Project manager specialist or generalist management essay

The project manager can be likened to the conductor of an orchestra, where each member of the orchestra has their own musical instrument and contribution to make to the entire orchestra. Without playing in unison, to the direction of the conductors' baton, the individual orchestra components will lack of harmony and coordination and the result will be discord. The orchestra succeeds because the conductor provides the direction and communication to all members, much as the project manager must. In addition, the project manager can be considered as a leader of an expedition, with the expedition being the project to be delivered, and must also have the correct balance of leadership attributes (Stallworthy & Kharbanda, 1983). The background experience of the project manager may also influence project success. History has shown that the majority of project managers evolved from the technical areas of an organisation, particularly engineering. However, many of the key attributes of a successful project manager are diametrically opposite to those skills required to be a skilled engineer. Engineers are expected to have a critical focus on technical aspects of a system, process or organisation and predominantly work with things that exist or can be seen to be operating. Project managers are expected to have a much broader perspective of current and future planned events, focusing on the entire project rather than their former functional area of expertise. Project managers also primarily work with and through people and require the requisite interpersonal skills to be successful (Thornberry, 1987), therefore training courses require to target the right balance subject learning areas between the technical (quantitative) and behavioural (qualitative) aspects of the project management coursework.

After completing Combat Engineer training and an artisan trade course gaining trade and leadership experience in the field army, the best Royal Engineer soldiers can go on to specialise as a Clerk of Works. Suitably qualified Royal Engineer Officers can also train to become Professionally Qualified Engineers (PQEs). Both undergo an intensive two year course at the RSME in Chatham, gaining Foundation Degrees for the soldiers and Masters Degrees for the Officers. Most PQEs go on to attain Chartered Engineer status in the Institute of Civil Engineers, Mechanical Engineers or IET, with the Clerk of Works having the option to further study for a BEng and gain Incorporate Engineer status. Whatever their route up the rank structure, the unique talent the Royal Engineers possess is being able to ' re-focus' for new roles. The military has a fantastic record of developing people and of insuring talent is given the responsibility, a trait that is omnipresent across defence. As in the majority of organisations, there are not enough people to do all the work; therefore personnel need to be stretched and diverse in their professional development.

Identifying the Correct Subject learning Area

The latest project management training programmes attempt to incorporate a workable balance between the technical and behavioural aspects of the project management coursework. Without the correct knowledge delivery methodology, coupled with coaching and mentoring support, this can often be difficult to achieve. Figure X below highlights this as the discretionary zone between the 2 elements of the project management training coursework.

Figure X. Balance of Project Management Subject Learning Areas.

Conflict

Motivation

Leadership

Team Building

Time Management

Discretionary Zone

Behavioural (Qualitative)

Technical (Quantitative)

Planning

Scheduling

Cost Control

Software

Figure X: Project Management Subject Learning Areas (Kerzner, 2006).

Knowledge Delivery System

Organisations deliver training to their workforce in a number of different ways of which 3 methods are: Atomised learning. Atomised learning tends to focus on current individual needs, using a predetermined ' bite-sized' module based formal learning system, to provide training on a ' just-in-time' basis. Unfortunately with this approach it is comparatively ineffective in ensuring individuals gain an adequate understanding to apply the new skills effectively in the workplace. Holistic Learning. Holistic learning concentrates

training on discreet individuals within a company i. e. senior managers and staff with ' high potential'. The level of training provided is specifically integrated into their required development areas and supported with coaching and mentoring. Although clearly a more beneficial form of training for the chosen individuals, it is more expensive, harder to control and more difficult to evaluate. Blended learning. Blended learning attempts to combine the benefits of both atomised and holistic learning to produce a more beneficial, yet generic training programme. An example of this would be a short induction Health and Safety course followed by a ' buddy' development system over the next few weeks to improve their knowledge and understanding.

Transfer of knowledge between contexts

Transferring knowledge gained on previously completed training courses or through experience gained is relatively straight forward to the student, if the subject is of a similar nature to the new training programme. Conversely, if the new training programme is complex, applying the old training context can be more difficult. The military professional engineer completes numerous management development programmes developing their competence in areas such as leadership, planning, communication and management. Most have been involved in technical projects in the planning or construction aspects which assist in their understanding of project planning requirements, allowing them to contextualise these experiences into the project management training environment. Determining the initial knowledge base is not easy to achieve in the majority of organisations, due

to the diverse nature of the employees, their previous background and experiences gained within different departments or companies, therefore the subject areas within the training cannot accurately target the required subject learning areas between the technical and behavioural aspects of the project management coursework. Military engineers have specific training career paths were the selection of students his highly competitive for both normal career leadership and management development, but also for specialist engineering development training. Individuals are developed substantially before attending project management training and all have previous exposure to projects in one form or another. As leadership development is a key factor for military personnel, the majority of the behavioural aspects of the project management subject learning areas are familiar, allowing more emphasis to be placed on use of the behavioural techniques.

When to Train

Individuals often state that they have not utilised new skills recently taught in training, but this is not necessarily the case. A well planned training course should aim to train individuals with sufficient time to also complete some additional ' on the job' training under a supervisor, mentor or trainer. In order for this rationale to be successful, the individuals' organisation / department must be aware of the training consolidation requirements and support the individual as required. With other work constraints this is often not the case, hence the perception that ' the training has not been used'. Research has shown that ' just-in-time' training is therefore often the most

effective (Eraut & Hirsh, 2007), although organisations must expect some development during the application of the new skill in the workplace. In general, for training to be worthwhile it requires to be applied immediately. If methods or processes of work need to be modified or changed, training specific individuals in an organisation is likely to be ineffective and without colleague cooperation is more likely to demoralise the individual who has undertaken the training. For change to be successful, the critical mass, over 80%, of individuals must be involved and be willing to change. Support to change and individual mentoring / development support to trained staff can be provided by a project support office.

Training in the Workplace Summary

The latest project management training programmes attempt to incorporate a workable balance between the technical and behavioural aspects of the project management coursework. Without the correct knowledge delivery methodology, coupled with coaching and mentoring support, this can often be difficult to achieve (Kerzner, 2006). A well planned training course should aim to train individuals with sufficient time to also complete some additional ' on the job' training under a supervisor, mentor or trainer. Research has shown that ' just-in-time' training is therefore often the most effective (Kerzner, 2006), however, organisations should expect some development during the application of the new skill in the workplace. Whilst many companies include individual training in order to enhance individual skills, long term development of their employees is often ignored. Development programmes for employees enhances the commitment to common goals and

helps motivate staff, it is especially effective with management staff in gaining acceptance to change improving communication and participation (Turner, 1999). Some of the key project manager prerequisites of intelligence, deduction, reasoning, tenacity and enthusiasm for success cannot be developed through training courses. However, training can help individuals to learn from analysing both their own and a diverse range of other individuals experiences (Smith, 2008). Transferring knowledge gained on previously completed training courses is seldom considered in detail within the reference literature. The military professional engineer completes numerous management development programmes developing their competence in areas such as leadership, planning, communication and management. Most have been involved in technical projects in the planning or construction aspects which assist in their understanding of project planning requirements, allowing them to contextualise these experiences into the project management training environment.

Organisation Structure

Organisations are constantly required to change what they do and how they do it to ensure they remain competitive, efficient and deliver customer satisfaction. Well managed organisations need to recognise that it is not sufficient only for excellence in project management to be developed, but also to achieve the right degree of company maturity, in a structured approach and reasonable timeframe. This requires visible company executive support, project methodologies and project governance structures to be successful (Kerzner, 2006). Organisations have traditionally been

structured in a hierarchy or pyramid management format. This is a militaristic structure where each level of the structure represents a different level of authority or command and tends to offer limited flexibility (Maylor, 2005). An organisation which traditionally undertakes routine ' business as usual' works must be capable of considerable adaptation to develop a project culture, therefore a more flexible structure is often required. A purely project based structure may have permanently formed project teams or be based entirely on transient members. This type of structure can also be inflexible and suffers from poor resource management and has the potential to become insular, reducing development and risks a loss of cultural identity. Generally the most effective management structure is a matrix organisation, however, this requires both functional and task managers to work in close partnership to achieve the project and corporate mission (Turner, 1999). Project managers seldom have any influence on how the project organisations are arranged and often have to deliver projects in inappropriate or weak structures where they have little direct authority (Maylor, 2005). Although military units follow a hierarchical structure, project teams are again more frequently established in a weak matrix organisation. In this structure there is limited commitment to project success from other unit functional managers and again the project manager lacks authority. In most private and public sector business organisations, project manager selection is an executive level decision, where the most appropriate project manager is appointed based on the type of project and skill sets required. Project managers are assigned early in the project life-cycle to assist in the initiation stages and develop customer relations (Kerzner, 2006). In the

military environment this is seldom the case, as the choice of project managers is often limited to a small team or section currently in post or due to deploy to the location of the project. In addition, short-term posts lead to the handover of legacy projects between project managers. Legacy projects are usually the most difficult to manage, as standard project management methodology and processes, initial steps of projects and a large amount of project documentation may require to be revisited. Many companies encourage high level director project support in the form of project champions to assist in increasing the profile of the project. Rather than taking responsibility or control away from the project manager, the project champion's involvement encourages other members of the organisation to become actively involved, generating interest in successfully completing the project (Maylor, 2005). Modern project teams are more frequently formed from multiple departments within an organisation, in order to achieve the correct mixture of personalities to ensure an effective group dynamic. Forming groups of individuals into a team can be a complex process, but the benefits in both productivity and effectiveness can be considerable, the sum of the output from a team is greater than the sum of the output of a group of individuals. In order to achieve complete effectiveness the team will also move through phases or life-cycles and it is the project managers responsibility to gain and maintain maximum team performance (Maylor, 2005). Military engineering project teams often lack the diversity of personalities to achieve the most efficient of teams, as they primarily consist of like-minded engineers. NASA recognised the benefits of a diverse social context in the early 1990s, with the initial failure of the Hubble Space

Telescope and developed a ' 4-D Team Building Process' to improve performance. The 4-D System simplifies leadership characteristics into 4 broad areas, cultivating, including, visioning and directing and allows you to assess your base performance and identify areas for improvement. The system also allows individual team members strengths to be identified allowing the project manager to match the specific skill sets to tasks or to customers' needs. Through regular assessment and drive for improvement, the social context of the team and its performance significantly improved (Pellerin, 2009). Project teams are more frequently being formed from multiple organisations, within joint ventures. Elements of these project teams are often in geographically separate locations and although modern technological advances in ICS assist with information transfer, communication and controls, present additional challenges to the project manager and his team (Maylor, 2005).

Organisation Maturity

Although there may be a strategic desire to improve systems and performance, the characteristics of organisations frequently differ. Some organisations develop successful and relevant processes whilst others can become obsessed or hampered by extensive documentation and structures losing sight of the whole reason for the organisation development. By analysing the difference between them, organisations can be broadly placed in one of four groups represented graphically as shown in Figure X, with the characteristics of each group detailed in Figure X.

Figure X. Project Performance Groups

Group 4

Group 3

Group 2

Time

Performance

Group 1

Figure X: Project Performance Groups (Maylor, 2005). It can be seen that the gaps between ' Group 4' and all other groups is significant. In addition, the performance gap between groups doesn't reduce over time, but actually increases. By analysing the different groups and organisation characteristics, the likely performance and improvement approach can be predicted, as detailed in the Project Management organisation maturity column within Figure X.

Figure X. Project Organisation Maturity

Group

Group Characteristics

Project Management Organisation Maturity

Group 1 – Flat-LinersAlthough initial intentions are good, these organisations make little project performance improvements and make frequent and repeated mistakes. The project objectives are inadequately identified. Every project treated as novel without learning from experience. Very few standard processes or disciplines in place. External ideas are seldom implemented.

Group 2 – ImproversSome performance improvement systems are put in place enabling a slow performance improvement over time. The project objectives are sometimes established with a focused planned approach. A limited amount of learning from prior projects is completed. Some project process implemented resulting in acceptable performance. Group 3 – Strivers / WannabesThis type of organisation will try to implement every possible project performance technique in order to gain parity with the best performing organisations. Project objectives are routinely established, with a strong focus on conformance. Processes are improved, with an attempt to mirror the best organisations systems, but limited by the constraints of systems and documentation. Processes are well established with strict systems imposed. Group 4 – World Class PerformersRepresent a small number of organisations which set standards for continuous performance improvements. Project aim is to exceed the expected objectives and deliver the best product possible. Strong processes based on a strong foundation of learning knowledge. Processes constantly improved and tailored to suit individual projects. Figure X: Adapted Project Management Maturity Stages in Different Organisations (Maylor, 2005). For an organisation to move between groups requires process change, a fundamental desire and stringent approach to change. Again it is possible to move an organisation between ' Group 1' and ' Group 2' by applying some basic project management systems and processes, however, moving to ' Group 3' requires considerable discipline. It is not until the organisation has mature standard project management systems and developed project team members that these standard systems can be tailored to specific projects in order to deliver the

most significant improvements (Maylor, 2005). Levene (2003) supports the fact that individual learning and development requires to be integrated into the organisation and that it can provide a considerable competitive advantage provided it embraces both project delivery and organisation development (Levene, 2003). Egginton (2012) analysed the actual application of project management tools and techniques in the workplace, in order to identify potential workplace barriers. His study highlighted that, after 12 months from completion of training courses, 56% of trained personnel remained unable to apply the taught processes in the workplace and this had a profound effect on benefit realisation and often led to individual frustration. These barriers were often exacerbated by the different levels of project management understanding across the organisation, again placing a combined emphasis on organisation learning and continuing individual and workplace development following training (Egginton, 2012). The economic climate and public perception on how Defence projects are delivered is a major factor influencing changes within the MOD (Levene, 2011). The Corps of the Royal Engineers have embraced the organisational change required to make project management training more effective by also introducing project management terminology into all foundation training and trade instructional courses. In doing so, all individuals can communicate more effectively using a common framework of understanding. Lessons learned have also been collected and passed on through peer presentations, and post project reports, something which has vastly improved as the PM maturity level rises throughout the armed forces. Without which there was a danger that mistakes would be duplicated. There is now a sense that the

military is a lot better informed when undertaking a new project. A great deal of time, money and effort has been invested in the development of Information Management and Information Exchange (IM/IX) systems, with the recent introduction of a SharePoint based system, allowing for efficient transfer of data both within a project and between the 'theatre' of war and the UK home base. Yet having made these key improvements, the extent of the organisation development is unknown.

Organisation Summary

Completing Projects in Developing Countries or Conflict Situations

All projects are undertaken within a dynamic environment and it is this ever changing element that creates a high level of uncertainty. It is widely acknowledged that non-domestic projects face greater challenges to be successful than domestic projects. When considering the environment, a successful project design must not only consider the current situation and the effect of the project on completion, but also try to predict the impact of the project and the potential changes within the external environment around the project for the entire project life-cycle which could be 10 years into the future (Stallworthy & Kharbanda, 1983). The project organisation sponsors objectives, management structure, resources and financial support elements also represent major contributing factors to project success or failure. Key organisation factors influencing project success are (Kealey, et al., 2005): Governance of the project and in particular the imposed command structure and division of roles and responsibilities. Realistic, clear and

compatible project strategic objectives and operational goals. The commitment, stimulus and direction of the organisation's headquarters throughout the entire project life-cycle. d. Continuous support of resources to the project, including funding, manpower, material, logistics, communication and information communication technology support etc. Military professional engineer construction projects in developing countries must consider a number of additional challenges[1]outside of the normal project context, such as climatic conditions, population of the country, human resource skill level, material availability and quality, economics, importation limitations, influence of Non-Government Organisations (NGOs) and socio-cultural factors[2](Smith, 2008). Projects must also adopt the 'comprehensive approach', whereby the goal should always be to hand over fully functioning infrastructure to the host nation. Lessons identified from recent operations highlighted a failure to 'design to the vernacular'. Reinforcing the mentality that it is the local people that will end up operating and maintaining the infrastructure, helps avoid installing overly complex system. Such projects often lead to long term through life failures, as they require locally trained people to operate and maintain the system, resulting in an antithesis of the desired project objective. Project design processes often do not follow the normal ' plan, design, resource, construct' process and often require the process to commence with the evaluation of available resources, therefore a ' resource, plan, design and construct' process. Project planning and success criteria also neglect to account for the fact that, in the nature of military operations, military engineer project delivery is always secondary to the military mission / objective. The result of this is to draw project manpower

away from engineering construction projects. Although the highlighted constraints are not exhaustive, when coupled with a only limited understanding across the profession of managing complex projects in the operational environment, military professional engineers previously failed to develop a realistic delivery strategy in order to manage client expectations. This results in the perception of projects that fail to meet the success criteria.

Projects in Developing Countries Summary

Critical Success Factors in Effective Project Implementation

Projects, by their nature involve doing things that are new or different and whenever we embark on new ways of doing things we inevitably introduce uncertainty, error and / or failure. It is therefore not surprising that projects experience a significantly higher degree of failure than business as usual operations (Kerzner, 2006). What constitutes project success is a subject that has been investigated thoroughly[3], as it is the key element that every project manager strives to achieve, and central to every project. Although one of the major factors, project management organisations still deliver projects that are not considered successful. Kerzner suggests that a project management company that delivers all their projects successfully are not taking enough project risk (Kerzner, 2006). Defining actual project success is hampered by the lack of a standard approach (Dvir, et al., 2003). Baker et al (1974) investigated over 650 projects in order to determine which subjective attributes were viewed as relevant in determining project success. They concluded that perception had a significant influence on the definition of

success and therefore suggested that it is more appropriate to refer to '
perceived project success' (Baker, et al., 2008). The originally defined
elements of the ' iron triangle'[4](time, cost and quality) are increasingly
viewed as incorrect or even ' dangerous' as determinants of project success
(Morris, 1998). There is a growing body of evidence that the single most
important contributor to project success is to agree the success criteria with
the stakeholder at the start of the project (Turner, 1999). Various slight
modifications ensued, Schwalbe (2009) expanded the ' iron triangle' into a '
quadruple constraint' of scope, time, cost and quality (Schwalbe, 2009),
Atkinson (1999) included elements of the product (reliability and
maintainability etc) as well as stakeholder benefits into the triangle,
transforming it into a ' square root' (Atkinson, 1999). Cooke-Davies (2002)
classes scope, time and cost as the traditional project management critical
success factors that can be considered as ' harder' quantifiable aspects,
while the ' softer' aspects of quality, risk and communication are more
difficult to measure (Cooke-Davies, 2002). More subjective success criteria
may only be relevant when considered from the perspective of a particular
stakeholder. Elements of the project that are considered as successful from
the view point of the project manager may not be interpreted the same by
the project owner, project engineer or maintenance team (Hughes, et al.,
2004). Therefore perceived project success is likely to be defined differently
by military engineers and stakeholders. Papke-Shields et al (2010)
investigated project delivery organisations to ascertain the actual degree of
the project management practices, by project management knowledge area
(time, scope, cost, integration, HR, procurement, communication, quality and

risk categories) used and the impact of their use on performance. They concluded that the majority of project management organisations do utilise recognised and targeted practices in project delivery, however, they are not being implemented in a consistent or even manner across the target practice knowledge areas. The results found that practices associated with the ' iron triangle' were more consistently used as they represent well known project objectives. Practices associated with HR, procurement and integration were only partially used and practices associated with risk, quality and communication were the least frequently used. The analysis also suggested that these results did not vary between organisations of varying size or different industry sectors (Papke-Shields, et al., 2010).

Critical Project Success Factors Summary

Calculating a Project Management Training ROI

Organisations expect the investment in employee project management related training to offer value for money. It is expected that the processes, tools and techniques learnt will improve future project planning and project control (Lee-Kelley & Blackman, 2012). Mann and Robertson (1996) state that the evaluation of the effectiveness of training programmes is critical for organisations; otherwise they have no idea if the investment in training is beneficial (Mann & Robertson, 1996). The importance of training and development to improve both employee competence and organisation performance is generally accepted, yet research suggests that organisations pay limited attention to the quality or effectiveness of the training completed (Wang & Wilcox, 2006). Current evaluation tools for measuring training

effectiveness are still based on Kirkpatrick's proposed four levels of improvements in reaction, learning, behaviour and results where value and effectiveness increases the further up the levels you progress (Kirkpatrick, 1998). Further studies have determined that very few organisations have the mechanisms to truly assess the value of training provision by levels and only 31% routinely evaluate to Level 2 (learning), 14% to Level 3 (behaviour) and 8% to Level 4 (results) (Sugrue & Kim, 2004). The most common form of evaluation is completed in the form of a post course questionnaire which generally focuses on trainee satisfaction. This type of assessment is more a means for the training organisation to gain feedback on course content and delivery and are often completed by trainees in a rush or without any deep reflection and therefore offer no insight into the application of the knowledge gained in the actual workplace. To determine if project management training offers any form of ROI to the MOD and RSME will be difficult to achieve. The majority of military projects do not offer any financial tangible benefits, often focusing instead on increased military capability, operational security or equipment. Within military infrastructure projects, the effect on the ROI is often based on moral component and operational security, where the benefit is to the well-being or safety of MOD personnel. This analysis is supported by Rowe, who stated that it is not possible to make measurements that enable a ROI to be assessed or evaluated by utilising intangible benefits and quantitative ' bottom line' indicators (Rowe, 1994). Although post course training questionnaires are completed, no other form of organisation project management development assessments are completed. The standard and value of the APM training provision framework has been accepted at the

highest levels of the MOD for offering improved planning and delivery performance. RSME (RSME, 2012) are currently looking at the feasibility of a ROI by investigating the potential of third party work income generation, by delivering project management training courses to a wider audience. This may offer a greater spectrum of project management education development opportunities.

Summary of ROI

There benefits of training and evaluation are acknowledged to be critical for improving organisation performance and individual competence and there is a consensus that this training must be aligned with the organisations strategy. Although literature details the importance of post training coaching and mentoring support, very little has been published on how to achieve a corporate understanding of the quality or effectiveness of the training completed (Lee-Kelley & Blackman, 2012).

Novelty of the Research Area

From the analysis it is clear that a company specifically targeted package of project management training, delivered to a high standard and coupled with the organisations support, is essential to achieving project success and project management excellence. Despite the recent growth and popularity within the project management profession, this interest has not transferred into researching the effectiveness of the formal training and project staff development (El-Sabaa, 2001).