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672 How Lego® Serious Play® supports team building through the creative coproduction

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ABSTRACT

This case study paper will describe the process and underlying theory behind the use of Lego® Serious Play® (LSP) being used to develop a shared vision and real time strategy for the Translating Evidence to Enhance Maternal-newborn care: Knowledge Translation (TEEM-KT) team. LSP draws on a range of theories around reflection, externalising thoughts and making tangible alongside the actual building of metaphors as a means of sharing and developing complex ideas. These theories will be discussed further in the paper in light of the authors previous work around knowledge mobilization and particularly creative practices in knowledge mobilization. In the case study described, there were 20 participants including the team lead and Research Fellow and the session was delivered by two LSP trained facilitators.

The methods were drawn from the LSP canon with preliminary skills building followed by a series of questions prompting participants to build and share. This process explored personal then collective perspectives about the current team then a vision for 3 years in the future. Short evaluation questionnaires were filled in before and after the session by all participants, asking about expectations and then how the workshop had addressed those expectations. Other results were in the form of the individual and shared models that were created and described by the teams.

Whilst LSP has been used extensively in the Business world, the authors feel it has much to offer in the world of health, not only in team and strategy building but in the broader endeavours of knowledge mobilization. It is an example of creative co-production and addresses and evidences many of the challenges of coproduction identified in the health literature.

Keywords: Lego Serious Play, Knowledge Mobilization, Play, Strategy



Introduction

The 2010 UK National Health Service staff survey identified that over 90% of individuals reported they work as part of a team., but of these only 75% claimed they had a had a set of shared objectives (Care Quality Commission 2010). West (2013) argues that without this shared understanding teams exist in name only. This area provides a space in which to explore how to achieve these shared objectives and allows for the application of creative practices drawn from the design in health literature. In previous work the authors have explored the potential of creative methods in enabling the coproduction of knowledge (Cooke et al. 2016). One approach that has been used explicitly in the team context (and largely industry) is Lego® Serious Play® (LSP). We will explore the LSP approach further in the background. The team in question was already exploring Knowledge translation and using the embedded researcher approach espoused by Integrated Knowledge Translation (Gagliardi et al. 2016), and were keen to use methods to enhance coproduction of an understanding of where the team was now and where it wanted to be in 3 years. This paper will describe the application of LSP to achieve this shared understanding, its results and how the approach was received by the participants.

Background

LSP is a methodology or innovation tool originally developed by Lego®. It focuses on enabling all participants to contribute, on using construction as a way of making sense or learning (from Papert's constructionist principal –1991) and on the use of physical metaphors to aid communication of complex ideas. According to Gourlay (2002) it engages the participants on a level playing field, removes jargon, unlocks unconscious knowledge and makes knowledge and ideas tangible. Alison James discusses some of the underpinning theories of LSP in her report 'Innovative Pedagogies Series: Innovating in the Creative Arts with Lego' (James 2015). Using LSP, the Lego® innovation team included all Lego® employees in their internal innovation process. They used this to innovate products, services, and organizational structure. Later, after experiences, refinements, and anecdotal evidence of its success internally, Lego® offered the LSP method as a service to other commercial organizations.

Within a Healthcare landscape, the use of LSP has largely been restricted to a corporate training tool for CEOs and senior clinical academics or managers. There are very few examples of LSP use in Health Research or Innovation.

Teem KT

TEEM-KT was established in 2016 to support the translation of evidence into practice as part of the Women's and Newborn Health Program at the IWK Health Centre. The goal of TEEM-KT is to uncover effective knowledge translation (KT) interventions that support both healthcare providers'



and system users' behaviour change in the Maternal Newborn setting of the IWK Health Centre (IWK). This behaviour change will support the uptake and use of research evidence.

TEEM-KT has shared values of safety, trust, and respect. We influence one another through mentoring, knowledge, fun, and learning in a context where education, research, leadership, and clinical practice impact health and enhance practice. Similar to the principles of Practice Development, team members describe TEEM-KT as a research program that 'allows for networking with fellow peers, graduate students, consumers, and experts in the field. TEEM-KT increases understanding of what roles these people play in research and informs ways of working together'.

Method

The LSP workshop ran for a full day on the 21st of Oct 2017 in Dalhousie University, Halifax, Canada. There were 20 participants and 2 facilitators (authors 1 and 3) each taking a group of 10 participants. The participants were purposively recruited by the TEEM KT lead. They were divided into the two groups ensuring as much diversity of discipline and background as possible in each group. The workshop activities across the two groups were identical.

The process of LSP is 'build and share', at each stage all participants build a model in response to a question and then share a description of their model. The facilitator draws out further expansions on this by asking about meaning attributed to specific physical features of the models. For the 'Big Questions' an additional activity occurs. After building and sharing a model, participants have to identify the key piece of their model that is central to their understanding or belief about the question. This piece is then placed in the centre of the table, and through a process of negotiation a shared model encompassing every individuals piece is created. This model is not a consensus model, but something all contributors can live with and is true to each and everyone's contribution. This ensures that when the shared model is described everyone can see and have their contribution recognised.

All participants were asked to complete a short questionnaire before and after the workshop. The responses to these questions were transcribed and summarized. The responses were not linked to the participant, so no trends across different levels and types of staff could be explored, they were also not linked pre and post so we are unable to say how the process effected individuals directly. As a result of these limitations we are presenting a content analysis rather than a thematic analysis (Hinds and Vogel 1997), where we will report the range of responses rather than any deeper exploration of underpinning themes. To allow the reader to experience and interpret some of the responses we will also visualise some of the responses to questions in the form of words clouds using participant's own responses verbatim.

Results

The results will be discussed in two sections: the outputs of the workshop, the shared models and understanding gained from the LSP process followed by the pre and post evaluations.

Outputs from workshop: The two 'big questions'

Participants were asked to respond to the statement 'describe what TEEM-KT is to you?' LSP questions work better when they are broad and asking for a personal perspective as it allows participants to explore a broader range of responses, has no wrong answers and build metaphors rather than a model that responds to a certain requirement. After building and sharing the first model they responded to 'describe how people outside this team see TEEM-KT'.

As described above there followed a process of Negotiating a shared model that describes 'what TEEM-KT is now' using the key piece of either the internal or external perspective models already built.



Fig.1 Group 1 image of now, keywords: *opportunity, academia, innovation, women's health, noise*



Fig 2. Group 2 image of now, keywords: *teamwork, goal: improvement, connections, unaware, viewpoint*

The two 'now' models both contained self-critical elements such as 'barriers' and 'screens' between team members and between the team and others outside. These are picked up and expressed in the key words 'unaware', 'viewpoint' and 'noise'; noise being a reference to a dismissive description of the work going on in TEEM-KT by some outsiders. They also contained critical reflections on the systemic structures within which they worked as

expressed by the keyword 'Academia' depicted by the black structure at the top edge of the grey plate in figure 1. Academia was described as both a negative and positive factor in this image of TEEM-KT now.

The participants saw their subject matter (Maternal and Newborn health) and their own gender (all women) as a real strength of TEEM-KT. They were proud of being mothers themselves and successful women, academics and clinicians. They believed their gender gave them strengths in their teamwork and peer to peer support, captured in the keyword 'Women's Health' depicted by the two colorful and creative towers bridging the blue and grey plates in figure 1.

They also expressed a very clear purpose or goal in the key words 'innovation' and 'improvement'. These broadly captured notions of knowledge translation or 'getting research used' but at the same time encompassed a slightly messier, incremental reality to this.

Finally, there was an expression of a couple of the mechanisms by which TEEM-KT worked in the key words 'opportunity' and 'connections'. It was seen as an important element of the work TEEM-KT did to make personal connections and to seize opportunities.

The second 'Big question' was to build a model to describe 'what TEEM-KT should look like in 3 years'. This again was built as individual models, shared and then the key piece identified. The process of Negotiation into a shared model followed with the models and keywords below

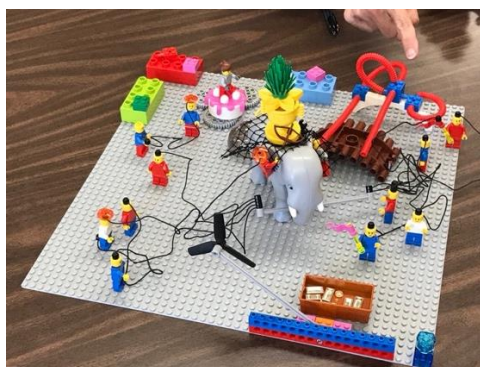


Fig. 3 Group 1 image of 3 years time, keywords: *sustainable, diffusion, impact, collaboration, vision*

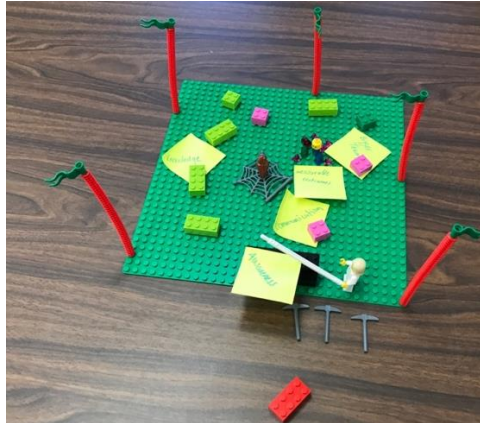


Fig 4. Group 2 image of 3 years time, keywords: *knowledge, awareness, communication, measurable outcomes, bigger team*

The two models of '3 years' contained practical details of what would have to be done to allow TEEM-KT to still be there in 3 years. For example, '*communication, measurable outcomes, impact, bigger team*'. There was a recognition that being able to communicate the clear vision for the team both internally and externally was central to the ongoing success of the collaboration in '*vision*' and '*awareness*'. These goals were to be taken forward in subsequent practice development work by TEEM-KT.

Pre-post evaluation:

1. What are your expectations for the day?
A range of responses in two broad areas, one having no idea what was going to happen and therefore little or no expectations and the other hoping it would be a fun and engaging, 'Have fun! Laugh a lot! Learn! Build relationships! Create a shared vision for research!'
2. How are you feeling at the beginning of the day?



Fig 5 word cloud of participants' feelings at the beginning of the day

3. What do you think about Lego as a team building exercise?

There were a range of responses some very positively disposed to the idea of using Lego, 'I love Lego, so it has to be good' to others who had a more considered response and were interested to see how the day would pan out.

After the workshop a further set of questions were asked.

1. Did this day meet your expectations?

13 of the respondent said that the day met or exceeded their expectations, the only cautious responses were around the form of the outputs for the day and how the learning would be taken forward, 'In part- was hoping to have more concrete actions forward. Great for building relationships with others.'

2. How are you feeling at the end of the day?



Fig 6: word cloud of participants feelings at the end of the day

3. What went well today?

Participants reflected that the chance to work together facilitated with tools that ensured everyone could contribute was very powerful, 'Able to go beyond self and focus clearly on others ideas as well as my own- Great sharing'

4. What could be improved upon?

Participants responded to say they wished the day had been a little shorter, and that there had been the opportunity for the two groups to be mixed up throughout the day.

5. What do you think about Lego as a team building exercise?

Respondents were universally positive, although some more cautiously so, many reflected that it could have other applications outside of the team building purpose of the day, 'Actually makes me wonder what other applications are possible.'

Discussion



We have described the outputs of the LSP workshop that was set up to support building a shared vision and goal for an innovative research grouping. Participants appeared to agree that the workshop had allowed this to happen, but we have to recognize some caveats around the success in this specific case, before considering the approach more broadly.

The pre-workshop evaluation data appears to demonstrate either a general reservation of judgement or that participants approached the day expecting the process to be 'fun'. There was also curiosity to see how Lego, which many people know predominantly as an enjoyable and expensive toy, would be used in a work setting. Even though as facilitators authors 2 and 3 are mindful to use the full title Lego Serious Play, few participants believe that it will be serious, and so this can set up a bit of a mismatch of expectations (James 2015).

The issue of outputs and next steps has been noted by the facilitators previously, and a range of approaches applied to capture the learning from workshops. This point has not been commented on in other literature about the use of LSP in business or in teaching and therefore maybe unique to academics associated with their need to document, record and report; 'knowledge can only exist if it is written down', 'something only happened if it is written down' In this case the shared models were photographed and participants encouraged to write post-its of their key themes. This doesn't really sit comfortably with the capture of rich and complex understanding gained from the metaphors and descriptions thereof. Subsequent workshops have used video to record the visual and audio descriptions of shared models, these are edited, curated and shared back to all participants for a prompt to both remember and provoke further reflection.

The length of LSP workshops continues to be a contentious. It is a compromise between allowing the workshop to get to the output stage against the emotional labour of participating in the workshop. The tiredness seems to come from people having to think, and listen in very different ways to their normal day (James 2015). We have had more success splitting the workshop over two days.

The engaging nature of the media and the process along with its approach to inclusion and valuing all perspectives was appreciated by the group both in the context of their own team and in their insights into how it might be usefully applied in other areas.

The recognition that LSP might have other uses outside of team building or real time strategy is not new, and is in fact the reason author 3 first commissioned the training. We are building up a range of case studies of the approach which will be addressed in subsequent papers.

Conclusion

As mentioned in the introduction authors 1 and 3 are largely concerned with the processes that are described as knowledge mobilization, and see LSP as a powerful method for sharing knowledge eliciting tacit personal, organizational and system knowledge and blending knowledge between stakeholders (Kristiansen, Hansen, and Nielsen 2009).



Knowledge mobilization used to be about getting (largely) research knowledge in the form of the outputs of research, into practice. This was described as mode 1 knowledge mobilization or knowledge transfer and suggested that the only thing stopping research being used in healthcare was a lack of awareness of the 'right' thing to do (McCormack et al. 2002). This conceptualization has moved forward to mode 2 which is about trying to bring different forms of knowledge (e.g. Research, tacit, Know-how) together in new shared understandings to deliver benefit for all stakeholders in health with an explicit recognition of the importance of context. Mode 2 preferences a broader range of types of knowledge, recognising that what is important is not just the 'how' but the 'how we do it here' aspects of experiential knowledge (Rycroft-Malone et al. 2016). In this paper we refer to Mode 2 as coproduction.

Coproduction is not straightforward to achieve and, in her paper, Greenhalgh sets out factors that have to be in place for successful co-creation to take place, namely;

'a systems perspective, a creative approach to research focused on improving human experience, and careful attention to governance and process.' (2016, 392)

In previous work the authors have described how through 'making' many of these conditions are satisfied (Cooke et al. 2016), and one of the exemplars of these approaches was LSP. We would argue that LSP encourages a broader, systems type view across issues by enabling all stakeholders to have equal input into the exploration and by eliciting some of the tacit system knowledge that different stakeholders unconsciously possess. Creativity and the careful attention to governance and process are enshrined in the LSP approach and through making thoughts and feelings tangible through physical metaphors, allows a different relationship with one's self and with others.

This ability to develop a shared understanding, through mobilising different forms of knowledge allowing a real time synthesis, responds to West's challenge to teams and speaks to a broader application of such methods to other aspects of design and health research and practice.

References

- Care Quality Commission. 2010. "BRIEFING NOTE: ISSUES HIGHLIGHTED BY THE 2010 NHS STAFF SURVEY IN ENGLAND."
http://webarchive.nationalarchives.gov.uk/20110504151259/http://www.cqc.org.uk/_d_b/_documents/NHS_staff_survey_nationalbriefing_final_for_DH.pdf.
- Cooke, Jo, Joe Langley, Dan Wolstenholme, and Susan Hampshaw. 2016. "Seeing; the Difference: The Importance of Visibility and Action as a Mark of Authenticity in Co-Production Comment on; Collaboration and Co-Production of Knowledge in Healthcare: Opportunities and Challenges;" *Int J Health Policy Manag* 5: 1–4. doi:10.15171/ijhpm.2016.136.
- Gagliardi, Anna R, Whitney Berta, Anita Kothari, Jennifer Boyko, and Robin Urquhart. 2016. "Integrated Knowledge Translation (IKT) in Health Care: A Scoping Review." *Implementation Science* 11 (1). Implementation Science: 38. doi:10.1186/s13012-016-0399-1.
- Gourlay, S.(Kingston Business School. 2002. "Tacit Knowledge , Tacit Knowing or Behaving ?" In *The Third European Conference on Organizational Knowledge, Learning and Capabilities (OKLC 2002)*, 1–24. Athens, Greece. doi:10.1109/EMR.2003.1267012.
- Greenhalgh, Trisha, Claire Jackson, Sara Shaw, Tina Janamian, Greenhalgh T., Jackson C., and Shaw S. 2016. "Achieving Research Impact Through Co-Creation in Community-Based Health Services: Literature Review and Case Study." *Milbank Quarterly* 94 (2): 392–429. doi:10.1111/1468-0009.12197.
- Harel, Idit., Seymour. Papert, and Massachusetts Institute of Technology. Epistemology & Learning Research Group. 1991. *Constructionism: Research Reports and Essays, 1985-1990*. Ablex Pub. Corp.
- Hinds, PS, and RJ Vogel. 1997. "Possibilities and Pitfalls of Doing a Secondary Analysis of a Qualitative Data Set." *Qualitative Health*, 408–24.
<http://qhr.sagepub.com/content/7/3/408.short>.
- James, Alison. 2015. "Innovative Pedagogies Series: Innovating in the Creative Arts with LEGO." *Transforming Teaching; Inspiring Learning*.
- Kristiansen, Per, Poul H. Kyvsgård Hansen, and Louise Møller Nielsen. 2009. "Articulation of Tacit and Complex Knowledge." Eidgenössische Technische Hochschule Zürich, Laboratorium für Lebensmittel-Verfahrenstechnik.
[http://vbn.aau.dk/en/publications/articulation-of-tacit-and-complex-knowledge\(81304a00-e94e-11de-b63d-000ea68e967b\).html](http://vbn.aau.dk/en/publications/articulation-of-tacit-and-complex-knowledge(81304a00-e94e-11de-b63d-000ea68e967b).html).
- McCormack, B, A Kitson, G Harvey, J Rycroft-Malone, A Titchen, and K Seers. 2002. "Getting Evidence into Practice: The Meaning of 'Context.'" *J Adv Nurs* 38. doi:10.1046/j.1365-2648.2002.02150.x.
- Rycroft-Malone, Jo, Christopher R Burton, Tracey Bucknall, Ian D Graham, Alison M Hutchinson, and Dawn Stacey. 2016. "Collaboration and Co-Production of Knowledge in Healthcare: Opportunities and Challenges." *Int J Health Policy Manag* 5 (54): 221–23. doi:10.15171/ijhpm.2016.08.
- West, Michael A, and Joanne Lyubovnikova. 2013. "Journal of Health Organization and



Management Illusions of Team Working in Health Care." *Journal of Health Organization and Management* 27 (110): 134–42.
<https://doi.org/10.1108/14777261311311843>.