

Educating major programme managers: Hopes, fears and speculations.

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Abstract.

Accredited education programmes for major programme managers aim to fulfil a need to equip people aspiring to the role of “Chief Programme Officer”, CPO, a position with equivalence to that of the CEO of a large corporate division with associated responsibilities for delivering the major programme and realising the intended benefits. The context of major programme management is positioned as one with unique challenges, including the need for a major programme to be considered like a large-scale organisation yet having the requirement to adapt its governance structures over time. The learning and development journey that supports people to successful command this position is described along with concerns over the robustness with which this journey is understood.

The Major Programme Context: i before e?

The notion that macro level economics has some simple rules of thumb seems both desirable and laughable yet this is the world that major programmes inhabit and their managers need to navigate. One such idea that seeks to summarise a notion yet is fraught with difficulties is, ‘i before e’, that is: ‘infrastructure before expansion’. On one hand it is clear that failure to improve infrastructure hampers growth and the achievement of societal goals while on the other hand the funding requirement seems overwhelming and needs to be justified against anticipated benefits that often fail to materialise. The tendency for cost and schedule overruns in major programmes remains an unwelcome reality that haunts a range of infrastructure developments, not least transport but also notably IT programmes. This suggests that the way forward is not to constrain expansion and instead to proceed and let infrastructure eventually catch up. So, a simple notion with significant implications can be played either way where the key issue is that someone needs to step up and take responsibility for determining how to proceed, e.g. whether one way is ‘better’ than the others, and to operationalise the delivery of the benefits.

This issue is a topical one with several governments reporting that infrastructure spending will be / is now a notable part of their fiscal stimulus packages as well as long term spending plans. This is the case in the UK and USA as well as elsewhere with India reportedly planning to spend US\$500bn in the coming years. This means that while delays and the squandering of scarce funds has always been an issue, the need to understand this problem, address the causes and find cures has become particularly timely.

Focussing on India as but one example, the nation has a desperate need for large scale investments in a number of areas that range from physical infrastructure to addressing the zeitgeist of poverty. Emphasising recent underperformance, the World Bank contrasts India against China, which it considers, “has an enormous – and growing – advantage in infrastructure.” On the face of things this is simply a question of scale with India’s 4% of GDP comparing unfavourably to China’s reported 9%. While the level of investment is an important issue so is the effectiveness with which programmes and their planned benefits are delivered.

Large scale projects can be found across India in a number of sectors including transport, construction, energy, raw material extraction, defence and IT. A particularly interesting subset of such projects are ‘major programmes’ which lie at the top end of the ‘mega projects’ scale in terms of size, complexity and ability to transform. Major programmes are those that cost more than US\$1bn (approx Rs. 5,000 crores), possess inherent political or technological complexity, and have the potential to deliver benefits that are significant at a state or indeed national level. The Delhi Metro is a good example of a programme with these characteristics. Phase one of the work drew plaudits both at home and abroad for providing the rare mix of efficient service at a reasonable tariff and in having done so to budget and ahead of schedule. While examples such as this are encouraging the general trend falls short of these achievements which leads to disappointing results on specific initiatives and a cumulative delay to wider economic and social progress. Data compiled by the Indian Ministry of Statistics and Programme Implementation¹ reveals significant delays and cost overruns across a range of major projects valued above US\$20m (Rs. 100 crore) and at an overall level found progress to lag behind targets for all but one of the industrial sectors tracked. It is cold comfort that this tale of under performance is repeated internationally with reports of delays and cost overruns in major programmes issued by the National Audit Office in the UK² and the Government Accountability Office in the USA³.

¹ Ministry of Statistics & Programme Implementation (2009), *281st Flash Report on Central Sector Projects (Rs. 100 crore and above)*, Ministry of Statistics & Programme Implementation, New Delhi

² See for example: Burr, T. (2008) *Ministry of Defence: Major Projects Report 2008*. The Stationery Office, London.

³ See for example: Francis, P. (2009) *DEFENSE ACQUISITIONS Charting a Course for Lasting Reform*. United States Government Accountability Office. GAO-09-663T.

While there seems widespread agreement that Indian infrastructure is in a poor state, the bigger issue here and internationally is not the revelations associated with yet another delayed programme, rather it is the realisation that things are not getting better despite apparent advances in understanding the methods for planning, monitoring and delivery. This points to a clear need for a re-examination of major programmes to improve understanding of why those that succeed manage to do so and why the rump fails to deliver. A cursory glance would suggest that poor project management or financial management would top the list of weaknesses however this often masks a failure to understand risks inherent in many programmes. Across a range of sectors key important risks that are poorly managed include ‘optimisation bias’, the tendency to favour optimistic projections, and ‘strategic misrepresentation’ which is lying to distort or misrepresent facts⁴. Failure to recognise and address either risk has a tendency to lead to cost and time overruns and seeking to resolve where the impact of these risks would surface is of vital importance when setting up the contractual frameworks of public and private sector programmes. This identifies the need to couple the traditional skills of financial probity and contract management with an improved understanding of risk and to identify where this is best borne.

The case for educating major programme managers sits at the confluence of the issues that (i) general performance in delivering major programmes is dire (ii) while there is no substitute for experience, the idea that leading a major programme is something that can be learnt "on the job" is, at the very least, an unnecessary risk.

Learning and development

The learning and development challenge of major programme managers is both a capacity issue of increasing the supply of suitably qualified individuals and a capability issue of being clear on what is meant by ‘suitably qualified’. The easier of these two challenges to conceive is that looking forward there is a steady pipeline of major programmes that requires the development of a cadre of major programme managers where need currently outstrips the supply of talent.

Addressing the trickier issue of what is meant by ‘suitably qualified’ is a case of understanding “What is the destination?” which helps to establish the learning objectives when coupled with understanding “Where do we start from?”

Where do we start from? (The archetypal student)

At this point it is worth raising the cautionary note that developing people to manage a major programme appears much more than a question of project managers stepping up to manage

⁴ Flyvbjerg, B. (2005) *Policy and Planning for Large Infrastructure Projects: Problems, Causes, Cures*. World Bank Policy Research Working Paper 3781.

bigger projects. While this role will benefit from a deep understanding of the issues of major programme management that an insider can bring it is clearly much broader. The emphasis at this level is on understanding the nature of strategy and the manner with which different types of organisational design address the challenges of executing strategic goals and in addition providing leadership coupled with a keen ability to manage individual and group performance. Indeed, it may not be the case that experience in project management is necessary but not sufficient. Instead, it may be that the capabilities of a successful project manager, for example where competence in the technical side of process and practice are emphasised, are in conflict with those needed to be effective at managing major programmes which requires a focus on delivering benefits and in doing so to appreciate and respond to the impact that context has on programme outcome.

This possibility that project management is a poor base to build from can be traced to the typical (stereotypical?) learning and development journey of a project manager. The initial requirement when entering the profession is to acquire competence and subsequently excellence in project management while the breadth of their contextual knowledge need not extend beyond their geographical, sectoral and subject specific setting. In terms of subject matter expertise, there seems a tendency to treat project management as a technical matter, one that is rational, universal and deterministic⁵ that can be mastered through learning the appropriate methods and techniques and to acquire experience of their application. This seems the basis for training courses in this field, the criteria for being awarded the accreditations that seem important for gaining legitimacy to practice and therefore act as a defacto prerequisite for employment. While the so called soft skills are not ignored it is clear their development lacks the emphasis placed on technical skills.

Project managers stepping up to management are presented with a challenge common to the progression of other subject matter experts. This stage of the leadership journey is significant as there are distinctive destructive behaviours that tend to occur in this “hero stage” of managers’ early careers⁶. These destructive behaviours: being an imposter, rationalizing, glory seeking, playing the loner and being a shooting star, can be masked by apparent success or even underpin success in the short term although can ultimately lead to the undoing of a manager as they progress into a senior role. For these reasons there is a learning and development need during this early career stage to anticipate progression into a senior management role where it is important to develop the ability to focus on others, gain a sense of a larger purpose, foster multiple support networks, and develop mechanisms to keep perspective and stay grounded.⁷

⁵ Winter, M., Smith, C, Morris, P. and Cicmil, S. (2006), directions for future research in project management: The main findings of a UK government-funded research network, *International journal of Project Management*, V 24 pp 638 – 649.

⁶ George, B. and McLean, A. (2007) Why leaders lose their way, *Strategy & Leadership*. Vol. 35, Iss. 3; pg. 4

⁷ George and McLean, *ibid*

The move into management requires the development of what may be a previously unutilised set of skills, including: supervisory essentials; understanding of corporate context and connections; communication, management, and leadership skills; confidence and self-awareness, and; the ability to continue learning and development, e.g. through peer coaching⁸. There are significant challenges to successfully making the transition, where reported problems include: focusing too heavily on the details; reacting negatively to criticism; intimidating others; jumping to hasty conclusions; micromanaging direct reports⁹, as well as failure to: delegate; get support from senior staffers, project confidence, think strategically, and give feedback¹⁰. While these are general issues, there are also specific issues associated with the legacy thinking on project management where this extends to the manner in which, “practitioners learn their craft, and how they actually practice their craft using relevant theory”¹¹. Rethinking this point is a move Winter et al refer to as from, “practitioners as trained technicians”, towards, “practitioners as reflective practitioners”. This is referred to as a move to enhance theory in practice, which is explained in Table 1, below.

Practitioners as trained technicians	Practitioners as reflective practitioners
<p>From: training and development which produces: practitioners who can follow detailed procedures and techniques, prescribed by project management methods and tools, which embody some or all of the ideas and assumptions of the ‘from’ parts of 1 to 4:</p> <p>[1. Simple life-cycle based models of projects; 2. Projects as instrumental processes; 3. Product creation as the prime focus; 4. Narrow conceptualisation of projects.]</p>	<p>Towards: learning and development which facilitates: the development of reflective practitioners who can learn, operate and adapt effectively in complex project environments, through experience, intuition and the pragmatic application of theory in practice.</p>

Table 1. Theory in practice. (Winter et al, 2006)

The work of Winter et al proves useful in both describing current practice and also suggesting a direction for enhancing this. Commenting on Winter et al’s notion of reflective practice, Sauer and Reich note, “Practice in the new domain of project management cannot principally be the exercise of defined techniques. It will embody a continually thoughtful and constructive re-appraisal of practice and involve experimentation to seek out better ways of thinking and managing”¹². Developing from this idea, Sauer and Reich identify nine principles of thought they associate with a “new mindset for project managers” and four underlying personal qualities that mould these new ways of thinking, as shown in Table 2.

⁸ Priestland, A and Hanig, R. (2005) Developing First Level Leaders, Harvard Business Review; Vol. 83 Issue 6, p112-120

⁹ van Buren, M.E. and Safferstone, T. (2009) The Quick Wins Paradox, Harvard Business Review. Vol. 87, Iss. 1 p54-61.

¹⁰ Walker, C. A., (2002) Saving Your Rookie Managers from Themselves. Harvard Business Review; Vol. 80 Issue 4, p97-102

¹¹ Winter et al, *ibid*.

¹² Sauer, C. and Reich, B.H (2009), Rethinking IT project management: Evidence of a new mindset and its implications. International Journal of Project Management, Vol. 27, Iss. 2; p. 182-193

Principles of thought	Underlying personal qualities
<ul style="list-style-type: none"> • Focus on ultimate value. • Deep personal identification with project goals. • Investment in trust. • Devolved, collective responsibility. • Willingness to continually adapt. • People development. • Learning orientation. • Creativity and innovation. • Proactive view. 	<ul style="list-style-type: none"> • Clear-sighted realism. • The scope of the personal responsibility they accept. • A long-term perspective. • Willingness to relax control.

Table 2. A new mindset for project managers (from Sauer and Reich, 2009)

The contribution of this work is to identify principles of thought and underlying personal qualities that can be reinforced in early career stages that would seem to correct or mitigate the distinctive destructive behaviours identified by George and McLean and provide an underpinning that can be leveraged in later years to facilitate development of the capabilities sought in a major programme manager.

What is the destination? (What does a ‘Major Programme Manager’ look like?)

At the level of individual programmes, success requires much more than domain specialists and good project managers, in addition they require a variant of the sort of leaders you would expect to find in the best major corporations. These are people with the insight into strategy that allows them to comprehend while seeing beyond the technical challenge of a programme in order to explain, champion and deliver its benefits. They require the ability to inspire a team of specialists, across a range of governmental and private organisations and have political savvy while retaining the credibility and moral authority to reach out and engage with a range of stakeholder groups to listen to and act on their concerns. In many ways this role is akin to the CEO role in an organisation. This similarity would appear to have credibility given the parallels between programmes/projects and organisations drawn elsewhere, with the notion put forward that programmes can be viewed as temporary organisations¹³.

There are however factors that are unique to major programmes that need to be addressed, such as the issues around governance structures described by Miller and Hobbs, “Rather than thinking of the design of megaproject governance structures as a search for the one best structure, the design of such regimes can be thought of as a flexible strategic process that will draw on a variety of governance mechanisms to deal with different issues in different phases of the project

¹³ Van Donk, D.P and Malloy, E. (2008) From organising as projects to projects as organisations, International Journal of Project Management, v26 pp 129-137; and, Lundin, R.A. and Söderholm, A. (1995), A theory of the temporal

life cycle. Some of these issues are predictable, while others will be emergent. This opportunity is unique to large complex projects.”¹⁴

This suggests that there are important similarities and differences between the purpose, focus and duties of a major programme manager and the key organisational roles of CEO and COO, as summarised in Table 3.

	Chief Executive Officer	Chief Operating Officer	Major programme manager (Chief Programme Officer)
Purpose	<ul style="list-style-type: none"> • Secure the future. 	<ul style="list-style-type: none"> • Deliver corporate strategy. 	<ul style="list-style-type: none"> • Deliver major programme.
Focus	<ul style="list-style-type: none"> • Vision and direction setting. • Maintain / ensure organizational reputation and integrity. 	<ul style="list-style-type: none"> • Coordinate organisational functions. • Deliver quarterly performance in terms of return on assets/ sales / net income. 	<ul style="list-style-type: none"> • Deliver objectives: <ul style="list-style-type: none"> - Earned value (or similar). - Benefits. • Context. • Risk.
Duties	<ul style="list-style-type: none"> • Set strategy and vision. • Build culture. • Build teamwork. • Allocate capital. 	<ul style="list-style-type: none"> • Enable team. • Communicate with stakeholders (Board / key customers / staff). 	<ul style="list-style-type: none"> • Design and develop governance regime. • Secure resource, set direction, drive progress. • Engage stakeholders. • Manage risk.

Table 3. Selective comparison between executive roles.

This comparison suggests that while there are differences between the roles, the leader of a major programme seems to have a status that places it alongside other executives in the CxO pantheon of CEO; CFO; COO. To reflect this equivalence the title ‘Chief Programme Officer’, CPO, would seem appropriate. Indeed the term ‘Chief Programme, Portfolio and Projects Officer’, CP3O, may apply with the benefit of reflecting topical nomenclature although the associated comedy value (“In a galaxy, far, far away ...” etc.) may suggest not.

¹⁴ Miller, R. and Hobbs, B. (2005). Governance regimes for large complex projects, Project Management Journal. Vol. 36, Iss. 3; pg. 42-50.



Figure 1. CP30 – The future major programme manager?

Whichever the case, the recognition of the CPO position is akin to the emergence in the 1960s/70s of the Chief Operating Officer, COO, a role which has subsequently been seen as a critical position that is broadly positioned along with the CFO as first lieutenant to the CEO on the executive team. In the case of organisations that are organised around programmes the CPO seems a likely substitute for the COO.

Alternatively it may be preferable for the CPO can be conceived as the CEO of a major business unit. In this scenario, the CPO role is a rounded one, one that is consistent in nature with the unique job of the CEO: link the external world with the internal organization, which is a job only the CEO can do as everybody else in the organization focuses much more narrowly and almost always internally.¹⁵ In doing so, the CPO role seems to address the concerns raised around the separation of executive team tasks that result from having both CEO and COO roles. These stem from seeking the benefits of delegating responsibility for the operations of an organization to a COO, which can allow the CEO to better cope with the overwhelming complexities of leading a large organization, a move which raises concerns over weakening the CEO's capacity to lead the firm through the structural separation of strategy formulation and implementation¹⁶. Keeping strategy formulation and implementation under the remit of one person ensures clear responsibility and in a major programme setting this seems particularly important given the requirement for ongoing adaptations in governance described by Miller and Hobbs as much as well as for the reasons of setting direction, securing resource, driving progress, engaging stakeholders and managing risk.

The Provision of Major Programme Management Education

At a macro level, the provision on major programme management education is in part an issue of capacity. There are several solutions to this including:

¹⁵ Lafley, A. G. (2009) What Only the CEO Can Do, Harvard Business Review, Vol. 87, Iss. 5, pp 54-62.

¹⁶ Marcel, J.J., (2009) Why top management team characteristics matter when employing a chief operating officer: A strategic contingency perspective, Strategic Management Journal, Vol.30, pp. 647–658.

- Add to current programmes a legacy commitment to develop leaders of future major programmes;
- The provision of ‘in-house’ capability that leverages the context specific learning and development opportunities offered by experience;
- Extending the provision of continuing professional development, CPD;
- Extending the provision of accredited educational courses.

On the matter of a legacy commitment to develop leaders of future major programmes there seem to be parallels with Miller and Hobbs’ assessment of the UK experience with Private Finance Initiative projects. Miller and Hobbs describe the conditions for institutional learning and a “spectacular improvement in project performance” as being due to (i) the availability a large number of projects, 450 with a total value in excess of £35bn over a 12-year period, and (ii) the political will to scrutinize both projects and the institutional framework through which they are managed. Generalizing this point and applying it to the development of a cadre of major programme managers suggests the need for (i) considering the various major programmes in progress and in the future from a collective viewpoint and (ii) manifesting the political will to add to each major programme a legacy commitment to develop leaders of future major programmes.

The provision of education to service this need can take a number of forms. Where there is a need for deeply contextualised learning this is often best undertaken ‘in-house’ where at the extreme this is achieved ‘on-the-job’ and enabled by close mentoring support. At a more abstract level where theory is engaged to inform generalisation and the transferability of knowledge then there is a role for accredited educational courses, with CPD activities positioned between these two alternatives.

The Learning Journey

Focussing attention on accredited learning there is a need to recognise several distinct features of major programme management that influence the learning journey:

- Understanding is widely dispersed and much of it lies with practitioners;
- Context is important;
- Experience is essential.

Taken collectively these features suggest that major programme management can be conceived as a “complex” problem, as opposed to a “simple” one using Grint’s categorisation of situations¹⁷. Complex problems are best addressed by analysing them in their context in order to

¹⁷ Grint, K. (2005), “Problems, Problems, Problems: The Social Construction of ‘Leadership’”, *Human Relations*, V58 N11, pp.1467-1494.

arrive at the appropriate solutions as they lack prescribable solutions that can be read across from apparently similar situations. This type of problem also benefits from being addressed in a collaborative manner as understanding and the means of resolution is dispersed amongst stakeholders.

The implication for the design of a course is a need to recognise understanding is dispersed, which highlights the need for collaboration between academics and practitioners on course design as well as recognising that practitioners have a valuable contribution to make in teaching a class and that the class of seasoned practitioners is itself a valuable source of knowledge. The importance of context means that subject matter knowledge, which may be the focus of other courses such as MBA classes, is necessary but not sufficient. At the very least this calls for the choice of the cases used on a course being based on both the learning points addressed and how these are illustrated in an appropriate setting. This identifies a role for practitioners to provide case studies of their own experiences. On the matter of experience being essential the view that, “Until managerial aspirants are taught to learn from their own firsthand experience, formal management education will remain secondhanded”¹⁸, provides both a warning and an opportunity. Appropriate pedagogies in this setting include those where reflection on prior experience are seen as a valuable source of insight, for example by operationalising Kolb’s Experiential Learning Cycle¹⁹ through peer-to-peer coaching and the case method. The risk that learning falls victim to ‘engaging tales from the sharp end’ means that course leaders need to remain vigilant and provide support as appropriate to speakers who are not familiar with prioritising the needs of students. This highlights the need to balance the provision in a course to bring together useful tips, techniques and methods that students can use to improve their immediate performance as practitioners and ensure these support long term learning through employing these examples as opportunities for developing the capability to critique and determine rigour, improve self awareness and the ability to identify paths for future learning and development and develop the capability and skills that enable as yet unforeseen challenges to be addressed.

A curriculum?

The previous discussion identifies that the purpose of the educational programme is to support both learning and development. While these purposes overlap it is worth first considering them separately. Learning is the provision of understanding on how to manage a major programme including the knowledge of the range of topics involved in running an organisation, the manner in which this knowledge draws together into a coherent whole, with the additional need to

¹⁸ Livingston, J. S. (1971) Myth of the well-educated manager. Harvard Business Review, Vol. 49 Issue 1, p79-89.

¹⁹ Kolb, D. A., (1984), *Experiential Learning. Experience as the Source of Learning and Development*. Prentice Hall.

understand how to deliver the benefits required of the major programme. Development in this setting is to acquire the ability to lead (i) the organisation; (ii) the top management team of the programme and (iii) oneself.

While the unit of analysis, i.e. the focus of attention, has vague boundaries there is merit in recognising the need to vary the focus on the individual student as well as on their relationship with their setting, i.e. in a team, organisational or wider context. Considering the purpose and focus of attention as separate variables allows a list of topics to be summarised against them, as shown in Table 4.

Focus of Attention	Individuals	<p>Thought Leadership</p> <ul style="list-style-type: none"> • Governance and organizational architectures. • Setting direction and securing resource: The realm of Systems Engineering. • Legal issues and contract management. • Finance and financial control. • A global perspective 	<p>Personal Leadership</p> <ul style="list-style-type: none"> • Personal credibility and moral authority. • Gain a sense of a larger purpose. • Foster multiple support networks. • Develop mechanisms to keep perspective and stay grounded.
	Wider context, e.g. a team or organisational setting	<p>Results Leadership</p> <ul style="list-style-type: none"> • Maintain / ensure organizational reputation and integrity. • Deliver objectives: Earned value (or similar) and benefits • Manage risk. 	<p>People Leadership</p> <ul style="list-style-type: none"> • ‘Tasks of Leadership’: Inspire; focus; enable; reinforce; learn.²⁰ • Pick up weak signals, anticipate change and conceive scenarios – local and global. • Engage stakeholders. Listen to them and act on their concerns.
		Learning	Development
		Purpose	

Table 4. An outline curriculum for major programme managers.

The four quadrants of the table have different characteristics and provide different contributions to the learning journey. In most cases the quadrants are complimentary and learning in one can be used to reinforce learning in other quadrants. This allows the learning journey to be balanced and progress achieved across each area in parallel and not in sequence.

²⁰ Pendleton, D. (Forthcoming) *Top team capabilities and leadership*.

Gaps in understanding and other risks

While the intention has been to provide a coherent thesis, and notwithstanding the desire to do good, the discussion presented here is riddled with hopes (optimisation bias?), fears (known and unknown uncertainties?) and speculation (prejudices, stereotypes and ignorance?). It is, above all, lacking a robust evidence base.

Given there will be a continuing stream of major programmes and the need for management teams to lead then this highlights a need to improve the substance on which the education of future major programme management is based. In seeking to capture the current situation it is intended this paper makes a contribution by providing a starting point from which progress can be made, not least through identifying areas where research would prove useful.