

DEVELOPING PROJECT MANAGER SKILLS: AN INDUSTRY PARTNERSHIP APPROACH

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RESUME

Un partenariat innovant entre l'industrie et l'université favorise la transformation de la culture d'entreprise, en assurant un enrichissement à long terme et en profondeur des compétences en matière de gestion de projet tout en proposant de nouvelles façons de comprendre et d'aborder les projets réels. L'Université de Technologie de Sydney travaille avec le gouvernement et l'industrie pour donner, sur le tas, des compétences accrues et des qualifications tertiaires transférables aux chefs de projet.

SUMMARY

An innovative partnership between industry and academia is supporting corporate culture change, providing long term and in depth development of project management skills, while offering new approaches to real projects. The University of Technology, Sydney is working with government and industry to provide project managers with enhanced skills and transportable tertiary qualifications, on the job.

INTRODUCTION

Public and private organisations are increasingly looking towards project management as a vehicle for changing corporate culture [1]. As corporate restructuring movements, the use of teams, and the adoption of a "project management" approach are introduced to support new corporate directions by developing the skills of project managers.

In many cases the training is notional only - a one day short course which introduces the bare framework and a few of the more common tools. But project management is not just a set of skills, tools and techniques - it is an approach and a way of thinking in one day. A deeper form of learning, made possible by genuine commitment from participants and management is necessary to achieve real individual and organisational project management.

The Project Management team at the University of Technology, Sydney (UTS) has a long program of partnership with organisations to develop an effective project management approach in the workplace. The program includes both training and education.

The main component of the program is a series of short courses in which teams work on projects taken from their organisation's business plan while focusing on projects taken from their organisation's business plan. These short courses, when taken by a critical mass of staff from an organisation, lead to a common understanding and application of project management terminology. The education component is a longer term approach in which staff are sponsored by their organisation and enrolled in a subject in the UTS Master of Project Management. Over a 6 month period these people work in teams on real workplace projects that encourage significant skill development and attitude change in participating staff. These activities are ongoing activities of the organisation. At the same time, participating staff are working towards a postgraduate qualification and are encouraged to become life long learners. The education component of the UTS Industry Partnership program is the primary focus of the program. With development of project manager skills as an individual development focus, the program is based on tasks as a basis for individual and organisational learning.

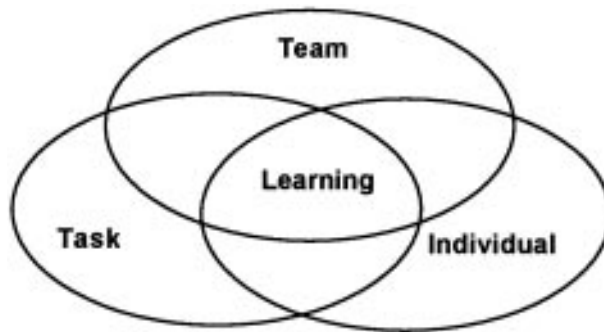


Figure 1

BACKGROUND

The principles underlying the partnership program are essentially those of problem based learning. Reg Revans, the founding father of action learning, states that 'action learning takes so long to describe because it is so simple' [2]. Another description of action learning, Mike Pedler, describes it as 'an approach to the development of individuals which takes the task as the vehicle for learning. It is based on the principle that there is no learning without action and no sober and deliberate action without learning'. Revans states that action learning implies both self-development and organisational learning. 'Problem based learning is a way of constructing and teaching courses that are problem based. It has a stimulus and focus for student activity. It is not simply the addition of problems to otherwise discipline-centred curricula, but a way of conceiving of curricula that is centred around key problems in professional practice' (Boud and Feletti). Revans [5] makes an interesting distinction between 'puzzles' and 'problems'. In academic settings, as students, we are presented with 'puzzles', where there is one right answer, which we have to find or identify. 'Problems', on the other hand, have multiple solutions. Different people, in different circumstances will suggest different solutions. Problems present risk and uncertainty for team members and academics, which are avoided in traditional lecture-based education and training. Although there are strong similarities between action learning and problem based learning, the primary focus - problem based learning has a project, task or problem focus - problem based learning has a project, task or problem focus.

demographic institutions for undergraduate programs in preparation for professional and architecture. Action learning, on the other hand, is more widely used in education such as MBA programs and outside academic institutions in management workplace training programs.

Weinstein [6] describes the main elements of an action learning program

1. *the set*: a team of people - five or six - who meet regularly, ideally once a month for a day;
2. *the projects or tasks* that each person works on during the program
3. *the processes* that the team adopts when working, which differ in many ways from the way we normally work in other teams or groups
4. *a set adviser* who helps the group as it works and learns
5. *the duration of the program* - normally from three to six months

THE UTS INDUSTRY PARTNERSHIP PROGRAM

The UTS Industry Partnership Program includes the five elements of an action learning program as described by Weinstein, although it does not use the term 'set', 'teams' or 'set advisers'. The primary feature which distinguishes the UTS program from other programs used in industry training and MBA programs, is that it emphasises the development and use of project management principles, tools and techniques

1. *The project teams*: Each program involves between three and four teams of five - a total of between 15 and 20 people. To date each program has comprised people from only one organisation although discussions are taking place with four Local Government Councils who are each considering sponsorship of a team of five people as a means of developing their project management skills while improving the networking and relationships between the councils.
2. *The projects or tasks*: The sponsoring organisation identifies a project for each team. The project is one which is drawn from the business plan of the organisation. These are projects which the organisation must carry out and for which a consultant may need to be engaged if it were not tackled in the context of the partnership program. The sponsoring organisation provides a client, a steering committee and a brief for each project. The project teams report regularly to the client and steering committee both formally through reports and presentations within the program, and informally.

Project teams are required to manage their project, including making an estimate of the time commitment required, and any other costs, as a basis for project costing.

As an example of the types of project selected, a program conducted in the second half of 1995 had as the four team projects:

- An Implementation Plan for introduction of Scheduling Software
- Recommendation and implementation plan for a Cost Control System
- Development of a Uniform Reporting System
- Development of a Safety Plan

3. *The processes*: A project management approach, tools and techniques must be used by the teams as they carry out their project. A total of 300 hours including both contact time, independent and project work is expected.

In an introductory 2 day residential workshop participants are introduced to:

- Learning styles (Honey and Mumford)[7]
- Team roles (Belbin) [8]
- Project Management Life Cycle
- Basic project management tools and techniques: eg Needs Analysis, Project Appraisal;
- Work Breakdown Structure, Bar Charts, Critical Path Method
- The nine Units of the Australian National Competency Standards in Project Management [9] and PMI(USA) Project Management Body of Knowledge [10]: Project Integration, Sco-

pe, Time, Cost, Risk, Quality, Procurement, Communications and Human Resource Management

The balance of the program has four main process components:

1. Team work on projects
2. Project presentations and reports (to the client and Steering Committee)
3. Workshops / lectures / discussions on aspects of project management (see Refs. [9] and [10]) selected by participants
4. Progressive development of a reflective journal
4. *A team adviser:* The equivalent of the “set adviser” in action learning is a team adviser. The Program Director for the UTS Project Management Program is the principal team adviser. Project Management practitioners who are involved as Associates of the UTS academic program are closely involved with the teams to act as mentors, and a resource for the teams. The role taken by the Project Management Program Director and the Associates is similar to that of the Director of a firm of consultants - not doing the work for the teams, but supporting the teams in their work, providing guidance as necessary, ensuring that project management processes are applied effectively and that client needs are identified and met
5. *The duration of the program:* as for action learning, the programs are usually conducted over a six month period. One organisation has supported participants through two x six month programs and is continuing to sponsor them as they complete full post graduate qualifications in project management

A distinctive feature is that participants in the program are enrolled at the University of Technology, Sydney, and on successful completion receive an official diploma from the University and credit points which can be used towards the University's other academic programs such as the Masters in Business Administration

Specific and tangible outcomes from the program are therefore:

For the sponsoring organisation: a completed project

For the individual participants: a certificate of completion plus an award of credit points which can be used to further both their qualifications and their careers

An extract from a letter received from the Director of one of the sponsoring organisations provides evidence of some of the less tangible but potentially more important outcomes of the program [11]:

- *development of improved project management skills for staff, an area needing to be strengthened following the introduction of new structures in the organisation*
- *the personal development of staff involved is already apparent for several participants*
- *improved communication between disparate groups in the organisation - the choice of project has assisted, as solutions involve a range of disciplines and interests*
- *staff new to the organisation and selected for the program have developed a wider understanding of organisational issues much more quickly*
- *the less tangible but significant cultural change of valuing in the organisation the need for continuing education and increased skills*
- *confidence for staff that the organisation is serious in equipping staff to respond to the challenges of competition*
- *improved individual communication and presentation skills*
- *an enhanced capacity to work cooperatively in teams*

To give some idea of the participant's view, the following are observations from participants in the program referred to in the Director's comments above:

a) *What I wanted to achieve:*

- expand my technical expertise
- develop better communication skills
- be noticed by people who affect my ambitions as someone who has provided value to the organisation
- satisfy an ambition of being up to a University standard of education

b) *What I actually achieved*

- gained a good knowledge of how to work in a group and how to rely on others
- improved my ability to disseminate relevant information from a mass audience
- gained confidence in being around talented people
- did not improve communication skills but did face up to a reality that to reach the level of competition I must improve this part of my perceived talent
- acknowledged by the Director as someone who has a changed attitude towards the (organisational) restructure

c) *What I could do better*

- join "Toastmasters" to improve public speaking skills, and volunteer to give presentations in the next round of the program to gain more confidence
- take on more responsibility during the next round of the program
- increase learning skills to appreciate the theoretical side of project management. These skills will certainly increase my standing in the organisation

d) *Is the program worth pursuing?*

- halfway through the program I would have said no - however, after seeing what other talented people can achieve I decided that I needed to lift myself to an equal basis
- I suppose I could summarise my aspirations when entering this program as "I don't succeed, lower your expectations". However, after six months I got out of that apathetic view and stimulated enough to want to achieve the program as a means to that end
- I feel very privileged to be associated with this group. I learned a lot and look forward to further association.

The comments given here are typical of the response from both program participants.

Weinstein [13], having interviewed 69 participants in 16 action learning groups, identified the following principal gains from action learning identified by these participants:

1. learning a more 'disciplined' way of working
2. learning to network
3. learning to relate to, and communicate with, others more effectively
4. gaining increased self-confidence
5. gaining increased awareness
6. gaining increased readiness to take responsibility and initiative

These gains are clearly shared by the participant in the UTS Industry Panel discussion above.

FURTHER OUTCOMES AND OBSERVATIONS

The nature of the learning clearly varies according to the individual and the nature of the project being undertaken as part of the program. Observations that can be made from the point of view of the academic Director are that the following observed programs involving different organisations.

Development of lifelong learners

A common concern of participants is how they will cope with returning to work after several years away from an academic institution. One of the advantages of the program for participants are enrolled University students, the "study", because they are working on a workplace project, and is undertaken alongside workplace colleagues, rather than turning to study alone. Industry sponsorship of the program also clearly encourages continuing education and qualifications by the organisation.

An outcome of this, for one of the sponsoring organisations, is that participants who had previously but failed to gain entry to the industry sponsored program have now enrolled in a Masters in Project Management. Of 30 people who entered one sponsored program, 10 are now taking advantage of their course credits and enrolling directly in a program in Project Management and related areas.

The program provides an excellent transition and encouragement for future participants.

Participants learn from one another

'Learning with and from others similarly engaged is one of the basic principles of action learning.' [14]. This can clearly be seen occurring in the programs. To facilitate peer learning it is important to select participants from a range of backgrounds and experience.

One sponsoring organisation has conducted three programs. Half of the participants in the first two programs are veterans of a previous program. They are therefore beginning the current program at the level of achievement at which the last program finished. The program for new and returning participants quickly learn and achieve the standards expected. The program's performance in the expectations and achievements of participants is both excellent and consistent.

Participants learn that there is no single right answer

By wrestling with a real project, participants quickly realise that the project is really much harder than implementation. As Weinstein [15] says, 'Action learning is useful where there is no one way forward, no single answer; where there are many different circumstances, people, on history, on what is to be achieved - on a number of different forces. Likewise, action learning is helpful where change of any sort is required. It brings in its wake, uncertainties, doubts, fears and hence 'problems'.

The comments of one of the action learning participants interviewed by the author are typical of the experience of UTS Industry Partnership participants at the start of the program. 'I'd expected to solve my 'problems' in a 'straight-line' approach - a direct solution - but it's not like that. You begin to work on whether what you think is the problem really is the problem ... and that's when the real work of action learning begins.'

In the UTS program, teams have on several occasions completely redefined their objectives. They received full support and the appreciation of their clients in doing so.

Participants learn that all projects are part of larger projects

Another important learning outcome for participants is the fact that all projects have sub projects and are themselves part of larger projects. The interfaces between projects or project interfaces are often overlooked but they must be managed to ensure the overall success of the program.

One of the UTS programs comprised three project teams - a total of eight was working on part of an overall project - an improvement plan for a project had been broken down into three sub projects by the client - an ongoing asset management project and a tenancy participation program the three teams decided to amalgamate and work together on the plan as one project. Academic staff, the sponsoring organisation and they were amazed at the quality of the end product and at how successfully work together on one project.

Clients learn

An interesting by product of the program is the learning experienced by ring organisation who are not direct participants in the program. They bers of the Steering Committee. They learn by observing the change participants. They learn by involvement with program participants as interviews within the organisation as part of the stakeholder analysis learn as they read the reports produced by program participants and as tations.

As Weinstein [17] says, action learning "changes the way people work, other.....As such, it may be deeply disturbing for those who fear cha status and beliefs". The learning and change which results from a progr well beyond the immediate participants.

Second order learning

From observation of participants over two consecutive programs, each of that there is a major leap in learning in the second program. Particip come used to the nature of the learning experiences, to working in team nagement principles, learning from their peers. To begin with they are and this can impede the learning process. Having successfully survive pants enter the second with a much higher level of confidence. They ha and are ready to embrace the experience and extract as much as they can cond six month period that real changes and development can be seen.

The value of longer term educational and training experiences is clearl

LESSONS FOR FUTURE PROGRAMS

We must all learn from both our successes and our mistakes. Experience Industry Partnership program gives rise to the following points for fut

- A minimum two day residential workshop at the start of the program which establishes the teams and provides a project management framework is essential
- Participants must want to be part of the program - they must not be drafted
- Participants must decide, with a little help and guidance from academic staff, what input and assistance they require and what topics they need, if any, to be covered by lectures, workshops and other educational activities. It is important that the program is not fully predetermined and that there is flexibility to respond to the changing needs of teams and individuals as the program and the team projects progress
- Participants must decide, with a little help and guidance from academic staff, how they will be assessed.
- A reflective journal is an essential part of the assessment for the program. It is an effective medium for encouraging participants to observe their own learning experiences and those of others.

- Real workplace projects, where teams are reporting to clients and a Steering Committee from their place of work take a considerable amount of time. Participants are under pressure to perform and deliver an excellent outcome from the project as their performance may impact on their future within the organisation. This can cause considerable stress and may detract from the opportunities for learning. Some participants complain that because they have a real client they are just doing what they always do and not exploring and experimenting with different roles, approaches, tools and techniques. Nevertheless, both the organisations and the participants confirm that the value of using real projects outweighs potential difficulties. It is important for academic supervisors to ensure that the program and the projects have the full support of the sponsoring organisations, that the workload of participants is monitored and that the projects are tackled as experimentally and adventurously as possible.

CONCLUSION

The UTS Industry Partnership program incorporates action learning principles as a process for developing the project management skills of individuals. This approach has been used successfully to support organisations which have adopted a project management approach as a means of changing corporate culture.

The program involves a strong and productive partnership between industry and the university institution. A key feature which distinguishes the program is that participants work on projects with outcomes of value to their organisation, while individuals also gain credits towards academic qualifications.

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