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Forming powerful MBA teams using Lego architecture

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Learning objectives

This intervention will help students;

- Augment their self-confidence and be more comfortable to engage in open, reflective class discussions,
- Develop resilience by failing fast in a low stakes task,
- Accelerate the peer bonding process, and
- Experience working with ambiguity under pressure

Inspiration

Creating inspiring, interactive and educationally valuable induction activities can be challenging, particularly when your class is shoehorned into space that is just configured all wrong, student expectations are stratospheric and as module leader or programme director you just want to 'start right'.

This two to three-hour long experiential exercise using Lego Architecture has been developed and deployed successfully over four academic cycles, as part of an extended management masters degree induction programme, but could be used across most academic disciplines as a team-working activity, to offer theory in practice for a management or leadership class or be situated in an employability module as preparation for an assessment centre. The problem based learning exercise introduces students to two theoretical team-working frameworks, Belbin (Belbin, 2012) and Tuckman (Tuckman & Jensen, 1977), before challenging groups to build a plastic brick model of an unknown iconic building without any instructions. Groups are invited to use the After Action Review knowledge management technique as part of the debriefing exercise.

Ideation

The idea was inspired by Krivitsky (2011), but there are a number of other interesting pedagogic constructs available in journals (Pike, 2002; Wolz 2001; Lawhead et al, 2002) and more widely on the internet (Weedmark, 2017; Lean Simulations, 2011; Kay, n.d.), perhaps also popularised by the emergence of more creative approaches in the areas of entrepreneurship (Sohn & Ju, 2015; Bulmer, 2011) and design thinking teaching (Leifer & Steinert, 2011). However, these exercises had a strong technical focus, often in software development, and there was an opportunity to develop a wider, generic team-working focussed exercise, which is presented in this paper.

Implementation

To encourage task engagement and more profound self-reflection, the workshop might discuss, in plenary for up to 30 minutes, the applicability of Belbin's (2016) six team role summary descriptions; resource investigator, plant, teamworker, coordinator, specialist and monitor/evaluator. Students were encouraged to grasp the opportunity to try out new roles and to form diverse, often higher performing groups. They were discouraged from forming comfortable, homogeneous choices. Highlighting the university's risk-free, safe learning environment was emphasised with the mantra 'no one is getting fired today'.

Then, Tuckman's Form-Storm-Norm-Perform group evolution model (Tuckman & Jensen, 1977) was introduced (10-15 minutes) using a single visual slide. Tuckman observed groups moving through an evolutionary, stepped process from Form (group begins to establish), Storm (disagreements manifest themselves), Norm (effective communication and mediation groups begin to agree and accept new ways of working effectively together), before the group moves on to the final Perform (working effectively) stage. The MBA students were encouraged to use their new learning to organise themselves into small groups, each with four to six members, according to their business backgrounds and recent insights about their Belbin role preferences. I carefully, and in retrospect probably over emphasised to

cover my discomfort, the symbolic role being taken by the Danish company's bricks as a proxy for work. Each group was given a clear, up cycled plastic take away food box that contained one of six different Lego Architecture kits (lego.com/en-gb/themes/architecture), minus all the packaging, images, instructions and critically, the name plaque that identified the specific model. (These were stashed in a small bag at the front of the class for later, but never did anyone investigate this nirvana.) The instruction given was pared back to the extreme; "Build it", which was repeated three or four times because student body language suggested they were a little shocked with the brevity. Importantly, no other rules or information were provided, provocatively creating a feeling of uncertainty, augmented by the passive observational instructor role I chose to adopt, silently making mental notes of the discussions and activities. The set task required groups to use the plastic blocks to create a scale model of a global, iconic skyscraper from the premium priced, Lego Architecture collection; Chicago's Willis Tower, Dubai's off shore luxury hotel Burj Khalifa, Seattle's Space Needle, London's Big Ben, Paris's Eiffel Tower and New York's Empire State building. It did not matter that groups rarely got even close to completing the task. The black glazed Willis Tower, with fewer, more uniform blocks was often the most complete model. Big Ben's four, round clock face tiles usually gave away the model identity, but it also had the most bricks that required strong building design capabilities, uninhibited skills that many of us lose in early adulthood. The task was set up so groups were likely to fail, and by failing fast hopefully students would accelerate through Tuckman's four stage process, developing a keen sense of self-awareness and foster effective, open team communication.

Piling on the pressure

It was important not to allow too much time for detailed building, with the initial conceptual inputs and debriefing, this team building challenge would typically fill the majority of a half-day workshop, but could be condensed into a two-hour workshop with some pre-class preparation. To create some additional pressure after circa 25-40 minutes, a five or ten minute warning notification, shouted loudly to the groups, created a stress-inducing pivot. The majority of groups at this point were usually some way off completion, perhaps having organised all the pieces into neat piles and having iterated a few unsuccessful design options. It was instructive to observe and reflect back to students the behaviour changes that took place at this point. Initially, of course, no time limit had been given. After around an hour the exercise was stopped and students were invited in their groups to reflect for 15 minutes. This is the first step in preparing for the debrief which uses the US military knowledge management technique of After Action Review (Morrison & Meliza, 1999). This approach encourages groups to consider more and less effective behaviours and enable formal, wider (organisational) dissemination of useful learning insights. This included prompted and pointed facilitation evaluation of individual and group performance, seeking to draw out elucidations of lessons learnt and explicitly identifying what the groups would do differently next time.

The big reveal

At this stage there was usually quite a lot of casual banter in the classroom. The incomplete models created an effective centrepiece for informal photos (with prior permission) of the team members holding up their creations. Several groups had clearly failed fast, but the idea of winners and losers was de-emphasised. Students recognised that the tasks had differing levels of complexity, with two distinct phases comprising model identification and then building. A further 30-45 minutes would be used to share insights in plenary.

To encourage students to begin to feel more comfortable speaking out in class (essential for peer infused MBA learning) groups took turns to present their creations, with everyone involved. They often needed to be quite alternative and require an amusingly creative narrative to be developed. With facilitator observations gently introduced into the discussion, the groups were asked to describe their process, highlighting strengths and weaknesses. To conclude each group's presentation I would, with theatrical aplomb, reveal the relevant box, often to gasps and unknowing chuckles, without doubt providing some unadulterated edutainment to the proceedings (5 mins).

Student groups found the less well-known Seattle Space Needle the most challenging to identify and build. I had considered using the cheaper Japanese Nanoblocks (nanoblockus.com), because they have a much wider and more globally representative choice of landmark buildings, but the bricks are quite small for bigger fingers like mine and more difficult for group interactions. Some Lego Architecture models have subsequently been retired by the manufacturer and replaced by cityscapes, which would work equally well. A number of similar and cheaper model kits from other suppliers are also available.

Debriefing instructions

In plenary, by way of debriefing, I would ask the groups four reflective questions, detailed below with typical responses;

What did you learn ?

Although often quite jolly, the discussions were not in any way frivolous, for example students reflected; (1) Lego models often have spare pieces, which was confusing, (2) they valued the experience dealing with ambiguity and not knowing everything and the ability to problem solving confidence and (3) learning to trust one another.

Students gained resilience from coping with uncertainty. The exercise did not provide any form of scaffolding, or way markers, students did not know how to evaluate their performance. I would point out that this was something that is not untypical in the work place and a challenge that students often found adjusting to their university assessment requirements too.

Can you identify examples of effective behaviour(s)?

Students would often identify group members communicating effectively and introducing a different approach to the problem solving. Some participants would be recognised for their story telling.

What didn't go so well?

Failure to complete the task was often raised here, which provided an opportunity to emphasise the fail fast, safe learning objective. I would often need to explicitly link back to Tuckman and the importance of matching skills and orchestrating the team activities.

Students frequently missed the opportunity to legitimately observe and/or collaborate with the other groups (facsimile for 'market research' and 'the competition') as no anti-trust rules applied, demonstrating, often, an overly myopic task focus.

What would you, individually and as a group, do differently next time?

Ready. Aim. Fire. At this early stage in their programme groups routinely skipped the important plan and role allocation phases. Often, I found little evidence of groups putting learning into action by engaging systematically in reflective After Action Reviews, even when prompted to do so.

Although there were undoubtedly a myriad of power-status constructs in play, the lesson to think out of the box and challenge assumptions, particularly when none were stated, was powerful, particularly when linked to examples of disruptive business innovators who dare to paradigm shift.

Summary

Often with the next class clawing at the window to be allowed in, the final act was to share the big bang kicker, and the call to arms to take risks and think creatively outside the box. My closing piece: "You will remember there were no rules in this exercise. Only one group, in one cohort, has ever been cunning enough to go online with their phones and look up the freely available Lego Architecture building guides and used the step-by-step numbered building guide".

This ambiguous and at times stressful building block teaching innovation was designed to fail fast, memorably. I have, however, been delighted at its effectiveness in accelerating peer bonding and encouraging students to engage in open, reflective discussion. Blending theoretical inputs in the form of the Belbin self-evaluation, the Tuckman model and debriefing using the After Action Review exercise with a more playful series of discussions around the Lego Architecture fail fast challenge created an enjoyable and impactful team building learning encounter.

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Appendix A: Instruction list

Pre class preparation materials

- ✓ Printouts or paper handout copies of the Belbin role preferences descriptors
- ✓ Lego Architecture sets, denuded of their packaging and instructions, a range of different models, enough for one per group of 4/5 students
- ✓ A PowerPoint slide showing Tuckman's Form, Storm, Norm, Perform framework
- ✓ No student preparation is necessary

Key interventions

[Total time circa 121-181 minutes]

[5 mins] Explain the structure of the class and present the Belbin framework.

[5 mins] Hand out or show the Belbin role preference descriptor summary.

[10-20 mins] Invite students to consider which of the team working roles they can identify for themselves. Sometimes two or three roles might be identified. Encourage consideration of roles that are uncomfortable and discuss how university is a safe place for relatively risk free learning.

[10-15 mins] Introduce the Tuckman model using a single visual slide, with some time set aside for student questions and plenary discussion.

[up to 10 mins] Encourage students to organise themselves into groups of 4-6 members in light of their experience and Belbin role preferences.

[5 mins] Give each group an anonymised kit and invite them to "Build it".

[25-40 mins] Instructor silently observes groups, making notes. Do not provide any further guidance. Students work in groups to attempt to identify what they are being asked to build and then attempt to build it.

[5-10 mins] Facilitator shouts loudly "Five minutes left" and look out for different (stressed) behaviours. Observe for approximately 10 minutes before calling the build phase to a close.

[15 mins] Invite groups to reflect amongst themselves using the After Action Review process.

[5-10 minutes] Take photos of student groups with their creations (with prior permission) and theatrically 'reveal' each group's model. Start with the easiest/most complete models first, building tension until the most difficult/least complete builds.

[30-45 mins] Discuss debriefing exercise questions in plenary

- What did you learn?
- Can you identify examples of effective behaviour(s)?
- What didn't go so well?
- What would you, individually and as a group, do differently next time?

[5 mins] Ask groups to break up their models and return all the parts to their boxes and give them back.

[1 min] Close the session with the kicker "You will remember there were no rules in this exercise. Only one group, in one cohort, has ever been cunning enough to go online with their phones and look up the freely available Lego Architecture building guides and used the step-by-step numbered building guide".