

2011

The Use of Scaffolding in the Financial Planning Classroom: An Australian Case Study

Janet Cowen
University of Western Sydney, j.cowen@uws.edu.au

William Blair
Macquarie University

Sharon Taylor
University of Western Sydney

Follow this and additional works at: <https://ro.uow.edu.au/aabfj>

Copyright ©2011 Australasian Accounting Business and Finance Journal and Authors.

Recommended Citation

Cowen, Janet; Blair, William; and Taylor, Sharon, The Use of Scaffolding in the Financial Planning Classroom: An Australian Case Study, *Australasian Accounting, Business and Finance Journal*, 5(3), 2011, 3-16.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

The Use of Scaffolding in the Financial Planning Classroom: An Australian Case Study

Abstract

This paper focuses on changes that can be adopted to ease students' difficulties when challenged to prepare a personal financial plan. It reports the experiences of one Australian university's use of a 'scaffolding' approach that was developed specifically to support students with this task. Such scaffolds provide a support for students to accomplish the task of constructing the financial plan by providing them with early, but temporary, supporting structures at particular points in the process. Over time these supports are removed. This pedagogic approach has proved successful and has assisted students in building confidence in, and mastery of, the financial planning process.

Keywords

Scaffolded learning; Teaching strategy; Personal financial plan



The Use of Scaffolding in the Financial Planning Classroom: An Australian Case Study

Janet Cowen¹, William Blair² & Sharon Taylor^{1,3}

Abstract

This paper focuses on changes that can be adopted to ease students' difficulties when challenged to prepare a personal financial plan. It reports the experiences of one Australian university's use of a 'scaffolding' approach that was developed specifically to support students with this task. Such scaffolds provide a support for students to accomplish the task of constructing the financial plan by providing them with early, but temporary, supporting structures at particular points in the process. Over time these supports are removed. This pedagogic approach has proved successful and has assisted students in building confidence in, and mastery of, the financial planning process.

Keywords: Scaffolded learning; Teaching strategy; Personal financial plan

JEL Classification: D14, I20.

¹ University of Western Sydney j.cowen@uws.edu.au

² Macquarie University

³ We are grateful for the feedback received from Professor Russell Craig, and reviewers' comments.

Introduction

The last 30 years in Australia have witnessed the emergence and growth of personal financial planning as an industry with the development of a separate body of knowledge. Eysell (1999) maintains the practice of financial planning has evolved from a relatively narrow specialty undertaken by accountants, lawyers and insurance agents, into a unique and distinct profession. Aligned with this has been the increasing interest by the Australian academic community in offering university courses in personal financial planning at undergraduate and post graduate levels (Cowen, Blair & Taylor 2006). Warschauer (2002) also highlights the critically important role that universities play in the development and growth of personal financial planning as a profession.

Research relating to teaching and learning in personal financial planning classrooms is sparse. Although the link between student learning styles and teaching effectiveness has been established in other academic disciplines (Davis & Linn 2000; Greening 1998; Hartman 2002; Johnson 1997; McKenzie 1999) only limited research exists in relation to personal financial planning (Fox & Bartholomae 1999). How we teach is as important as what we teach, and what we teach needs to be presented in ways consistent with students' views (Vihtelic 1996). This paper makes an important contribution to the literature relating to financial planning teaching and learning by highlighting scaffolding as a central teaching approach when presenting complex and challenging assessment tasks to students. The paper provides some insights into better teaching practice and learning outcomes, not only in financial planning but for business related studies generally.

There is a need for research that delves more deeply into the specific processes associated with the implementation and evaluation of various pedagogic techniques used in teaching personal financial planning (Goetz, Tombs & Hampton 2005). Additionally, education programs for personal financial planning should be designed to prepare students for professional practice, with teaching staff encouraged to make a concerted effort to continually evaluate and improve curricula. The focus of this paper is therefore on teaching and the changes that one institution has made to ease the difficulties of students enrolled in a financial planning unit. We outline and illustrate a 'scaffolded' approach to the teaching of financial planning that has been developed and implemented at the University of Western Sydney (UWS). The scaffolded learning approach supports students undertaking challenging course requirements that include the preparation of a comprehensive personal financial plan for a complex case study. The completion of this plan constitutes the major assessment task for a core unit in the Bachelor of Business (Accounting) undergraduate accounting degree at UWS. This task is often perceived by students to be daunting, difficult, lengthy and time consuming. Traditional teaching techniques are often inadequate when students are faced with the prospect of constructing a comprehensive personal financial plan (Goetz et al. 2005).

The scaffolded approach adopted included a variety of specific tasks and activities including the use of models, cues, prompts and direct instruction. These scaffolds acted to help support and integrate a student's learning to a particular stage. From that point on students were then "on their own" with the assignment. As Leonard & Seethamraju (2005) note the emphasis is always that the scaffolding is temporary. It helps students in the difficult initial stages until such time as they have established and developed their own mental frameworks to integrate their learning. Such support structures help to increase students' task-related confidence. This then enables students to complete the assignment independently. The use of scaffolding emphasises

student independence and places responsibility and ultimately the control of the learning process on the student (Greening 1998).

As a teaching and learning strategy the use of scaffolds has been successful in achieving several desired benefits and enhanced learning outcomes for students and teaching staff (Davis & Linn 2000; Ge & Er 2005; Sharma & Hannafin 2007; Van der Stuyf 2002). The scaffolded learning approach as used in the financial planning assignment was both an efficient and effective educational process as it provided students with an early, necessary framework and a disciplined support structure to enable them to break-up the plan construction process into a series of more manageable components. The use of scaffolds assisted students to commence the assignment early and to keep them on track and task oriented. The scaffolded approach appears to be a more effective way for students to achieve an integrated understanding of both the financial planning and plan construction processes. The scaffolded approach supports the development of student skills at a technical level and assisted in the development and enhancement of generic skills such as routine skills, analytic/design skills, appreciative skills, personal and interpersonal skills. Such skills are fundamental for successful business graduates and are used at all levels of learning and in practice (Birkett 1996).

The paper is arranged as follows. The next section provides the background and motivation for the adoption of the scaffolded learning approach for the unit Financial Planning used by the teaching staff at UWS. Section three describes scaffolding and its educational characteristics. Section four discusses the specific application of the various scaffolds adopted for the unit. The final section discusses and reflects on the scaffolded approach adopted for the unit.

Background and Motivation

Personal financial planning is defined by the Financial Planning Association (2011) as the process of developing strategies to help individuals manage their financial situation to protect and build wealth, to enjoy life and achieve financial security. Personal financial planning is an “applied profession” so a simple mastery of theoretical knowledge is considered insufficient preparation for students entering such a profession (Goetz et al. 2005). Personal financial planning education therefore must facilitate learning that is above all useful for a student both in and outside the classroom. Consequently, it must take place in contexts similar to situations in which the knowledge and skills will be used and provide students with extensive opportunities for practice (Johnson 1997).

Unit Information and Student Profile

The undergraduate financial planning unit was a core unit for all accounting majors. The unit was positioned so as to be completed in the second semester of the final year of a three year accounting degree or could be chosen as an elective unit for any degree and was available in both autumn and spring semesters. Students undertaking the unit must have completed the prerequisite unit Corporate Financial Management and were assumed to have a basic knowledge of accounting, taxation and economics. The financial planning unit required weekly attendance at a one hour lecture and a two hour tutorial with the expectation that students would commit an additional 7 hours to the unit outside weekly face-to-face involvement. The average enrolment number was 350 students per semester, with numbers of male and female students generally

being equal. Approximately 75% of students undertaking the unit each semester were majors in the Bachelor of Business (Accounting) degree. Seven full time teaching staff were involved in the teaching of the unit across four metropolitan campuses of the university.

Students found the unit to be very broad and challenging while staff found the unit demanding to teach. The unit provided students with a comprehensive overview of the main topic areas relating to financial planning. It also considered the Australian regulatory framework, the importance of the client planner relationship and the development of a range of communication and other generic “soft” skills. The financial planning unit required students to complete five assessment tasks over the semester, with the centrepiece being the construction of a comprehensive personal financial plan for a given complex case study. Other assessment items included the design, development and real-life trial of a Client Questionnaire (Fact Finder), weekly tutorial exercises, a mid semester exam and a final exam.

Construction of Personal Financial Plan and Associated Student Difficulties

Learning in the UWS financial planning classroom strived to be authentic as it involved real world problem solving situations, interaction with peers, self motivation, and an expectation that students would take responsibility for their own learning. The requirement to prepare a personal financial plan meant that UWS students were provided with the chance to practice the skills of financial planning as well as learning in an environment that reflected the way that knowledge is used in real life. The richness of this learning environment encouraged students to reflect on what they had learned and the mistakes they made. Scott (1997) maintains that such a learning environment, based on authentic problems and real life situations and requirements (such as the construction of a personal financial plan) is critical for developing intellectual skills in students.

In week one of a 14 week semester, students were presented with a real life, complex and meaningful case study which had no obvious or “correct” solution. Students had to determine the best possible solution (i.e. the completed personal financial plan) for their case study client by week 11 of the semester, including a full justification for the reasoning behind their solution. An important outcome of this process was that students realised that “getting the right” answer is not what is desired and that various “solutions” were acceptable, depending on what assumptions had been made. The complex nature of this assignment precluded simple solutions and meant that students had to very quickly establish the format and requirements of the planning process. Students therefore had to go beyond traditional tools such as texts and needed to pursue a range of other resources (particularly Internet based) to augment the weekly lecture and tutorial materials.

A holistic understanding of the financial planning “process” and the individual components which constitute the plan are critical to the student’s ability to produce a comprehensive personal financial plan. Hammer and Champy’s (1993) view of “process” as being a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer, is fundamental to the financial planning process. Students had to quickly assume the role of a professional financial planner and understand the distinct steps necessary in the financial planning process. With this came the realisation that to assist the client(s) to reach their desired goals the “planner” had to address a host of interrelated concepts and issues. These included budgeting and saving, tax planning, investment planning, debt and credit management, insurance and risk management, estate planning, superannuation, social security and retirement issues.

The requirement to construct a personal financial plan was a challenging task for students. Many students often came to the unit and its major assignment with only a fundamental knowledge of accounting, finance and taxation. The unit and the requirement to produce a comprehensive financial plan had taken on a somewhat “legendary” status as being one of the most difficult units and assignments encountered in their academic careers.

In this unit staff perceived that many students seemed to be more familiar, and indeed more comfortable with, traditional educational approaches where they separated and treated various concepts as discrete areas. This meant that students frequently experienced difficulty and apprehension at the prospect of, and the actual “doing” of the plan construction assignment. A chasm appeared to exist for many students as they failed to see and grasp the integrated, holistic nature of the different issues and components related to the case study and the plan construction activity. To be successful in this assignment, students had to carefully combine analytical skills with contextual problem solving, make assumptions, devise strategy and make decisions and recommendations. Students were required to know more than how to perform a particular function or to learn the abstract concepts and tools of the discipline. They had to satisfy the client’s goals, carefully consider their audience and know how to communicate their “solution” to the client. Students had to be able to use, apply and communicate their knowledge in particular contexts – knowing how, why, when and for whom the financial plan related.

The major problems faced by students as identified by staff, were firstly getting started with the assignment and secondly having the appropriate organisational skills to develop a framework and a plan of action for the task. Student issues related to the “size” of both the task and the final product (approximately 50 pages). This often meant they procrastinated for many weeks, severely short-changing themselves for time and leaving it too late to complete the task effectively. An established student culture also seemed to exist where it was considered acceptable to leave assignments until the last minute. Some students lacked a realistic understanding of just how much time and effort was required to successfully complete the financial plan, irrespective of how many times teaching staff discussed these issues with them. Furthermore students appeared to be deficient in many generic and basic business skills, especially those relating to computing and communication skills such as formatting of professional documents, business letter writing and reports. Some students also had difficulty identifying with a client’s situation because of their limited life experiences, especially in areas such as estate planning, wealth creation and taxation.

Staff Dilemmas and Proposed Solution

Prior to the adoption of the scaffolded approach students had to undertake the assignment independently and complete the financial plan with little guided structure or support. Staff involved in teaching the unit had assumed too much about the relative extent and sophistication of student skills. Staff had expected that final year students could make the appropriate connections between topic areas and prior related knowledge, and that they possessed the ability to synthesise that knowledge and apply it. Furthermore, staff and students lacked access to examples of commercial industry-based financial plans and relevant text and related resources.

Clearly what had been absent for many students was the development and adoption of an appropriate framework to fit all the related “pieces” of the financial plan together. Not only had students experienced difficulty understanding the different pieces but more fundamentally they

misunderstood the relationships between the pieces. Students failed to see the “big picture” and only perceived topic areas as isolated, stand alone concepts. It was perplexing for staff to note how often students who had been successful in many previous accounting units had difficulty distinguishing and applying simple accounting issues when required to relate them to the personal financial planning context. In many instances students were unable to accurately produce relevant personal financial statements for the given case study data. Vihtelic (1996) suggests that there appears to be some sort of “missed connection”, in that accounting knowledge for many students is coded too functionally and is not connected to other knowledge. In other words it only works in their accounting classes to answer accounting questions and problems.

Vihtelic (1996) views the educator’s role as helping students code information in ways that are appropriate to the individual. This therefore requires staff to evaluate students and their previous experiences to help them place new knowledge in their appropriate repertoires. John Dewey’s (1974) dictum “to start where students are” is most apt but often ignored. For many students in the unit it appeared that there was indeed some missed connection and that the teaching techniques employed were not meeting student needs. Poor assignment results and student feedback indicated that many students had limited understanding of the realities of the plan preparation process. Realising that the traditional learning and teaching model was not meeting student needs and that many students were at risk of failure provided the catalyst for staff reflection and re-examination of their teaching practices. It was necessary for staff to diagnose where changes had to be made so as to increase effectiveness in instruction and learning outcomes. Staff wanted to break the existing cycle, close the learning gap, adopt an improved pedagogic approach and assist students with the assignment task.

Staff agreed that changes to current teaching strategies were required in the unit. There was agreement to adopt a much more student-centred form of instruction and to provide guidance and structure in the form of some sort of “scaffolding” for the plan preparation assignment. The aim of such scaffolds was to assist students not only in improving the quality of the resulting financial plan but also in improving many of the related areas of the financial planning learning process. The rationale for the use of an alternative instructional technique such as scaffolding was that it encouraged students to develop their own initiative, motivation and resourcefulness (Lawson 2002). Instructional scaffolding would provide students with a disciplined framework and assist them in commencing the project. As Bruner (1977) notes, the importance of such a disciplined structure allows students to place details in a structured pattern and to understand fundamental principles and concepts. In so doing, the plan construction process should become less daunting, more comprehensible and ultimately achievable.

As the preparation of the financial plan usually takes students considerable time to complete it was necessary to ensure students were quickly and fully immersed in the case study right from the start of semester. Furthermore students had to sustain their thinking about specific issues related to the assignment for the duration of the unit. The poor standard of student financial plans prior to any scaffolding intervention meant that staff had to provide students with sufficient structure to start them off and keep them productive and on track but without “confining them to straight jackets that destroy initiative, motivation and resourcefulness” (McKenzie 1999).

Scaffolded Learning

Although the concept of scaffolding has existed for some time and may take many forms the term as applied to teaching in business schools is relatively new. As McKenzie (1999) notes there is no appropriate educational definition which can be found in a dictionary. Greening (1998); Rosenshine and Meister (1992) and West, Farmer and Wolff (1991) maintain that scaffolds include all devices or strategies that structure and support students' learning and is a term used to broadly refer to the range of devices to assist that learning.

Scaffolding as a teaching strategy originates from Lev Vygotsky's sociocultural theory and the concept of the zone of proximal development (ZPD) (Van Der Stuyf 2002). The ZPD is the difference between what students are able to do by themselves on certain tasks and what they can achieve with guided assistance (Raymond 2000). Scaffolding is a different approach within a traditional learning environment and when employed as a teaching strategy provides students with specific support or a bridge to accomplish specific tasks and develop understanding that some students may be unable to manage on their own. Staff provide early but temporary supporting structures at particular points in the learning process and over time. This support is eventually withdrawn with the responsibility for learning gradually shifting back to the learner. The learner is then able to complete the task or master the concepts independently (Chang, Sung & Chen 2002).

In an academic domain scaffolds may include numerous tasks and activities such as modelling, a cue or prompt, partial solutions, hints or direct instruction (Hartman 2002). Use of such scaffolds can act to motivate and capture the student's interest for the particular task at hand. Scaffolds assist in simplifying a given task to make it more manageable and achievable. They aim to reduce frustration and anxiety and clearly model and define the expectations of the activity to be performed (Bransford, Brown & Cocking 2000). McKenzie (1999) also associates certain characteristics with scaffolded instruction including: the provision of clear direction; the clarification of purpose; the ability to keep students on task; assessment to clarify expectations; pointing students to worthy sources; reducing uncertainty, surprise and disappointment; delivering efficiency; and creating momentum. The relevance of such characteristics **is** highlighted in the following section in relation to the specific scaffolds adopted for the financial planning unit.

The Use of the Scaffolded Approach in The Unit

The key challenge for teaching staff was to identify, devise and experiment with alternative approaches to improve learning in their classrooms. Making the "best" choice(s) of support activities to employ was also a significant challenge, especially given the resource implications relevant to universities in the current environment. What follows is a description of the various instructional scaffolds and activities employed in the classroom to support student learning.

Scaffold 1: Adoption of a new financial planning text

A new Australian textbook was adopted for use with the major advantage being that this text included a comparable complex case study with a fully worked and annotated financial plan construction. This demonstration plan was a scaffold that served many purposes. Many of the students in the unit were largely unfamiliar with the financial planning process and had limited

knowledge of what a financial plan looked like. So the demonstration plan represented an example of a quality piece of work produced by someone else. It was able to provide students with a useful overview and perspective of a plan's structure and the various components which constituted the financial plan. In essence the demonstration plan defined the expectations of the task at hand and served as an interactive bridge for students. It allowed students to connect the exemplar to their own required task and acted as a model from which to establish a workable framework for undertaking their own assignment. This process asks students to review their own work and make judgements about how it relates to the required standard (Nicol & MacFarlane-Dick 2006). Used as a scaffold in this sense the demonstration plan was something tangible and allowed students to visualise the finished product. As students moved through the annotated step-by-step process of the model plan they constructed new understanding (Barnett 1997). Using the demonstration plan in this reflective way enabled them to commence their own assignment, see more clearly what they had to do to move to the next level and eventually complete the assignment. The use of the model plan also encouraged students to reflect on the activity and raised questions for them such as "what does a plan look like?"; "what elements can I take/use from the model for my own assignment?"; "what do I do now?", and "what would I do differently?"

Scaffold 2: Realigning lecture structure and content

Prior to the scaffolded learning intervention, the one hour lecture for the unit largely followed the traditional "banking model" format of week by week formal instruction with students receiving large amounts of content information. The banking model is characterised by the:

... act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiqués and makes deposits which the students patiently receive, memorise, and repeat (Freire 1996: 53).

As a direct consequence the teaching staff decided to change the lecture format to one where the textbook demonstration plan (Scaffold 1 above) would become the central focus for each week's lecture. The objective here was to successfully align and integrate the lecture materials with the other scaffolds being used. Placing the demonstration case study alongside the lecture meant that many of the lecture concepts became in effect encoded in the case context. Students therefore saw the direct relevance of lecture materials and how that concept knowledge was applied and integrated with the case study at hand.

Organising the delivery of lecture materials in this way proved beneficial as it assisted students to make the connection between the theoretical course material and its application to the given case study. It also aided in clarifying any misunderstandings that may have arisen. By direct application to the case study material students recognised how to organise the plan structure, extract the relevant information, break up the complex task and identify the critical issues. The lecture now enhanced students' exposure to the financial planning process and helped to direct their learning to the development of increasingly complex ways of looking at and solving problems. This scaffold assisted students to develop a better mindset by engaging them with a similar problem and reinforced the notion that the task was achievable.

Scaffold 3: Weekly financial plan progress checks (PCs)

Staff all held a strong belief that there was an urgent need to engage students in the learning process more adequately and quickly, and to lessen the procrastination and apprehension associated with students beginning and completing the assignment. So a scaffolded approach incorporating a series of five weekly progress checks (PCs) was introduced which divided the assignment into a series of related component parts. Table 1 lists the individual components included in each progress check.

Table 1
Weekly Progress Checks

	Components of Financial Plan
PC1	Cover letter, cover page of plan
PC2	Client’s current situation, goals/concerns
PC3	Net worth, income statement, excess cash flow, table of contents
PC4	Assumptions, executive summary structure, client risk profile
PC5	Asset allocation and development of investment strategy

Adopting this structure meant that students would prepare and complete the relevant progress check items prior to attending their tutorial. During the second hour of the weekly tutorial class from weeks 2 through 6, students would individually sit with their tutor to discuss and demonstrate progress on particular components of the major assignment. For example in PC1, students in the week 2 tutorial were required to have prepared a cover letter which accompanied the financial plan and a complying financial plan cover page. Whereas in PC2, students had to extract from the case study data the necessary information related to the client’s current situation and identify short-term, medium and long-term goals.

The adoption of the PCs has proved to be a very effective and successful technique and a powerful aid in supporting student learning. The PCs have assisted in compelling students to begin the assignment. This meant they were actively involved with the case study and the mechanics of the plan preparation process right from week one. Questions such as “am I getting it?”; “how am I going?”; “why am I doing this?”; “are there other ways this could be done?” all became much clearer and answerable at an earlier stage. As McKenzie (1999) notes “the progression of activities is liberating yet controlling at the same time” and assists students in “putting their energy into interpretation rather than wandering”. This process of early intervention through the use of PCs provided students with a clear understanding of both the nature and scope of what they had to do. Use of such scaffolded techniques provided students with individualised, early and frequent feedback⁴ which assisted them in building both confidence in, and mastery of, the planning process. Students were able to incorporate the weekly feedback, whether positive or negative, and so could move forward to the next level. This process encouraged students to reflect on their learning, but more importantly it allowed for weekly revision and correction of their work. Students had the opportunity to shape and reshape

⁴ A combination of different feedback styles were used including one-on-one short discussion with individual students; whole class discussions and/or the use of exemplars.

their knowledge and were more able to assess their work to date and make the appropriate content connections. Tonge & Willett (2009) maintain that good feedback practice requires that it should be timely and specific. The PCs demonstrate the importance of providing timely feedback early enough in the assessment process to be useful. Thus, it was particularly beneficial for students to receive feedback in this way on their work-in-progress. Each PC related specifically to each student's performance and provided corrective advice.

Using the PCs meant staff were able to assist students to break up a large, sometimes incomprehensible, often unwieldy task into a series of manageable components. The elements included in each PC helped focus students' thinking on particular items that were important for that task, but at the same time allowed them to visualise and understand how the financial plan was built week by week. The PCs not only helped guide students through the early stages of the planning process but also delivered efficiency as students' work was now organised, structured and focussed with many potential errors either being reduced or eliminated earlier in the financial plan construction process. In essence the PCs helped students to know what to do and to create early and continuing momentum on the development of the financial plan. The PCs worked to lessen student frustration as they spent less time procrastinating on how to begin and work out what to do. Therefore actual time spent on the assignment increased and as a result of the use of the PCs learning was more productive. The use of PCs as a scaffolding support mechanism also gave teaching staff greater insight into what students had learnt (and learnt differently) and allowed them to see specific examples of understanding and growth week by week.

Discussion and Conclusion

This study has provided some insights into ways in which aspects of teaching financial planning have enhanced the experiences of students and staff. The premise is that learning in personal financial planning is difficult, and as a result, there is a chance that students may become disengaged if they do not receive adequate assistance in the plan construction process. Vihtelic (1996) maintains that effective teaching invites students into a particular discipline and helps them to see and make connections between the content and their lives. Without such a learning environment, which provides a clear structure and an established framework from which to work, many students find themselves vulnerable - and none more so than students required to complete a financial plan.

The use of scaffolding as an instructional strategy requires that staff provide students the opportunity to extend their current skills and knowledge. As Hausfather (1996) notes, staff must engage students' interest and simplify the tasks associated with the assignment so that these tasks become manageable and act to motivate students to pursue the ultimate instructional goal. Given a project such as a financial plan construction, more effective student learning and understanding will occur when "students have been well equipped, well prepared and well guided" (McKenzie 1999).

It is acknowledged that scaffolding as an instructional strategy is not a panacea. Scaffolding is good teaching as it makes sense to first show students how to do something, provide structures to support them as they are learning to perform the task themselves and gradually remove the supporting scaffolds so that they are able to complete the task independently. Although this case study may lack robust empirical evidence to demonstrate the superiority of the scaffolded approach over other teaching and learning approaches, anecdotal

evidence and student feedback indicates that the use of scaffolding has led to greater student performance and proficiency in the task of constructing a financial plan.

As is demonstrated in Table 2, over the four year time period there has been an improvement in the percentage of students passing the financial plan construction assignment. Additionally, there has been a positive increase in the grade distributions at credit, distinction and high distinction levels over this time period. It is important to note that in Spring 2004 prior to the introduction of any scaffolding techniques, 56 percent of students failed the financial plan construction assignment. This level of failure was both a motivation and catalyst for staff to incorporate a more supportive structure for student learning. The use of scaffolding was first conceptualised and gradually introduced from Autumn 2005 and was subsequently refined as a result of informal student feedback and staff reflection. Over the given time period the application of the marking guide for the financial plan assignment was consistent and used the same criteria and standards, and maintained the same weightings for each component.

Table 2
Student Grades (as a Percentage) for Financial Plan Construction Assignment.

Grade	Spring Semester 2004	Autumn Semester 2005	Spring Semester 2005	Autumn Semester 2006	Spring Semester 2006	Autumn Semester 2007
	No PCs used	Use of 1 PC	Use of 5 PCs			
HD & D	4	18	12	23	25	26
Credit	10	12	13	18	17	21
Pass	30	32	35	32	31	34
Fail	56	38	40	27	27	19

Reflection on the effectiveness of the use of scaffolding techniques serves to highlight the benefits and challenges that have been observed and experienced for both students and staff at UWS. Students were more actively involved in the overall learning process often remarking that: “Using the progress checks made me get on with it, showed me how it fitted together and I know I will remember this for the future – it is hands on.” Statements such as this indicated that students were becoming more adept at identifying the more important aspects of the case study with the associated development of reasoning and critical thinking skills. Staff have also noted that the resulting improvement in the quality of the assignment was primary evidence of enhanced student learning. Overall, final assignments displayed greater accuracy with students demonstrating a greater appreciation of how to construct the plan. This was exhibited by the now professional quality of the plan, its clarity and completeness and a more logical sequencing.

No teaching strategy can be guaranteed to work every time with every student. In this case study, success has been experienced with the use of instructional scaffolding. Compared to the traditional manner of simply lecturing on all aspects of the financial planning process the experience of UWS financial planning teaching staff in using the scaffolded approach to teaching and learning has been a positive, rewarding and worthwhile experience. Students now have a much stronger understanding of financial planning and the plan construction processes. They have been assisted and supported to organise their knowledge which has helped them to more effectively build on what they know. The various scaffolds have assisted students so that they can more clearly see and understand what is required and in so doing has helped to provide some relief to previous student concerns associated with the assignment. Staff perceptions are that

student motivation has increased and frustration reduced. The integrated nature of the scaffolds has helped to engage the students in the unit – they are not just passively sitting in lectures or tutorials listening to what they should be doing - they are actually actively doing it, right from week one!

From a staff perspective the scaffolding approach has made the task of teaching financial plan construction more interesting, challenging and beneficial. The experience of using a scaffolded approach has not only deepened staff understanding of the complex factors influencing learning and teaching in the financial planning context but has assisted them in identifying areas of student weakness and misunderstanding of technical content.

The paper raises several important issues for further consideration and research. Firstly there is a need to gather empirical data from students and teaching staff concerning their perceptions, satisfaction and performance in relation to the use of instructional scaffolding. Furthermore the impact of factors such as student learning styles on the effectiveness of teaching methods such as scaffolding should be examined and explored.

References

- Barnett, R 1997, *Higher Education, A Critical Business*, Open University Press, Buckingham.
- Birkett, W P 1996, Competency standards for financial planning in Australia and New Zealand, *Financial Planning Association of Australia Ltd.*
- Bransford, J, Brown, A & Cocking, R 2000, *How people learn: brain, mind, and experience and School*, National Academy Press, Washington, DC.
- Bruner, J 1977, *The process of education*, Harvard University Press, Cambridge.
- Chang, K, Sung, Y & Chen, I 2002, 'The effect of concept mapping to enhance text comprehension and summarization', *The Journal of Experimental Education*, vol. 71, no.1, pp5-23.
- Cowen, J E, Blair, W T & Taylor, S 2006, 'Personal financial planning education in Australian universities', *Financial Services Review*, vol. 15, pp43-57.
- Davis, E A & Linn, M C 2000, 'Scaffolding students' knowledge integration: prompts for reflection in KIE', *International Journal of Science Education*, vol. 22, no.8, pp819-837
- Dewey, J 1974, *John Dewey on education: selected writings*, University of Chicago Press, Chicago.
- Eyssell, T H 1999, 'Learning by doing: offering a university practicum in personal financial planning', *Financial Services Review*, vol.8, pp293-303.
- Financial Planning Association 2011, 'Financial Planning Defined', *FPA Website*, Accessed 30/03/2011, <http://www.goodadvice.com.au/default.asp?action=article&ID=21992>
- Fox, J & Bartholomae, S 1999, 'Student learning style and educational outcomes: evidence from a family management course', *Financial Services Review*, vol. 8, pp235-251.
- Freire, P 1996, *Pedagogy of the Oppressed*, Penguin, London.
- Ge, X & Er, N 2005, 'An online support system to scaffold real-world problem solving', *Interactive Learning Environments*, vol.13, no.3, pp139-157.

- Goetz, J W, Tombs, J W & Hampton, V L 2005, 'Easing college students' transition into the financial planning profession', *Financial Services Review*, vol.14, pp231-251.
- Greening, T 1998, 'Scaffolding for success in problem-based learning', *Medical Education*, Accessed 01/02/2008, <http://www.med-ed-online.org/f0000012.htm>
- Hammer, M & Champy, J 1993, *Reengineering the corporation: a manifesto for business revolution*, Harperbusiness, New York.
- Hartman, H 2002, 'Scaffolding and cooperative learning', *Human Learning and Instruction*, pp23-69.
- Hausfather, S J 1996, 'Vygotsky and schooling: creating a social context for learning', *Action in Teacher Education*, vol.18, pp1-10.
- Johnson, S D 1997, 'Learning technological concepts and developing intellectual skills', *International Journal of Technology and Design Education*, vol.7, pp161-180.
- Lawson, L 2002, 'Scaffolding as a teaching strategy', *Scaffolding Website*, Accessed 07/01/2006, <http://condor.admin.ccny.cuny.edu/~group4>
- Leonard, J & Seethamraju, R 2005, 'Towards a holistic understanding of business and an applied understanding of information systems: the use of a "scaffolding approach"', 16th Australasian Conference on Information Systems, Sydney, Australia, 29 Nov-2 Dec 2005.
- McKenzie, J 1999, 'Beyond technology: questioning, research and the information literate school community', *From Now On the Educational Technology Journal*, vol. 9, no.4 Scaffolding for Success, Accessed 01/02/2008, <http://fno.org/dec99/scaffold.html>
- Nicol, D & Macfarlane-Dick, D 2006, 'Formative assessment and self-regulated learning: a model and seven principles of good feedback', *Studies in Higher Education*, vol. 3, no.2, pp199-218.
- Raymond, E 2000, Cognitive characteristics, *Learners with Mild Disabilities*, pp169-201.
- Rosenhine, B & Meister, C 1992, 'The use of scaffolds for teaching higher-level cognitive strategies', *Educational Leadership*, vol.49, no.7, pp26-33.
- Scott, P H 1997, 'Developing science concepts in secondary classrooms: an analysis of interaction from a Vygotskian perspective', PhD Thesis, Leeds University.
- Sharma, P & Hannafin, M J 2007, 'Scaffolding in Technology-Enhanced Learning Environments', *Interactive Learning Environments*, vol. 15, no.1, pp 27-46.
- Tonge, R & Willett, C 2009, 'Learning to Think: Using Coursework to Develop Higher-order Academic and Practitioner Skills among Final Year Accounting Students', *Accounting Education: an international journal*, Vol. 18, No. 2, pp207-226.
- Van der Stuyf, R R 2002, 'Scaffolding as a teaching strategy', Accessed 01/02/2008, <http://condor.admin.ccny.cuny.edu/~group4/Van%20Der%20Stuyf/Van%20Der%20Stuyf%20Paper.doc>
- Vihtelic, J L 1996, 'Personal finance: an alternative approach to teaching undergraduate finance', *Financial Services Review*, vol.5, pp119-131.
- Warschauer, T 2002, 'The role of universities in the development of the personal financial planning profession', *Financial Services Review*, vol.11, pp201-216.

West, C K, Farmer, J A & Wolff, P M 1991, *Instructional design implications from cognitive science*, Prentice Hall Englewood Cliffs, New Jersey.