

# 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

**T**his 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

# Team role theory in higher education

In the second of three articles, **Gillian Smith** and **Pat Yates** present the results of their research into increasing students' employability skills

**T**his article builds upon our previous research “to investigate whether knowledge of team role theory could be used as a means to support HE students in academic group work and the development of soft skills required by industry”. Preliminary findings created a paradigm shift that moved the research away from the construction of Belbin’s “perfect team” where the Belbin<sup>1</sup> Team Role Self-Perception Inventory became the vehicle for imparting knowledge of TRT.

To evaluate soft-skill development, sometimes referred to as transferable skills, we have reviewed the literature, drawing upon case studies of group work within educational settings, and presented the primary research findings. We have also taken into account the needs of the various stakeholders involved within the development of soft skills, which include students, employers, academics, educational practitioners and governing bodies.

A key finding of our research is that group work *does* enhance the development of the softer transferable skills. This was not surprising as our experience and observation of working with

students over time indicated that this would be the case. However, a significant finding of this study is that the development of softer TS is magnified when students have prior knowledge of TRT.

## CASE STUDIES

### Skills for Industry

Edmond<sup>2</sup>, referring to foundation degrees, cites Keep’s 2004 analysis, noting a “profound shift in the nature of the skill sets that many employers are seeking...” arguing that a shift from “manual skills... [And] hard technical knowledge, towards a growing prioritisation of ‘softer’ social skills and personal attributes...” is in line with employers’ requirements of HE.

Semeijin *et al* focused upon *narrow field studies* and *generic field studies* when considering employability<sup>3</sup>. Where students with ‘wider’ study remits embrace generic skills such as teamwork, employability chances were improved; however this must be set in the context of the labour market. Interestingly, a tight labour market favours generic skill sets such as transferability and multi-skill sets, enhancing capability across a range of career paths.

The East of England Development Agency further supports this research, noting that “employers are increasingly seeking evidence of skills and competencies rather than just qualifications”<sup>4</sup>. The current instability of the economic environment, discussed by Moreau and Leatherwood<sup>5</sup>, is in accord with Fallows and Steven<sup>6</sup>, who assert that students need “to be flexible and prepared for a lifetime of change...”, concurring with Keep’s belief of a *shift*, “with employers stressing the priority they give to personal transferable skills”.

---

*A key finding of our research is that group work does enhance the development of the softer transferable skills*



In contrast, a study by Jones-Evans *et al*<sup>7</sup> “acknowledges the need for the development of **both** *hard* and *soft* skills simultaneously throughout the period of education and beyond” and reflects the delivery in most higher education establishments today.

The development of soft skills arguably poses a challenge for HE, with Petrova and Ujma<sup>8</sup> highlighting the lack of appreciation that students have of the soft skills that make them employable. Although, according to Ehiyazaryan and Barraclough<sup>9</sup>, when students are exposed to challenges it enables them to develop the soft skills needed for employment. A suggested causal effect is that “too often, ‘passivity’ still dominates learning... therefore limiting the development of highly valued transferability skills”<sup>10</sup>. The policy and research report *Key Competencies: Some International Comparisons* notes that a “key driver [for soft skills] has been business industry needs”<sup>11</sup>.

A synergy between educational environments and industry requirements, acknowledged by previous and current government policy, is therefore essential. Indeed, Sutherland<sup>12</sup> notes the changing ethos and expansion, endorsed by Robbins through to Dearing, suggesting that “higher education was to be seen as a form of

human capital investment, equipping individuals for more productive participation in the [service] labour market...” Nonetheless, skills shortages are still a key issue today.

### **Learning**

A case study by Siebert *et al*<sup>13</sup> found that those students returning to education after exposure to industry actually preferred group work as it enhanced their learning. The students valued *learning as participation* as opposed to *learning as acquisition*. However, it could be argued that this cohort already had (soft) ‘employability’ skills as they were studying part-time while working in industry. Mutch<sup>14</sup> refers to the maturity of the learner, while extolling the benefits of ‘action learning’ and their ability to self-discipline.

In support of action learning, Rossin and Hyland’s research<sup>15</sup> concluded that group-based activities are essential for personal and social development and the enhancement of ‘deeper learning’. Dickinson<sup>16</sup> takes this a stage further, suggesting a journey of discovery, similar to Kolb’s *experiential learning*, where a student travels through a “passage from detached observer to involved performer...” According to Dickinson, skills development has a formula in which: →



training/support, plus relevant experience, plus time to reflect, plus feedback, over sustained motivation, will be equal to development.

Signifying for the acquisition of learning, students travel through a rite of passage over a period of time that, when completed, will give the necessary skill sets to perform effectively in industry. Discussing skill development, Bell<sup>17</sup> sees soft skills as essential, arguing that “if graduates are expected to change careers several times over during their working life, these generic features [skills] become even more important”. Disturbingly, The UK Commission for Employment and Skills<sup>18</sup> found “too many young people in the UK fail to gain the basic employability and lower-level skills needed to progress in work”.

### The role of self-reflection in student development

While Sancho-Thomas<sup>19</sup> indicates that, within the HE sector, group work is used extensively, he also argues that, to develop students’ ability, they will need to understand self. Self-reflection is a critical life skill within both education and the workplace; in an educational setting this is encouraged through TS, particularly the TS of *improve your own learning and performance*, and in a workplace setting through self-appraisal. Additionally, Petrova and Ujma agree that TS enhance employment capabilities, arguing that self-awareness is critical.

Working with post-graduate students, Greenan *et al* developed a learning strategy encompassing five phases, requiring students to carry out ongoing peer- and self-assessment. However, their results show that students found the self-assessment aspect difficult, feeling that this particular responsibility lay outside of their remit and preferring tutors to take responsibility for assessment.

While the findings show reluctance to self-assess, it is interesting to note that an industry requirement is to have employees with the skills that enable self-reflection, thus suggesting students need to be challenged and taken out of their comfort zones in order to further develop TS.

Referring back to Jones-Evans *et al*’s research on learning sets, in particular soft skills, students developed an understanding of their own skills, providing them with the capability to ‘self-select’ into teams based upon complementary skills. The students’ ability to self-select into teams (groups) appears to indicate a level of self-understanding, placing them in a much stronger position to perform collaboratively.

### Supporting the development of TS

A number of case studies would appear to support the assertion that students need to make a transition from *passive* to *active* learners, whereby group work is the vehicle for this development of soft skills. However, arguably, development will not take place unless facilitation and guidance are given, systems are in place to support the process and an opportunity exists to strengthen the experience through reflection.

Mutch’s research found that students needed to be “properly prepared for the roles which they may play...” Drummond<sup>20</sup> concurs, arguing that “opportunities for effective skill development require support [and] guidance which encourages... constructive reflection... [and] strategies for improvement...” Where

appropriate support for group work is provided, “students develop the attributes and skills relevant to teamwork in the real world...”<sup>21</sup>

### Time frames

Arguably, the plethora of group work in HE is driven by the desire to engage students in their learning while also meeting the needs of industry. A key finding from our review of the case studies has been the time frames involved. Case studies by Kotey and Mutch involved a three-month period, considered to be a reasonable time frame. Similarly, over a nine-month period, Jones-Evans *et al* believe that learning sets (groups) gained skills and knowledge about self and others that place the student in a much stronger position to perform cohesively.

Ehiyazaryan and Barraclough’s Venture Matrix model facilitates teamwork through the delivery of a business model and creates interdependence of teams over the duration of their three-year course, reinforcing the notion that deeper knowledge of self and others facilitates group work. Again, the importance of self-reflection is argued, along with the need to engage students in active learning; time frames would appear to be a critical factor.

In contrast to the case studies discussed above, University College Birmingham students undertake group work in much shorter time frames, of between six and seven weeks. Arguably, this reflects the fast pace of the workplace today.

### Findings of primary research

This longitudinal study took place over two years and collected data comprising 116 completed questionnaires from Level 5 undergraduate students. These students participated in a group assignment and had previously studied team role theory, including completing a BTRSPI. This cohort will be referred to as Group A.

Additionally, a questionnaire was issued to 191 Level 5 undergraduate students who had participated in a group assignment, but had *not* previously studied TRT or completed BTRSPIs. This cohort will be referred to as Group B.

Both groups answered questions 1-19 but only Group A were able to answer question 20 (*Do you feel that knowledge/understanding of the Belbin team roles improved the performance of the group?*).

The 116 questionnaires issued to Group A gave a return rate of 73 per cent. The 191 questionnaires issued to Group B gave a return rate of 62 per cent. Statistical analysis in the form of a t-test was then applied to questions 1-19 to determine whether there is a degree of

## Group A indicates a higher level of transferable skill development than Group B

significance between the independent data sets of Group A and Group B. The results revealed with 95 per cent confidence a **significant** difference between the two groups.

As we identified in our first article last month, our students were able to give responses by circling one of five different categories (*very poor, poor, average, good, very good*). To find out how many students have improved their perception of working with others (ultimately raising their performance through the development of transferable skills), we had to analyse how many found the experience *good to very good*. Consequently, *average, poor* and *very poor* responses were purposefully discounted to set a high benchmark and to ascertain improvement of TS.

The percentage responses to questions 1-19, to indicate TS development, from Group A ranged between 60 and 78 per cent, while the percentage responses from Group B ranged between 39 and 63 per cent. Figure 1 presents further analysis of questions 1-19, combining the responses into the four TS components.

% responses to indicate transferable skill development  
Q1-19 (Good/very good responses only)

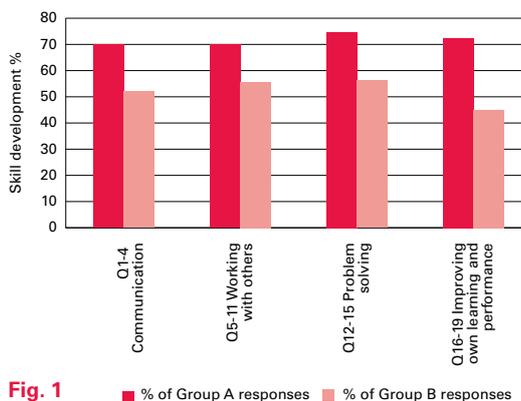


Fig. 1

The responses to questions 1-19 from both groups reveal a consistent level (Group A 70 to 74 per cent and Group B 45 to 55 per cent). However, in all categories, Group A indicates a higher level of transferable skill development than Group B.



## In this case, study knowledge of TRT has contributed to improved performance of HE students working in groups

As stated earlier, an additional question was included in the questionnaire issued to Group A to try to ascertain if the students felt that having knowledge of the Belbin TRT helped improve the performance of the group. In response to this question, 80 per cent of students felt knowledge of TRT had improved their performance.

To support this quantitative data, qualitative responses were also requested and 41 per cent of students gave reasons for the qualitative response. The rationale for separation of the responses under the headings of the four TS was to determine whether it was possible to make a clear link between the transferable skill and the response of the student. All responses indicated this to be the case (see Figure 2 below).

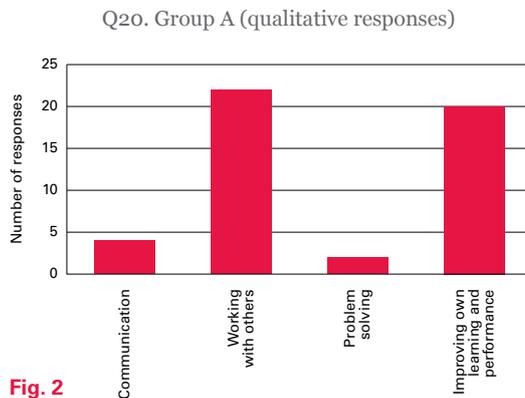


Fig. 2

Both groups were given a question referring directly to their individual skill development. Figure 3, right, shows that, in all areas, Group A (44 to 85 per cent) indicates a higher level of transferable skill development than Group B (24 to 71 per cent).

The “others” category has not been counted as the students did not identify what “other” skill they felt they had developed. “Communication” is the highest-ranked skill development by both groups. The biggest difference in terms of skill development responses between groups A and B is evident within the “confidence” category: Group A



is significantly 32 per cent higher than Group B. The research evidence shows that this is attributed to giving them a dialogue to play to their strengths and develop their weaknesses. This is further supported by the significantly improved levels of Group A in respect of “trust” (25 per cent higher than Group B) and “interpersonal skills” (28 per cent higher than Group B).

### Skill Development

Q21. What skills do you feel you have developed as a result of working in a team?

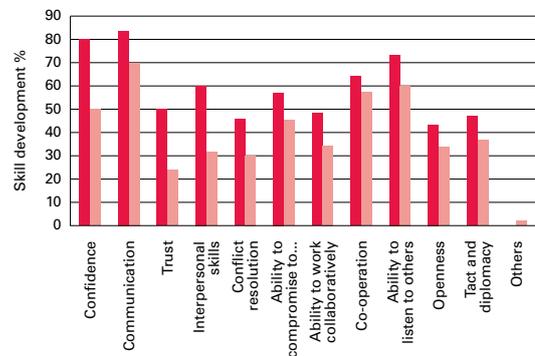


Fig. 3 ■ % of Group A responses ■ % of Group B responses

### Conclusion

The fact that students may learn from group activities is not in itself questioned. Inferences from

**Gillian Smith and Pat Yates**

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



the case studies suggest that, to develop cohesive group work, a longer-term relationship is advantageous.

However, in contrast, this study argues, based upon the improved skill development of Group A, that knowledge of TRT provides an appropriate toolkit to develop TS (*communication, working with others, problem-solving, improve own learning and performance*) and enables students to be fast-tracked through the various stages of group work development.

Interestingly, this improvement took place over very short time frames, which may be useful to other stakeholders working with groups of people interchangeably. In this case, study knowledge of TRT has contributed to improved performance of HE students working in groups.

### Future research

Moving away from the quantitative data presented within this article, our third article next month will review qualitative data obtained from a focus group comprising final-year degree students, thus completing triangulation of three different data sets. Where the questionnaires revealed factual data, a focus group has been used to explore the attitudes and feelings of students who have, arguably, in respect of their skill development travelled through a “passage from detached observer to involved performer...” (Dickinson, p.164 citing Benner). **TJ**

### References

- 1 Belbin M *Management Teams: Why They Succeed or Fail* Elsevier (2007)
- 2 Edmond N, Hillier Y, Price M “Between a rock and a hard place: The role of HE and foundation degrees in workforce development” *Education & Training Journal* Vol 49, No 3, pp170-181 (2007)
- 3 Semeijin J, van der Velden R, Heijke H, van der Vleuten C, Boshuizen H “Competence indicators in academic education and early labour market success of graduates in health sciences” *Journal of Education and Work* Vol 19, No 4, pp 383-413 (2006)
- 4 East of England Development Agency *East of England Skills Analysis: The graduate labour market, Higher Education participation and the knowledge economy* (2003)
- 5 Moreau M, Leatherwood C “Graduates’ employment and the discourse of employability: a critical analysis” *Journal of Education and Work* Vol 19, No 4, pp 305-324 (2006)
- 6 Fallows S, Steven C “Building employability skills into the higher education curriculum: a university wide initiative” *Education & Training* Vol 42, No 2, pp 75-83 (2000)
- 7 Jones-Evans D, Williams W, Deacon J “Developing entrepreneurial graduates: an action learning approach” *Education & Training* Vol 42, No 4/5 (2000)
- 8 Petrova P, Ujma D *Students’ Awareness of the Importance of Transferable Skills for Employability* The Higher Education Academy Hospitality, Leisure, Sport and Tourism Network pp 1-9 (2006)
- 9 Ehiyazaryan E, Barraclough N “Enhancing employability: integrating real world experience in the curriculum” *Education & Training* Vol 51, No 4, pp 292-308 (2009)
- 10 Greenan K, Humphreys P, McIlveen H “Developing transferable personal skills: part of the graduate toolkit” *Education & Training* Vol 39, No 2, pp 71-78 (1997)
- 11 SQA “Key competencies – some international comparisons” *Policy and Research Bulletin* no 2 (2003)
- 12 Sutherland J “Higher Education, the graduate and the labour market: from Robbins to Dearing” *Education & Training* Vol 50, No 1, pp 47-51 (2008)
- 13 Siebert S, Mills V, Tuff C “Pedagogy of work-based learning: the role of the learning group” *Journal of Workplace Learning* Vol 21, No 6, pp 443-454 (2009)
- 14 Mutch A “Employability or learning? Group work in higher education” *Education & Training Journal* Vol 40, No 2 (1998)
- 15 Rossin D, Hyland T “Group Work-based learning within Higher Education: an integral ingredient for the personal and social development of students” *Mentoring and Tutoring* Vol 11, No 2, pp 153-162 (2003)
- 16 Dickinson M “Giving undergraduates managerial experience” *Education & Training Journal* Vol 42, No 3, pp 159-169 (2000)
- 17 Bell J *Graduateness: some early thoughts* <http://www.leeds.ac.uk/educol/documents/000000068.htm> downloaded 12/01/2010 (1996)
- 18 UK Commission for Employment and Skills *Towards Ambition: skills, jobs, growth: Expert advice from the UK Commission for Employment and Skills* (2009)
- 19 Sancho-Thomas “Learning teamwork in university programming courses” *Computers & Education* No 53, pp 517-531 (2009)
- 20 Drummond I “Personal transferable skills in higher education: the problem of implementing good practice” *Quality Assurance in Education* Vol 6, No 1, pp19-27 (1998)
- 21 Kotey B “Teaching the attributes of venture teamwork in tertiary entrepreneurship programmes” *Education & Training Journal* Vol 49, No 8/9, pp 634-655 (2007)

# Team role theory in higher education

In the third of three articles, **Gillian Smith** and **Pat Yates** reveal the thoughts of their students about team working

**T**his article consolidates the research we presented in the preceding two articles “to investigate whether knowledge of team role theory could be used as a means to support HE students in academic group work and the development of soft skills required by industry”.

The research used Belbin’s (2007) team role self-perception inventory as a vehicle to develop knowledge of TRT and drew upon two data sets referred to as Group A and Group B, concluding that “the development of softer transferable skills was magnified when students had prior knowledge of TRT”.

A third data set, in the form of a focus group, has been incorporated to provide an opportunity to triangulate the research findings. Ghauri and Gronhaug argue that “through triangulation we can improve the accuracy of judgements and thereby results...” So “triangulation... can produce a more complete, holistic and contextual portrait of the object under study” (*ibid*)<sup>2</sup>. This focus group cohort is referred to as Group C.

The key findings in this article are that, to maximise the development of soft skills, individuals need an opportunity to reflect on reasons for engaging in group work. Participants said that clear guidance/facilitation and use of social testing would be useful in supporting the development of groups both in educational and industrial settings.

## Group C

Accordingly, 11 final-year students, who had been exposed to group work over a four-year period, were invited to take part in a focus group, to gain insight into their feelings, attitudes and perceptions towards group work, thus providing

an opportunity to gather new data that the questionnaires may not have addressed. Similar to Group B, these students had not completed BTRSPI or undertaken in-depth studies of TRT.

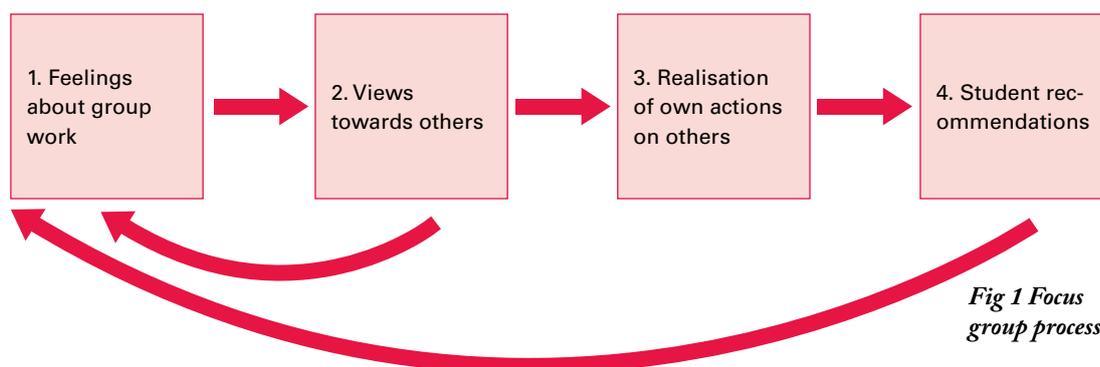
“Focus groups are undoubtedly invaluable when in-depth knowledge is needed about *how* people think about an issue – their reasoning about *why* things are as they are, *why* they hold the views they do.”<sup>3</sup> Figure 1 opposite identifies four distinct phases of the focus group process, inferring that, if students remain at stages one and two, original perceptions of group work are reinforced. In this case, the initial feelings about group work and views towards others were negative; however, when students were given an opportunity to reflect upon their experiences, the value of group work was acknowledged. Additionally, the focus group was able to consider potential strategies to improve the experience.

The session was digitally recorded and lasted just over an hour.

## Feelings about group work

To generate discussion, the focus group were given an activity comprising a picture of a student who has just been told that he is required to participate in group work for a module they are studying. They were asked to write down what they thought the student in the picture was thinking, enabling them to transfer personal opinion onto the image. This ‘non-threatening approach’ facilitated open, honest and transparent dialogue.

The activity returned 56 negative responses towards group work. Concerns were repeated by the respondents and fell into eight distinct categories, which were then collated (see Table 1 opposite). Ninety six per cent of the responses (categories one to seven) related to their negative feelings about “working with others”. It is



*Fig 1 Focus group process*

interesting to note that only 4 per cent of the responses (category eight) consider individual responsibility and effect of self on the group. This is a clear indication that the initial attitudes and feelings towards working with others, even after a four-year period of study, were negative.

**Table 1 Focus group activity 1**

1	Assumption that the standard of others is inferior to their own	6
2	Not wanting to do group work	9
3	Assumption that they will do more work than others	10
4	Assumption that group work will have a negative effect on grades	4
5	Assumption that the work ethic of others is inferior to their own	3
6	Wanting to choose own group	9
7	Need for information about group work	13
8	Reflecting on own group work activity	2
	<b>Total number of responses</b>	<b>56</b>

### Negative views towards others

The negative comments made within the focus group activity were used as a basis for generating further discussion to enable deeper exploration of their attitudes and feelings. Examples of the kind of negative comments made include “oh no”, “not group work again”, “I hope we can choose our own group”, “am I sitting next to any bright people?”

Interestingly, from the beginning of the discussion, the interchange between students began to establish alternative viewpoints in favour of group work. This indicated that, although initial comments were 96 per cent against working with others, when given an opportunity to reflect on attitudes and feelings, this proved not to be the case. For example, “to try and do that on your own [group work] would be near impossible,

I think... you need people... but it depends on what group you end up in” (UCB focus group transcript 15.18). Another student commented: “It generates ideas... but also, if someone is not pulling their weight, you tend to think am I really doing their work for them?” (UCB focus group transcript 18.12.)

This debate continued in the same vein, and the facilitators were able to observe that self-reflection was enabling the students to realise that, although they had negative perceptions of working with others, they were acknowledging that they had also benefited from group work experiences.

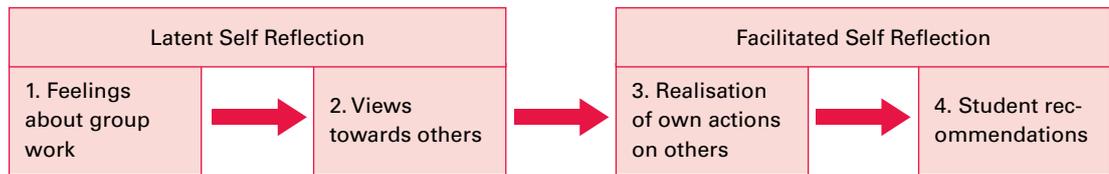
### Realisation of own actions on others

As the discussion unfolded, there was a transition from focusing on working with others to an acknowledgement that individual contribution also needed to be questioned. Rather than seeing group work as something that is ‘done to them’, they began to explore their ‘own’ responsibilities to the group.

Fallows and Steven<sup>4</sup>, Greenan *et al*<sup>5</sup>, Sutherland<sup>6</sup> and Siebert *et al*<sup>7</sup> would identify this as a shift from passive to active learning, an essential element of employability skill development. An extremely revealing example of active learning was when one student stated: “I am also going to throw something out to the group that has just come to me... it is a kind of a reflection of your own people skills... do you not think that people don’t like group work because it kinda reflects their [poor] people skills and it reflects the bad points or even possibly the good points but more often than not the negative points of your own personal skills?” (UCB focus group transcript 38.45.)

This paradigm shift reinforces the importance of group work within HE institutions and the part that it plays in the development of soft skills, supporting Moon’s assertion that “group work is central to many areas of academic and personal development work, from joint work on *critique* and problem solving... to manage the





*Fig 2 Group work development indicator*

challenges to the self in the course of learning”<sup>8</sup>. To further illustrate, one respondent reflecting upon a previous experience stated: “I have stood there and cringed [in a presentation] with what people are saying because they don’t represent how I think or what I want to say... I was equally thinking, you know what, I could have actually helped that person which would help me. I could have maybe done more... in a group environment, you have to help each other.” (UCB focus group transcript 17.50.)

A lengthy discussion ensued about preferred ways of learning/working and how appropriate group work is in industry. The group gave many examples of utilising the experience in terms of being able to communicate with others regardless of age or position, acknowledging that it “opens your eyes to show you what you can achieve through working with other people” (UCB focus group transcript 31.15) and that “you are not going to get on with everyone but sometimes you are going to have to work with them... I think that is what uni tries to do. It tries to get you ready for going out there and being able to form these relationships” (UCB focus group transcript 40.55).

**Student recommendations**

The students explored the importance of having consistency in terms of guidance and procedure for managing group work. The consensus was that standardisation across modules was important so that students knew how the process was going to be facilitated: “If they [lecturers] could perhaps help us with appointments for our group... allocate group meetings in the lecture... then do a bit of team-building.” (UCB focus group transcript 1.01.09.)

Students also discussed the importance of using tests to develop group work synergy: “Why not have a couple of lectures or a lecturer preparing people for group work and if things go wrong giving them extra strategies, do it formally at the

beginning [of their studies]... the college could actually run some tests to see if they can put the person into groups.” (UCB focus group transcript 36.42.) “But how do you identify what someone is best at? You will need to do psychometric tests then.” (UCB focus group transcript 1.00.18.)

The students’ recommendations support the notion that facilitated self-reflection is advantageous to developing soft skills and their suggestions will be incorporated into our future research.

**Conclusion**

The key finding of the focus group exercise is that taking part in group work will not automatically develop TS as deeper learning does not necessarily take place, thus indicating latent reflection (Figure 2, stages one and two). Therefore, the opportunity and access for facilitated self-reflection is a key influence (Figure 2, stages three and four). This was evident during the focus group discussion, in which students began to question themselves and review their behaviour in previous group work settings. They recognised that, although group work is not always perfect, there are advantages.

Inferences could be drawn of an attitudinal shift in favour of group work during the focus group discussion.

**Research summary**

Group A stated that knowledge of TRT and BTRSPI improved TS. Similarly, Group C believed that use of the tests would improve the experience of working with others. The differences in terms of skill development between Groups A and B indicate that it is possible to improve the development of groups over shorter timeframes and that it is likely that Group B will arrive at the same learning point over similar timeframes to Group C.

Students’ attitudes to group work are often negative, due to latent self-reflection, and, therefore, the challenge for those with responsibility for developing transferable



skills through group work, especially in short timeframes, is to create suitable learning opportunities that move the learner forward.

Having established a number of common themes from the secondary data – self-reflection, active learning and soft skill development – it is important to note that underpinning all of these is dialogue between the group members. Group C acknowledged the importance of team-building exercises (and referred to psychometric testing or similar) as a vehicle for development opportunities. They also identified that facilitation plays a crucial part during the group work activity.

We now recognise that, for Group A, the BTRSPI and knowledge of TRT were critical features of soft skill development. Sharing information opened up communication channels, giving students an opportunity to discuss strengths and weaknesses, which created better understanding of both self and others. The significance of having an opportunity for facilitated self-reflection is demonstrated in Figure 2 and concurs with the students' recommendations in respect of facilitation. **TJ**

### References

- 1 Smith G, Yates P "Team role theory in higher education" *Training Journal* (March and April 2011)
- 2 Ghauri P, Gronhaug K *Research Methods in Business Studies: A Practical Guide* Pearson Education (2002)
- 3 Laws (2003) cited in Bell J *Doing Your Research Project* Open University Press (2005)
- 4 Fallows S, Steven C "Building employability skills into the higher education curriculum: a university wide initiative" *Education & Training* Vol 42, No 2, pp 75-83 (2000)
- 5 Greenan K, Humphreys P, McIlveen H "Developing transferable personal skills: part of the graduate toolkit" *Education & Training* Vol 39, No 2, pp 71-78 (1997)
- 6 Sutherland J "Higher Education, the graduate and the labour market: from Robbins to Dearing" *Education & Training* Vol 50, No 1, pp 47-51 (2008)
- 7 Siebert S, Mills V, Tuff C "Pedagogy of work-based learning: the role of the learning group" *Journal of Workplace Learning* Vol 21, No 6, pp 443-454 (2009)
- 8 Moon J *Making groups work* <http://escalate.ac.uk/5413>

**Gillian Smith and Pat Yates**

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

