

Team role theory in higher education

In the first of three articles, **Gillian Smith** and **Pat Yates** set the scene for research they have undertaken into increasing students' employability skills

This article contextualises the background and secondary research we have undertaken at University College Birmingham to investigate whether knowledge of team role theory could be used as a means to support higher education students in academic group work and the development of soft skills required by industry.

Macquarie University (2008) espouses that the design and management of group work affects the development of employability skills. Hence a connection exists between employer engagement, group work in HE institutions and successful development of employability skills, often referred to as transferable skills, which fall under the umbrella of the social education system.

TS are high on the government agenda because it is recognised that they contribute to raising performance, "particularly those most relevant to future employability" (Department for Education and Employment 1998). However, the feedback we receive from students is that, generally, they have negative perceptions of working with others.

So it was from this starting point that we decided to undertake research to see if students' negative perceptions could be improved upon as a result of understanding team role theory. The pilot study indicated that knowledge of self and others *does* improve group performance.

Introduction

One of the main recommendations of the *Leitch Review of Skills* (2006) is to "increase adult skills across all levels. Progress towards world class is best measured by the number of people increasing skills attainment". It also differentiates between basic, generic and specific skills: "Basic skills, such as literacy and numeracy, and generic skills, such as team working and communication, are applicable in

most jobs. Specific skills tend to be less transferable between occupations."

More recently, the *Sector Skills Assessment Summary* (2009) reported that, in 2007, some 154,800 workplaces within the UK existed within the asset skills sector, comprising mainly of facilities management, cleaning, property and housing workplaces. It acknowledged that, although each sector has different needs, all sectors require the development of generic skills to varying degrees (customer service, communication, team working, management and leadership). It also comments that this development should be evident in terms of qualification and assessment.

Research undertaken by authors such as Drake *et al* (2009), Ehiyazaryan and Barraclough (2009), Fallows and Steven (2000), Petrova and Ujma (2006), CSHE (2002), Macquarie University (2008) and Rossin and Hyland (2003) also espouse that the design and management of the group work affects the development of TS. Hence, a connection exists between employer engagement, group work in HE institutions and successful development of TS. Raising skill attainment is in accordance with the recommendations of the *Leitch* report.

It is the development of generic skills that this research project seeks to improve to meet the needs of demand-led HE, which is in agreement with *Leitch*, which also suggests that the "principles of



The pilot study indicated that knowledge of self and others does improve group performance

Train to Gain – delivering skills flexibly according to employer and individual demand – should apply to higher education too”. Furthermore, research undertaken by People1st (2007), in response to the National Skills Strategy, acknowledges that employers want “qualifications that provide people entering management positions for the first time with a broad range of skills and knowledge”.

Accordingly, TS are embedded within the University College Birmingham curriculum and HE students are required to undertake group work. Indeed, the focus at Level 5 aims to nurture and develop the adult learning environment. This means encouraging “mutual cooperation through the giving and receiving of information/ideas and modifying responses where appropriate” (UCB 2009).

Therefore the TS of *communication, working with others, problem solving and improving own learning and performance* are the key instruments for this research. Swinnock (2009) acknowledges that “team/group work is essential in terms of developing students who are able to work effectively in teams and are therefore better placed to work effectively in a future work environment”. Moon (2009) also recognises the importance of group work in HE in terms of skill development and that students and tutors should be equipped with tools that will help students in group work activities. He observes that “group work is central to many areas of academic and personal development work, from joint work on critique and problem-solving... to managing the challenges to the self in the course of learning”.

Research carried out by Briggs (2000) in post-16 education refers to the government’s Green Paper *The Learning Age* (DFEE 1998), and the Tomlinson report of 1996 also comments on the need for those involved in teaching to provide an environment conducive to lifelong learning, widening participation and inclusive learning.

Briggs also maintains that the use of self-assessment questionnaires on learning styles adapted from theories including Kolb (1985), Belbin (1981), Honey and Mumford (1986) and Riding (1981) can support individuals during group-work activities. Research by Cools *et al* (2009) on the metacognitive opportunities of learning style research and the difficulties in formulating groups based on learning style profiling says Belbin’s work on group size and roles (1993) should also be considered.

It appears that, for more than a decade, the government has promoted skill development that meets the needs of organisations. In response, academic institutions have implemented a range of strategies to encourage metacognition.

While we agree that knowledge of learning styles promotes self-awareness and contributes



to group work activities, individuals also need to have knowledge of team role theory to promote the development of TS. Feedback received from students is that they have negative perceptions of *working with others*; this view is supported by James *et al* (2002 – cited in Devlin 2002): “Students are sometimes not clear about the learning benefits of group work... may perceive little value for their own learning in group activities.”

It was from this starting point that we undertook research to see if the negative perceptions could be improved upon as a result of understanding team role theory. Therefore we sought to investigate whether *knowledge* of team role theory could be used as a means to support HE students in academic group work. The study uses Belbin’s Team Role Self Perception Inventory (2007) as an instrument to improve knowledge of team role theory.

Currently, three modules integrating team role theory and completion of the BTRSPI are studied



at UCB by Level 5 foundation degree students. As they are designed to raise students' awareness of their potential and/or limitations when working in groups, the primary research draws upon these cohorts of students. The findings are used to determine whether the performance of students working in groups can be improved upon, if they have studied team role theory.

Justification of BTRSPI

The BTRSPI was selected as an appropriate research tool because Belbin's team role theory has been drawn upon within several post-16 and HE research studies – Rushmer (1996), Fisher *et al* (1996), Partington (1999), Pritchard and Stanton (1999), Briggs (2000), Sansom and Shore (2008), Henny van de Water *et al* (2008), Cools *et al* (2009), Pollock (2009) and Manning (2008 and 2009) – indicating that it could be an appropriate tool within this research project.

Furthermore, Henny van de Water *et al* (2008) acknowledge that Belbin (1981), Margerison and McCann (1990), Parker (1990) and Davis *et al* (1992) have also proposed “the notion of team roles”, but suggest that Belbin's team role framework is probably one of the most renowned and is currently widely used in a great variety of practical team and management development purposes.

Pritchard and Stanton (1999) assert that “Belbin's ideas have been widely used by many commercial organisations and management consultancies, in both training and actual team building and development” and their research findings “offer some support for Belbin's ‘role balance’ hypothesis theory... teams balanced with respect to team-role composition are more effective than unbalanced teams”.

Partington and Harris (1999) also reveal that the BTRSPI is used as a management development tool: “The SPI is widely used as a diagnostic tool for assessing individual team role preference...”; they also assert that “an awareness of team roles helps teams perform better”.

Research carried out by Senior (1997) gives “some support to the connection Belbin makes between team role balance and team performance” and, more recently, Blenkinsop and Maddison (2007) used Senior's team performance survey and the BTRSPI, concurring that an imbalance in team roles could have a negative impact on performance.

However, criticisms also exist around the validity of BTRSPI: Partington and Harris (1999) cite a range of authors who criticise “the psychometric properties of the BTRSPI and the lack of theoretical underpinning”. These include Furnham *et al* (1993), Dulewicz (1995), Fisher *et al* (1996) and Broucek and Randall (1999).

Furthermore, Manning *et al* (2006 and 2009) cite that Hogg (1990) and Furnham (2005) also raise the same concerns.

Fisher *et al* (1996) say that, in response, Belbin “protests that the BTRSPI was never intended to be a formal psychometric test”. Indeed, Pollock (2009) observes that “the self-perception aspect of Belbin's questionnaire is more valuable and meaningful than psychometrically-sound instruments which ultimately require the analysis of self”.

So, while it appears that the main criticism is the validity of BTRSPI, this research seeks to determine whether knowledge of team role theory can help to raise the performance of HE students working in groups and not the validity of the BTRSPI. For that reason, we consider that the criticisms of the BTRSPI will not invalidate the aim of this research project.





Pilot study and preliminary findings

To facilitate the research, a pilot study was carried out, comprising 22 students who had knowledge of team role theory; as part of the process they completed a BTRSPI.

Based upon the results of the completed BTRSPI, we investigated whether it was possible to construct groups based upon 'Belbin's perfect team'. However, the BTRSPI profiles revealed that a 'perfect team' was not found in this cohort; this was further compounded by student migration into other programmes, deferment and withdrawal from study. This preliminary finding created a paradigm shift away from the construction of 'perfect teams.'

Interestingly, however, we observed an improvement in the performance of the pilot cohort that suggested knowledge of self and others may be an influencing factor. Conversely, the BTRSPI became the vehicle for imparting 'knowledge' of team role theory rather than as a construct for perfect teams. Therefore, this tacit knowledge will provide the focus for research to determine whether knowledge of team role theory can help to raise the performance of HE students working in groups.

To provide tangible evidence, a questionnaire has been designed to determine to what extent the students have developed, or not developed, TS. It contains 21 questions designed under the sub headings of four transferable skills: *communication, working with others, problem solving, improve own learning and performance*. The questions were designed to challenge responses both from an individual and a team development perspective in terms of their individual development and team

development. Students were able to give responses by circling one of five different categories (*very poor, poor, average, good, very good*). The design of the questionnaire drew upon a team effectiveness audit one designed by Bateman *et al* (2002), who recognise that they "adopted an action learning process model (Revans 1980)". Similar to Bateman *et al*, the questionnaire employs a Likert (five-point) scale in order to assess individual team members' level of agreement or disagreement with a series of statements.

Therefore, a longitudinal study is in process to measure changes over two academic years. The BTRSPI will be issued to students with knowledge of team role theory and a questionnaire used to evaluate the development of soft skills. To examine to what extent levels of performance have improved, the questionnaire will also be issued to students who have not studied team role theory. To complete triangulation, a focus group will also be carried out.

Future research

The second article will present a review of literature in relation to group work and draw upon the findings of completed questionnaires.

To ascertain if students exposed to group work throughout their course have developed the required soft skills for industry, the third article will provide a review of the research project, drawing upon the findings of a focus group comprising final-year degree students who have arguably travelled through a "passage from detached observer to involved performer" (Benner (1986) cited in Dickinson (2000)). **TJ**

Gillian Smith and Pat Yates

are lecturers at University College Birmingham. They can be contacted on +44 (0)121 604 1000 and at p.yates@ucb.ac.uk and g.smith@ucb.ac.uk