

STUDENT KNOWLEDGE ACQUISITION AND SMALL BUSINESS CONSULTING

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ABSTRACT

The acquisition of explicit and tacit knowledge by students participating in the Small Business Consulting module at the University of Limerick presents a challenge to its entrepreneurship educators. Utilising a case study approach, knowledge transfer within the Small Business Consulting module at the University of Limerick is explored using in depth interviews with the teaching team and ten graduates (with equal gender balance) to explore attitudes and opinions towards the transfer of explicit and tacit knowledge. The empirical evidence demonstrates student satisfaction with the transfer of explicit knowledge and, more significantly, tacit knowledge, which is reflected in improved student performance. In addition the University of Limerick benefits from the positive associations of having a successful outreach programme, and academic staff retain currency of consultancy skills while gaining access to case material and research subjects. Future research will use quantitative research methodologies in a longitudinal study of two groups of University of Limerick graduates; first, those who have participated in the Small Business Consulting module and second those who have not. This use of a control group will more clearly enable the research team to explore the value of the module in knowledge transfer.

Introduction

One of the key challenges facing entrepreneurship educators is the acquisition of explicit and tacit knowledge by students, a challenge which is particularly significant for entrepreneurship students participating in the Small Business Consulting module at the University of Limerick. In the University of Limerick one of the primary purposes of education is to prepare students for the world of work and the changing characteristics of the workplace environment. The Small Business Consultancy module was developed to prepare entrepreneurship students for employment in a dynamic and highly competitive consultancy market. Thus a pivotal element of the module is the transfer of relevant and appropriate knowledge to meet student needs. Such knowledge can be categorised on a knowledge continuum with two extremes, tacit and explicit knowledge. Tacit (uncodified) knowledge refers to practical knowledge

acquired by experience (Grant, 1996), while explicit (codified) knowledge is captured in a language which can be communicated (Hall and Andriani, 2003). While explicit knowledge can be transferred using traditional teaching methods, explicit knowledge requires more creative, intuitive and experiential learning methods. Within this context, entrepreneurship academics in the University of Limerick have experimented to find the best course structure, content and teaching and learning methodology to nurture students' entrepreneurial inclinations, skills and abilities (Fleming, 1999).

This paper outlines the essential components of the Small Business Consulting module delivered through the Kemmy Business School at the University of Limerick and the role played by both explicit and tacit knowledge in this teaching and learning experience. In doing so the paper outlines the key concepts of attributes and modes of knowledge, the research approach adopted for the study, the research findings and conclusions.

Attributes of Knowledge

In order to understand knowledge transfer in the context of designing educational programmes, the primary components /attributes of knowledge need to be considered. Hall and Andriani (2003) define knowledge in terms of factors which facilitate explanation, prediction, and control of physical phenomena while retaining the potential to influence human thought and behaviour. As such, the term knowledge refers to key elements which can be placed on a knowledge continuum extending from tacit (uncodified) knowledge at one extreme to explicit (codified) knowledge at the other. This continuum would include aspects of knowledge such as formal codified theories and concepts and more informal knowledge based on skills, intuition, organisational culture and reputation. In this context Grant (1996) classified tacit knowledge as knowledge of what works, that is, the skills, practical knowledge and know-how which is acquired by experience. In contrast explicit knowledge refers to knowledge which has been captured in a code or a language which can be communicated (Hall and Andriani, 2003).

The principal attributes of knowledge are codification, complexity, newness, teachability and stickiness. Codification refers to the ability of the student to structure knowledge into a set of identifiable rules and relationships that can be easily communicated (Kogut and Zander, 1993), while complexity is characterised by the difficulty of replication due to increased causal ambiguity (Grant, 1996). In addition, although newer knowledge is more valuable and less likely to be codified (Kogut and Zander, 1993), it requires greater personnel interactions to affect its transfer. Teachability examines the ease by which know-how is taught (Kogut and Zander, 1993), while stickiness refers to the incremental expenditure required to transfer knowledge (Von Hippel, 1994). For example, in this instance if a particular student knowledge seeker is less able to acquire the necessary knowledge, they will have to work harder to acquire the required knowledge which will result in the stickiness of the knowledge will be higher than it might be under other conditions (O'Dwyer and Flynn, 2005). These attributes of knowledge form the foundation of knowledge transfer, dictating the mode of knowledge transfer utilised.

Modes of Acquiring Knowledge

Similar to the knowledge continuum used in identifying attributes of knowledge there is a spectrum of modes for acquiring knowledge. On this spectrum there are two classifications of knowledge acquisition, experiential learning and unintentional/ unsystematic learning. Experiential learning utilises learning methodologies such as scanning, experiments, self-appraisal, experimenting learners, and unintentional or unsystematic learning. In contrast unintentional/unsystematic learning consists of vicarious learning, focused search and performance monitoring; in addition to using scanning.

In exploring the first mode of knowledge acquisition, Huber (1991) characterises experiential learning as learning by doing. There are five modes of delivery adopted for the dissemination of experiential learning knowledge; the first mode of experiential learning is that of scanning whereby a learning participant seeks data from both its internal and external environment which can be translated into intelligence. The second mode is an experiment whereby the participant can engage in experiments which demonstrate cause and effect relationships between actions and outcomes. The third mode is that of self-appraisal, which is

utilised as a learning mode focusing on cognitive aspects of learning and learning new frames of reference (Shrivastava and Schneider, 1984). The fourth mode is that of the experimenting participant where those who perform activities take primary responsibility for learning and for investigating new methods (Hedberg et al., 1976). The final mode is unintentional or unsystematic learning which refers to variation in behaviour and performance on the part of the learning participant in response to a simple adaptation in an uncertain environments (Huber, 1991).

The second mode of knowledge acquisition (external learning) focuses on strategic characteristics, as part of which vicarious learning is the first mode explored. In this instance organisations commonly attempt to learn the strategies and administrative practices of other organisations, making this a common form of organisational learning (Fuld, 1988; Gilad, and Gilad 1988). Channels for acquiring this information include consultants, professional meetings, trade shows, publications, vendors and suppliers and in less competitive environments, networks of professionals (Huber, 1991). The second mode is that of scanning which according to Kogut and Zander (1995) forms the basis of a firm's long term growth and survival. The third mode is that of a focused search, for which Reitzel (1958) found a general reluctance to initiate, unless a clearly identified threshold is exceeded. The final mode in the external learning genre is performance monitoring, utilising standards such as inventory levels, and the expectations of external constituencies and stakeholders (Huber, 1991).

Given that knowledge consists of a number of characteristics, combining both tacit and explicit knowledge in a manner which can best be acquired through experiential learning and strategic characteristics should be considered in the development of entrepreneurship education programmes. It is considered that one effective course which has achieved this is Small Business Consulting, which is part of the entrepreneurship programme at the University of Limerick.

Entrepreneurship at the University of Limerick

The University of Limerick is an independent, internationally focused University, based in the Mid-West of Ireland, with over 10,500 students and 1,200 staff. Its mission is to promote and advance learning and knowledge through teaching, research and scholarship: paying particular attention to the generation of knowledge which is relevant to the needs of Ireland's continuing socio-economic development. The first Entrepreneurship initiative was introduced at the University of Limerick in 1983, subsequent enterprise

modules and initiatives introduced at undergraduate and postgraduate level continue to develop and transfer knowledge regarding the enterprise process (University of Limerick, 2008).

Within this context, entrepreneurship academics in the University of Limerick have experimented to find the best course structure, content and teaching and learning methodology to nurture students' entrepreneurial inclinations, skills and abilities (Fleming, 1999). Modules range from structured courses consisting of lectures, assignments, case studies and readings to innovative integrated modules where students actively participate in the small business sector, such as the Small Business Consulting module which forms the focus of this paper (University of Limerick, 2008). *'The aim is to produce graduates who are capable of being innovative and who can recognise and create opportunities, take risks, make decisions, analyse and solve problems and communicate clearly and effectively'* (Fleming, 1999: 405). One of the primary challenges in developing such a module is the transfer of knowledge to students.

Research Approach

A qualitative research approach was adopted to facilitate insight through experiencing attitudes and behaviours which were dismantled, interpreted and integrated into a composite of the research issue, an exploration of knowledge transfer in the Small Business Consulting (de Ruyter and Scholl, 1998; Van Maanen et al., 1982). The Small Business Consulting module in the University of Limerick is explored in the context of the literature reviewed, adopting a qualitative research approach, using case studies to understand the complex and dynamic issue of knowledge transfer in a Small Business Consulting module. *'A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used'* (Yin, 1994: 13). This was possible due to the contemporary setting (Yin, 1994) and the fact that the locale comprised a complex issue which was more than the sum of its parts (Lindgreen, 2000).

One of the primary strengths of case study research is the use of multiple methods to facilitate converging lines of inquiry combining historical, attitudinal or behavioural data. In this study multiple methods such as interviews, direct observation, documentation, archival records, participation and observation were utilised (Yin, 1994), the use of such methods facilitated a holistic interpretation of student and staff teaching and learning experiences in the Small Business Consulting module. As part of this process, documentation and archival records such as student grades were utilised to build the case. In addition, researchers participated in project group meetings, using the opportunity to observe project group interactions with their supervisor and client. Depth interviews were also conducted with the teaching team for Small Business Consulting, and ten in-depth interviews were conducted with Bachelor of Business Studies graduates who had completed the Small Business Consulting module. The case subjects (5 male and 5 female) were randomly selected and satisfied the researchers that they could highlight key insights regarding the phenomenon being researched (Ettlie and Subramaniam, 2004). The in-depth interview protocol was completed over a series of 20 interviews, using open-ended, and almost content- and jargon-free questions, so that the answer could capture the respondent's, not the researcher's perception (Gilmore and Coviello, 1999; Perry, 1999). Each interview was guided by a topic list which formed the basis of the interview, facilitating in-depth exploration and investigation of the key knowledge acquisition elements identified in the literature.

Research findings

The research findings are framed in the context of a description of the Small Business Consulting module, and are explored in the context of the literature explored addressing issues of the transfer of explicit knowledge, tacit knowledge and overall student performance.

The Small Business Consulting Module at the University of Limerick

The Small Business Consulting module in the University of Limerick is a final year undergraduate module which provides students with the principles and process of business consulting through explicit and tacit learning. *‘Undertaking a consulting exercise on behalf of a business presents students with an opportunity to develop management skills that are valuable and relevant. Doing so while at a teaching institution means they can develop those skills with definite and controlled learning outcomes in a safe and supportive environment’* (Wickham, 2008: 5). Students utilise experiential learning and strategic characteristics as modes of knowledge acquisition in order to acquire the necessary skills and abilities to act as consultants to small businesses. A core element of consultancy is the value attributed to the experience of the consultant; clients are purchasing a service which although intangible, and is pre-judged based on the experience, reputation, skills and abilities of the consultant. The reassurance of such elements reduces the element of risk in a client purchase, within the Small Business Consulting module this risk to the client is reduced through the moderating and mediating influence of the project supervisor.

Prior to the commencement of each term small businesses and enterprise support agencies are contacted to identify prospective consultancy clients. Each client is allocated a student team at the start of the term, this team will act as consultant to the client business, enabling students to apply experiential knowledge and concepts learned in the classroom, to real-life business situations this is achieved whilst working in teams with the support of a project supervisor (who has had consultancy experience) who acts as a learning process facilitator (O’Dwyer and Ryan, 2000).

Under the guidance of a project supervisor the module commences with the student group engaging with their client SME, subsequently market research is undertaken (secondary and primary investigation in relation to the market and customer requirements); and an industry analysis is completed. Common projects would include undertaking market analyses, business planning, strategy development and

marketing strategy development – this type of project allows students to draw on an existing skill base but in an applied sense, while also demanding that they acquire new skills. Dependent on the nature of the project, the client requirements may require a product/service development market/sales strategies which would address pricing, distribution and promotion strategies; the management structure of the enterprise may require alteration; manufacturing/operations improvements may be suggested; start up finance and return on investment may be explored; and financial projections (projected cash flow, profit and loss and balance sheets) may be proffered. In all instances a final written report is submitted, and a formal presentation is made to the client.

In terms of administration, the module requires the creation of client contact reports, research briefs and all associated documentation for each student team, in addition to lecture notes. This results in the module absorbing significant man hours which necessitates team teaching to address the needs of the individual students with respect to their constituent disciplines (Bachelor of Business Studies, Bachelor of Science in Equine Science, Bachelor of Technology in Wood Technology, Bachelor of Arts in Public Administration, Erasmus and International students). The Small Business Consulting team, led by the Co-ordinator who lectures the subject, works in conjunction with additional faculty who act as supervisors to groups. Each group meets with their supervisor at least once a week, providing confidential managerial assistance to their client firm, acquiring tacit knowledge through experiential learning while building on the explicit knowledge gleaned from didactic teaching and learning methods. Given the dynamic nature of small business, the module is evolutionary, requiring continual development and monitoring which is facilitated by the academic team.

The effective transfer of explicit and tacit knowledge within these circumstances is essential given that both the student academic grade, and the reputation of the University within the business community, are entwined and dependent on the skills and abilities for the participating students. Therefore, significant

responsibility for the success of the module and the knowledge acquisition is held by the participating students, and supported by the lecturer and project supervisors. *'Addressing the management challenges presented by delivering the consulting project is a valuable part of the learning experience for the student'* (Wickham, 2008: 8). Explicit knowledge is transferred to students using didactic methods (lectures, textbooks, readings and seminars). To maximize the explicit learning experience for Small Business Consulting students, skeleton lecture notes are provided in electronic public folders in advance of each lecture. This allows the lecturer freedom to encourage student interaction while providing additional material throughout the lecture; it also engages students in the lecture through supplementing the lecture notes and in discussion of key material.

The process of Small Business Consulting education is reflected in Figure 1 which illustrates the aspects of the primary inputs that are considered such as students' prior knowledge base, their personality needs, interests and motivation, their role orientation abilities and work experience, the effort they are prepared to give the consultancy project and the resources made available to them. These inputs are then augmented by the explicit knowledge gleaned from the content focus of the business consultancy curriculum and the teaching focus which utilises didactic, skills building and discovery methods of learning. Thus Small Business Consulting intangible and tangible outputs are achieved.

INPUTS (STUDENTS)	PROCESS		
	CONTENT FOCUS	TEACHING FOCUS	OUTPUTS
Prior knowledge base Personality needs Interests Motivation Role orientation abilities Work experience Effort Resources	Entrepreneurship defined Environment Innovation Creativity New product development Market research Business planning	Didactic methods (lectures, textbooks, readings and seminars)	Intangible (Goal, achievements, skills/knowledge, confidence, decision-making, problem-solving, communications)
	Management Marketing Operations Finance Legal issues Teamwork	Skills building (Case studies, group discussion, brainstorming, teamwork, projects)	Tangible (Assignments, presentations, reports, drawings, prototypes, products)
	Managing growth Intrapreneurship	Discovery methods (Problem-solving, networking, consultancy, career planning)	

Figure 1:
A process model of Entrepreneurship Education (Fleming, 1999: 406)

Small Business Consulting: Explicit knowledge

In engaging with the planning and preparation process for the Small Business Consulting module the lecturer takes account of literature regarding learning styles, notably, Dunn and Dunn's (1978) Three Basic Learning Styles; Honey and Mumford's (1982) Learning Model; Gardner's (1993) Multiple Intelligences; Gregorc's Mind Styles (1985); and Kolb's (1981) Experiential Learning Cycle. In noting a variance in learning styles the Small Business Consulting lecturer must strive to balance the lecture material provided so that there is an appropriate ratio between concrete information and abstract concepts: practical problem solving methods and fundamental comprehension of material.

Small Business Consulting lectures incorporate audio-visual aids, good presentation skills, group interaction and activity, teamwork, guest speakers from academia and industry, and project-based learning to aid learning. Examples of the explicit knowledge required by the student which is addressed in

the module content include: the steps, skills and roles in the consultancy process, market research methodology, conducting an industry and competitive analysis, the marketing plan, report writing, communication and presentation skills. The integration of such tools and techniques into the Small Business Consulting module has necessitated the development of course guides; course and learning materials; sourcing and integrating software modules and appropriate manuals. However, the explicit teaching and learning methods employed are continuously evolving based on feedback from students, peer review, and exposure to concepts and theories in relevant journals.

All ten students interviewed were very satisfied with the transfer of explicit knowledge using didactic methods (lectures, textbooks, readings and seminars) they experienced on the Small Business Consulting module; *'the lectures were really well structured and gave me exactly what I needed to know'* (Student 9). To maximise the explicit learning experience for Small Business Consulting students, skeleton lecture notes are provided in electronic public folders in advance of each lecture. This allows the lecturer freedom to encourage student interaction while providing additional material throughout the lecture; it also engages students in the lecture in supplementing the lecture notes and in discussion of key material. *'Having an outline of the notes in advance of the lectures was really important. It allowed me to familiarise myself with the area before the lecture and then really get involved in the lectures'* (Student 4).

In noting a variance in teaching styles they encountered, the interview subjects were satisfied with the balance of practical problem solving methods and fundamental comprehension of material. The reflection time which is integrated into the explicit knowledge element of the module, and opportunities for students to undertake problem solving/brainstorming activities are provided: in some instances applying theory to a particular situation, in other instances analysing situations; and in some instances providing examples of certain elements noted in the lecture – in all of these cases students responses are praised. The impact of

this approach is demonstrated in student feedback; *'Very enlightening and appropriate module, great learning experience'* (Student 5) and *'This is an excellent module; best I have done here'* (Student 2).

The explicit knowledge module content includes: the steps, skills and roles in the consultancy process, market research methodology, conducting an industry and competitive analysis, the marketing plan, report writing, communication and presentation skills. The integration of such tools and techniques into the Small Business Consulting module has necessitated the development of course guides; course and learning materials; sourcing and integrating software modules and appropriate manuals.

Small Business Consulting: Tacit knowledge

Tacit knowledge is transferred to students using skills building techniques tailored to meet the individual needs of each group and led by that groups' project supervisor. Indeed while the tools required for directed learning are supplied, students are actively encouraged and supported in engaging in self-directed learning in accordance with the aims, objectives, assessment and learning outcomes of Small Business Consulting.

Small Business Consulting is an active learning module where student groups act as professional consultants to SMEs, thus drawing on the explicit knowledge acquired to date in their module of study. This module is 100% project based with students forming groups of 4/5 who develop skills and abilities to act as consultants to 'real life businesses'. The assessment for this module is divided into a group grade worth 55% and an individual grade worth 45% in order to acknowledge both individual and group efforts. Assessment and examination of students participating in the Small Business Consulting module is guided by Scriven's (1967) distinction between formative and summative evaluation; both forms of evaluation are utilised in an effort to overcome passive reproductive learning which can hide lack of understanding (Ramsden, 1988; Entwistle and Ramsden, 1983). In addition, issues of validity have been addressed in order that

the module taught and assessments set match students requirements (academic and experiential) post University of Limerick. Thus the assessment and examination strategy focuses on achieving authentic assessments, in a more holistic context, which present appropriate and complex academic and industry oriented intellectual challenges.

Each group is led by a project supervisor whose role is to guide the group through a real life consultancy experience. The project supervisor facilitates tacit learning, offering one-to-one mentoring to each group, building on their individual and group strengths; discussing, monitoring and empowering students throughout the project from their initial meeting with their client to the presentation of their final report. This process enables students to absorb tacit knowledge regarding the consultancy process, thus honing their innate skills and abilities. All ten case subjects were very satisfied with the transfer of tacit knowledge (using skills building techniques tailored to meet the individual needs of each group) they experienced on the Small Business Consulting module.

The students realise that they are viewed as professional consultants by the companies they advise, and are therefore further motivated to acquire tacit knowledge in addition to the explicit knowledge provided. *'When I realised that this was a real business and that they were really going to make decisions based on our advice – that changed everything. I realised that I needed to be more professional, it wasn't just about what I learnt about in lectures, to be good at this module and to be a good consultant I needed to know more about things I couldn't learn from books'* (Student 6). *'I learned a lot from the lectures but the real learning took place in our group...managing our client and learning from our supervisor'* (Student 5). *'There were all sorts of things we'd never know about if we didn't actually do it [the Small Business Consulting project]'* (Student 2).

'I learnt so much more about consultancy by actually having to act as a consultant than I ever could from the lecture notes, readings and book – there's no way I could have picked up the behavioural nuances etc. other than by actually doing it' (Student 3). *'This is an excellent module. Out of all the modules that I have studied in my four years this is the one that I learned most from. I feel every Business student should do a module like this as it puts you in touch with the real world'* (Student 8). *'I think the module is an excellent learning experience and I definitely wouldn't have had the opportunity to gain such hands on experience in any other module'* (Student 1).

Small Business Consulting and Student performance

Three measures are utilised to explore student performance on the Small Business Consulting module; student academic performance, student perception of their achievement of the intended learning outcomes, and the long term affect of the module on student entrepreneurial activities and inclinations. In addressing student academic performance, the grade point average for the Small Business Consulting module was assessed and it found to be consistently higher (average of .285) than the normal distribution for other University of Limerick subjects each year. This result reflects the significant effort students made by students in their efforts to successfully complete the task they have agreed with their client.

The second measure used in exploring student performance on the Small Business Consulting module focuses on student perception of their achievement of the intended learning outcomes. The learning outcomes indicate that through explicit and tacit knowledge appropriation students who have completed the module will have an improved understanding of the role and skills required for the consulting process and should be capable of advising owner/managers in a professional manner. *'This module did exactly what it said it would – I would feel very happy acting as a consultant to any small firm – I know what to do, how to behave and how to manage the entire process successfully'*(Student 6). Formal feedback from students through the teaching evaluation mechanisms developed by the Centre for Teaching and Learning

in the University of Limerick confirms this feedback, indicating student perceptions that this module is of most value to them.

The third measure is the long-term effect of the module on student entrepreneurial activities and inclinations. Informal feedback indicates a substantial number of students are far more confident of their ability to start a business venture or run a subsidiary/business unit following the Small Business Consulting module. Research undertaken by Fleming and Owuzu-Ansah (2002) indicates that this confidence translates into, approximately 2 times as many UL entrepreneurship graduates starting new business ventures as non-entrepreneurship graduates, upon graduation, a figure which rises to 3 times within 10 years of graduation.

Conclusion

One of the key challenges facing entrepreneurial educators in a dynamic global environment is the transfer of tacit knowledge. Implicit in entrepreneurial education is the transfer of explicit knowledge through didactic methods such as lectures, textbooks, tutorials, workshops, readings and seminars. However, the successful transfer of explicit knowledge is not sufficient to provide students with the skills and abilities required to act in a professional manner as consultant to SME owner/managers. Given that much of the success of a consultant is dependent on intangible elements such as reputation, experience, skills and abilities, the module's success in enriching the tacit and explicit learning experience for students is essential. Thus the integration of mechanisms to facilitate the transfer of tacit knowledge into a consultancy module is fundamental.

The Small Business Consulting module at the University of Limerick has enabled students to participate in a more complete learning experience, with its emphasis on students acquiring both explicit and tacit consulting knowledge. Based on this evidence the study illustrates that this

teaching approach offers a richer learning experience for students which acts as a capstone for their undergraduate business programme. This is reflected in their satisfaction with the module and its intended learning outcomes and in their consulting and academic performance. In addition, the University of Limerick benefits from the positive associations of having a successful outreach programme, and the academic staff benefit from maintaining their consultancy skills while acquiring access to case material and research subjects.

This study provides some interesting insights into the value of the Small Business Consulting module at the University of Limerick. However, the study is constrained by certain limitations predominantly the use of the case study method which (although useful in facilitating insight into the research issue) provides data which is not generalisable. To address this issue future research will use quantitative research methodologies in a longitudinal study of two groups of University of Limerick graduates; first, those who have participated in the Small Business Consulting module and second those who have not. This use of a control group will more clearly enable the research team to explore the value of the module in knowledge transfer.

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