the research was to generate a hypothesis that could be developed and tested through further research, rather than to reach definitive, statistically valid conclusions.

Semi-structured interviews were chosen as the primary source of data since they could give an insight into students' perceptions; highlight unexpected issues; and give the students the opportunity to describe their experiences in their own terms. The students selected for interview were all in the current third (degree) year at the Welsh School of Architecture, Cardiff University. They had all been asked to complete a learning journal during the previous academic year, and therefore the interviews focused on that particular task. As statistical validity was not an issue the sample of students was selected by the researchers so that subjects showed a balanced range of attitudes towards reflection. Willing participants from the entire cohort of 63 were asked whether their experience of completing the learning journal was positive or negative and nine were selected so that three showed a positive attitude, three were ambivalent and three showed a negative attitude. Six of the nine participants were female, and interestingly it proved impossible to find a willing male

participant who showed a positive attitude. Interviews were also conducted with two members of staff who had been responsible for running the learning journal project. It was known that these staff were supportive of the process of learning journals and therefore the interviews tended to focus more on the project's rationale and outcomes rather than their attitudes. Neither of the authors of this paper were tutors on the project.

The interviews were focused, structured, narrative and of a limited length. The questions in the interview were intended to be non-leading and were tested and refined prior to the interviews taking place. A list of questions was drawn up and reduced to give what were considered to be the most productive questions. Attention was placed on the interview technique with the use of active listening and focusing on allowing the students to speak freely in order to elicit their perceptions. The interview script was tested with Student A as a pilot study and then refined further to ensure that the interviews remained focused and relevant to the research question. The eventual set of interview prompts covered the following broad areas:

- The student's perceptions of the purpose of the learning journal.
- Details of the format of the learning journal adopted by the student, and why the students felt that style was appropriate.
- The student's perceptions of the benefits of completing the learning journal.
- The student's perceptions of how the learning journal was introduced and supported by staff.

The interviews were transcribed and key substantive statements were highlighted (Gillham, 2000). It was then possible to use an open coding technique (Flick, 1998) to cluster the substantive statements into themes which could be used to build further theory. Given the nature of the sample it was not possible to perform a statistically valid quantitative analysis based on the number of times a particular issue was raised by the student, but it was still possible to highlight those themes for which there was a degree of consensus.

Analysis of Interviews

The principal themes that emerged from the interviews could be categorised into two major categories. Firstly, there were issues to do with the context within which the learning journal was completed and the students' perceptions of that context. This included issues to do with the perceived rationale for completing the learning journal, references to the impact on the way the journals were completed as a result of them being compulsory, and the nature of the tuition, guidance and support provided by the university staff. A second set of comments related to the student as an individual, specifically in terms of any benefits that the student might have encountered, their attitude towards completing the learning journal and, of particular interest to the authors, whether attitudes towards reflection changed as a result of completing the learning journal.

Perceptions of context

It was clear from the student interviews that how the students approached their learning journals was influenced by their perceptions of the external context within which they were working. The learning journal was a compulsory, assessed element for all students and this appeared to have an impact on what students included. A clear majority of the students interviewed felt that the reason they were asked to complete the learning journal was because it was a government or university requirement, rather than something that would be for their own personal benefit. One student even claimed that there was a perception amongst students that they were asked to do this because it was providing data for the tutor's Ph.D: this was not the case. The interviews also suggested that there was a notion that students felt under pressure to produce a presentable piece of work for the learning journal, and that the aesthetic quality of the learning journal was a part of the assessment criteria:

"...had it not been assessed I don't know if I would have bothered to put together something that looked like a final presentation piece at the end." – Student G

"It was just having to write them down in a way that someone else can read them that was the added pressure...I felt like I was just trying to make 'pretty' everything that I'd already learnt so it wasn't about learning anything else it was just more about making it look pretty." – Student B

Whilst the students were asked to present a journal that was well crafted and carefully composed, the need to produce a finished piece that was 'pretty' was not necessarily advocated during the project introduction and tutorials. Nevertheless, the students' interpretation was that a reader or assessor would understand them more clearly if their journal was well presented. The comments suggested that some students were becoming overly fixated with the presentation of their journals, perhaps at the expense of the aim of achieving deeper learning through reflection. Of the six students who commented on the importance of presentation, there was a mix of those who expressed a positive and negative view of the learning journal.

Given that the work was assessed, privacy or lack of, and confidentiality issues may have had the potential to alter the content of a journal. It prevents an author from reflecting on issues which may be intensely important, and for which reflection could offer a means of resolution. Although this is an issue that is frequently referenced in the literature (Walker, 1985; Paterson, 1995; Smith and Tillema, 2003; Moon, 2006) it was only considered a significant issue by a few students. Nevertheless, the majority did say that it had a limited effect on their learning journals in that they kept it in mind and censored themselves at times:

"I wrote on separate pieces of paper the more brutal comments about tutors and critics and decided not to put those in, in case they got read!" – Student H

"It felt quite intrusive because I think it was quite a personal thing because I did it primarily for myself...so that I could keep track of my development and show me

things about my work that I didn't realise before...It was fine that people read it, but it was a bit strange." – Student H

Others had a more overt reaction; these students tended to be negative towards the learning journal, possibly because they felt that their privacy was being invaded. It may be that they felt unable to use their learning journals to reflect on important, personal issues:

"My sketchbook and my learning journal are absolutely personal to me and I don't feel comfortable with sharing that with someone." – Student F

"It made me do something that I would be willing to show people...very, very apparent in my mind....every page has got to have something on it that I don't mind being shown." – Student E

One student claimed that she would have been more inclined to complete the learning journal if it had not been compulsory but others said they wouldn't. This raises a conflict between motivation and assessment; students only do learning journals because they are assessed, but the benefits are less because their reflection is reduced as a result of a lack of privacy. They feel restricted, can become frustrated and negative towards the learning journal and miss out on potential benefits which the learning journal may have to offer. This perhaps supports assertions by Smith and Tillema (2003) that high levels of reflection can never be achieved when work is assessed. Nevertheless, as a number of the students claimed that they would not have done the learning journal if it had not been assessed, then it is difficult to see how it might be possible to resolve this issue.

It is traditional for Architecture students and professionals to keep a sketch book in which they note down ideas and thoughts related to their design projects. From entry into the School, students are encouraged by staff to keep a sketch book, even if it does not form a formally assessed part of the course. It is hoped that its utilisation would become central to the way a student works throughout their architectural education and future career. The interviews carried out as part of this project suggested some confusion between the sketch book and learning journal. There is clearly some overlap between the two and there is potential for the sketch book to become the starting point for a graphically orientated reflective journal (James, 2007). Nevertheless, many students perceived that their sketchbook was not permitted to be their learning journal even though our interviews with staff suggest that this was a misconception. When asked about basing the learning journal around a sketch book one student suggested that:

"We weren't allowed to. We had to submit two separate things. Otherwise, in my head, it would have been a lot more clear if I'd just had everything together." – Student B

This misconception was not necessarily universal as another student pointed out:

"I kept a sketchbook throughout the year which was basically just my very rough work....I just thought that I would take it literally as a learning journal and just literally write down what I'd learnt and what I was trying to learn." – Student C

The interviews suggested that this confusion could possibly be related to the way that the learning journal was introduced to the students, which many students felt was vague. This could explain the students' uncertainty as to why they had been asked to do a learning journal. There appeared to be a difference in perception of the learning journal between staff who saw the learning journal as an extended, annotated sketch book, and students who felt that it was something else. It is possible that staff deliberately made the introduction vague, to allow the students some freedom of approach, but this was an aspect that some students struggled with. There was no deliberate attempt to prevent students from submitting their sketchbooks but tutors were trying to emphasise the need for an extra layer of thought and reflection. It was not sufficient for the learning journal to just be the student's everyday sketchbook; there needed to be some additional evidence of critical questioning.

Many students were unsure about the role their design process work (which would previously been placed in the sketch book) played in the learning journal. Even if students did perceive the learning journal in the way that it was intended, it was not always easy for the students to express the process they were undertaking in their design project work. Student J was keen to document his design processes but was unsure how to explain it. Ultimately he was left feeling unsuccessful and frustrated in his attempts to utilise the learning journal to record his process work.

It was apparent from the interview data that those students who understood the purpose of the journal seemed to benefit from the exercise to a greater extent than those who didn't. Sadly there were perceptions from the staff and student interviews that other members of staff, who had negative pre-conceptions of the use of learning journals, were promoting negative attitudes amongst the students. In one case a visiting tutor advised the student not to complete the learning journal:

“One of the things that affected me about the learning journal was [another] tutor's comments about it like ‘what's the point doing this because students already assess themselves anyway’ and ‘don't bother’.” – Student F

This tutor was presenting a contradictory argument to that of the course leader which can do little more than cause confusion in the minds of students. This is always a danger in studio teaching situations where design teaching is often delegated to a team of visiting tutors who might not value (or understand) the purpose and benefits of reflective practice to the same extent. This issue demonstrates the importance of careful briefing of visiting tutors.

Perceptions of learning

Although some students viewed the learning journal quite negatively, on the whole many students perceived the benefits of producing it. Some reported that the journal gave students a sense of achievement and pride. Student D commented on benefits of:

“...realising what you'd achieved and seeing the summary.” – Student D

Other students suggested:

"I realised that I'd actually done well; I thought that it encouraged me to actually do more work, to sort of keep doing well." – Student E

"It made me feel a bit confident of my work...I realised that I had actually done quite a lot of work and some of it I was quite proud of, and it was quite nice!" – Student J

This sensation of pride and achievement often came as a surprise to the students, possibly since those that raised the issue wouldn't have described themselves as 'natural' journal keepers and had only participated in the exercise because they felt that it was compulsory.

Other benefits highlighted in the interviews included the development of organisational skills:

"I keep a little book with me all the time now...just to write to-do lists...I think it's made me organised." – Student C

"It was very much a sort of going through a lot of work and rough work and trying to summarise my ideas to clarify them." – Student D

It suggests that by completing the learning journal, students learned to focus their work in a reflective manner and organise their thoughts: making some students feel more in control. This supports James' (2007) comments on the reflective benefits of compiling a portfolio.

Other students found that the learning journal was a good support tool and was beneficial, especially when things were not going well academically. Several interviewees volunteered information as to how the learning journal had provided a place to 'vent' emotions and it even helped one student to decide whether or not to leave the course.

Despite some students openly claiming that the learning journal had not given any great benefit and that many would not have done the learning journal if it had been optional to them, all the students demonstrated an understanding and awareness of reflection in the way that they discussed their learning journals during the interviews. This awareness suggests that the students may be reflective, but this is not something that is encouraged through the act of completing a learning journal. This is evident in remarks such as:

"We continually self assess ourselves in architecture anyway all through the year... when I mean self assessment I mean talking with my colleagues about my work. It's purely verbal and it's continuous everyday." – Student F

"In my mind I understand things far more if I reflect and write about them...you can't really progress your learning without something that you've got that contains a couple of your thoughts." – Student A

"Architecture is very demanding...if someone says, 'Oh that's a good idea', and you write it down it kind of makes you think, 'Oh I am actually good at doing this'. It kind of gives you a little bit more drive when something is wrong." – Student E

"Writing your thoughts down makes you collect them and it gives them coherence and makes you understand them better, and you understand why you're thinking that more than if they're just a jumble in your head." – Student H

When questioned about the learning journal a number of attitudes became apparent. A number of students already kept sketchbooks, partly as a habit instilled in first year and partly as a natural compulsion:

"I think that I like to write and I used to keep a diary anyway so I sort of just abandoned a personal diary as such and just chose to reflect more on architecture. And I think of it as being very relevant to the development of my design work and my theory. because I think in my mind I understand things far more if I reflect and write about them and sometimes I can then learn and that will influence how I go about doing something the next day." – Student A

"I realised that I was doing that anyway in my sketchbook." – Student G

Much like Moon (2006), who herself confesses to be a natural journal keeper, those who were naturally inclined to keep a journal had fewer issues and frustrations with the learning journal. This is possibly because they had already experienced the benefits to them of reflective journal keeping. These interviews suggested a self-motivation on the part of the student:

"It sort of forced you to lay out your thoughts a bit more systematically...[it] made tutorials a bit easier." – Student G

"I did it primarily for myself...so that I could keep track of my development and show me things about my work that I didn't realise before." – Student H

Most of the students who showed this degree of self-motivation were able to demonstrate some form of positive outcome of using the learning journal such as those described at the start of this sub section.

Not all participants were initially convinced of the benefits of keeping a learning journal. Some participants began the learning journal with scepticism, believing it to be poor use of their time. This attitude may have been a result of their own personal pre-conceptions, unenthusiastic staff attitudes and the low academic weighting the learning journal had been allocated in terms of the contribution towards the students' final mark. Whilst a few remained entirely disengaged with the learning journal and its benefits, there were several students whose attitudes had changed and are now actively using sketchbooks in a reflective manner and finding them highly supportive in developing their architectural education:

"...it was a help to be able to jot things down, and I always do that now anyway. I'm writing things down all the time." – Student C

Student E, seemingly speaking on behalf of the student group as a whole suggested that a number of individuals' views of learning journals had changed:

"It just seemed like a pointless exercise when we had a lot of work to do...so we thought it was like a massive pile of work on the side and we weren't sure whether it was being assessed so we were reluctant to sort of start it...But in the end I think it did turn in peoples' minds into being something quite sort of useful."

Even so there remained a group of students who felt that they had achieved no real benefit from the learning journal. Their attitudes towards the journal were generally negative:

"...[it] made me feel like it was a big waste of time..." – Student J

"I feel like I mainly do that [write annotations] for the tutors. I work best when I don't have to stop to write down what I'm thinking." – Student J

"It counted for so little that if it was assessed then it wouldn't matter at all. Cos no one really took it seriously, it was just daft." – Student F

"I was quite frank with her [the tutor] that I didn't enjoy the learning journal." – Student F

This diverse range of views supports our earlier suspicions that some students were more inclined to reflect than others. Furthermore the more 'reflective' interviewees tended to recognise that not all of their peers shared the same inclination as themselves. For instance student B suggested that:

"...I keep a sketchbook anyway. Whereas I think some people, it kind of forced them to analyse stuff a bit more and maybe that's a good thing. Maybe that's why it's unpopular because people don't like, necessarily having to analyse everything that they do. But I think for me it's quite a natural process anyway." Student B

A Proposed Typology of Learners

The above arguments suggest three distinctive attitudes towards reflective practice that the students may demonstrate depending upon their attitude towards reflection: natural, convert and disengaged. These are now described:

Naturals are writers who are already naturally inclined to keep journals and appear to benefit from journal writing. In the present study, it was easy for these students to participate in the learning journal since they already understood (perhaps implicitly) what it would do for them. Students A, B and H all fall into this category. From the interviews these students clearly discussed the benefits of reflection and personal development as demonstrated in the previous section. They freely made reference to keeping sketchbooks and appear to have few issues with the privacy of their learning journals. Most said that they consistently used their learning journal throughout the year as they went along. These students were also able to clearly identify personal development as a reason for participating in the learning journal. They mostly classified themselves as having had positive learning experiences.

Converts were initially sceptical about the learning journal and were often confused as to what was required. Over time, however, these students became involved in the learning journal and started to notice benefits. This was because they fully engaged with the task, and gradually began using the learning journal more regularly rather than just prior to deadlines. Converts include students C and E. Notably student C who found a lot of support in the learning journal, as did student E when projects did not go as well as anticipated. As we saw in the previous section, student E clearly showed how his perception of learning journals had moved from 'pointless' to 'quite useful'. The process of the learning journal helped these

students to form habits which have been continued, as well as developing critical and reflective awareness.

Disengaged students found little benefit in completing the learning journal. Whilst the entire sample interviewed had participated and submitted a learning journal of some description some had only gone through the motions. These students were highly critical of the learning journal project and often felt that there was little benefit in it. The disengaged included students D, F and J. These students were very concerned with format and presentation which perhaps led them to miss the purpose of reflection. Their learning journals lacked personal commentary and critique, instead these students tended to focus on presentation and what they felt was the minimum necessary to pass. They generally only filled in their learning journals prior to a tutorial or assessment when they felt that it was obligatory. As a result of their negative perceptions, the students found few benefits of the learning journal. Following the academic literature they are likely to demonstrate a surface learning approach to learning.

It was clear that the majority of students were initially sceptical about the learning journals, even though some students subsequently viewed them more favourably. But why might some students become converts, and others remain disengaged?

Typically disengaged students struggled to understand how the learning journal would benefit them and tended to view other pieces of work as having a higher priority. It is possible that the whole concept of reflection was something that was unfamiliar to them and they were therefore unaware of any potential benefits. In addition some had issues with the lack of privacy resulting from the journal being assessed and were therefore unwilling to express themselves openly. They generally produced the minimum that they felt was required attempting to present experiences without reflective commentary. They also kept the activity of the learning journal separate from their other activities and did not integrate it with any of their other work. As a result levels of reflection were low and they were not able to experience any benefits from reflection. This lack of benefit further reinforced the students' negative perception of the learning journal.

In contrast the convert students placed an initial higher priority on their learning journal. Whilst initially sceptical, they tended to feel that the learning journal might have some benefit and were trusting of the staff, believing that they would not be asked to do something unless it was in some way beneficial. Interestingly the convert students both described incidents elsewhere on the course and within their personal lives on which they were able to reflect in order to make sense of their experiences. It was as a result of this that they started to value reflection. It would appear that sceptical students perhaps need help in developing a personal desire to reflect. As well as extolling the benefits of learning journals, perhaps one of the roles of tutors supervising students is to provide scaffolding or a framework to help students gain greater confidence in reflecting.

Students on architecture courses generally have a heavy workload perhaps compared to some of their peers, and it is typical for students to work for long hours and late nights (American Institute of Architecture Students, 2002). Design is a time consuming process,

and this leaves little time to spend on learning journals. This workload pressure and perceived demand for high standards of presentation signals to the student that a surface approach may be the most time efficient strategy to adopt. Many students found the time commitment required by the learning journal daunting, even though in theory organisation skills gained from completing the journal might result in a reduction in workload.

Paterson (1995) argues that there are four factors which impact upon an individual's willingness and ability to reflect: the individual's developmental level of reflection; the individual's perception of the trustworthiness of the teacher; the clarity and nature of expectations associated with the journal writing assignment; and the quantity and quality of the teacher's feedback. Many of these factors concur with the findings contained here. Paterson argues that the individual's developmental level of reflection could be seen as a skill, which can be developed through careful coaching and scaffolding. Student J, who felt frustration at trying to reflect on his design process, may well have been lacking in this reflective skill. He felt that reflection was about 'self analysis' and he did not feel capable of achieving this through writing. It is possible that the convert students were able to develop and improve their level of reflective thinking skills. Student E, who could be classed as a convert, talked about how the tutor had encouraged the use of her interest in photography as a starting point to reflection, highlighting the importance of the tutor's role in helping the students.

Paterson also argues that it is important that the tutor is seen as someone who can be trusted. Students need to be able to express their beliefs without fear of negative consequences. Clearly some of the comments previously mentioned suggest that some, even if not all of the students, felt compromised by the fact that the work was assessed and would be read by other people. Nevertheless there are questions about whether the students would have done the work at all if it had not been assessed. This remains an awkward dilemma, which needs further investigation to address. One possibility might be clear guidance to the students that assessment will be based upon the depth of reflection, rather than specific content within the learning journals. A further alternative would be to encourage the peer assessment of learning journals (Bain *et al.*, 2002). It is useful to provide feedback to students on the level of reflection that they achieve or need to develop. Research suggests that students find this more useful than providing general advice to the students on their experience (Bain *et al.*, 2002). Feedback should be provided at timely intervals during a period of experience, so that students can act on that experience. Paterson (1995) argues that the ultimate goal here is to be able to see the tutorial process as a dialogue between student and tutor. Roberts (2009) suggests that a combination of an individual's propensity to reflect and the nature of the support given to the student has an impact on the type and level of reflection demonstrated by the student.

The comments above also show concern amongst the students that the initial guidance on the learning journals was vague. There was a feeling that they were unclear of what was expected of them, and in some cases the interviews suggested that students were directed by rumour rather than fact. Paterson (1995) also argues about the importance of clear

guidance as to why it was necessary to complete the learning journal, citing this as a factor determining a student's willingness to reflect. She describes her experience in nursing where students are given a comprehensive induction, including the critical evaluation of previous students' work. As mentioned earlier, this was not possible in this project, given that this was the first year that the learning journals project was run.

Conclusions

The categories of natural, convert and disengaged proposed in this paper are tentative and hypothetical. Nevertheless an understanding that students bring to the learning situation different pre-conceptions, values and propensities to reflect is something that needs to be considered by teachers of architecture who are attempting to encourage reflective practice amongst their students. The case of the convert is of particular interest as this appears to have been someone who has only come to value the use of reflection through actively engaging in the learning journal.

It was clear from the interview data that the students' understanding of the purpose and nature of the learning journal were not as the staff supervising the exercise had intended. The learning journal was intended to be a vehicle to encourage reflection and to record architectural process work in a deep or meta-cognitive way, however, many students failed to see it in this way. The result was a surface approach to the learning journal by many students. It was also apparent from the research that if students perceive reflective work as an assessed task, then they may be less inclined to provide personal, deep reflection. Nevertheless, there is a perception that assessed work may encourage students to engage in reflective activities.

Given that the students on this course were all highly qualified in terms of secondary school grades, many arriving at the School with three A grade "A" levels under the UK qualifications system, they appeared to have different qualitative approaches towards their journal keeping, which may be a result of different experiences in their prior learning. The disengaged students appeared to have very little experience of reflective learning. As a result, the students showed little commitment towards the learning journal and adopted a surface learning approach. This gave little in the way of reward, which further re-enforced their negative conceptions. Those students who were willing to accept the importance of reflection in their learning journals tended to adopt a more positive attitude as rewards for their deeper levels of reflection became apparent. Further research is needed into the prior learning experiences of students and how these might influence their willingness to reflect.

The research has led to some interesting provisional conclusions but it is important to recognise the limitations of the findings. The length of time that elapsed between the students doing the learning journal and being interviewed was almost a whole year and this may have had an effect on their responses and their ability to recall the experience. Whilst this research was generally of a qualitative nature, looking for themes and theory building, the selected sample may not have been entirely representative. Only students who were willing to discuss their experiences 'on the record' were interviewed. Furthermore, the interviewed students tended to be those who chose to work in the collaborative environment

of the School's design studio, rather than those who preferred to work independently at home. This meant that a certain section of the cohort was not represented. The students were not randomly selected, but chosen based on whether they claimed to have found the learning journal useful or not – in order (it was hoped) to gain a full range of viewpoints. The sample also contained more females than males since they were more willing to be interviewed. Within the scope of this project it was not possible to compare the students' interview responses to the level of reflection shown in their journals. This is certainly an area where further research might be instigated.

This research has implications for how staff introduce and tutor the learning journal projects, with a need for them to recognise that part of their role is to help students develop confidence and an ability to reflect. Furthermore, the research suggests that there is a need for staff to demonstrate a clarity of purpose in setting the learning journal task and provide adequate and timely feedback. There is a need for initial guidance and support to those students who are novices in the field of reflective thought, perhaps demonstrating examples of what 'highly reflective' work might look like. It may be helpful to engage students in warm-up reflective activities before they commence learning journals. Walker (1985) provides, for example, a set of guidelines, based upon his own experience, which can also be of assistance when introducing reflection to novice students. This research also showed an inconsistency in staff attitudes, especially with visiting tutors, and further research into the impact of negative preconceptions by staff may be necessary.

This research has identified three possible attitudes towards journal keeping held by students: natural; convert and disengaged. Natural types were pre-disposed towards keeping learning journals and found them beneficial. Convert types were initially sceptical about the use of learning journals, but through their use became more convinced of their value. The disengaged students showed misconceptions of the purpose and potential benefit of the learning journal and did not find them to be beneficial. Further, more detailed research is needed to confirm the nature and validity of these types, the extent of their presence within a wider population, the possible reasons for their existence and the impact that these characteristics might have on students' development.

References

- American Institute of Architecture Students. (2002). *The redesign of studio culture: A report of the AIAS Studio Culture Task Force*. Washington DC: AIAS.
- Anthony, K. H. (1991). *Design juries on trial: The renaissance of the design studio*. New York: Van Nostrand Reinhold.
- Bain, J. D., Ballantyne, R., Packer, J. & Mills, C. (1999). Using journal writing to enhance student teachers' reflectivity during field experience placements. *Teachers and Teaching*, 5 (1), 51-73.
- Bain, J. D., Mills, C., Ballantyne, R. & Packer, J. (2002). Developing reflection on practice through journal writing: Impacts of variations in the focus and level of feedback. *Teachers and Teaching*, 8 (2), 171- 196.
- Betts, J. (2004). Theology, therapy or picket line? What's the good of reflective practice in management education? *Reflective Practice*, 5 (2), 239-251.
- Blackwell, A., Bowes, L., Harvey, L., Hesketh, A. J. & Knight, P. T. (2001). Transforming work experience in higher education. *British Educational Research Journal*, 27 (3), 269-285.
- Boud, D., Keogh, R. & Walker, D. (1985). *Reflection: Turning experience into learning*. London: Kogan Page.
- Calderhead, J. (1988). *Teachers' professional learning*. London: Falmer.
- Davies, A. (1998). Using learning journals to identify critical incidents of understanding. In: Rust, C. (Ed.). *Improving student learning: Improving student learning outcomes*. Vol. 6. Oxford: Oxford Centre for Staff and Learning Development, pp. 1-9.
- Davies, A. & Reid, A. (2000). *Uncovering problematics in design education: Learning and the design entity*. [Online]. URL: http://ualresearchonline.arts.ac.uk/620/1/cltd_designeducation.pdf (accessed 15th December 2009).
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston, Mass.: Heath.
- Dutton, T. A. (1991). *Voices in architectural education: Cultural politics and pedagogy*. New York; London: Bergin & Garvey.
- Ellmers, G. (Ed.). (2006). Reflection and graphic design pedagogy: Developing a reflective framework to enhance learning in a graphic design tertiary environment. *Proceedings of Thinking the Future: Art, Design and Creativity: ACUADAS 2006 Conference*. Melbourne, 27-29th September 2006. University of Melbourne. URL: <http://ro.uow.edu.au/creartspapers/8/> (accessed 4th August 2009).
- Flick, U. (1998). *An introduction to qualitative research*. London; Thousand Oaks, Calif.: Sage.
- Gillham, B. (2000). *The research interview*. London: Continuum.

- Hatton, N. & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education*, 11 (1), 33-49.
- James, A. (2007). Reflection revisited: Perceptions of reflective practice in fashion learning and teaching. *Art, Design & Communication in Higher Education*, 5 (3), 179-196.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Upper Saddle River, NJ.: Prentice-Hall.
- LaBoskey, V. K. (1993). A conceptual framework for reflection in preservice teacher education. In: Calderhead, J. & Gates, P. (Eds.). *Conceptualizing reflection in teacher development*. London; Washington: Falmer Press, pp. 23-38.
- LaBoskey, V. K. (1994). *Development of reflective practice: A study of pre-service teachers*. New York; London: Teachers College Press.
- Marton, F. & Saljo, R. (1976). On qualitative differences in learning: 2: Outcome as a function of the learner's conception of the task. *British Journal of Educational Psychology*, 46 (2), 115-127.
- McIntyre, D. (1993). Theory, theorizing and reflection in initial teacher education. In: Calderhead, J. & Gates, P. (Eds.). *Conceptualizing reflection in teacher development*. London; Washington: Falmer Press, pp. 39-52.
- Moon, J. A. (1999). *Reflection in learning and professional development: Theory and practice*. London: Kogan Page.
- Moon, J. A. (2006). *Learning journals: A handbook for reflective practice and professional development*. 2nd ed. London: Routledge.
- Paterson, B. (1995). Developing and maintaining reflection in clinical journals. *Nurse Education Today*, 15 (3), 211-220.
- Platzer, H., Snelling, J. & Blake, D. (1997). Promoting reflective practitioners in nursing: A review of theoretical models and research into the use of diaries and journals to facilitate reflection. *Teaching in Higher Education*, 2 (2), 103-121.
- Roberts, A. (2009). Encouraging reflective practice in periods of professional workplace experience: The development of a conceptual model. *Reflective Practice*, 10 (5), 633-644.
- Salama, A. (2007). A structured content and a rigorous process meet in studio pedagogy. In: Salama, A. & Wilkinson, N. (Eds.). *Design studio pedagogy: Horizons for the future*. Gateshead, UK: Urban International Press, pp. 153-166.
- Schön, D. A. (1983). *The Reflective practitioner: How professionals think in action*. London: Temple Smith.
- Schön, D. A. (1985). *The Design studio: An exploration of its traditions and potentials*. London: RIBA Publications for RIBA Building Industry Trust.
- Smith, K. & Tillema, H. (2003). Clarifying different types of portfolio use. *Assessment & Evaluation in Higher Education*, 28 (6), 625-648.

Till, J. (2004). *The studio and contingent reality* [Online]. URL: <http://www.cebe.heacademy.ac.uk/news/events/sc2/edinburgh4.pdf> (accessed 4th August 2009).

Till, J. (2009). *Architecture depends*. Cambridge, Mass.; London: MIT.

Walker, D. (1985). Writing and reflection. In: Boud, D., Keogh, R. & Walker, D. (Eds.). *Reflection: Turning experience into learning*. London: Kogan Page, pp. 52-68.

Webster, H. (2004a). Facilitating critically reflective learning: Excavating the role of the design tutor in architectural education. *Art, Design & Communication in Higher Education*, 2 (3), 101-111.

Webster, H. (2004b). The design diary: Promoting reflective practice in the design studio. In: Spiridonidis, C. (Ed.). *Architectural Design: Monitoring architectural design*. EAAE Transactions on Architectural Education. Vol. 24. Thessaloniki: EAAE, pp. 343-356.

Webster, H. (2008). Architectural education after Schön: Cracks, blurs, boundaries and beyond. *Journal for Education in the Built Environment*, 3 (2), 63-74.