

Developing creative and critical thinking abilities in business graduates

The value of experiential learning techniques

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Abstract: *Educational programmes should promote an ethos of lifelong learning and develop in graduates the capacity for long-term personal and professional development through self-learning and reflection. A business degree programme should seek to produce graduates who are confident, creative thinkers with the capacity to solve problems, think creatively, negotiate, make decisions and resolve conflict. The development of these capabilities should not be left to chance, but should be addressed explicitly in the programme. Whether creativity and critical thinking skills are innate or learned, there is little disagreement that experience deepens and expands these abilities. A module entitled 'Critical Thinking' has been introduced into a bachelor's degree in Business Studies. In this module both individual and team experiential tasks are used to develop creative thinking. These tasks are relevant to business activities in product development, marketing, and process development. Experiential exercises in decision making and conflict resolution abilities build skills necessary to face challenges from new technologies, competition or the business environment.*

Keywords: *business education; experiential learning; critical thinking; creativity; problem solving; decision making*

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Educational programmes should promote an ethos of lifelong learning and develop in graduates the capacity for long-term personal and professional development through self-learning and reflection. A business degree programme should seek to produce graduates who are confident, creative thinkers with the capacity to solve problems, think creatively, negotiate, make decisions

and resolve conflict. The development of these capabilities in graduates should not be left to chance, but should be addressed explicitly in educational programmes.

Business students vary widely in the background experience they bring to their education. Participants in postgraduate programmes will generally have had

experience in a variety of jobs and/or companies. Mature students entering a degree programme may also have work experience in different aspects of business enterprises. Students entering directly from secondary school may come with some work experience, but it will generally be limited to lower-level positions which will not have taught them much about the general workings of business. As lecturers, therefore, we find ourselves teaching management, strategy, analysis and implementation to students who have not directly experienced these activities in the business world.

'Critical Thinking', a new module in the bachelor's degree programme in Business Studies at the Galway Mayo Institute of Technology, is designed to address this problem. In the module, we seek to develop the ability of students to apply creative and critical thinking skills to their business responsibilities. The course combines the expertise of lecturers in experiential education, developmental psychology, social psychology, decision making and management development. Experiential learning techniques have been used for many years at the institute in the fields of outdoor education and business mathematics and statistics. This course extends the method into the area of business management.

Experiential learning – definition and development

The development of experiential learning concepts owes much to the fields of philosophy, psychology and education. The contributions from those disciplines are given coherence by their emphasis on the centrality of experience in the process of learning.

It could be argued that the tradition of experiential education began with John Dewey, perhaps one of the most influential educational philosophers of the twentieth century. He believed that all genuine education came about through experience. To summarize his philosophy of education as 'learning by doing' neglects the key role of reflection on experience. According to Dewey,

The belief that all genuine education comes through experience does not mean that all experiences are genuinely or equally educative. Experience and education cannot be directly equated to each other. For some experiences are mis-educative. (Dewey, 1938, p 25.)

For Dewey, learning depended on the *quality* of experience and on the subsequent reflection on that experience. He argued that the process of how a student learned should be equal in importance to the content of education. This is particularly relevant in the education of business graduates, since in business environments

change is exponential and adaptability and flexibility to new situations is essential.

While John Dewey, Kurt Lewin and Jean Piaget have been identified as the foremost intellectual ancestors of experiential learning theory, humanist psychology has been identified as bringing two important dimensions to experiential learning (Kolb, 1984, p 15). The first of these is the concept of adaptation, which requires an integration of cognitive and affective processes. Rogers (1961) emphasized that genuine learning was a holistic process which was most effective when it addressed the needs and wants of the learner. The second contribution from the humanist school to the development of experiential learning theory is the conception of social and emotional development as an ongoing process throughout the life-cycle, with human beings having a natural propensity to learn. In summary, Rogers (1961) characterizes the educator as a facilitator of the learning process rather than a dispenser of content.

Another key contributor to the body of theory that is experiential learning theory has been Donald Schön. Schön's contribution was to explore how we can prepare professionals for the demands of practice in the real world. He notes that 'problems in the real world do not present themselves to practitioners as well-formed structures ... but as messy, indeterminate situations' (Schön, 1987, p 4). He suggests that part of what is required is the knowledge that cannot be described or explained by theories. 'Tacit knowledge' is knowing something but not being able to describe it, and 'non-logical processes' are 'the skilful judgements, decisions, and actions we undertake spontaneously, without being able to state the rules of procedures we follow' (Schön, 1987, p 24). 'Knowing-in-action' is knowledge shown by our actions that we may be unable to explain. For example, you may be able to sing very well but not to explain how you do it. He identified *reflection* as having a key role in making this knowledge explicit to the learner. Reflection on and during action, he suggests, can play a key role in bridging the worlds of the university and practice (Schön, 1987, p 309).

Chapman summarizes the disparate strands that form experiential learning theory when he describes it as:

... an approach which has students actively engaged in exploring questions they find relevant and meaningful, and has them trusting that feeling as well as thinking, can lead to knowledge. Teachers are cast as coaches and are largely removed from their roles as interpreters of reality, purveyors of truth, mediators between students and the world. They are asked to believe that students can draw valid and meaningful conclusions from their own experiences. (Chapman, 1995, p 239.)

Using experiential learning in business education

Experiential learning has been incorporated into business education in three major ways:

- case-based courses;
- work placements; and
- business games and exercises.

Case studies of companies are used in business courses in the same way that school tours are used for young children – they expose students to experiences outside their normal life. The wide range of case studies incorporated in business texts gives us insight into companies, operations and decisions that we would otherwise not have available. This is particularly noticeable in operations management and decision making texts. Case studies range from focused analyses of particular decisions to extensive descriptions of new product development processes (see, for example, Kidder, 1981).

Work placements have long been used in engineering and business programmes to provide students with experience in the areas covered by the classroom lectures. Some programmes incorporate a single work placement, while others alternate between classroom semesters and work semesters (for example, the aerospace engineering programmes in the USA).

Business games and exercises are increasingly spreading from the world of management consulting and training into the university classroom. Experiential techniques have been used by consulting firms for many years to educate managers in new business techniques. In the 1980s, for example, Coopers and Lybrand developed and used a 'JIT game' to allow business managers to experience and learn from a Just-in-Time system. It used a mock business, including purchasing, production control, assembly and quality-control functions. A variety of changes, such as shortages of materials, could be made in the game to encourage decision making. The people who participated in such games typically had a wide range of experience in business: the game simply brought their experiences to bear on understanding a new situation. In contrast, many students in a university programme have limited experience in business. The point of using such exercises in a university programme is therefore to provide the student with the benefits of experience which can be applied to business, even if it is provided in an artificial situation. These simulation-games use student peers instead of real clients and the hope is that the student participants will transfer the skills and knowledge they gain during the simulation into the reality of the business world.¹

The Critical Thinking course

The 'Critical Thinking' course, as mentioned above, combines the expertise of lecturers in experiential education, developmental psychology, social psychology, decision making and management development. It addresses two basic areas in knowledge generation and application: creative thinking and decision making.

'Creativity' has traditionally been seen as an integral part of literary and artistic endeavours. Business, however, has long been a user and beneficiary of creative thought and its realization through innovation. The benefits from creativity and innovation in business are found in product and service development, new manufacturing and delivery techniques, management processes and the use of information systems. Creative and innovative efforts have often been viewed as the purview of the R&D department or as the contribution of a few rare individuals. Current literature and management seminars express the contrary view, arguing that creativity can be developed more broadly among managers and business staff.

The most critical area for the use of creative approaches is the definition and resolution of problems or decisions. Psychological, intellectual and social processes affect decisions made by individuals and groups. Conflict resolution and negotiation techniques are critical for effective group decision making.

The course is taught in four modules:

- (1) the learning process;
- (2) creativity and innovation;
- (3) problem solving and decision making; and
- (4) negotiation and conflict resolution.

Each module is divided into three parts. The initial part outlines the important theories that underlie particular skills and relates those theories to organizational contexts. In the second part, tasks are undertaken that require students to display and develop the targeted skills. The final part reviews the processes and learning involved and transfers the main concepts to the business and organizational world.

Each class has the following format.

Introduction/explanation/'front loading'. Lectures, handouts, case studies, Websites and discussions cover the theories, research and business approaches to the particular topics. The experiential task or activity is introduced. Information about the task itself is discussed and the students are encouraged to identify the goals, the possible problems and alternative outcomes. The purpose of this introductory section is to prepare the students and to enhance their learning from the exercise through comparing the experience they anticipate with their actual experience.

Conduct of the exercise or task. This ranges from a discussion with guest presenters to a team problem-solving challenge involving active engagement. The role of the lecturers is to facilitate and manage the learning activity. The students are encouraged to take responsibility for the activity and their consequent learning.

Review, application and integration. Using team discussion and learning journals, the students are encouraged to apply the principles of reflective thinking (see Schön, 1984) in order to:

- evaluate the activity itself;
- critique the process and the results, thereby identifying how they have learned;
- identify the key lessons learned;
- describe applications of those lessons to business problems and scenarios; and
- integrate the knowledge they have ‘created’ with experience in other parts of the course.

Both individual and team experiential tasks are used to develop creative thinking. In one task, the individuals are given a standard set of materials and asked either to create an artistic piece or solve a problem with the materials. In a second task, teams of students are given standard products and compete to identify as many applications in different areas as possible. These tasks are relevant to business activities in product development, marketing and process development.

Experiential exercises used to build decision making and conflict resolution abilities include mock juries, debates and mock companies facing challenges from new technologies, competition or the business environment.

One of the more unusual exercises is for groups of students to change their viewpoint on life by seeing the world from three different perspectives: a blind student at the institute, a foreign student at the institute and a hawk. In each case, they are asked to identify problems that might arise on a daily basis, discuss the information necessary to understand the problems and suggest a product or service to address them. The point of this exercise is that the ability to see the world from another’s viewpoint is relevant to product and service design, personnel management, marketing and union negotiations.

Students are encouraged to enjoy the tasks (intrinsic motivation) while achieving course goals (extrinsic motivation). The reflective portion of each task encourages application and retention of the relevant knowledge and experience. As described by other educators,

Knowledge retained by students is that knowledge which they find relevant to their daily lives or which can be integrated

with larger systems of knowledge. . . . For educators, this means portraying knowledge as valuable in itself and as a means to important human ends. (www.sasked.gov.sk.ca)

Student evaluations

On completion of the first running of the course, students were given an opportunity to evaluate the methodology and its effectiveness. In these evaluations students commented on:

- the need for an adjustment period to accustom themselves to the experiential methodology;
- their enthusiasm for and belief in group work; and
- their increased confidence in their own ideas.

Students have been ‘socialized’ into a certain way of learning by their previous experience of learning, and a change in the process requires a period of adjustment. This following comment was representative of students who were unsure about the methodology at the outset:

At the start of these class exercises, I often failed to see the point of such exercises. After completing the class exercises I do believe that the work was fundamentally an important aspect of the subject, as it enabled people to explore the creative sides of various ideas, playing around with different angles and thoughts. It also enabled students to participate in the groups and their activities without the feeling that we were even completing assignments.

The fact that many exercises involved working in groups was consistently mentioned in the students’ evaluations. For example, one student noted that

... when you combine all these differing opinions you have a multitude of different and creative innovations for what might have been a difficult obstacle. People tend to learn off each other and get fired up creatively by what others are saying.

Another noted that

... by working in groups you achieve more and with greater ease. People learn off each other and are more enthusiastic about what they are doing and they realize that you can learn as much from each other as you can from the lecturer.

This last comment introduces the third aspect that was commonly referred to in the evaluations: students’ perception of their increased confidence after the course. One student commented, for example,

During this module I came to value my own ideas more and not rely entirely on those I had taken from books or the Internet.

And another student noted,

... it encouraged us to get all our silly ideas out and once said or written down they didn’t seem so silly after all.

The tasks, though, were not all equally effective. In their evaluations some students referred to the fact that some tasks had not engaged them as much as others and that they had not been able to make the connection between the task and the business world. This may explain the differing levels of engagement referred to by one student:

As a group member I found it difficult as some people approached the task in a meaningful and determined way while others approached it in a 'jokey' manner, ie they didn't take it seriously.

However, after an initial period of adjustment the students in general became involved in the tasks, perceived that working in groups was very effective and felt more confident in their own abilities. This engagement was not universal and in individual cases the level of engagement was variable.

Benefits and limitations

Employing an experiential learning approach in the Critical Thinking module has produced a range of benefits, some of which were unanticipated.

A wider range of primary experiences than are available in a traditional lecturing situation resulted in a greater level of engagement from the students and a higher quality of discussion. In some instances the discussion after the learning event or experience seemed to highlight the learning for some of the students:

...it was only after I heard how the other group approached the task that I realized where we had wasted so much time.

This stresses the importance of enhancing the students' ability to reflect on what they have done if they are to draw more meaning from their experiences.

Encouraging students to learn by active engagement built both their capabilities and their confidence. The lecturers were surprised at how often students referred to a sense of increased confidence as a result of their active engagement with the tasks.

The process of experiential learning promoted 'common sense' and the use of experience from outside the classroom. In reviewing the tasks undertaken and comparing approaches, this knowledge became deeper and more refined. Encouraging students to link past experiences with experiences in the classroom has been noted as important in learning:

Learning always relates, in one way or another, to what has gone before. There is never a clean slate on which to begin; unless new ideas and new experience link to previous experience, they exist as abstractions, isolated and without meaning. (Boud *et al.*, 1993, p 8.)

Group problem solving was encouraged and an unexpected consequence of this approach was the extent to which students valued the interpersonal skills they had learned from working together.

The learning climate in the classroom was described as more productive and was characterized by more effective cooperation and communication between lecturers and students.

The module benefited from its incorporation of intrinsic motivation into the learning experience. However, the experiential tasks, by their nature, have some inherent limitations. The degree to which the learning could be truly experiential was limited in the college context. The learning events or games were simulated: they represented an artificial situation without the risks and complexity of real-life business situations. In these exercises information could be provided or created to support certain scenarios, unlike the real-life situation in which the desired information cannot always be obtained accurately because of the pressure of time.

There are a number of aspects in the college context which have to be got right for the experiential learning climate to be effective. Lecturers need to learn and prepare new techniques and material and must be comfortable with their use. New lecturing techniques include the skills of facilitation, informal class control, time management and more specialized assessment and evaluation. It was found that time management was particularly difficult. It is easier to cover more material with traditional methods, so to some extent in this new course 'coverage' is being sacrificed for depth and knowledge of 'how we learn' as well as 'what we learn'. Furthermore, lecturers may face resistance from colleagues who do not appreciate the difficulties and benefits of experiential techniques. Kolb acknowledges that are many sceptics, who would describe experiential education as 'gimmicky and faddish, and more concerned with technique and process than content and substance' (Kolb, 1984, p 3).

While there is increasing use of experiential methodologies at the Galway Mayo Institute of Technology, it is not the dominant philosophy and it seems that the students have been socialized into expecting learning in a particular way. Some students considered the experiential tasks as 'games', and so reduced their commitment and learning potential. In experiential education students have to shoulder more responsibility for their own learning and motivation: the degree of learning is dependent on the degree of engagement. Perhaps it is unreasonable to expect them to change learning modes frequently in one day: it occurs to the authors that the individual learning styles of different students affect the quality of their participation and the consequent learning they achieve.

Further research is planned to explore whether there is any correlation between learning style and the perceived effectiveness of the methodology.

Conclusion

Graduates from business programmes can be encouraged to develop and apply critical thinking to business responsibilities through the use of experiential learning. While experiential learning in the classroom cannot match the depth and extent of later learning in the workplace, it provides a solid base for the development of the critical reflective manager.

Note

¹Experiential exercises relevant to business are included in a number of business books (for example, Michalko, 1991; Clegg and Birch, 1999) and Websites (for example, www.marketplace-simulation.com; www.towson.edu/~absel/).

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