RESEARCH WORKING PAPER SUBMISSION

TITLE

Team optimisation

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INTRODUCTION

In today's fast paced environment organizations move away from a traditional hierarchical structure and incline toward a team-based structure. A recent study indicates team interactions and communications have increased by 50% over the last two decades, which for many companies, means more than three-quarters of an employee's day (Cross, Rebele, & Grant, 2016). Global trends are also changing the face of teams with the rise of new forms of teams such as Virtual, Cross-functional, Fluid, and Swift starting action teams (STATs). The complexity of the new forms of teams warrant further consideration into the effective management of these teams in order to achieve maximum efficiency.

The aim of the research is to improve the effectiveness of feedback giving and receiving within teams to improve both team wellbeing and performance by using information technology-mediated peer feedback processes. The proposed process will be adapted from a process called "peer assess pro" which is currently used in the education sector. There are over 65 educators worldwide who use the Peer Assess Pro tool as part of their Team-Based Learning pedagogy or as a method to determine individual scores from team-based assessments. The current tool provides a platform to explore further, how feedback can be used in work-based teams.

LITERATURE REVIEW

Team research dates back a half a century ago and discusses variables that contribute to team performance (Ellis, 1979; Helms & Wyskida, 1984; Naylor & Dickinson, 1969; Paris, Salas, & Cannon-Bowers, 2000; Walker, 1973; Wheelan & Krasick, 1993). However, new features of teams in the digital era adds another layer of complexity to the problem at hand. Studies into virtual teams (Lipnack & Stamps, 1999) Cross-functional teams (Aime, Humphrey, DeRue, & Paul, 2014), Fluid team (Schreyögg & Sydow, 2010), Swift starting action teams (STATs) (Wildman et al, 2012), and Cheetah teams (Engwall & Svensson, 2001) suggest that new forms of teams warrant new approaches to managing and organising teams.

There is a common understanding amongst scholars that the interpersonal process is the key driver of team performance as evident in most models of team and workgroup effectiveness. Furthermore, the self-organising nature of modern teams requires team members to sustain and enhance performance via direct or indirect feedback loops. Peer evaluation and feedback as a structured process has been used in a range of settings to improve awareness, gauge interpersonal skills, and encourage professional behaviour (Levine, 2012).

The concept of using feedback to inform and enhance individual performance and engagement has been around for more than two decades. The importance of peer feedback in improving the effectiveness of teams has been well established in tertiary teaching and learning (Brutus & Donia, 2010; Brutus et al., 2013; Mayo et al., 2012). Studies found increased rates of group sharing, cooperation, and team performance increases if students know that their performance on a group project is going to be evaluated by their peers (Erez, LePine, and Elms 2002).

Outside of tertiary education literature, the body of knowledge focusing on 360-degree feedback is another source that offers an understanding of the variables and criteria that make the feedback process beneficial in improving performance, developing talent and leadership, and aligning expectations (Bailey & Austin, 2006; Bracken, Rose & Church, 2016; Day et al, 2014). Scholars also discuss pitfalls that would lead to counter effect if inappropriate processes and interventions are used (Church, et al, 2018; Heen & Stone, 2014). However, the existing 360-degree feedback body of knowledge does not specifically address the requirements of temporary organisations (Lundin & Söderholm, 1995) and teams. Accordingly, proposed interventions do not directly influence the team performance and the feedback process cannot replace hierarchical management structure.
Some of these challenges are commonly known in student teams; for example team members who work independently rather than collaboratively, poor communication, conflict, differences in team-members' skills, motivation, and goal levels, and free riding or social loafing (Burdett, 2003; Felder & Brent, 2007; Verzat, Byrne, & Fayolle, 2009). Indeed student projects were an excellent laboratory to explore and understand the knowledge-based teamwork phenomenon. The existing Peer Assess Pro tool was developed through several years of iteration and research and it is showing great potential to improve team effectiveness, which makes it a great starting point for the proposed tool.

RESEARCH QUESTIONS

We expect to answer the following research questions

- What barriers to giving and receiving feedback in team situations exist?
- To what extent can information technology-mediated peer feedback processes overcome the barriers and improve the effectiveness of team wellbeing and development?
- How can information technology-mediated peer feedback processes be designed and utilised productively to mitigate extreme team member behaviours, such as social loafing, self-seeking, domination and leaderlessness?
- What is the extent of a commercial market for an advanced information technology app and related support services that responds to the needs identified in the foregoing questions?

METHODOLOGY

The action research method is used to enable the tool to be refined continually in response to feedback from stakeholders (Sankaran and Dick, 2015). Furthermore, the continual feedback process inherent in project work is aligned with the cyclical nature of action research. (Gibson, 2004). The peer feedback tool is 'intervention' to a situation (teamwork) and the study is seeking to assess some outcome (team performance). There are several advantages to using the action research methodology; Key advantages are:

- Input from key stakeholders and users
- Co-creation of solutions to actual problems
- Learn as we test, recalibrate and evolve prototype solutions

Action research has been used successfully in human resources (Cappelletti & Baker, 2010; Doherty & Norton, 2013; Huang & Martin-Taylor, 2013; Ulhøi & Stjernholm Madsen, 2005); as well as project management (Algeo, 2014; Takey and Carvalho, 2015; Duffield and Whitty, 2016) to develop and/or enhance intervention tools.

Currently, we are negotiating to collaborate with few industry partners who are using Agile team to conduct the action research. We intend to use the latest version of the Peer Assess Pro tool as part of their existing practice (e.g. retrospective meetings). Researchers will conduct observation and will use all feedback and project documentation throughout the duration of the project or the cycle.

Findings expected to enrich our understanding of Team dynamics and the role of peer feedback in informing and enhancing individual performance and engagement.

REFERENCES

Aime, F., Humphrey, S., DeRue, D. S., & Paul, J. B. (2014). The riddle of heterarchy: Power transitions in cross-functional teams. Academy of Management Journal, 57(2), 327-352. doi:10.5465/amj.2011.0756

Algeo, C., 2014. Exploring project knowledge acquisition and exchange through action research. Project management Journal 45 (3), 46–56.

Bailey, C., & Austin, M. (2006). 360 Degree Feedback and Developmental Outcomes: The Role of Feedback Characteristics, Self- Efficacy and Importance of Feedback Dimensions to Focal Managers' Current Role. International Journal of Selection and Assessment, 14(1), 51-66.

Bracken, D., Rose, D., & Church, A. (2016). The Evolution and Devolution of 360° Feedback. Industrial and Organizational Psychology, 9(4), 761-794. doi:10.1017/iop.2016.93

Brutus, S., & Donia, M. B. (2010). Improving the effectiveness of students in groups with a centralized peer evaluation system. Academy of Management Learning & Education, 9(4), 652-662.

Brutus, S., Donia, M. B., & Ronen, S. (2013). Can business students learn to evaluate better? Evidence from repeated exposure to a peer-evaluation system. Academy of Management Learning & Education, 12(1), 18-31.

Burdett, J. (2003). Making groups work: University students' perceptions. International Education Journal, 4(3), 177-191.

Cappelletti, L. G., & Baker, C. R. (2010). Developing human capital through a pragmatic oriented action research project. Action Research, 8(2), 211-232. doi:10.1177/1476750309349976

Church, A. H., Dawson, L. M., Barden, K. L., Fleck, C. R., Rotolo, C. T., & Tuller, M. (2018). Enhancing 360-Degree Feedback for Individual Assessment and Organization Development: Methods and Lessons from the Field Research in Organizational Change and Development (pp. 47-97): Emerald Publishing Limited.

Cross, R., Rebele, R., & Grant, A. (2016). Collaborative overload. Harvard Business Review, 94(1), 16.

Day, D. V., Fleenor, J. W., Atwater, L. E., Sturm, R. E., & McKee, R. A. (2014). Advances in leader and leadership development: A review of 25 years of research and theory. The leadership quarterly, 25(1), 63-82.

Doherty, L., & Norton, A. (2013). Making and measuring "good" HR practice in an SME: the case of a Yorkshire bakery. Employee Relations, 36(2), 128-147. doi:10.1108/ER-02-2013-0017

Duffield, S., Whitty, S.J., 2016. How to apply the systemic lessons learned knowledge model to wire an organisation for the capability of storytelling. International Journal of Project Management 34 (3), 429–443.

Ellis, L. W. (1979). Effective use of temporary groups for new product development. Research Management, 22(1), 31-34.

Erez, A., Lepine, J. A., & Elms, H. (2002). Effects of rotated leadership and peer evaluation on the functioning and effectiveness of self- managed teams: A quasi-experiment. Personnel Psychology, 55(4), 929-948.
Felder, R. M., & Brent, R. (2007). Cooperative learning.
Järvinen, P. (2007). Action research is similar to design science. Quality & Quantity, 41(1), 37-54.
Heen, S., & Stone, D. (2014). Find the coaching in criticism. Harv Bus Rev, 108-111.
Helms, C. P., & Wyskida, R. M. (1984). A study of temporary task teams. IEEE Transactions on Engineering Management(2), 55-60.
Huang, J., & Martin-Taylor, M. (2013). Turnaround user acceptance in the context of HR self-service technology adoption: an action research approach. International Journal of Human Resource Management, 24(3), 621-642. doi:10.1080/09585192.2012.677460
Levine, R. E. (2012). Peer evaluation in team-based learning. Team-Based Learning for Health Professions Education: A Guide to Using Small Groups to Improve Learning, 103-116.
Lipnack, J., & Stamps, J. (1999). Virtual teams: The new way to work. Strategy & Leadership, 27(1), 14-19.
Lundin, R. A., & Söderholm, A. (1995). A theory of the temporary organization. Scandinavian Journal of management, 11(4), 437-455.
Mayo, M., Kakarika, M., Pastor, J. C., & Brutus, S. (2012). Aligning or inflating your leadership self-image? A longitudinal study of responses to peer feedback in MBA teams. Academy of Management Learning & Education, 11(4), 631-652.
Naylor, J. C., & Dickinson, T. L. (1969). Task structure, work structure, and team performance. Journal of Applied Psychology, 53(3p1), 167.
Paris, C. R., Salas, E., & Cannon-Bowers, J. A. (2000). Teamwork in multi-person systems: a review and analysis. Ergonomics, 43(8), 1052-1075.
Romm, N. R. (2018). Responsible research practice: Revisiting transformative paradigm in social research. Springer.
Schreyögg, G., & Sydow, J. (2010). CROSSROADS—Organizing for Fluidity? Dilemmas of New Organizational Forms. Organization Science, 21(6), 1251-1262. doi:10.1287/orsc.1100.0561
Takey, S.M., Carvalho, M.M., 2015. Competency mapping in project management: an action research study in an engineering company. Journal of Porject Management 33 (4), 784–796.
Ulhøi, J. P., & Stjernholm Madsen, A. (2005). Technology innovation, human resources and dysfunctional integration. International Journal of Manpower, 26(6), 488-501. doi:10.1108/01437720510625412
Verzat, C., Byrne, J., & Fayolle, A. (2009). Tangling with spaghetti: Pedagogical lessons from games. Academy of Management Learning & Education, 8(3), 356-369.
Walker, T. G. (1973). Behavior of temporary members in small groups. Journal of Applied Psychology, 58(1), 144-146. doi:http://dx.doi.org/10.1037/h0035327
Wheelan, S. A., & Krasick, C. L. (1993). The emergence, transmission, and acceptance of themes in a temporary system of interacting groups. Group & Organization Management, 18(2), 237-260.
Wildman, J. L., Shuffler, M. L., Lazzara, E. H., Fiore, S. M., Burke, C. S., Salas, E., & Garven, S. (2012). Trust development in swift starting action teams: A

BIO

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Maryam is a lecture in Operations Management at Unitec Institute of Technology. She has a B.Sc. in Industrial Engineering and MPhil in Project Risk Management. Her PhD research at Victoria Business School was focused on Project Management. In addition to her

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Craig has been the HR Head in large businesses before recently becoming a People and Culture full-time Lecturer with Unitec in 2018:

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