

THE IMPACT OF A FIRST-YEAR ORIENTATION TEAM-BUILDING EVENT

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Abstract

Students' post-intervention perceptions of an event provide insight relative to their understanding and appreciation of the intervention, as well as the impact thereof. Experience and anecdotal evidence indicate that first-year construction management students experience challenges in terms of adapting to the first year of study at a South African university where the study was conducted. The purpose of the study was to determine the impact of a one-day orientation seven-activity team building event (TBE) directed at enhancing first-year students' ability to manage themselves, work as a team, interface with each other, strategise, plan, evolve tactics, and take action that would lead to their team winning the 'amazing race' style event. A thirteen-question questionnaire was used to determine the students' perceptions. Twelve questions were close-ended, and one was open-ended. All close-ended questions were Likert scale type questions. Twenty-two students attended the event and completed the self-administered questionnaire survey. Findings include that the TBE activities contributed to: enhancing participants' skills, emotional intelligence, and ability to communicate with their peers; built confidence in their abilities including that of completing a task, and enhanced participants' alternative thought processes, ability to be creative, strategise, evolve tactics, take action, and plan. The students benefited from, enjoyed the TBE activities and believed it contributed to improving their time management skills. Conclusions include that the TBE had the desired impact in terms of the development of the first-year students' skills, abilities, and emotional intelligence. Recommendations include that the TBE should continue to be undertaken on an annual basis, and the impact on participants should be assessed. Furthermore, the study should evolve into a longitudinal study and be reported on in that context to determine any trends.

Keywords: *Construction management, event, orientation, students, team building.*

1. Introduction

Construction management graduates must be empowered to manage the business of construction, and projects, which requires the development of surface competencies in the form of knowledge relative to a range of knowledge areas, and skills (Smallwood, 2006). Furthermore, given the dynamic and ever-changing environment in which construction is undertaken, and that it is influenced by a range of stakeholders during the design, procurement, and construction processes, it is imperative that graduates are emotionally intelligent, and able to strategise, plan, evolve tactics, and take action. Therefore, it is critical that tertiary construction management education develops students' ability to manage themselves, work as a team, and interface with each other and through others to achieve objectives (Love et al., 2001).

Personal development and performance are a function of confidence, and can be engendered by students exploring practices that increase interaction with each other, and exploring other boundaries outside the traditional lecturing and learning environment, thus providing opportunities to tackle any deficiencies (Kamardeen, 2013). Furthermore, the exposure of students to the management of others during tertiary education through TBE activities contributes to overcoming the challenge of managing others in the field and applying concepts learned in the lecture environment (Farrow, 2016).

Given the above, and the Department of Construction Management's focus on 'lecturing and learning' research, a survey was conducted among the participants of a further first-year orientation one-day TBE, styled on the 'Amazing Race' television programme, which was introduced at the commencement of the first year of study.

The aim of the study was to determine whether the TBE as a contributed to preparing the students for the challenges of first year, and the undergraduate programme. The objectives were to determine the extent to which the TBE activities:

- enhanced participants' skills;

- impacted on participants;
- enhanced participants' abilities to strategise, plan, evolve tactics, and take action;
- enhanced participants' attributes / states, and manage themselves, work as a team, and interface with each other, and
- resulted in enjoyment and benefit.

2. Review of the literature

2.1. Competencies

There are two categories of competencies, namely surface and core, the core competencies differentiating between average and above average performance (Singh, 2004). The surface competencies include knowledge and skills. A study conducted by Smallwood (2006) investigated the frequency of use of 78 knowledge areas, and 45 skills, which informed the study reported on. Skills are dependent on knowledge; however, they require practice. This is reinforced by Jackson (2015) who emphasises the importance of refining, developing, and practicing skills, as opposed to learning them, which amplifies the need to expose students to a pseudo or simulated work environment.

2.2. Emotional intelligence

Smallwood et al. (2013) note in 'Emotional Quotient and Managing Construction Projects', the impact of fifteen attributes / states of emotional intelligence (EI) on construction managers' performance. Therefore, tertiary construction management education programmes and training must develop such attributes / states.

3. Research method and sample stratum

Given the challenges recorded in the introduction, the department arranged a TBE involving the first-year students at a resort near to the university during orientation week. The TBE entailed seven activities: Hoolahop; Human Foosball; Bomb Squad; Leaky Pipe; Gutterball; Human Skis, and Full Throttle – Quad Crawl. Each of the activities entailed one or more of the following: strategising; planning; evolving of tactics, and taking action.

A quantitative approach was adopted, which entailed the completion of a self-administered questionnaire to determine the impact of the team-building event on the students. Twenty-two students from the first-year cohort who could attend the TBE completed the 'print format' questionnaire immediately after the event. However, one questionnaire was incomplete and was not included in the analysis of the data. The questionnaire consisted of thirteen questions, twelve closed-ended, using either a five-point or a six-point Likert scale question. Due to paper length constraints, this paper reports on the findings relative to five of the twelve close-ended questions, as these were central to the intervention.

The analysis of the data captured in MS Excel, included the computation of frequencies, and a measure of central tendency in the form of a mean score (MS) between 1.00 and 5.00 (five-point), and 0.00 and 5.00 (six-point) was computed based upon the percentage responses to the points on the respective scales to enable interpretation of the responses and to rank variables where necessary.

4. Research findings

Table 1 indicates the extent to which the team building event (TBE) activities enhanced seventeen skills in terms of percentage responses to a scale of 1 (minor) to 5 (major), an additional sixth point 'did not', and MSs between 0.00 and 5.00, the midpoint being 2.50. The skills were identified from a total of 42 skills identified relative to the practice of construction management (Smallwood, 2006). It is notable that all the MSs are > 2.50 , which indicates that in general the TBE activities contributed more of a major than a minor extent to an enhancement in participants' skills.

It is notable that only 2 / 17 (11.8%) MSs are $> 4.17 \leq 5.00$, which indicates the TBE activities enhanced team building, and motivating as skills between a near major extent to a major extent / major extent. Furthermore, team building, the primary objective of the event, predominates with a MS of 4.38, followed by motivating, the MS being 4.25. Thereafter, 6 / 17 (35.3%) MSs are $> 3.34 \leq 4.17$, which indicates the TBE activities enhanced the related skills between some extent to a near major / near major extent – these include the skills ranked second to eighth include planning, leadership, decision making, communicating (oral), leading, and coordinating.

The remaining 9 / 17 (52.9%) MSs are $> 2.50 \leq 3.34$, which indicates the extent is between near minor to some extent / some extent – organising, negotiating, initiating, interpersonal, procedures development, technical, supervisory, persuading, and controlling.

Table 1. Extent to which the TBE activities enhanced participants' skills.

| Skill | Response (%) | | | | | | | MS | R |
|------------------------|--------------|---------|------------------|------|------|------|------|------|----|
| | Un-sure | Did not | MinorMajor | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | | |
| Team building | 0.0 | 0.0 | 0.0 | 0.0 | 14.3 | 33.3 | 52.4 | 4.38 | 1 |
| Motivating | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 15.0 | 55.0 | 4.25 | 2 |
| Planning | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 45.0 | 25.0 | 3.75 | 3 |
| Leadership | 0.0 | 0.0 | 0.0 | 9.5 | 28.6 | 47.6 | 14.3 | 3.67 | 4 |
| Decision making | 0.0 | 0.0 | 0.0 | 4.8 | 38.1 | 47.6 | 9.5 | 3.62 | 5 |
| Communicating - oral | 0.0 | 0.0 | 4.8 | 9.5 | 38.1 | 23.8 | 23.8 | 3.52 | 6 |
| Leading | 0.0 | 0.0 | 9.5 | 14.3 | 28.6 | 9.5 | 38.1 | 3.52 | 7 |
| Coordinating | 4.8 | 0.0 | 4.8 | 23.8 | 28.6 | 9.5 | 28.6 | 3.35 | 8 |
| Organising | 4.8 | 0.0 | 4.8 | 9.5 | 38.1 | 38.1 | 4.8 | 3.30 | 9 |
| Negotiating | 4.8 | 4.8 | 14.3 | 4.8 | 23.8 | 19.0 | 28.6 | 3.30 | 10 |
| Initiating | 10.0 | 0.0 | 10.0 | 20.0 | 10.0 | 35.0 | 15.0 | 3.28 | 11 |
| Interpersonal | 14.3 | 0.0 | 9.5 | 14.3 | 28.6 | 19.0 | 14.3 | 3.17 | 12 |
| Procedures development | 20.0 | 5.0 | 0.0 | 10.0 | 35.0 | 25.0 | 5.0 | 3.13 | 13 |
| Technical | 19.0 | 0.0 | 0.0 | 28.6 | 23.8 | 23.8 | 4.8 | 3.06 | 14 |
| Supervisory | 4.8 | 0.0 | 9.5 | 28.6 | 19.0 | 28.6 | 9.5 | 3.00 | 15 |
| Persuading | 10.0 | 5.0 | 10.0 | 20.0 | 30.0 | 20.0 | 5.0 | 2.72 | 16 |
| Controlling | 4.8 | 4.8 | 14.3 | 19.0 | 33.3 | 14.3 | 9.5 | 2.70 | 17 |

Table 2 indicates the extent to which the TBE activities impacted on participants in terms of percentage responses to a scale of 1 (minor) to 5 (major), an additional point 'did not', and MSs between 0.00 and 5.00. It is notable that all the MSs are > 2.50 , which indicates that in general the TBE activities impacted more of a major than a minor extent on participants. However, a review of the MSs in terms of ranges provides a more detailed perspective. 2 / 7 (28.6%) MSs are $> 4.17 \leq 5.00$, which indicates the impact can be deemed to be between a near major extent and a major / major extent – building confidence in your own abilities, and removing you from your 'comfort zone'. 4 / 7 (57.1%) MSs are $> 3.34 \leq 4.17$, which indicates the impact can be deemed to be between some extent to a near major extent / near major extent - your ability to communicate with your 1st year colleagues, your ability to complete a task, enhancing alternative thought processes, and improving your time management skills. The last ranked impact, namely your ability to be creative, has a MS $> 2.50 \leq 3.34$, which indicates the extent is between a near minor extent to some extent / some extent.

Table 2. Extent to which the TBE activities impacted on participants.

| Impact | Response (%) | | | | | | | MS | R |
|---|--------------|---------|------------------|------|------|------|------|------|---|
| | Un-sure | Did not | MinorMajor | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | | |
| Building confidence in your own abilities | 0.0 | 0.0 | 0.0 | 4.8 | 9.5 | 42.9 | 42.9 | 4.24 | 1 |
| Removing you from your 'comfort zone' | 0.0 | 0.0 | 0.0 | 4.8 | 19.0 | 23.8 | 52.4 | 4.24 | 2 |
| Your ability to communicate with your 1st year colleagues | 4.8 | 0.0 | 0.0 | 14.3 | 9.5 | 19.0 | 52.4 | 4.15 | 3 |
| Your ability to complete a task | 0.0 | 0.0 | 0.0 | 4.8 | 14.3 | 47.6 | 33.3 | 4.10 | 4 |
| Enhancing alternative thought processes | 4.8 | 0.0 | 0.0 | 14.3 | 4.8 | 42.9 | 33.3 | 4.00 | 5 |
| Improving your time management skills | 4.8 | 0.0 | 4.8 | 0.0 | 28.6 | 38.1 | 23.8 | 3.80 | 6 |
| Your ability to be creative | 0.0 | 0.0 | 9.5 | 9.5 | 23.8 | 52.4 | 4.8 | 3.33 | 7 |

Table 3 indicates the extent to which the TBE activities enhanced participants' various abilities in terms of percentage responses to a scale of 1 (minor) to 5 (major), an additional point 'did not', and MSs between 0.00 and 5.00. It is notable that all the MSs are > 2.50 , which indicates that in general the TBE activities enhanced participants' various abilities to more of a major than a minor extent. It is

notable that all the MSs are $> 3.34 \leq 4.17$, which indicates the enhancement is between some extent to a near major extent / near major extent. Strategise, ranked first is followed closely by evolve tactics, take action, and plan.

Table 3. Extent to which the TBE activities enhanced participants' abilities.

| Impact | Response (%) | | | | | | | MS | R |
|----------------|--------------|---------|------------------|-----|------|------|------|------|---|
| | Un-sure | Did not | MinorMajor | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | | |
| Strategise | 0.0 | 0.0 | 4.8 | 0.0 | 19.0 | 47.6 | 28.6 | 3.95 | 1 |
| Evolve tactics | 9.5 | 0.0 | 4.8 | 4.8 | 14.3 | 38.1 | 28.6 | 3.89 | 2 |
| Take action | 0.0 | 0.0 | 4.8 | 0.0 | 33.3 | 28.6 | 33.3 | 3.86 | 3 |
| Plan | 0.0 | 0.0 | 0.0 | 9.5 | 19.0 | 52.4 | 19.0 | 3.81 | 4 |

Table 4 indicates the extent to which the TBE activities enhanced participants' attributes / states in terms of percentage responses to a scale of 1 (minor) to 5 (major), and MSs between 1.00 and 5.00. It is notable that all the MSs are > 3.00 , which indicates that in general the TBE activities enhanced participants' attributes / states to more of a major than a minor extent. The attributes / states were identified in a study conducted by Smallwood et al. (2013).

It is notable that only 1 / 15 (6.7%) MSs is $> 4.20 \leq 5.00$, which indicates the TBE activities enhanced the participants' happiness between a near major extent to a major extent / major extent.

A further 9 / 15 (60.0%) MSs are $> 3.40 \leq 4.20$, which indicates the TBE activities enhanced the participants' attributes / states between some extent to a near major extent / near major extent - social responsibility, problem solving, flexibility, interpersonal relationship, empathy, emotional self-awareness, self-actualisation, self-regard, and independence.

The remaining 5 / 15 (33.3%) of MSs are $> 2.60 \leq 3.40$, which indicates the TBE activities enhanced the participants' attributes / states between a near minor extent to some extent / some extent - stress tolerance, reality testing, assertiveness, optimism, and impulse control.

Table 4. Extent to which the TBE activities enhanced participants' attributes / states.

| Attribute / State | Response (%) | | | | | | | MS | R |
|----------------------------|--------------|------------------|------|------|------|------|------|----|---|
| | Un-sure | MinorMajor | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | | | |
| Happiness | 5.0 | 5.0 | 0.0 | 0.0 | 40.0 | 50.0 | 4.37 | 1 | |
| Social responsibility | 0.0 | 0.0 | 5.3 | 10.5 | 47.4 | 36.8 | 4.16 | 2 | |
| Problem solving | 0.0 | 0.0 | 0.0 | 20.0 | 45.0 | 35.0 | 4.15 | 3 | |
| Flexibility | 10.0 | 0.0 | 10.0 | 25.0 | 20.0 | 35.0 | 3.89 | 4 | |
| Interpersonal relationship | 0.0 | 0.0 | 15.0 | 25.0 | 25.0 | 35.0 | 3.80 | 5 | |
| Empathy | 5.0 | 10.0 | 5.0 | 15.0 | 40.0 | 25.0 | 3.68 | 6 | |
| Emotional self-awareness | 0.0 | 0.0 | 20.0 | 5.0 | 65.0 | 10.0 | 3.65 | 7 | |
| Self-actualisation | 5.3 | 0.0 | 10.5 | 36.8 | 26.3 | 21.1 | 3.61 | 8 | |
| Self-regard | 10.5 | 0.0 | 5.3 | 47.4 | 26.3 | 10.5 | 3.47 | 9 | |
| Independence | 0.0 | 14.3 | 9.5 | 28.6 | 14.3 | 33.3 | 3.43 | 10 | |
| Stress tolerance | 5.0 | 5.0 | 10.0 | 35.0 | 35.0 | 10.0 | 3.37 | 11 | |
| Reality testing | 15.0 | 0.0 | 20.0 | 30.0 | 20.0 | 15.0 | 3.35 | 12 | |
| Assertiveness | 10.5 | 5.3 | 10.5 | 31.6 | 36.8 | 5.3 | 3.29 | 13 | |
| Optimism | 20.0 | 0.0 | 25.0 | 20.0 | 30.0 | 5.0 | 3.19 | 14 | |
| Impulse control | 5.0 | 10.0 | 20.0 | 20.0 | 35.0 | 10.0 | 3.16 | 15 | |

Table 5 indicates the extent to which participants enjoyed and benefitted from the TBE activities in terms of percentage responses to a scale of 1 (minor) to 5 (major), an additional point 'did not', and MSs between 0.00 and 5.00. The MSs of enjoyed (4.71) and benefitted from (4.37) are $> 4.17 \leq 5.00$, which indicates that the enjoyment and benefit is between a near major extent to a major extent / major extent.

Table 5. Extent to which participants enjoyed and benefitted from the TBE activities.

| Aspect | Response (%) | | | | | | | MS | R |
|-----------------|--------------|---------|------------------|-----|------|------|------|------|---|
| | Un-sure | Did not | MinorMajor | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | | |
| Enjoyed | 0.0 | 0.0 | 0.0 | 0.0 | 4.8 | 19.0 | 76.2 | 4.71 | 1 |
| Benefitted from | 0.0 | 0.0 | 0.0 | 0.0 | 10.5 | 42.1 | 47.4 | 4.37 | 2 |

5. Conclusions and recommendations

TBEs, which constitute non-traditional academic programme interventions, impact on first-year students' ability, to manage themselves, strategise, plan, evolve tactics, and take action, which in turn should contribute to their ability to manage their studies, and successfully complete assignments, tutorials, projects, tests and exams, and the undergraduate programme, although this can only be quantified on completion of a full academic year. This conclusion amplifies the need for the inclusion of non-traditional academic programme interventions construction management and related tertiary programmes.

Given that the TBE activities enhanced participants' skills more to a major than a minor extent, it can be concluded that non-traditional academic programme interventions can enhance skills, which is not necessarily easy to achieve in the lecture environment.

The impact of the TBE events on participants in terms of removing them from their 'comfort zone', increasing their confidence, improving their ability to communicate with peers, manage time, and complete tasks, and enhance alternative thought processes, and ability to be creative, further amplifies the role of non-traditional academic programme interventions.

The extent to which the TBE activities enhanced participants' attributes / states relative to emotional intelligence, indicates the role of non-traditional academic programme interventions in terms of addressing this need during the tertiary education process.

The extent to which participants enjoyed and benefitted from the TBE activities leads to the conclusion that tertiary education should include non-traditional academic programme interventions.

Overall, the impact should contribute to their ability to respond during employment interviews, integrate more effectively into the construction industry in terms of vacation work, and after graduation, and to fulfil a form of management function in the industry.

The TBE should continue to be undertaken on an annual basis, and the impact on participants should be assessed. Furthermore, the study should evolve into a longitudinal study and be reported on in that context to determine any trends.

The conclusions amplify the need for the inclusion of non-traditional academic programme interventions in construction management and related tertiary programmes.

Further potential events directed at enhancing students' abilities and increasing confidence in their abilities, as well as providing them opportunities to test alternative thought processes, should be investigated.

References

- Farrow, C. (2016). Correlating learning styles and student experience in a construction field lab. *Proceedings of the RICS COBRA 2016 Conference*, Toronto, Royal Institution of Chartered Surveyors.
- Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, 40(2), 350-367.
- Kamardeen, I. (2013). Motivation-driven learning and teaching model for construction education. *Australasian Journal of Construction Economics and Building*, 13(1), 36-49.
- Love, P. E. D., Haynes, N. S., & Irani, Z. (2001). Construction managers' expectations and observations of graduates. *Journal of Managerial Psychology*, 16(8), 579-593.
- Singh, S. (2004). *The Handbook of Competency Mapping*. New Delhi: Response Books.
- Smallwood, J. (2006). The Practice of Construction Management. *Acta Structilia*, 13(2), 62-89.
- Smallwood, J.J., Emuze, F. and Bloomberg, C. (2013). Emotional Quotient and Managing Construction Projects. *Proceedings of the ISEC-7 Conference 'New Developments in Structural Engineering and Construction'*, Honolulu, Hawaii, USA, 18 – 23 June 2013, 1281-1286.