

18D:
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Growing Leaders: The Evaluation of a Customised Leadership Development Program

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Introduction

This paper presents some key findings of a research project that evaluated the performance of a customised, six-month leadership development program (LDP). This program was designed for 20 emerging leaders who were promoting sustainable urban water management (SUWM) in the Sydney region of New South Wales. Here, the term 'leader' is used to describe individuals who drive *processes of influence* that occur within the context of relationships with their collaborators, and involve establishing direction (vision), aligning resources, generating motivation and providing inspiration (see Kotter, 2001; Rost, 1993).

Customised, evidence-based and best practice LDPs have been recommended as one mechanism to build desired forms of leadership capacity within the Australian water industry to help successfully manage the transition from traditional to more sustainable forms of water management (see Brown *et al.*, 2006; Taylor, 2008; White, 2006). The rationale for building leadership capacity has three dimensions. First, the Australian water industry is experiencing unprecedented levels of change and uncertainty due to factors such as severe droughts, climate change predictions, rapidly increasing populations and increased recognition of the need for more sustainable water management practices (see Davis, 2008; Kaspura, 2006). In such turbulent contexts, there is a greater need for professionals with highly developed leadership abilities (see Conger, 1993; Kotter, 2001).

Second, the challenge of making the transition to 'water sensitive cities' (Brown *et al.*, 2009) fits the description of a 'complex challenge' (Drath, 2003) which is also known as a 'wicked problem' (Rittel & Webber, 1973). Such challenges are characterised by disagreement among stakeholders on the causes and solutions, a tendency to cross jurisdictional and organisational boundaries, numerous inter-dependencies, the need to change people's behaviour, instability, and a history of chronic policy failure (Commonwealth of Australia, 2007). Leadership researchers (see Drath, 2003; Plowman *et al.*, 2007; Snowden & Boone, 2007; Uhl-Bien *et al.*, 2007) argue that such challenges are best suited to leaders with particular attributes (e.g. an openness to new approaches and the ability to engage in systems thinking) and particular forms of leadership (e.g. coordinated forms of group-based leadership that span organisational boundaries and managerial levels).

Finally, there is now strong evidence that emergent leaders with particular attributes (i.e. 'champions'; see Taylor, 2007) are instrumental in initiating and driving leadership processes to promote SUWM in Australia (see Brown, 2003; Brown & Clarke, 2007; Taylor, 2008; White, 2006). Recent research by Taylor (2008) has identified the leadership behaviours used by these champions within publicly-managed Australian water agencies.

Given the potential value of building leadership capacity in water agencies to help promote SUWM, a research project was formulated at Monash University in partnership with the NSW Environmental Trust (part of the NSW Urban Sustainability Program). This project used knowledge of effective SUWM champions and best practice LDPs (see Taylor, 2008) to design, deliver and evaluate a six-month, 'feedback intensive' LDP (see Guthrie & King, 2004) for actual or potential SUWM champions in water agencies. The primary aim of the program was to help emerging leaders working at the 'entry' to 'team leader' managerial levels to strengthen their leadership skills so they could be more effective at promoting SUWM. The LDP was based in Parramatta and was part of a larger project in the region titled 'Working Together to Sustain the Parramatta River' that was delivering SUWM infrastructure in the Parramatta River catchment.

This paper answers the following three research questions: Was the program valued by participants in terms of its quality and likely impact on their leadership ability? Was the program associated with changes in desired leadership behaviours, as assessed by the peers of participants? Is it likely that the program will deliver a positive 'return on investment' (ROI; see Phillips, 2007) after one year? To answer

changed was investigated). For tier 4, the total cost to run the program was estimated. Tier 5 involved *estimating* the tangible program benefits in financial terms (e.g. the approximate value of the program to the participants' organisations). For tier 6 the intangible program benefits were identified (e.g. benefits such as increased motivation to take on leadership roles). Finally, Tier 7 involved *estimating* a conservative, average ROI for program participants after one year. The ROI is defined by Phillips & Phillips (2002) as:

$$\text{ROI \%} = \frac{[\text{The total financial benefit to the participant's organisation for 1 year (\$)}] - [\text{The total program cost (\$)}]}{\text{The total program cost (\$)}} \times 100\%$$

Table 1. Overview of the program's seven tier evaluation framework

Tier of evaluation (adapted from Phillips & Phillips, 2002)	Data and data source	Data collection methods
1. Participant satisfaction and planned action.	a) Data from participants on the: <ul style="list-style-type: none"> Quality of the program's design, delivery and materials.* Program's strengths and weaknesses. b) The quality of the 20 final ILDPs, as assessed by the researcher.	a) Post-program questionnaire and group interview (qualitative and quantitative data).* b) Assessment of final ILDPs against best practice principles (qualitative data).
2. Participant learning.	Data from participants on whether key messages from the October 2008 training were retained in February 2009.	Post-program multiple choice questionnaire (20 questions, quantitative data).
3. Application of knowledge.	a) Data from participants on the degree to which the actions in their ILDPs were implemented, and peer review of this data by the participants' supervisors. b) Data from the participants' peers on changes in key leadership behaviours over the program's timeframe.*	a) Post-program questionnaire involving the participants and their supervisors (qualitative and quantitative data). b) Survey of participants' peers (at least 5 per participant) in early February 2009 using questionnaires that were customised for each participant and aligned with ILDPs.*
4. Total program cost.	a) Data from participants on all of the costs that their organisations incurred due to their involvement with the program and peer review of this data by their supervisors. b) Estimates from the researcher on all other costs associated with delivering the program.	a) Post-program questionnaire involving the participants and their supervisors (quantitative data). b) Estimates related to the cost of running such a program at consulting rates rather than as a research project (quantitative data).
5. Tangible program benefits / business impact.	Data from participants on: <ul style="list-style-type: none"> The percent of their role that was potentially affected by the program, and the level of confidence in this estimate. The percent improvement in their ability to perform leadership elements of their role as a result of the program, and the level of confidence in this estimate. Their annual salary and on-costs. These data were also peer reviewed by the participants' supervisors.	Post-program questionnaire involving the participants and their supervisors (mainly quantitative data).
6. Intangible program benefits.	Data from participants on: <ul style="list-style-type: none"> Benefits from the program that could not be expressed in financial terms, such as increased motivation to lead, positive impact on staff and benefits outside of work. 	Post-program questionnaire involving the participants (qualitative data).
7. Return on investment.	a) Data from Tier 4 (i.e. total program costs) and Tier 5 (i.e. tangible program benefits) to produce an estimate of ROI for each participant and the whole program (i.e. average ROI).* b) Data from participants on factors that helped and hindered their developmental progress and therefore affected the ROI (e.g. intrinsic motivation, organisational support, etc.).	a) ROI methodology from Phillips (2007) and Phillips & Phillips (2002 & 2003).* b) Post-program questionnaire involving the participants (qualitative and quantitative data).

Note: * = data that are most relevant to this paper.

The methodology to estimate an average ROI has been designed to generate a very *conservative* figure. Relevant design features include only considering tangible benefits (i.e. it does not consider intangible benefits such as those associated with improved motivation to lead, more motivated staff, or improved leadership effectiveness outside the workplace). The methodology also only includes benefits from using newly developed leadership skills during the following year, even though most participants had the potential to be in the workforce for an additional 20 to 40 years. In addition, one would expect the portion of the roles undertaken by participants that require leadership skills to grow over their careers as they move into more senior positions. Another conservative design feature is that the methodology does not include the long-term benefits of learning how to improve one's leadership skills over one's career. The methodology also discounts benefit estimates using data on the level of confidence associated with these estimates, and ensures that supervisors review the participants' cost-benefit estimates to identify the most conservative estimates. In addition, the benefits from the 'booster' training at the end of the program would not have had time to materialise before participants provided data relating to the program's benefits. Finally, 95% confidence intervals around averages were used during quantitative data analysis to help draw conservative conclusions regarding the magnitude of the average estimated ROI.

Results and Discussion

Program quality, likely impact, strengths and weaknesses

Figure 2 presents the averaged ratings from all 20 participants for items in a post-program questionnaire that related to the quality of the program's design (88%), delivery (90%) and materials (83%). This figure also shows the 95% confidence intervals around the average ratings, indicating there was little variation in the individual ratings between participants. Overall, these data indicate that from the participants' perspective, the quality of the program's design and delivery was 'high' to 'very high', while the quality of the program's materials was 'high'.

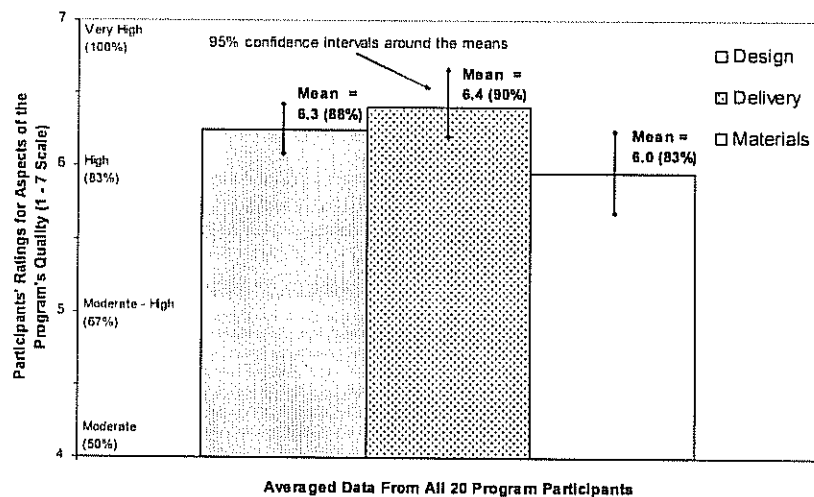


Figure 2. Program quality (participant assessment)

Figure 3 presents the averaged ratings from all 20 participants regarding the program's overall impact on their leadership ability. The lowest raw rating by any participant was 6 on the 0 – 10 scale (i.e. a 'moderate' impact) and the average was 7.1 (i.e. 'moderate' to 'high', or 68% on the scale). As this is self-assessed data, discounted scores have also been provided. For example, a raw rating by a participant of 8 on the 0 – 10 scale (78%) with a 80% confidence rating would become a discounted rating of 63% (as $78\% \times 0.8 = 63\%$). Once again, the 95% confidence intervals around the average ratings indicate there was little variation in individual ratings between participants. Overall and taking a conservative approach, these data indicate that from the participants' perspective, the average impact of the program on their leadership ability was 'moderate' (around 53% on the scale) after six months.

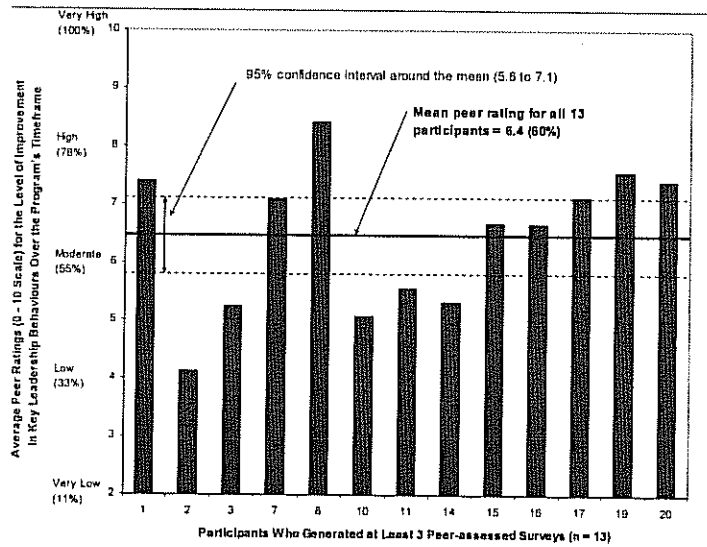


Figure 4. Level of improvement in key leadership behaviours (peer assessment)

Estimated return on investment after one year

Figure 5 shows the *estimated ROI* for the 11 participants who provided supervisor-reviewed data on the costs and benefits associated with their involvement with the program. It also presents the average ROI for the program (i.e. 190%). This figure displays the substantial variation in the estimated ROIs for each participant. For example, two of the 11 participants (18%) generated weakly negative ROI estimates (i.e. -11% and -14%) in contrast to three participants who generated strongly positive ROI estimates (i.e. 270%, 610% and 880%). Despite this variation, there is 95% confidence that the average estimated ROI after one year is positive for the program. A positive ROI represents a net benefit to a participant's organisation.

The high degree of variability in the estimated ROIs for each participant is consistent with research by Avolio (2007) who found the ROI for developing leaders with 'high potential' can be eight times that of people with 'low potential'. In this context, 'high potential' candidates for leadership development would typically have a strong commitment to learning and personal development, a desire to lead, a high need for achievement, persuasive and inspirational communication skills, strategic thinking ability, pragmatism, a high general mental ability, confidence and be self-motivated (Avolio, 2007; Doh, 2002).

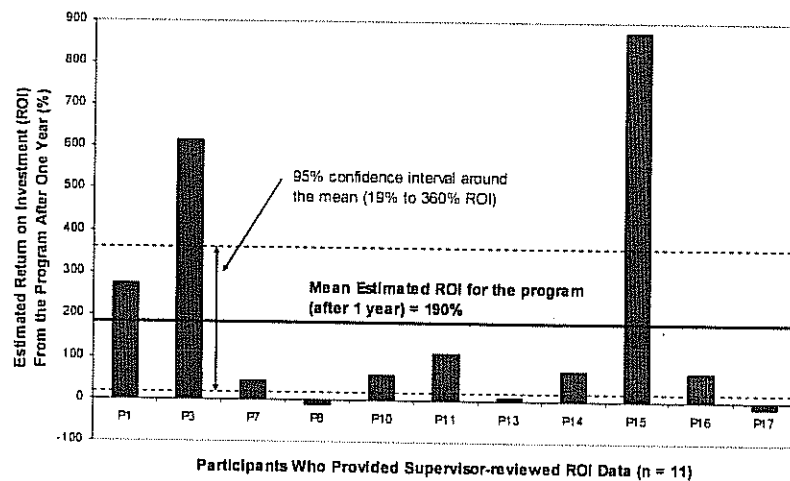


Figure 5. Estimated ROI for participants and the program's average ROI

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