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Research Article

The Usefulness of an Agile Methodology to Underpin a Public Engagement Activity -

Fern Todhunter*

University of Nottingham Faculty of Medicine and Health Sciences, School of Health Sciences, B Floor, South Block Link, Queen's Medical Centre, Nottingham

***Address for Correspondence:** Fern Todhunter, University of Nottingham Faculty of Medicine and Health Sciences, School of Health Sciences, B Floor, South Block Link, Queen's Medical Centre, Nottingham, NG7 2HA, Tel: +44 (0)-115-823-0945/+44 (0)-115 -823-1211;
E-mail: fern.todhunter@nottingham.ac.uk

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ABSTRACT

This conceptual paper reports on a synthesis of agile methodologies to plan, organise and deliver a health focussed public facing event held at a United Kingdom University. The scope of this work shows the opportunities for nursing, midwifery and physiotherapy educationalists, students, practitioners and expert service users to effectively collaborate beyond their usual settings. Agile is a way of working which offers flexibility in planning, decisions and actions. A review of the literature highlights its popularity with large organizations where uncertainty is predominant. In contrast, the absence of proven integrity has attracted criticisms of its adoption. The opening section sets out the characteristics of an agile method. This precedes application of two specific frameworks and the reported outcomes. The evidence shows the value of agile to underpin project design and management.

Keywords: Agile Methods; Project Management; Team Work; Reflection; Interaction

ABBREVIATIONS

UK: United Kingdom; DNA: Deoxyribonucleic Acid

INTRODUCTION

The adjective agile conjures up movement and responsive action. In this paper its dexterous features show its transferability from what can be seen as observable physical elements, to an ontological way of working through reflective thoughts and dialogue. An agile method is an iterative structure whose flexibility enables incremental changes at any stage of a project. The core principles are the emphases on human interaction, contextual knowledge and the required skills sets to plan a project's journey and deliver a successful outcome. Projects benefit from structured plans, but these may be linear in design with little wriggle room for deviation. An agile approach offers a project leader and their team the opportunity to review, revise and re-direct decisions and actions at any given time. These attributes are recognisable to healthcare practitioners when planning and revising a programme of care. In sum agile describes the reflective processes that conscientious designers will consider before, during and after development. Agile does not offer solutions to errors, but the engagement processes do help the prevention of mistakes before they occur.

ORIGINS AND EMERGENCE OF AGILE

Originating from the Japanese networking culture and lean manufacturing processes in the late 20th century [1], the concept of agile offered a critical review of workforce hierarchies and levels of efficiency and competent production. In contemporary organizations there is a required dexterity for success in markets subject to change and unpredictability. This is a workforce that can respond to change, with good communication at all levels, engage in professional development and implement a distributive leadership approach. The first citation is an example of how the application of these principles actively support responsive and evolving organizations' approaches towards their goals [2]. For the project lead the personal outcomes are both cognitive and behavioural; understanding the immediate and wider context, valuing human contribution and team effort, and post-project reflection on success for future activities [3-4]. For the agile team it is important that each member understands both their roles and those of their partners [5]. Agile applications therefore require lateral cross-sectional consideration rather than linear thinking. At the heart of agile are opportunities for dynamic adaptation and the ability to cope with changes in timely manner.

Agile methods are well established in industry, business, commerce and the information sectors [6-7], and in healthcare and higher education [8-10]. An agile method is the choice for public facing projects which reflect the design and development of an idea

into a completed product. Projects involving the general public require care and attention to a wide range of issues such as risk assessment and a safe environment. The agility embeds the notion of constant review of progress, but with enough flexibility to allow for innovative thinking, problem solving and critical reflection. In industry, the agile paradigm commences with the premise that the customer has a clear idea of the outcome and the product design. In healthcare, the versatility of an agile method at different and often complex organizational levels, is a competent way to review and revise need against available provision. For example, seasonal responses to health need require altered decisions and actions for patient care. Crucially the iterative characteristic supports synchronisation of the range of actions and the time frame for delivery. Blake and Gartshore's [10] study of healthcare workplace wellness shows the iterative structure of agile for emergent planning and responses. The philosophy of agile reflects people-management soft skill sets of interaction, teamwork, trust, openness and honesty. Agile is therefore dependent on the willingness of the team to engage, adapt and change direction. Studies emphasizing the value of agile soft skills [11-12] show their transferability across a range of contexts. In higher education, disciplines such as nursing, midwifery, medicine and physiotherapy incorporate soft skills into teaching and learning about professional accountability and responsibility. This is especially important as students on these courses will be working with vulnerable populations whose circumstances are often uncertain and subject to change.

Agile is not without its critics. In agencies where tasks and rule-following lead to precise outcomes, the introduction of opportunities for individual interpretation creates uncertainty [13]. The transient conditions of agile and its distributed opportunities do not sit well in rigid organisational mind-set custom-and-practice cultures [14]. The scientific effectiveness of agile is at best based on empirical persuasion. Established literature casts some reasonable doubt on the conceptual leaps and uncertainties that an agile structure creates [15]. A more recent criticism has been levelled at its single application to team work and collaboration [16]. This is to disadvantage those where the creative genre and productivity emerges through solitude and isolated practice.

APPLICATION OF AGILE

The citations reflect long term initiatives, multiple directions and cultural shifts in ways of working. The attraction of agile for this project was its culture of Blake and Gartshore's [10] model of a 360-degree rotational, horizontal and vertical thinking, planning and doing (See figure 1). Human factors such as reflection, organisation, communication and attitudes are crucial for a successful project outcome. In an increasing competitive market, Universities need to consider innovative ways to engage with future learners. The

Agile Factors Birkinshaw (2012)	Application	Agile Direction Blake and Gartshore (2016)
Using peripheral vision	Assessment of insurance and indemnity Marketing the event Securing corporate signage Engaging with procured suppliers Liaising with the Estates team on location and space Risk assessment activity	
Encourage dissent	Invitation for innovative ideas Encouraging ongoing review and appraisal Recognising and developing new expertise in the student volunteers	
Experiment	Balancing demonstration of professional competence with public hands-on activities for health conditions and circumstances Selection of a marquee to promote an 'Event in a Tent' as an alternative to a building.	
Simplify and flatten	Recognition of different types of expertise and experience, irrespective of staff grade and student status Dissemination of actions and decisions records Openness and transparency Training for Student Ambassadors to lead and showcase their emerging knowledge and skills	
Act quickly and active waiting	Working with procured suppliers Securing funding to underwrite the event	

Figure 1: Synthesis of Blake and Gartshore's and Birkinshaw's Agile Frameworks.

organisation of a wide-scale public engagement event requires careful consideration about a range of situations using the above facets.

The 2017 University of Nottingham Wonder Fun Day took place on the campus in June with 7,000 people visiting the events. One of the main attractions was the School of Health Sciences' Making a Difference to People's Lives' marquee. The School is situated within the Faculty of Medicine and Health Sciences. As a provider of courses for Nursing, Midwifery and Physiotherapy and Rehabilitation Sciences, our student population is drawn from across the globe. Our world-class practice-driven learning reflects professional accountability and public expectations from the outset. Showcasing excellent teaching and learning triggers not only interest in higher education aspirations, but also public trust in our governance-based approach to healthcare. Public engagement events are an opportunity to show how healthcare students make the safe transition from learner to registered practitioner; a principle embedded within recent English healthcare education policy [17].

Birkinshaw's [18 page 40] agile structure defines and classifies five pragmatic factors for the agile practitioner as a project leader and team member. These are:

- Using peripheral vision – anticipating and engaging with areas within and beyond the usual locality
- Encourage dissent – accept challenges and encourage alternative views
- Experiment – use a new opportunity to test fresh ideas
- Simplify and flatten – networking amongst and developing a community of talents irrespective of grade
- Act quickly and active waiting - time and speed balanced with foreseeing opportunities at a later point

This is a combination of knowledge and skills, cognition, behaviour, personality traits and the ability to adapt. The development of the activities for the Wonder event commenced 8 months earlier. This was a unique experience for a new team who knew each other, but had not previously worked together. The core team membership was a Project Leader who is a Nurse Academic, an Events Manager, an Education and Student Experience Manager and the Deputy Head of School. The latter was the strategic advocate between the team and the Faculty Executive Board. It was important to be clear about

the specific achievement, but consider room for manoeuvre and adjustment. Staff and students were asked to submit ideas that would trigger curiosity-driven interest, be appropriate for an open event and be professionally sensitive. Some healthcare activities transfer neatly across to public participation. For example, the anatomy and physiology related to learning how to take a pulse and a blood pressure. Likewise the opportunity to make DNA out of candies or stepping into the role of a midwife within a simulated Birth Centre (See table 1). This was an opportunity to demonstrate the importance of an evidence-based knowledge and skills in students working towards professional registration.

47 educationalists, practitioners, students and expert service users volunteered to participate in the event. The required risk assessment included attention to fire prevention, moving and handling considerations and the management of lost children; all of which have UK state governance frameworks as a point of reference. Action and decision meetings between the project team took place at two monthly intervals and were documented and disseminated for review. These were interjected with e-mails and telephone contact to assess progress or otherwise. Informal discussions were followed up with written e-mails to relevant parties. Staff, students and expert service users were actively encouraged to voice any queries. This proved to be beneficial to the team and the wider organization. For example, members of staff suggested additional ideas related to risk assessment. These ideas were then adopted by the University as policy at strategic level. Funding to underwrite the chosen activities came from a successful application to a philanthropic body within the University. The successful application for a 25m x 10m marquee generated additional space for more activities and safe movement around the location. This added a further creative dimension of healthcare practice under canvas and was subsequently billed as an 'Event in a Tent'.

The University of Nottingham facilitates Student Ambassador training which encourages learners to become involved in a variety of work-based events. These occasions introduce the culture of work beyond University life. Employers recognise such activities as useful for embedding the agility in soft skills for planning, problem solving, developing solutions, obligation and reliability. Giving the healthcare students the opportunity to lead the communication in the Wonder events was a fun and subtle, but powerful way to promote creative thinking and professional development.

Figure 1 sets out the Wonder event activities. The range shows the opportunities for safe student-led simulation. The 1300 visitors to the marquee were from a broad cross section of the public reflecting the local Community, current staff and students and our alumni. Providing tasters of nursing, midwifery and physiotherapy stimulated public curiosity across a broad age spectrum. Figure 2 is a synthesis of Blake and Gartshore's [10] framework and Birkenshaw's [18] five agile dimensions applied to the Wonder event planning and development stages. The left column shows agile factors mapped in the middle column as a series of decisions and actions. The iterative structure in the third column signposts the direction of the decision making. The vertical arrows show a two-way linear direction for governance business decisions and actions with deadlines. In contrast in those areas where creativity and experimentation were required, the circular flow reflects the trail of ideas. These manifest as the final activities in Figure 1. The horizontal arrows reflect the flat networking and communication structures and the soft skills of obligation, openness and transparency. The photographs taken on the day (See

figure 2) show some of the team preparing their stands and examples from the range of health activities.

FEEDBACK FROM THE TEAM AND THE GENERAL PUBLIC

The narratives below are feedback from the team and visitors to the Wonder event. These comments show the value of investment into a particular way of working and concur with previous successful applications. Agile supported the shaping of ideas into activities for the Wonder project delivery.

"It's the University's flagship piece of outreach into the community so I am happy to be a small part of it."

"I really enjoyed seeing a different demographic on campus and working with children, families and people of all ages. It made me feel part of the bigger University family - lots of faculties, staff and students all working together to achieve. I found it really engaging and positive."

"The event was inspiring. Residents from the local area, who had lived here for going on 15 years had 'never dared' come onto main campus, sticking to the lake and park areas. After the event they feel more comfortable seeing what else the University has to offer and more broadly what Higher Education could possibly do for them. Such a wonderful experience."

"Amazing! Great activities for children to engage in. Thank you!"
"We loved it! Back next year."

THE WIDER INFLUENCE OF AGILE

In health settings the seamless handling of care reflects the agile practice of referrals and consultation with relevant experts. Similarly in higher education, agile offers opportunities for individuals to step on and step off at specific times. From the outset this was important as individuals could focus on specific Wonder activities, knowing that other aspects of their workload were not being compromised. The outcome was consistency, enthusiasm and the prevention of project fatigue. A further benefit from agile is the flexibility it offers to assess discrete detail about progress. This ensured that local operational plans aligned with strategic expectations. Its feedback and feed-forward structure helped the proactive process of "early and often" sharing [19 page 317]. Sharing small successes also increased expressions of interest in participation. In turn these additional interactions led to new ways of thinking and wise decision making. The healthcare students reported an expansion in their repertoire of experiences, knowledge and skills.

CONCLUSION

This paper has discussed the usefulness of an agile approach to develop a public engagement activity. Its critics cite speculation and the absence of an underpinning theoretical foundation. In contrast, for this project, the multi-dimensions of an agile approach actively encouraged unpredictability whilst fostering creativity, attention to governance structures and an open and transparent work culture. This concurs with papers reporting a favourable application. The flexible strength of agile was demonstrated in the incremental journey towards the Wonder event and the contributions of the dynamic team. The outcome was a day of health-related discovery and learning for the general public. For students, an agile method offers opportunities to promote professional skills and knowledge. These attributes are the core tenets of healthcare delivery.



Figure 2: The Marquee and Some Members of the Wonder team. Photographs reproduced with kind permission from the University of Nottingham, United Kingdom.

Table 1: School of Health Sciences' Wonder Fun Day Activities.

<p>Promoting the School of Health Sciences Course and study information. Examples of students' academic work.</p>	<p>Physiotherapy and Rehabilitation Sciences Test your strength and balance</p>	<p>Mental Health and Wellness Use your mobile to zap the QR Code on our interactive poster</p>
<p>Biological Sciences Making candies Into DNA</p>	<p>For Children: "When I grow up I want to be a...." Put on a uniform and become a Nurse, a Midwife or a Physiotherapist</p>	<p>Learning Disability Nursing Making sure no one is left behind. Makaton signing for beginners</p>
<p>Biological Sciences Find out how the heart works. Learn how to take pulse and blood pressure measurements</p>	<p>Children's Nursing Health promotion and keeping you well. Hidden sugars in our sweets and treats</p>	<p>Adult Nursing What you can do in the event of an emergency. Learn how to do CPR, treat a burn and a cut.</p>
<p>Midwifery The Lakeside Birth Centre The delivery experience in a simulated labour ward.</p>	<p>Biological Sciences Viscosity – Find out what happens when the body is carrying too much sugar on board</p>	<p>Health Promotion Find out about happy health, fats, carbohydrates and everything in moderation</p>

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