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## **Using the Belbin Team-Role Self Perception-Inventory to Form Groups and Assign Roles for Media Production Assessment**

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### **ABSTRACT**

*Group work is an essential element in media production courses and an established method for teaching and assessing media production. This study was carried out over 3 years and was inspired by a cohort level 4 students experiencing problems whilst working in production team. It examines the benefits and limitations of using Belbin's Team-Role Self-Perception Inventory to form production teams for assessing level 4 media production students and also allocating production roles within those teams. Conclusions are drawn from the experiences of the students in the groups and the observations of the tutor. Implications of using the Belbin Team-Role Self-Perception Inventory are discussed and new practise suggested for media production tutors involved in assessing group project work.*

### **KEYWORDS**

Group work, team formation, Belbin team roles, media production assessment

### **INTRODUCTION AND BACKGROUND**

Group work has long been recognised as a method for teaching and assessing project-based work in Higher Education (Senior and Swales 1998; Race 2000, Prichard and Stanton 1999, Watkins and Gibson-Sweet 1997, Bournier et al. 2001, Dawson et al. 1994) and in particular within Media Production courses (Jones, 2003, Buckingham et

al. 1995). The vast majority of television programmes and films are made by large production teams therefore media production courses utilise group-based learning because it emulates the media industry (Ollin, 2003). Whilst there is an apparent need and reason for group work it can also be problematic, many studies have discussed the negative aspects to group work with group formation a key concern (Bourner et al. 2001, Johnson and Johnson 2000, Race 2000, Gibbs 1992, Buckingham et al. 1995).

This research project was conducted in direct response to a problematic level 4 cohort of Broadcast Media students taking a semester long documentary module. The module required groups of four students to create a short documentary as a piece of project-based learning. Due to the structure of the module students were placed in groups during week two of the academic year, to avoid issues of people being excluded groups were allocated by the tutor randomly using methods suggested by Race (2000) and Gibbs (1992). Tutor allocation was favoured as it was too early in the course for students to self-select as they had not yet formed “working or social relationships” (Jones, 2003:11), the cohort of thirty students was split into eight groups.

One group pitched a workable proposal and seemed to be making progress with their documentary having had a number of good ideas and contacts for contributors. When the film was submitted at the end of the semester it had evidently been shot and edited at the last minute, lacked in technical quality and the expected content was absent. Tensions were also apparent in other groups with students unable to decide on ideas amicably resulting in group members working independently of one another. Prior to

commencing the second semesters teaching, which included two further group work modules, this research project was instigated to discover what was preventing the groups from functioning successfully and if any other group formation methods would result in more cohesive teams. There are a number of methods suggested throughout the literature for forming groups and for studying how the group members develop their behaviour whilst working in groups (Race 2000, Gibbs 1992, Jaques and Salmon 2007, Johnson and Johnson 2000, Jones 2003), the Belbin Team-Role Self-Perception Inventory (Belbin, 2010, 2010a, 2010b) was selected as the method for forming groups for this project following a review of the literature.

## **LITERATURE REVIEW**

The Belbin Team-Role Self-Perception Inventory (BTRSPI) is a well established method for forming groups in both the workplace, primarily for management teams, and in Higher Education contexts (Senior and Swales 1998, Race 2000, Prichard and Stanton 1999, Watkins and Gibson-Sweet 1997, Bourner et al. 2001, Dawson et al. 1994). Jones (2003) notes that BTRSPI has been used to form groups for media production with some success although there is no further research data available to support this assertion.

Belbin hypothesises that a mix of team roles is needed to form a balanced group (Belbin 2010a and 2010b). According to Belbin a team role is “a tendency to behave, contribute and interrelate with others in a particular way” (Belbin, 2010a) and breaks down the various roles assumed by individuals within a team as:

**PLANT** – *creative, imaginative, unconventional, introverted, problem- solver*

**RESOURCE INVESTIGATOR** – *extrovert, enthusiastic, communicative*

**CO-ORDINATOR** – *mature approach, confident, delegates well*

**SHAPER** – *dynamic, thrives on pressure, has the drive and ability to overcome obstacles*

**MONITOR EVALUATOR** – *astute, sees all options and points of view, judges accurately*

**TEAMWORKER** – *mild, perceptive and diplomatic, listens and averts friction*

**IMPLEMENTER** – *reliable and efficient, turns ideas into practical actions*

**COMPLETER FINISHER** – *conscientious, anxious, searches out errors and omissions, perfectionist (Belbin, 2010b: 22)*

Each team role has the positive characteristics listed above however each role also possesses negative qualities (listed below) which Belbin identifies as “allowable weaknesses” as they are “often no more than the obverse side of the strength” (2010b: 54) and can be regarded as a “trade off” against the roles’ strengths (2010b: 55)

**PLANT** – *doesn’t communicate well, pre-occupied*

**RESOURCE INVESTIGATOR** – *loses interest once initial enthusiasm has passed*

**CO-ORDINATOR** – *offloads work, manipulative*

**SHAPER** – *offends people’s feelings, tendency to aggravate*

**MONITOR EVALUATOR** – *lacks drive and doesn’t inspire others, overly critical*

**TEAMWORKER** – *indecisive and easily influenced*

**IMPLEMENTER** – *inflexible, doesn't like change*

**COMPLETER FINISHER** – *worries, doesn't like to delegate*

(Belbin, 2010b: 22)

The successful use of the BTRSPI has been acknowledged through a number of studies (Prichard and Stanton 1999, Watkins and Gibson-Sweet 1997) besides those reported on by Belbin himself where he discusses the benefits of having groups in the workplace which are engineered to contain a number of mixed personality types, with the more varied groups performing tasks more successfully than those which contained fewer role types (2010b), this assertion is also supported by “Bales (1950) [who] found that teams needed both goal directed members and other members to ensure harmony within the team” (Prichard and Stanton 1999:652). Prichard and Stanton add that in addition to a balanced team the group member must also have the required “technical skills and abilities to do the job” (1999:652) accepting that it is not only creating a balanced team through the use of BTRSPI which contribute to the success of the team but the skills and knowledge the team members bring to the group.

Further benefits of balancing teams through the use of BTRSPI are recognised as circumventing personality clashes (Watkins and Gibson-Sweet, 1997) which are likely to occur when two identical personality types are placed in a team (Belbin 2010b and 2010c). Individuals also gain self-knowledge and personal development through the use of the BTRSPI as they develop an understanding of their own weaknesses as well as strengths and how that affects the team (Belbin 2010b, Prichard and Stanton 1999,

Jones 2003, McCrimmon 1995). Race asserts that Belbin's analysis can be "helpful [in a Higher Education context] to unpack groups and team roles you most naturally adopt in group situations" (2000: 65).

Concerns with the use of the BTRSPI in Higher Education are highlighted by Dawson et al. (1994) and McCrimmon (1995) who suggest that Belbin is more focused on group performance rather than the learning of the individual team members, although Dawson et al. (1995) acknowledge that there is possibly a correlation between the performance of a group and the learning of the individual. Gibbs' (1995) reservation for using tests is that 'allocating students on the basis of learning style [ ] or other quasi psychological grounds is difficult and unlikely to be effective" (Gibbs 1995 in Jones, 2003:13), with Furnham et al. stating that the tests are "unreliable" and there is "little psychometric support" for Belbin's structure (1993:255 - 256).

Sommerville and Dalziel (1998) and Furnham et al. (1993) also question the form of the BTRSPI, in that they are ipsative and not likert. Conversely Sommerville and Dalziel's (1998) findings support the use of the tests to create project teams as key personalities needed within a group are revealed through the BTRSPI. Other criticisms stem from the fact it was born without "explicit theoretical foundations" (Aritzeta et al. 2007:110) and even go as far as stating that the "team role theory itself is flawed [.....] and supported by anecdote alone" (Broucek and Randell 1996 in Arizeta et al. 2007: 109). Despite expressing worries that the team roles are not clearly defined and that overlap exists between some of the roles' characteristics and their primary function in the team

(Arizeta et al. 2007 and Fisher et al. 2001b), Arizeta et al. (2007) do conclude that the BTRSPI is “useful for measuring preferences towards contributing and interacting with other team members” (2007:111) and that teams can be formed in which each member increases the group output by the combinations of contributions made to the team. Conversely the balanced team formed by the BTRSPI may be imbalanced in terms of gender as there is the propensity for more males than females to fall into Belbin’s leadership roles, a ratio of 5:1, and females more likely to fall into the team-worker role than males (Anderson and Sleaf, 2004). This gender imbalance is reflected in industry production teams where more men work as TV/Film Directors than women (Lauzen, 2011), and women generally take on the roles to facilitate the film/production crew which require patience and tolerance, this assertion is also supported by the findings of Buckingham et al.’s study of a youth work media production project where the “the dominance of the men in the video group” is noted (1995:96).

Furthermore there is the risk that people will play to type once cast in a certain team-role (McCrimmon 1995) and that this will lead to inflexibility or unwillingness to contribute outside of the role for fear of others reactions and therefore the capacity to grow and develop is restricted. McCrimmon (1995) suggests that people should be encouraged to take on as many team roles as possible, however Belbin (2010b and 2010c) favours the exact opposite, although does accept that an individual may have more than one strong team role but will find it difficult to become an unnatural role type in a team. McCrimmon (1995) also casts doubt on the relevance of the BTRSPI by

questioning the purpose of a team; concluding that the purpose of management teams is to problem solve, make decisions and to increase some sort of productivity.

Some of the criticisms made of Belbin's team role theory are in direct relation to its use with management teams and not a Higher Education (or any other) context. Fisher et al.'s (2001) study examines the use of the BTRSPI across other areas of industry and business and surmised that the BTRSPI could be used at varying levels across organisations with success. Within TV and Film (media) Production the purpose of the team is not problem-solving in a traditional context and the decision making is that of creativity and therefore the team needs a mix of 'creatives' and 'organisers' and a clear delineation between the roles and tasks associated with them is beneficial and expected in the industry. The TV and Film industry is much more structured in its nature than many of the management teams discussed in the literature with Buckingham et al. asserting that "a hierarchical structure is simply the most efficient (some would say only) way of getting the job done" (1995:77). Despite considerable developments in media production technology the composition of the production team retains its historical hierarchy. The processes, language and protocols 'on set' have been a consistent since the film and TV productions of the 1930's. Therefore team composition theories make a better fit to these hierarchical teams than to modern multi-tasking management teams and therefore it is not "counterproductive to assign creativity as a role to a select group of individuals" (McCrimmon 1995:38) as there is an expectation that directors, cinematographers and script writers will be the 'creatives' within a team. McCrimmon



(1995:40) fails to acknowledge that differing role types complement one another but focuses on the lack of “understanding” and “appreciation” of each other.

A review of the literature suggests the BTRSPI is an established method of group formation in Higher Education; however groups formed in this manner then self-regulate and assign tasks, roles and duties themselves. This paper seeks to examine the results of allocating production roles within a group of media production students and examines the individual learning within the group and the success of the group.

## **METHODOLOGY**

The cohort of students undertook the BTRSPI tests at the start of semester two, which involved two group work modules, multi-camera studio production and drama production. The tests take the form of a questionnaire where a choice of different responses to various scenarios are given and the individual being tested has ten points to ‘spend’ across the responses spending more points on those answers which are strongly identified with and less point (or no points at all) on those which don’t elicit a reaction (Belbin, 2010b). The points are added up under each team role and the highest score becomes the primary role with the possibility of a second high score becoming a secondary team role which can dilute some of the characteristics or combine two roles to form a strong organiser or a self motivator. There are nine team roles within Belbin’s inventory but for the purposes of working with students the ninth team role, “the specialist”, was disregarded as this wasn’t believed to be applicable to students at this

level of study and therefore there were eight roles in the inventory for the purpose of this study.

Using the results of the BTRSPI balanced groups were formed with students who, according to the BTRSPI, had shown a propensity to work well together with a spread of role types across the groups. The characteristics of the roles in the BTRSPI were analysed and mapped against the qualities required of the various production roles in the project teams across both modules. The Shapers, Implementers and Completer Finishers were placed in roles such as Floor Manager, Assistant Producer, Producer and 1<sup>st</sup> AD which require the drive and leadership skills found in those personality types. Those with stronger creative tendencies found in the 'Plant' were allocated the roles of Director, Art Director, Camera Operator and Director of Photography. Monitor Evaluators and Teamworkers were placed in the central roles in the production teams such as Vision Mixer, Sound Supervisor and GFX where the abilities to listen to others and respond to the needs of the group are paramount. The roles of Gallery PA and Script Supervisor corresponded with the characteristics of the Co-ordinator and Monitor Evaluator as these roles require reliability, efficiency and calmness. No student repeated a similar production role across both modules to encourage a variety of learning and group experience and the membership of the groups altered between modules. The roles and groups were only assigned for the assessment so that students were able to experience the full range of production roles during class work and develop an appreciation and knowledge of all the production roles.

The students' reaction to the BTRSPI and the use of it to form groups for assessment was gauged through questionnaires which were answered after the completion of the semester 2 modules. As part of a larger research project into group work filmed interviews were also conducted about the range of difficulties experienced by the cohort in relation to group work with some questions and answers relating directly to the BTRSPI.

In the following academic years the BTRSPI was conducted at the start of the academic year before any groups were allocated and the students were asked to complete a short questionnaire about group work following the first semester. The most recent level 4 cohort undertook the BTRSPI at the start of the year and filled in a specific questionnaire at the end of the year. Tutor Observations, similar to those in the Belbin Observers Assessment Sheet (Belbin 2001b) were made and noted in a journal about the students' progress and performance in the groups.

## **DATA**

The results of the first BTRSPI taken at the start of semester 2 revealed that the four students who had formed the poorly performing documentary group were all Plants, with one student being such a strong Plant that scores for all other team roles were extremely low. These four students all performed very well in their second semester modules due to the combination and balance of role types in the groups and the production roles to which they were assigned , all four taking on creative roles and working with students who were able to organise the group and see ideas realised.

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Another documentary group who suffered tensions had contained all students who were either primary or secondary Shapers which had resulted in the problems occurring, as the tendency of the Shaper is to be organised but offend others easily (Belbin, 2010b).

### RESPONSES TO QUESTIONNAIRE 1

The Original Cohort were now 19 students at level 5

13 students responded

83% felt group work had improved since the documentary module (after the use of the BTRSPI)

#### *Improvements areas identified as*

- ❖ Communication
- ❖ Commitment
- ❖ Workload Distribution
- ❖ Group Allocation
- ❖ Respect
- ❖ Organisation

From the filmed interviews *Simon\** stated that doing the BTRSPI made him realise that people bring different things to a group and that they may not work in the same way as him, he felt doing the BTRSPI in class made him more aware of other people's strengths and made him more tolerant and understanding of others in group situations.

*Amy\** who had been part of the all Plant documentary group stated that she wished the Belbin team roles had been done at the start of year as she had found it very beneficial and made her realise that there were reasons why her group hadn't performed well.

### 2<sup>nd</sup> Cohort Responses

The following year 22 out of 24 students in the new level 4 cohort felt that the Belbin team's roles were a good introduction to group work and team work at university level.

### Most recent cohort

- 25 out of 52 students from the cohort responded to the questionnaire
- 23 of the students agreed with their Belbin Team Role as being the one which suited them.
- 22 students said that they understood more about the way they contributed to a group through doing the BTRSPI than they had previously.
- 6 of the students were not aware before the tests that people bring different strengths to a group.
- 23 of the students felt that using the tests made groups more balanced

Students acknowledged the benefits of using the BTRSPI to form groups as:

- *even and balanced*
- *had team spirit*
- *brings out the best in everyone*
- *tried and tested method*
- *the group already has an advantage*
- *good balance of personalities which keeps everyone active*
- *it put everyone into a role where people could work well together*
- *get placed with people you can cooperate with*
- *as the university doesn't know who we are it helps to put us into groups*

The limitations of allocating the groups were noted by two students as the tests are “not entirely accurate with some people” and “a group can be unbalanced if you only take into account the Belbin test and not the effort that each person puts in each”.

When asked about the benefits/limitations of allocating production team roles within the group using the results of the Belbin Team Roles the student responses included:

- *People excel in their individual roles*
- *people gain different confidence [in their] roles*
- *People were assigned roles that suited their individual talents and skills*
- *Right people do the best jobs*
- *roles suit group members*
- *I was given roles I enjoyed and was confident in*
- *those that are confident in leadership shall lead and those that are not comfortable in that position can follow*
- *it makes it fair*
- *given a role that suited me*
- *it's good to give people roles that suited them*
- *less disagreements more work gets done*

- *some unfair selection*
- *roles may not correlate to the Belbin Team Roles equally across all the production roles*
- *there may be too many people of a certain Belbin role to fill related roles in the team and some may have to have unsuitable positions*

### **TUTOR OBSERVATIONS**

The group sizes for the multi-camera studio production and drama production modules were larger than for the documentary groups, ten students and six students respectively but there was a 100% pass rate for the production element of each module. From the tutor's observations there was an apparent difference in the attitudes towards the group assignment, it was clear that the students were comfortable with their assigned production roles. The confident Shaper and Completer Finisher students who were the Floor Managers and 1<sup>st</sup> ADs seemed to feel vindicated in being able to make demands of the other team members and were able to motivate and persuade without fear of recrimination. The students who took on the sound, vision mixing and GFX, the Monitor Evaluators and Team Workers, were content in their roles knowing they would receive the information they needed to move forward with their contribution in pre-production and production from the more dynamic students in the leadership roles. The students undertaking Gallery PA and Script Supervisor in the two modules were well suited to the roles as they were calm, patient, efficient and observant, they were able to judge when to contribute and when to be supportive to the rest of the team, in particular to the director and producer. The productions were successful as the students at the helm as

Director and Producer were able to be creative and motivational with the full support of the rest of the group, knowing that the tasks to make the production a success would be done. All the students were working in roles which played to their strengths allowing them to gain confidence and flourish. There was also reduced anxiety amongst the students as they all knew the boundaries of their role, what was expected of them and what they could expect of others. This demarcation of roles helped enormously in moving the group through the various stages of production resulting in cohesive and communicative teams. There was vast improvement in the professionalism of the students in meeting deadlines, time keeping, communication and workload distribution. They were also confident in using the language of the multi-camera studio and the drama shoot emulating the industry throughout the assessed productions assuming the professional roles comfortably.

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## **DISCUSSION**

Looking at the traits of Belbin's Plant, it is easy to see retrospectively why the poorly performing documentary group failed to connect with each other. All four students had creativity and imagination but lacked the personalities, communication and organisational skills to bring their pitched idea to fruition. All four students were, to one degree or other, introverted which is another 'Plant' trait, this explicates the lack of communication within the group. Additionally not one of the four had any organisational skills in their secondary team role so even though they had great ideas and creativity this wasn't able to be realised as a Shaper or Completer Finisher was required to compliment their imagination. This concurs with the findings of Prichard and Stanton



who concluded that a range of roles need to be present for a group to perform and execute tasks competently and that “mixed teams performed significantly better” than a team which contained only Plants or Shapers (1992:660) and with members who have the “technical skills and abilities to do the job” (1999: 652) and thus supports Belbin’s hypothesis that balanced teams are more successful (Belbin 2010a, 2010b, 2010c).

A key outcome of the research is the students increased tolerance towards one another and also an improved awareness of themselves and what they can contribute to the team. Students also develop an awareness of their own shortcomings and have the opportunity to “develop an appropriate strategy for managing that weakness” (Belbin, 2010b: 55). The data suggests that prior to taking the BTRSPI the students had little understanding of how teams function, had poor group working skills and were inadequately prepared for the tasks. The BTRSPI increased the “student’s awareness of group dynamics” and overcame some of the problems associated with the lack of training and knowledge of groups (Goldfinch et al. 1999: 42) particularly in the early stages of Higher Education.

The use of the production role allocation made students feel secure as time and effort had been spent on carefully selecting the constitution of the group; they appreciated being assigned a role to which they were well suited. Forcing a student into a production role for assessment at level 4 which is against their personality is effectively setting the student up to fail, for example placing a Plant who has no organisational traits into a role whose key function is organising the group will see that student flounder and destroy

their confidence. In the longer term this could have an impact on student retention and progression. This refutes McCrimmon who states that [team] “role assignment gets in the way of flexibility and creativity” (1995:39). It is not unreasonable though to expect students to experience a range of production roles during their course which take them beyond their BTRSPI role type. Allowing for learning and development to take place but only once they have gained experience and confidence through success at level 4 by playing to their strengths and observing others playing to theirs. However reflecting anecdotally on the career paths of several students from the original cohort they have progressed into industry roles relevant to their team role types; Completer Finishers and Shapers have become Production Managers and Co-ordinators.

### **Potential Problems**

As one of the students pointed out in their questionnaire response there is a problem when there are too many role types to evenly distribute the roles however the primary and secondary role traits can be taken into consideration and students who are not strongly one role type or another will be comfortable across a range of roles. Although the teams are balanced and are shown to have a propensity to work well together with students playing to their strengths there is still no guarantee that the students will complete the tasks required of them, stick to deadlines or not become a ‘passenger’ within the group. There is also the problem of uneven distribution of work load relevant to the production role although these difficulties exist regardless of how the groups are formed. Ideally the BTRSPI needs to be coupled with further exercises, guidance,

support and development on how groups behave and how to deal with problems which occur in groups, no matter how balanced.

## **CONCLUSION**

Using the BTRSPI allows tutors an insight into students strengths and weaknesses and also prevents tutors from setting up a group or a student to struggle through an imbalance of role types. The tutor can also use the BTRSPI to redress the male/female imbalance which exists within the media industry by encouraging females with the appropriate characteristics into traditional male roles. The BTRSPI are a positive introduction to team and group working by increasing self-knowledge and tolerance of one another. The formation of the group, allocation of roles and success of the team facilitates the learning process and therefore there is certainly a correlation between the performance of a group and the learning of the individual. While no method of group formation is infallible the Belbin Team-Role Self-Perception Inventory provides a starting point for the tutor.

\*pseudonym

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