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Innovative Teaching, Teamwork and Generic Skills in the University Environment

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ABSTRACT

Innovative teaching methods are needed that will achieve good learning outcomes on substantive content as well as developing generic skills. Ability to work in teams is always included in short lists of desirable generic skills, whether it be those of employers or universities, along with information literacy, communication and computer skills. I argue that teamwork is not one skill but a compendium of many of the most useful generic skills, so that its use develops and fosters a broad range of key skills. My aims in this paper are to demonstrate one way in which teamwork can be used as a teaching and learning tool, explain the underlying rationale, show how it promotes student autonomy and generic skill development, and canvass some of the obstacles to innovation. First, the paper reviews aspects of learning and teamwork theory, and makes the case for use of teamwork in the higher education context. The educational model is derived from experiential learning theory, and based on the view that skills are most effectively learned when situated in a purposeful context. Secondly, implementation of the model in various law courses over three years at two universities is discussed, and its effectiveness considered. In conclusion, barriers to implementation, strategies to minimise obstacles, lessons learned and future directions are discussed.

KEYWORDS

Generic skills, Teamwork, Experiential learning, Reflective practice, Innovative teaching

INTRODUCTION

Generic skills and teamwork are buzz words around universities these days, and much favoured by government and employers. Innovative teaching methods are needed that will achieve good learning outcomes on substantive content as well as developing generic skills. I have been working with students since the early 1990s employing group work progressing to teamwork in my Law courses to foster both objectives, most recently at Macquarie University with final year
law students. My aims in this paper are to canvass some of the issues facing teachers attempting innovation, and demonstrate one way in which teamwork can be used to achieve the twin objectives above. The paper explains the underlying rationale, and how use of the method can develop or enhance students’ generic skills. Both theoretical and practical perspectives are considered.

Ability to work in teams is always included in short lists of desirable generic skills, whether it be those of employers or universities, along with information literacy, communication and computer skills. Team skills are inherently useful to all graduates, being highly correlated with employability in a diverse range of occupations (thus vocational in the broadest sense), and also because the skills necessary for effective teamwork can be seen as equally necessary for effective individuals. At one level, this article is about the generic skill of teamwork and how to develop and foster it. I argue, however, that teamwork is not one skill but a compendium of many of the most useful generic skills, so that it operates as a vehicle for practising and developing a large range of key skills. Generic skills which are required for successful teamwork include communication skills; planning skills, including setting of aims, objectives, and goals, devising and implementing strategies to achieve these and setting priorities; managing and using conflict; leadership and decision making; meeting skills, including record keeping; ability to value and use differences among team members; evaluating individual and team performance (includes designing criteria to evaluate product and process, and constructive feedback techniques); work flow and process analysis, incorporating reflective practice; personal management skills (time management, development of a win/win attitude), all of which can be summed up, in the education environment, as co-operative or collaborative learning (working) skills.

Individuals who are able to work successfully in teams must possess a reasonable degree of competence in many or at least some of the listed skills. As teams are powerful vehicles for developing the skills needed, skill potential rather than existing skill needs to be considered (Katzenbach, 1993) when planning teamwork. As long as team members between them possess or can acquire quickly most of the required skills, individual deficiencies need not be a cause for concern at the initial stages. One of the theoretical rationales of problem based learning, elements of which are adopted here, is that providing learners with a ‘need to know’ gives the impetus to develop the learning, whether content or process, necessary for the project. This is because the learning occurs in a purposeful context with immediate practical application. The methods described here can be used to lay the foundations of various skills, and/or enhance existing skill levels. Ideally both would be done in a planned sequence of experiences.

My approach to teamwork is based on experiential learning theory, as well as teamwork theory developed largely in the industry context. It is founded upon an interactive and constructivist view of learning, with elements of problem based learning. In this context, the ‘problem’ is how to work successfully in teams to achieve other content tasks. Since the target group is young adults at university level, an andragogical (adult learning) perspective is adopted, emphasising self directedness or autonomy as much as possible (Burns, 1995). The combination of explicitly taught theory with practice is important, as is reflection and self knowledge, since “skills do not develop merely by talking about them or recognizing them, but by practising and incorporating them into one’s behavioural repertoire” (Jacques, 1984). Emphasis upon integration of substantive (subject content) and skills based material, assessment which tests both product and process, some specific training in required skills, and a sustained, managed exposure to working in teams are all central.
EXPERIENTIAL LEARNING, REFLECTIVE PRACTICE AND TEAMWORK

The process of experiential learning (Kolb, 1984) “occurs in a cycle of experience (gathering information about events), reflective observation (bringing events to a conscious level), abstract conceptualisation (making sense of events), and active experimentation (putting learning into practice)” (Ballantyne and Packer, 1995). Put another way, the four stages in the process link together to form the DATA model of Describe /Analyse /Theorise /Act (Peters, 1991). In a teamwork context, the learners experience working in teams, engage in structured reflection at frequent intervals about what works or does not work, attempt to theorise (explain their experience, based in part on knowledge about teams gained from theoretical readings), and modify practice accordingly. Experiential learning theory takes into account extra cognitive factors such as senses, emotions, physical conditions, spiritual and social dimensions, in recognition of the wholistic nature of learning. Learning, therefore, is not a constant, experienced in the same way by all learners, but rather, a dynamic interaction between the whole learner (including conceptions of learning, values, beliefs, emotional responses, pre-existing knowledge, skills, learning style, motivation, attitudes, prejudices, etc), the learning environment, subject matter, learning process and a host of other factors.

Training in reflective practice (Schon, 1983, 1987; Mezirow, 1991; Sparkes-Langer, 1990) enables learners to convert their individual experiences into more generalised theory. Reflection is the process which enables the learner to transform experience into knowledge, that is, to construct meaning and understanding from an experience, and maximise the benefits obtained. Reflection makes explicit the connection between theory and practice, and subjects to conscious scrutiny many things which to the learner may feel ‘intuitive’, thus enabling ideas and practices to be evaluated, and informed choices to be made.

For example, a team might have experienced the frustration of devoting large amounts of time to team meetings with little to show for it. On reflection, that is, subjecting team processes to conscious scrutiny through discussion, members might conclude that the problem stemmed from poor time management skills (failure to set an agenda, no-one taking the role of timekeeper, failure to set a realistic finishing time), poor communication (failure to communicate expectations about punctuality or compliance with deadlines, confusion about what was to be discussed or acted upon, or about allocation of responsibilities), poor planning (failure to plan work in sequence, failure to co-ordinate interdependent sections), lack of leadership, or other deficiencies. Observing other teams at work can be very beneficial here, giving students concrete material for comparison. As part of my work with teams I have developed two volumes of readings on generic skills and teamwork, which give students the resources, in conjunction with help from me and class discussion of theory, to take corrective action once they have identified a problem.

BENEFITS OF TEAMWORK

The benefits which may be expected from successful teamwork are greater educational autonomy (students are given more control, choice and decision making power), generic skill development or enhancement, greater opportunities to engage in active and interactive learning of substantive content, understanding of co-operative working and learning processes from both a theoretical and personal perspective and increased employability. Peer tutoring, (Goodlad,1989) that is, student sharing of knowledge and skills whether formally or informally, extends the range of teaching resources and enables one on one or very small group (team) learning in a way which is not possible in the normal classroom context. Benefits in the affective domain also result, as
teamwork introduced at the first year level can play an important role in developing and cementing social structures and support networks, reducing drop out rates, and informally functioning as a mentoring and monitoring scheme.

WHAT ARE TEAMS?

There is considerable confusion in the industry literature, and in everyday speech, over terminology. Groups, teams, work groups, project groups, task forces, committees, self-directed work teams, are commonly encountered terms. Hackman (1990) argues that effective team performance has more to do with the creation of enabling conditions, that is, conditions which support effective performance, than it has to do with managing specifics of group behaviour. The importance of this is that there is no one way for teams to achieve success, although there are certain shared characteristics. It is necessary for each team to develop its own methodology and modus operandi (experiential learning), working within clear guidelines and structures. For this reason the most useful approach to definition is to consider the presence or absence of various qualities.

For university purposes, an effective learning team may be defined as an intact and cohesive social system, formed for the purpose of ‘deliberate’ learning, (Tough, 1979; Boud et al, 1985) within an institutional context, and possessing specific attributes. A review of the team literature suggests that these attributes should include clearly defined membership; small number of members; shared or rotating leadership; common commitment; individual and mutual accountability; interdependence; specific and common team purpose or mission, clearly articulated and developed by the team itself; definite task(s) to perform; collective work products; delineated criteria for success; clear and open communication, open ended discussion, active problem solving; agreed strategies, rules and procedures; direct and appropriate performance goals, and clear deadlines; suitable team based reward or assessment scheme; constructive conflict; differentiated member roles; appropriate expertise, training, and complementary skills; adequate resources and support; and balanced planned composition. (Katzenbach & Smith, 1993; Taguiri, 1995; Hackman, 1990; Jacques, 1991).

Thus it is clear that seminar groups, the basis of the 'small group' teaching method, are not teams, even when working as sub-groups in the form of dyads, triads, buzz groups, syndicates, or role play groups. The essence of the distinction lies in the longer term, more committed, focused and cohesive nature of the team.

GENERIC SKILLS AND TRAINING

There have been many attempts to identify the range of skills required by Law graduates (for example Keyzer, 1994; Twining, 1986; Le Brun and Johnstone, 1994). Many skills which would be regarded as generic in other contexts are usually classified as discipline specific for Law, such as capacity for analytical and critical thought, construction of argument, problem solving, evaluating evidence, advocacy and negotiation. Skills which are generic may be taught in discipline specific ways, for example, the discipline specific skill of mooting (mock legal trial) is also an aspect of broader skills such as oral communication and construction of argument. Required skills across disciplines can be grouped as: job skills/ functional expertise; team and interaction skills (personal/ interpersonal); problem solving and decision making skills. The first relates to domain-specific knowledge and skills, the others are generic. Training integrated into
classroom activities is ideal. Role plays, modelling, de-briefing and reporting on team meetings, setting of specific goals for following meetings, discussing appropriate criteria for evaluating success, practising particular skills under observation and receiving feedback from the whole class, pairing teams for specific tasks, are all useful. However, there are serious time constraints, especially in compulsory professional courses where substantive content cannot be reduced. My students were expected to read the theoretical material supplied on teamwork each week, and acquire the skills largely through out-of-class team practice, observation of and by other teams, reflection and completion of set process tasks.

IMPLEMENTATION OF THE TEAMWORK METHOD

In implementing teamwork initially I worked over two years with groups of seventy to eighty students, the majority in their third year of Law studying a compulsory subject, organised for the 14 week semester into small teams. Teamwork was compulsory, and each team member received the same mark for assignments prepared jointly. Assessment related both to substantive (legal) and process (teamwork) tasks, and was a combination of team and individual work. Normal classes were held for just over half of the timetabled hours per week, and students met in teams for an additional minimum of two hours per week. All meetings were minuted and many were conducted under formal and informal observation, either by teaching staff and/or other student teams. Readings were set each week for law and at greater intervals for team theory. Various specific team tasks were set. In the first year an introductory, one-day workshop was held which included outdoor experience and indoor exercises and activities related to teamwork. In my later work at Macquarie University I worked with twenty three final year students in an elective subject, and implemented a modified form of the model. The major changes were a reduction in workload and expectations on my part, and an attempt to blend the teamwork more fully with established methods of teaching (more seminar work) to make it less confronting for students. By this time I had developed two volumes of materials on various generic skills to assist with process problems.

CREATING LEARNING TEAMS: COMPOSITION AND SIZE

Teams can be selected in various ways, for example, randomly from a class list; according to convenience factors such as geography and timetabling; self selected on the basis of friendship and personality factors; academic criteria; and so on. There seems to be general agreement in the literature that heterogenous teams which contain a balance of skills, perspectives, and styles, work best. A number of diagnostic tools is available to assist in obtaining such a balance (for example in Kolb, 1984; Honey and Mumford, 1986, 1989; Margerison and McCann, 1991; Davis, 1992). All of the above are suitable for use as part of professional development and training for staff engaged in implementing teamwork, as well as for students. I chose to allow students to determine the composition of their own teams, chiefly because a very substantial component of the final grade depended on team (joint) assignments. Self selection had obvious advantages in terms of both logistics and equity. I was unconvinced by typologies of the kind referred to above, viewing them rather as informative for purposes of self-knowledge than as rigid classifications. As a safeguard, students in the first trial were given the option to disband and reform teams after the first four weeks, which none chose to do.

There is no one correct size, but the literature suggests that more than two and less than ten members is optimum. (Katzenbach, 1993; McNerney, 1994; Tagiuri, 1995; Abbassi, 1994; Davis,
1992; Eales-White, 1995) In deciding upon a suitable number, the nature and duration of the interaction, nature of task, and logistical factors such as meeting spaces and times need to be considered. Total student numbers and ratio to supervising staff is also important. My teams ranged in size from three to six, all suitable sizes, although larger teams experienced more logistical difficulties and frustration. For this reason I moved to teams of 3 - 4 in the second year, and this remained the most common number. Size appeared unrelated to quality of outcome, as additional logistical problems experienced by larger teams tended to offset the benefits of extra people sharing the workload.

**Evaluation**

Evaluation was necessarily qualitative. Initially the trials were evaluated by means of detailed and lengthy student journals, which proved to be immensely valuable for the insights offered, but very time consuming and difficult to mark. This was reduced in later work to a reflective assignment of a controlled length. Students were given a lot of freedom over matters like format, and submitted assignments such as videos, audio tapes, role plays and dramatisations, even stories, poems and drawings in addition to more conventional written work. Other methods included copious informal discussions with students as well as formal team mentoring and consultation; formal and informal staff and student observation of team meetings followed by written reports with the larger groups; and personal comparison of the quality of written and oral presentations for assessment with prior years during which standard teaching methods were employed. In working with the smaller group of twenty three students at Macquarie, students were in closer contact with me and with the whole class group so that methods such as formal observation were not needed. No quantitative evaluation was attempted.

**Insights**

Whether students had known their team mates or not prior to working together appeared to bear no correlation to the team’s success in terms of product. Students reported in both cases that they felt high levels of obligation and responsibility to the team, either because team members were friends or because they were previously unknown. This obligation is of course a double edged sword, in that it produces results but at a cost. Where students are sharing readings and peer tutoring members within the team, the quality of output (notes, depth and volume of material covered) is much better, but the strain of achieving this on time can lead to problems and grievances, especially where personal management skills vary significantly within the team. In terms of process, it should be noted that teams of friends seemed more prone to emotional strain (which could have resulted from more being taken for granted, that is, communication failures), as did teams in which one person felt the odd one out socially or intellectually. Whilst the sample was by no means large enough to make any confident generalisations about gender effects, it did seem that teams comprised of one gender only were more at risk, not necessarily in the same ways. All-female teams sometimes appeared to be operating at heightened emotional levels, whereas all-male teams seemed more at risk of failing to commit sufficiently to the team, including a reluctance to enforce agreed standards against dilatory friends. The problem of freeloading often experienced in group work can be largely avoided by designing the assessment scheme with plenty of checks and balances, particularly team observations, learning journals, and regular progress reports. Staff vigilance, constant monitoring and careful record keeping are extremely important, and timely action where necessary. In one case I removed a student forcibly
from a team because the team was unable to resolve problems of persistent absence and non-contribution.

CONCLUSION: INNOVATION, SOME PROBLEMS AND SOLUTIONS

Any innovation is likely to meet resistance, especially where it challenges basic perceptions of what is appropriate, or in other words, shakes people out of their comfort zones. Resistance to change can be intentional or unintentional, overt or covert (Burns, 1995). Attempts to promote greater student autonomy may be perceived as threatening. Requiring students to work in teams and learn co-operatively challenges many students’ conception of staff/student roles. Comments on evaluation forms such as “we pay you to teach us” sum up this viewpoint. Asking students to focus on generic skills, especially to read theoretical material about skills, challenges the deeply engrained perception that the only real objective is absorption of discipline content. Personal, structural, cultural (in the sense of organizational culture), political, and resource factors all impact on innovation. Opportunities for and constraints on change depend on a combination of objective conditions (physical, material) and subjective conditions (expectations, beliefs, attitudes) (Kemmis and McTaggart, 1988). Managing the subjective factors provided the biggest challenge in implementing teamwork, especially as emotional dimensions not usually associated with conventional teaching methods can surface. Students within any given group are likely to be at different developmental levels in terms of their views of themselves and their learning, ranging across the spectrum of dependence/independence. Whilst this is so for any form of education, it is more prominent in new or unfamiliar contexts.

By definition there are risks associated with any innovation. Learning to devolve control to students is difficult, requiring high levels of trust. Competitive, individualistic behaviour, imbalances caused by personality, ability, cultural, gender, philosophical or other factors, confusion and process losses, are all risks. Adequate attention to practical matters is important, such as availability of meeting rooms. Strong leadership from academic staff, based on a deep commitment and clear vision, is mandatory. Strategies for overcoming barriers include introduction of innovative methods in the first year of university, before too rigid conceptions of university learning and staff/student roles have formed, testing for conceptions at the beginning of a course by means of a questionnaire and explicitly challenging these conceptions in guided class discussion, theoretical readings in the area, and others.

Useful questions when considering innovation include: does the change improve student learning outcomes? How should this be defined and measured? Can it be maintained over time? Can it become self perpetuating? Is it cost effective? (staff resources etc) What is its likely effect on student and staff morale and workload? Are there any external constraints (for example, professional practice requirements)? The teamwork model discussed offers a learning experience which aims to progress all students some way along the dependence/independence/interdependence continuum, regardless of individual starting points, and promote the acquisition of generic skills including team skills. I defined success as achieving changes in students’ view of learning, learning law, and themselves as learners, by exposing them to a teamwork environment, and a set of ideas, skills and attitudes which could help to bring this about. One compelling criterion was that quality legal outcomes had to be achieved by the students.

Although it is extremely difficult to test for skill increases in any quantitative way, qualitative measures suggested improvement. As the trials were each implemented in the context of a one off, one semester course, with no structured or sequenced follow on, gains necessarily were
limited. In addition, students involved in the trials were all later year students, with more established expectations as to teacher and student roles, thus more resistance to change. To gain maximum returns in any endeavour which aims to promote skills, including generic skills, there needs to be a co-ordinated and sequenced programme implemented across the whole course of study, and an institutional climate supportive of innovation and the specific objectives of the programme being implemented.

REFERENCES


