



Managing Multi-Million-Pound Projects

Overview

There is no shortage of reports on how many significant projects fail due to poor management. Three-quarters of projects fail because senior management does not get involved, according to Capterra. And Gallup reported only 2.5% of companies successfully complete 100% of their projects.

Johnson Controls delivers multimillion-pound (£) construction and industrial installation projects. In an increasingly competitive marketplace, they needed to find ways to get ahead of their competition and reinforce their quality brand.

PMSL used Business Psychology techniques, incorporating neuroscience, to help Johnson Controls achieve this objective. The Project Manager Development Programme, which lasted six months, paid for itself within six weeks. Read this detailed example of how Business Psychology was applied very profitably for this challenging job family.

Challenge

Johnson Controls wanted to improve the management of their multimillion-pound (£) projects, to get ahead of their competition and reinforce the quality of their brand.

Their Project Managers (PMs) were already very experienced, so there were no quick wins available to improve their work, for example by training on project management technical skills ('hard' skills). To be optimally effective however, PMs also needed excellent 'soft' skills, such as communication, interpersonal relationship building and negotiation skills. Unfortunately, some PMs saw these 'soft' skills as somehow inferior to the 'hard' skills of project management. And this was in evidence in the results they were getting.

With some PMs focused solely on applying technical project management skills and paying less attention to managing team morale/engagement, or client relationships, there was evidence of:

- Poor team management; leading to disengagement and poor performance
- Poor interpersonal communication; leading to misunderstandings and mistakes
- Poor negotiation with clients and suppliers; leading to acceptance of unfavourable contract clauses, overspends and ultimately unprofitable projects

Finding Solutions

PMSL proposed using Business Psychology techniques, incorporating neuroscience, to enhance the skills of Johnson Controls' experienced PMs. They could be enabled to better manage their project teams and their interpersonal relationships with clients. In a rigorous evidence-based six-month PM Development Programme (including training, scenario-based learning and facilitated skills practice), they could practically increase the quality and quantity of their work, to realise significant cost and time savings.

The key stakeholders were a Business Manager and four Senior PMs. A partnership approach was adopted to ensure that the Business Psychologists could bring the necessary rigour to the Programme, whilst the Johnson Controls representatives brought specialist technical knowledge of the work.

They worked together to incorporate the Business Psychologists' specialist knowledge of psychological principles, with the PMs' skill set, to deliver an engaging Programme. Their approach would enable PMs to develop interpersonal skills, in a context relevant to them, so they could see specifically how to apply the knowledge and skills in their work.

Approach

Together, the Johnson Controls stakeholders and the Business Psychologists spent two months co-designing each of the Programme phases and deciding how the Programme would be facilitated. The client provided information about existing problems and context for the required development, and PMSL designed the learning activities using evidence-based techniques.

Business Psychology Models

When defining how the Programme would be designed and facilitated, Business Psychology concepts and learning theory were applied, as referenced below. The Business Psychologists also included psychological models and techniques in the content of the Programme, so that Participants could apply these in their management of projects, detailed later.

Experiential Learning

David Kolb's experiential learning theory, published in 1984, which works on two levels: a four-stage cycle of learning and four separate learning styles. The Business Psychologists therefore advised: for effective learning, people need time to absorb new information, use it experimentally and integrate it with their existing knowledge. We ensured Participants had opportunity to try out all the new skills in realistic work scenarios, and time to reflect on how they could integrate them into their day-to-day work

Deliberate Practice

K. Anders Ericsson and colleagues' research showed effortful activities (deliberate practice) could be designed to optimise improvement, and that expertise could be developed as a result of intense practice, environmental adaptation and learning (Ericsson, Krampe & Tesch-Romer, 1993).

Application of Concepts in Design

Business Psychology models, supported by neuroscience research, were applied throughout the Programme, both in the way the Programme was delivered and also by introducing models that the Participants could use.

Experiential Learning

In designing the Programme, Kolb's Experiential Learning model was applied. This meant ensuring that during the training, scenario-based learning and skills practise workshops, Participants had the opportunity for:

- Abstract Conceptualisation: introducing models/theories and framing this in terms of their existing knowledge

- Active Experimentation: allowing time for Participants to think about how they would apply the skills learned
- Concrete Experience: facilitating skills practises (role plays) with feedback
- Reflective Observation: asking Participants to review their experiences and objectively analyse the outcomes

Deliberate Practice

Ericsson (1993) emphasised the importance of Deliberate Practice in developing expertise so – following the three-day training course and two-day scenario-based learning workshop – the Programme allowed two full days for dedicated skills practice, reflection and planning. Participants were asked to email details of real (difficult) negotiation situations they were experiencing, and from this information the Facilitators designed skills practise sessions (role plays) that were used during the two-day workshop.

Application of Concepts in Content

Business Psychology models, supported by neuroscience research, were applied by introducing models that the Participants could use.

For example, during the training workshop, the SCARF model for collaborating with and influencing others was introduced. This model involves five domains of human social experience: Status, Certainty, Autonomy, Relatedness and Fairness (Rock, 2008).

- Status is about relative importance to others
- Certainty concerns being able to predict the future
- Autonomy provides a sense of control over events
- Relatedness is a sense of safety with others supported by interacting in ways that surface points of similarity and strengthen social connections
- Fairness is a perception of fair exchanges between people

This model helped PMs understand some of the factors that influenced the way people would react, interact, behave and feel at work. Participants then applied this to their negotiations with clients and when undertaking stakeholder analysis, so they could plan how to minimise threat and maximise reward for key stakeholders and get them onboard. When examining SCARF and the factors that activated a reward or threat response during performance management of their project teams, some of the PMs realised that they were at risk of ‘threatening’ people in several areas of SCARF. For example:

- Status – Giving a lot of feedback for improvement
- Certainty – Not setting clear expectations
- Autonomy – Micro-managing
- Relatedness – not connecting with others out of concern to avoid getting ‘too friendly’ with them
- Fairness – Not always assessing performance objectively

With this awareness, the PMs were motivated to plan how they would change their behaviour to move people into the ‘maximise reward’ state (engagement).

Other concepts that were developed, with associated (underpinning) psychological or neuroscientific basis, included:

- Empathetic listening and giving assertive feedback; managing conflict

- To overcome amygdala hijack by labelling emotions (Goleman, 1995)
- Functioning of amygdala and prefrontal cortex (Ressler, 2010)
- Managing first impressions
 - Drawing from the primacy effect and the recency effect, two main components of a broader concept known as the serial position effect (Onifade, 2011)
 - Threat response; correlated to the 'fight-or-flight' response (a term coined by Dr. Walter Cannon in 1915, having observed that not only physical but also psychological emergencies can create an acute stress response in the brain, an automatic reaction to a stressful and potentially dangerous situation. He observed that brains react quickly to keep us safe by preparing the body for action; the brain's response to acute stress, including perceived threats, is to fight or flee)
- Presenting information so that it is remembered
 - Primacy and recency effect; selective attention
 - Two-brain theory; two dichotomous modes/systems of thought: "System 1" is fast, instinctive and emotional; "System 2" is slower, more deliberative and more logical (Kahneman, 2011)
- Impression management; building rapport
 - Selective perception: Robert Cialdini's Principles of Persuasion, specifically, 'The Liking Principle,' individuals are more likely to comply with requests made by people they like. And, 'The Authority Principle,' individuals tend to support/follow people who look like they know what they are doing
 - Feelings of trust release Oxytocin, a hormone known to promote bonding (Meacham, 2013)
- Giving praise and constructive feedback
 - Maintaining self-esteem; motivation theory (Deci & Ryan, 1985. Ryan & Deci, 2000)
 - SCARF factor: Status (threat response initiated with 'negative' feedback, same as response to physical pain)
- Importance of sharing information; clear (SMART) objectives
 - 'SMART' objectives are specific, measurable, achievable, realistic and timely or time-bound
 - How uncertainty affects judgement (Tiedens & Linton, 2001)
 - SCARF factor: Certainty
- Decision-making
 - Increasing feelings of control and reducing threat response in times of change
 - SCARF factor: Autonomy
- Team meetings and client negotiations
 - Building trust and the importance of face-to-face contact
 - SCARF factor: relatedness; feelings of trust release Oxytocin (Meacham, 2013)
- Objective assessment and performance management
 - Equity theory (Adams, 1963)
 - SCARF factor: Fairness

Programme Delivery

The phased Development Programme was delivered in three modules.

- Phase 1: three days, face-to-face training covering People Skills and Negotiation
 - Building the project team
 - Managing team performance
 - Communicating effectively
 - Negotiating with customers and suppliers
 - Managing time
 - Managing conflict
 - Managing stress
 - Solving problems
 - Managing change in projects
- Phase 2, part 1: two days, scenario-based learning covering Project Execution, applying people skills to project management processes
 - Project Development process, reviewing scope, timeline, cost book, risk, sales presentations
 - Internal release and handover process, roles and responsibilities of PMs at the handover stage, handover meetings
 - Planning process, critical path and float time, risk analysis, customer acceptance meetings
 - Execute-Control process, roles and responsibilities of PMs at Execute stage, client kick-off meeting, change order proposals, negotiating change with clients
 - Closure process, roles and responsibilities of PMs at closure stage, punch lists, client handover meetings and lessons learned
- Phase 2, part 2: two days, facilitated skills practise workshop, applying people skills to difficult negotiations
 - Skills practice 1: Claim for customer delay
 - Skills practice 2: Client not paying
 - Skills practice 3: Inexperienced Controls team
 - Skills practice 4: Johnson Controls mistake causes delay
 - Skills practice 5: Outside scope
 - Skills practice 6: Warranty dispute

The Business Psychologists and Johnson Controls' stakeholders and Facilitators used a partnership approach; working closely to design and co-facilitate each element of the Programme. For example, two months were spent having numerous face-to-face meetings, telephone calls and email exchanges to design the very detailed (refrigeration plant installation) scenario materials for Phase 2 Part 1.

PMSL's role was to teach three Johnson Controls Facilitators about applying psychological techniques to project management, and Johnson Controls' role was to teach three PMSL Facilitators about the detailed workings of industrial refrigeration units and coolants! Only then were all Facilitators ready to co-deliver the two-day scenario-based learning workshop.

Agreeing Quality Measures

We agreed with the client that the Programme should enable Participants to:

- Develop the skills needed to effectively manage and motivate their teams and build excellent relationships with clients
- Learn skills they could apply to save time and money for Johnson Controls and enable them to increase the quality and quantity of their work
- Realise financial savings that would cover the cost of the Programme within one year

Agreed Key Performance Indicators (KPIs)

The Kirkpatrick Model was used to measure the effectiveness of the project. (Kirkpatrick, 1955.) This model has been widely used to evaluate the effectiveness of learning solutions. Typically, the model described assessing increasing impact at four levels: reaction, learning, behaviour and results. The Key Performance Indicators (KPIs) set were:

- Level 1: Reaction
 - Minimum average rating of 4.3 out of 5 on all Participant feedback surveys, after each of the three modules
- Level 2: Learning
 - As content covered was mutually agreed, this did not have a particular measure set against it
- Level 3: Application of Skills/Behavioural Change
 - Minimum of 50% of Participants to apply their learning in an applicable work situation within three months of completing the Programme
- Level 4: Business Impact
 - Minimum 50% of Participants to provide evidence of increased quality and quantity of work, saved costs and saved time, within three months of completing the Programme
 - Minimum 100% return on investment (reflected in costs saved or similar) in the first year following the Programme

Outcome

The evaluations show that the three requirements of the Programme were met and all KPIs were exceeded.

Level 1: Reaction

Questionnaires were used to measure the Participants' reaction to the Programme, including how it was delivered and how highly the Participants rated the content. The average ratings (out of 5) were:

- Phase 1: 4.7
- Phase 2, part 1: 4.5
- Phase 2, part 2: 4.7

This showed that the Participants were very satisfied with the Programme, found it useful and thought it was well delivered.

Level 3: Application of Skills

Six months after Phase 1 (three months after Phase 2), Participants and senior management attended a half-day facilitated focus group and completed a self-report questionnaire capturing quantitative and qualitative data.

Analysis indicated that all skills covered in the Phase 1 of the Programme had been applied by the majority of Participants:

- Effective communication: 100% applied
- Managing poor team performance: 70% applied
- Time management: 100% applied
- Negotiation process: 80% applied

Examples were also provided, giving evidence of application of skills

Analysis indicated that all skills covered in the Phase 2 of the Programme had also been applied by the majority of Participants:

- Project development process: 82% applied
- Internal release and handover process: 73% applied
- Planning process: 68% applied
- Execute-Control process: 78% applied
- Closure process: 63% applied

Despite the fact that some Participants had not yet had the opportunity to apply the skills learned, 94% of Participants reported that they were confident in their ability to use the skills covered on the Programme.

This met one of the original business requirements: Develop skills to effectively manage and motivate teams and build excellent relationships with clients.

Level 4: Business Impact

At the facilitated review meeting, Participants reported quantitative and qualitative evidence of the increase in quality/quantity of work and costs/time savings made, for example:

- “I expanded the scope of a project to generate change orders and increase margin”
- “On an ice factory contract, we negotiated with the client to change the icemaker board, so we got a saving of about £23m”
- “I reviewed the scope and discovered that the client didn’t need to ship for install, so could be shipped whole and installed whole. Saved time and money as a result”

Participants reported that as a result of attending the Programme, the following business benefits had been realised:

- 100% increased quality of work
- 100% increased work output
- 100% achieved cost savings, quantified at over £240,000
- 100% achieved time savings, quantified to c.76 days

Only savings that could be wholly attributed to application of learning from the Programme were included in the list above. Many other savings were identified (e.g. the £23M mentioned

above) but were not included because Participants attributed less than 50% of the cause directly to new learning from this Programme.

These results pertain to the 13 Participants who completed the full pilot Programme. Fifteen groups of delegates subsequently participated in the Programme and so these time and cost savings may be multiplied by 15.

This showed the organisation's original requirement was met, that PMs learnt skills they could apply to save time and money for Johnson Controls and increase the quality and quantity of their work.

Return on Investment (ROI)

The ROI for Phase 2 of the Programme (for the pilot group) was 845%. This equated to a payback period of six weeks; measured by weighing financial benefits achieved (£240,396) against the cost of the Programme (£25,428).

This met the organisation's third requirement: Realise financial savings that cover the cost of the Programme within one year. The next step was to roll out the Programme globally and increase the skills of all PMs.

Over the course of a six-month Programme, there was opportunity for Participants to develop their skills in other ways (not related to this Programme). It could, however, be said with some certainty that the results reported here were as a result of the Development Programme because:

- This multi-stage Programme provided a wide range of skills and involved training, scenario-based learning and intensive skills practice with action learning, which provided ample opportunity for Participants to embed the skills
- The Participants did not undertake any other formal development during this period

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