PrimaryConnections®
Linking science with literacy

Stage 3
Interim research and evaluation report 4

Professional Learning Facilitators: Confidence, self-efficacy, activities as at end of Term 1, 2006

A research report for the Australian Academy of Science

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The views expressed in this report do not necessarily represent the views of the Australian Academy of Science nor the views of the Australian Government Department of Education, Science and Training. The author accepts responsibility for the views expressed and all errors and omissions in this report.

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Introduction

The implementation of any new initiative in primary schools requires the strong support of the principal and strong leadership from leader teachers or coordinators in that learning area. Research with professional learning programs at secondary and primary schools (Goodrum, Hackling & Trotter, 2003; Goodrum, Hackling & Sheffield, 2003; Hackling & Prain, 2005; Lewthwaite, 2006) indicate that the provision of professional learning workshops and exemplary curriculum resources, opportunities for collegial interaction and reflection on practice, support of the principal and strong leadership by leader teachers/coordinators are required for successful implementations. The growth and effectiveness of teacher leaders depends on their personal attributes (e.g., motivation, self-efficacy), microsystem factors such as collegial and external supports, mesosystem factors such as the priority placed on the subject by their school and the schools openness to change, exosystefactors such as parent and community expectations, and macrosystem factors such as state and national curriculum agendas (Bronfenbrenner, 1989; Lewthwaite, 2006).

Research into the professional learning and growth of professional learning facilitators who will provide workshops for teachers of Primary Connections will provide insights into their activities and how they can be supported to be effective in their roles. Little research has been reported in the literature on the professional growth of professional learning facilitators and therefore this research has the potential to make an original contribution to the literature in addition to informing further developments of the Primary Connections program.

Data gathered from the professional learning facilitators trained at the three-day January 2006 workshop (Hackling, 2006) indicated that the facilitators were generally confident with their science teaching practice, had some experience of facilitating professional learning, and at the end of the workshop had made gains in confidence and self-efficacy as a facilitator. Palmer's (2006) research with pre-service primary teachers of science and Hackling and Prain's (2005) research with in-service teachers indicates that maintenance of gains in self-efficacy developed through workshops is enhanced when they have the opportunity to put into practise the skills learned in workshops. It would therefore be expected that the professional learning facilitators in this project would experience further growth in confidence and self-efficacy as a facilitator after having experienced success with conducting workshops.

Purpose

The purpose of this study was to elicit from professional learning facilitators (PLFs) information about: their confidence and self-efficacy as facilitators; their professional learning activities; factors supporting or inhibiting their effectiveness; how the professional learning resources can be improved and what further support they need in their role.

Method

A questionnaire based survey method was adopted to gather information from the PLFs. Questionnaires are effective and economical for gathering information from large numbers of participants and the data gathered are relatively easy to code and analyse. Focus groups will be used at a later date to gather more detailed information about how the professional learning modules can be improved.

The questionnaire included a mix of open response questions and closed objective items. A copy of the questionnaire is attached as an Appendix.

Sample
The sample of PLFs (n=72) that attended the end of Term 1 workshops completed the survey. This group was representative of the population of PLFs (n=89) that were trained at the January 2006 workshop.

Results

This section of the report presents demographic information about the participants, information about their professional roles, self-efficacy and confidence as professional learning facilitators, and the professional learning activities they had engaged with. Data are also presented about the PLFs' use of the supplied professional learning resources, and factors enabling or facilitating the effectiveness as a PLF.

Demographic data

Table 1: Number of PLFs from each jurisdiction

Jurisdiction	Number of PLFs at end term 1 2006 workshop
WA	15
SA	7
NT	5
QLD	12
NSW	12
ACT	4
VIC	13
TAS	4
Total	72

Of the 72 PLFs attending the workshop, 51 were from government schools, 10 from Catholic schools, seven were from independent schools and four where from other organisations.

Professional roles of PLFs
Eighty-nine professional learning facilitators (PLFs) attended the three-day initial workshop in Canberra during January 2006. Of these 72 attended the end of Term 1 one-day workshop. The professional roles of the PLFs are summarised in Table 2.

Table 2: Professional role of PLFs to end of Term 1 survey

Role in 2006	**Number of respondents**		
	Initial workshop	**End of initial workshop evaluation**	**End Term 1**
PC trial teacher	16	16	14
Teacher in a school, new to PC	31	30	24
District/central office adviser	29	28	26
Professional association adviser	7	7	5
Science organization adviser	6	4	3
Totals	89	85	72

Key finding 1: Of the 72 PLFs who completed the end of Term 1 survey, 38 were teachers while 43 were not based in schools.

Self-efficacy and confidence as a professional learning facilitator

Self-efficacy as a PLF

The PLFs responded to a self-efficacy as a professional learning facilitator scale before and after the initial workshop in January and to the same scale at the end of Term 1 workshop. Data are reported here for only those PLFs who responded to the scale on all three occasions.

The scale comprised eight items and PLFs responded to each item on a five-point agreement scale (strongly agree = 5 to strongly disagree = 1). Mean item scores and mean scale total scores (/40) are reported in Table 3.

Table 3: Mean self-efficacy item scores and mean total scale scores for PLFs at the initial and the end of Term 1 workshops in 2006. (n=65)

Aspect of self-efficacy as a professional learning facilitator	Mean score (/5)								
	Whole group (n=65)			Class teachers (n=34)			Others (n=31)		
	Initial	End Jan wshp	End Term 1	Initial	End Jan wshp	End Term 1	Initial	End Jan wshp	End Term 1
1 I am effective in eliciting teachers' prior knowledge and beliefs and adjusting the professional learning workshop to meet the needs of the teachers	3.92	4.11	4.17	3.56	3.94	4.00	4.32	4.29	4.35
2 My science content knowledge enables me to answer teachers' science questions effectively	3.49	3.97	4.02	3.35	3.88	3.94	3.65	4.06	4.10
3 My knowledge of effective science teaching practices enables me to answer teachers' science pedagogy questions effectively	3.80	4.18	4.12	3.68	4.06	4.03	3.94	4.32	4.23
4 I am quite comfortable with having my professional learning workshops evaluated	4.15	4.28	4.32	3.79	4.06	4.12	4.55	4.52	4.55
5 I am able to pose engaging tasks for teachers to work on in small groups in my workshops	4.03	4.26	4.28	3.76	4.15	4.09	4.32	4.39	4.48
6 My deep understanding of the culture of primary schooling enables me to give valuable advice to teachers on matters of primary science pedagogy	3.82	4.08	4.09	3.74	4.09	4.09	3.90	4.06	4.10
7 My deep understanding of the culture of early childhood education enables me to give valuable advice to ECE teachers about science pedagogy	3.32	3.57	3.55	3.21	3.53	3.53	3.45	3.61	3.58
8 My deep understanding of literacy teaching practice enables me to give valuable advice on integrating literacy education into science education	3.80	4.11	4.05	3.85	4.24	4.12	3.74	3.97	3.97

Mean total self efficacy score (/40)	30.34	32.55	32.6	28.94	31.94	31.91	31.87	33.23	33.35
SD for total scores	4.58	4.03	4.04	4.36	3.96	4.22	4.39	4.06	3.75

Self-efficacy mean scores for all items were high (>4) on all items except for Item 7 which relates to their capacity to support teachers in early childhood contexts. No significant changes occurred in the PLFs mean total self-efficacy scale scores between the end of the January workshop and the end of Term 1 workshop. Palmer's (2006) and Hackling and Prain's (2005) research on self-efficacy beliefs for teaching indicate that an opportunity to practice what has been introduced in workshops is needed to further enhance self-efficacy beliefs. Many PLFs had not had the opportunity to facilitate workshops by the time of the end of Term 1 survey. The teachers had lower mean total scale scores than the other PLFs in January and at the end of Term 1.

Table 4: Frequency of total scale scores for self-efficacy as a professional learning facilitator for surveys at the beginning and end of the January workshop and the end of Term 1 (n=65)

Total scale score (/40)	**Whole group (n=65)**			**Class teachers (n=34)**			**Others (n=31)**		
	Initial	**End Jan wshp**	**End Term 1**	**Initial**	**End Jan wshp**	**End Term 1**	**Initial**	**End Jan wshp**	**End Term 1**
1-10									
11-20	2			2					
21-30	35	20	22	22	11	13	13	9	9
31-40	28	45	43	10	23	21	18	22	22
Mean self efficacy score for all facilitators	30.34	32.55	32.6	28.94	31.94	31.91	31.87	33.23	33.35
S.D.	4.58	4.03	4.04	4.36	3.96	4.22	4.39	4.06	3.75

Total self-efficacy scale score = sum of eight self-efficacy scores (/40), with the most positive response given the value of 5 and the least positive the value of 1 on a five point agreement scale

No significant changes in total self-efficacy scale scores occurred between the end of the January workshop and the end of Term 1 workshop. Gains in self-efficacy achieved at the January workshop have been maintained.

Key finding 2: Self-efficacy scores were generally high. Gains in self efficacy as professional learning facilitators achieved through the January workshop have been maintained to the end of Term 1 despite many PLFs not having had the opportunity to practice facilitation by delivering workshops.

Confidence with aspects of facilitation

The PLFs responded to seven items regarding their confidence with facilitating professional learning workshops. PLFs responded to each item on a five point confidence scale (no confidence = 1 to very confident = 5). Mean item scores and mean total confidence scale scores (/35) are reported in Table 5.

Table 5: PLFs' confidence with facilitating professional learning on aspects of primary science teaching (n=65)

Aspect of facilitating	Mean score (/5)								
	Whole group (n=65)			Class teachers (n=34)			Others (n=31)		
	Initial	**End Jan W/S**	**End term 1**	**Initial**	**End Jan W/S**	**End term 1**	**Initial**	**End Jan W/S**	**End term 1**
An introduction to *Primary Connections*	3.42	4.25	4.28	3.32	4.12	4.03	3.52	4.39	4.55
Coordinating the science program in a primary school	3.82	4.13	3.95	3.79	4.06	4.00	3.84	4.20	3.90
Assessment of learning in primary science	3.74	3.94	4.00	3.68	3.85	3.71	3.81	4.03	4.32
Conducting investigations in primary science	4.05	4.25	4.17	3.97	4.09	4.03	4.13	4.42	4.32
Cooperative learning strategies	4.11	4.25	4.35	3.88	4.03	4.24	4.35	4.48	4.48
Developing literacies needed for learning science	3.74	4.14	4.14	3.74	4.09	4.06	3.74	4.19	4.23
Using an inquiry model to plan primary science units of work	3.89	4.29	4.26	3.71	4.12	4.06	4.10	4.48	4.48
Mean total confidence score (/35)	26.75	29.23	29.15	26.09	28.35	28.11	27.48	30.19	30.29
SD for total scores	5.26	4.23	4.04	4.83	4.24	3.78	5.68	4.07	3.93

NC = No confidence = 1 LC= Limited confidence =2, OK = 3 C = confident= 4, VC = Very confident = 5

Key finding 3: The PLFs had relatively high confidence for all aspects of facilitation surveyed. Teacher PLFs had lowest confidence with assessment and non school-based PLFs had lowest confidence with coordinating a science program. Gains made in confidence through the January workshop had been maintained to the end of Term 1.

Professional learning activities

The PLFs were asked to report the frequency of their professional learning activities conducted in Term 1 of 2006. These data are reported in Table 6.

Table 6: Frequency with which professional learning activities had been conducted by PLFs during Term 1. (n=72)

	Number of respondents			
Professional learning activity	**Never**	**1 – 3 times**	**4 – 10 times**	**Many times**
Answering questions about *Primary Connections*	6	7	24	34
Showed the *Primary Connections* curriculum units to a colleague	4	18	27	23
Sharing your experiences with *Primary Connections* with colleagues.	7	17	25	23
Teaching *Primary Connections*	48	8	4	1

Engaged in journaling, analysing and reflecting on your own science teaching practice	37	17	8	10
Observing a trial teacher/colleague teaching *Primary Connections*	60	10	2	0
Invited a colleague to observe you teaching *Primary Connections*	56	8	5	2
Visiting a *Primary Connections* trial school to see how they have organised the program within their school	58	13	1	0
Engaged in gaining the Principal's support and planning for the implementation of *Primary Connections* at your school	23	37	7	4
Made a short presentation outlining the features of *Primary Connections* to school staff	34	31	6	1
Presented an information session for a group of school principals	63	8	1	0
Presented an information session for a group of district/sector curriculum area leaders/policy officers/consultants	54	8	0	0
Shown video clips from the *Questioning Minds* DVD	42	26	4	0

Fourty-eight of the 72 PLFs had not taught Primary Connections in Term 1. The most common activities were showing colleagues Primary Connections curriculum resources, sharing own experiences of the program with colleagues and answering colleagues' questions about the program. Advocating for the program with the school principal, making a short presentation to school staff about the program, and reflecting on one's own practice were also common activities.

Key finding 4: The most common professional learning activities conducted in Term 1 were sharing resources and experiences, answering questions about the program and gaining the support of the principal.

There were differences in the types of professional learning activities conducted by classroom teachers and by other PLFs. These data are reported in Table 7.

Table 7: Frequency of professional learning activities in Term 1 conducted by classroom teachers and by other PLFs as a percentage of respondents. (n=72)

	Per cent of respondents					
	Classroom teachers (n=38)			Others (n=34)		
Professional learning activity	**never**	**1-10**	**lots**	**never**	**1-10**	**lots**
Answering questions about *Primary Connections*	8	45	53	11	37	42
Showed the *Primary Connections* curriculum units to a colleague	3	68	29	8	50	32
Sharing your experiences with *Primary Connections* with colleagues.	3	58	39	16	53	21
Teaching *Primary Connections*	47	24	29	79	8	0
Engaged in journaling, analysing and reflecting on your own science teaching practice	45	34	21	53	32	5
Observing a trial teacher/colleague teaching *Primary Connections*	76	24	0	82	8	0
Invited a colleague to observe you teaching *Primary Connections*	63	32	5	84	3	0
Visiting a *Primary Connections* trial school to see how they have organised the program within their school	92	8	0	61	29	0
Engaged in gaining the Principal's support and planning for the implementation of *Primary Connections* at your school	11	79	11	50	37	0
Made a short presentation outlining the features of *Primary Connections* to school staff	42	55	3	47	42	0
Presented an information session for a group of school principals	95	5	0	71	18	0
Presented an information session for a group of district/sector curriculum area leaders/policy officers/consultants	82	18	0	61	29	0
Shown video clips from the *Questioning Minds* DVD	58	42	0	53	37	0

Key finding 5: Classroom teachers more frequently taught PC, observed colleagues teaching PC, invited a colleague to observe them teaching PC and advocated with the principal than other PLFs. The other PLFs more frequently visited schools to see how PC was being implemented, presented information sessions for a group of principals or to district or sector policy makers, leaders or consultants.

A total of 32 workshops or information sessions had been presented by PLFs who completed the survey at the end of Term 1. Twenty-eight of the PLFs had presented workshops during Term 1 and 46 planned to conduct a workshop later in the year; most of these would be the Introduction to Primary Connections workshop.

Table 8: Facilitation of PC professional learning workshops by PLFs in Term 1 and planned for later in the year. (n=72

Workshop	**Number of PLFs with this response**	
	Term 1	Planned for later in year
Yes, I have facilitated/ plan to facilitate a workshop	28	46
Introduction to *Primary Connections* workshop	23	29
Literacies of science workshop	10	-
Investigating workshop	9	1
School Coordinators workshop	5	-
Auditing workshop	4	-
Assessment workshop	2	1
Other	0	2

There is no major difference between teachers and those not teaching in the classroom with regards to the PC workshops they have facilitated or plan to facilitate this year.

Key finding 6: The PLFs presented 28 workshops in term 1 and they planned to present 46 more workshops during the year. Most workshops were the Introduction to Primary Connections workshop.

Professional learning resources
The PLFs were asked which of the professional learning resources they had used and whether they had modified them . These data are reported in Table 9.

Table 9: Facilitators' responses to the question "Which PC professional learning resources have you used this year and have you modified them?" (n=72)

Resource	Number of teachers with this response		
	Used this resource	Modified this resource	Could be improved by:
Introduction to *Primary Connections* workshop	13	11	o Make it shorter o Spend more time exploring units in Introductory workshop o Need a timeline for implementation when doing introductory workshop
School Coordinators workshop	0		
Auditing workshop	0		
Investigating workshop	3	3	o Investigating – a selection of activities to choose from rather than just a couple
Assessment workshop	1		o Assessment resources need more work samples
Literacies of science workshop	2		
Questioning minds DVD	10	4	o DVD out of sequence with introductory PowerPoint
Facilitators manual	11	8	o PowerPoint to link to COGS and Fn statements (p4) o PowerPoint needs local input
Curriculum resources	7	2	o In folder of resources, one copy of the unit needs to be available per participant at workshop.
None used or no response to question	41		

The most frequently used professional learning resources were the Introduction to Primary Connections workshop, the facilitator's manual, the Questioning Minds DVD and the curriculum resources. It appears that it is common for PLFs to modify the resources to make links to local contexts. The most common suggestions for improving the resources were to shorten the Introduction to Primary Connections workshop or to add local content to the PowerPoint presentations.

Key finding 7: Most PLFs modified the professional learning resources to suit the local context. Suggestions for modifying the professional learning resources included breaking the one-day Introduction to Primary Connections workshop into smaller modules and adding more work samples.

Factors enabling or inhibiting professional learning activity
The PLFs were asked about factors that enabled them or inhibited them from being effective in their role as professional learning facilitators. These data are reported in Tables 10 and 11.

Table 10: Facilitators' response to the question: "What factors are enabling you to be effective in your role as a *Primary Connections* professional learning facilitator?" (n=72)

Factors enhancing	**Number of responses**	**Per cent of respondents with this response**
Support from principal, admin, district coordinator	17	24
Good resources	11	15
High interest in resources, they are easy to sell	11	15
My position/role, established communication structures	11	15
Time (prepared/ release)	7	10
Skill as presenter	6	8
Support for own pd/from Canberra/ PD done in Jan	5	7
Experience as a PC trial teacher	5	7
Links/meeting with other facilitators	4	6
Knowledge of the pedagogy	1	1
Not facilitating	7	10
Total responses	**85**	
No response	14	19

The major factors enabling facilitators to be effective in their role are support from their supervisors, the resources themselves and for those not in the classroom, their position, the established communication structures that go with the position and time available for the role.

Table 11: Facilitators' response to the question: "What factors are limiting your effectiveness as a *Primary Connections* professional learning facilitator?" (n=72)

Factors limiting	**Number of responses**	**Per cent of respondents with this response**
Finding time to facilitate, unwilling to leave own class for long	37	51
Schools have trouble finding time (conflicts with other programs, science low priority)	21	29
Need copies of PC books	9	13
Support from admin	6	8
Schools' knowledge of program	6	8
Lack of funds for PD	5	7
Not enough facilitators , high demand on student free days	3	4
Lack experience presenting	3	4
Don't know units (haven't taught)	3	4
Not facilitating	4	6
Total responses	**97**	
Number of respondents with no response	5	7

The major limitation seems to be time, either facilitators finding time to go to other schools and run workshops or schools finding time for their staff to participate in workshops. The availability of time for these activities is influenced by the priority given to science by a school relative to other competing agendas. There was a lack of PC books in some schools, however, this may have been addressed since the survey at the end of Term 1.

Table 12: Facilitators' responses to the question: What further support (resources, training etc) do you need for your role as a *Primary Connections* professional learning facilitator? (n=72)

Type of support needed	**Number**	**Per cent of respondents**
Ongoing support within state or territory, support from academy, region and DET	17	24
None	13	18
Time to integrate with state curriculum, to plan with others	12	17
Funding for relief and planning presentations	10	14
More units	7	10
Sets of PC books	6	8
Help on how to present workshops	3	4
Total number of responses	**79**	
No response	10	14

Support from organisation, time and funding are the major areas where facilitators feel they need more support.

Key finding 8: Key factors influencing PLFs' effectiveness in their roles include support from their line manager, having access to quality resources, schools' interest in the program, time to present workshops and availability of time in schools for staff to attend workshops, and access to curriculum units for workshops.

Summary of key findings

The key findings from this survey are listed in Figure 1.

Key findings	
1	Of the 72 PLFs who completed the end of Term 1 survey, 38 were teachers while 43 were not based in schools.
2	The self-efficacy scores were generally high. Gains in self efficacy as professional learning facilitators achieved through the January workshop have been maintained to the end of Term 1 despite many PLFs not having had the opportunity to practice facilitation by delivering workshops.
3	The PLFs had relatively high confidence for all aspects of facilitation surveyed. Teacher PLFs had lowest confidence with assessment and non school-based PLFs had lowest confidence with coordinating a science program. Gains made in confidence through the January workshop had been maintained to the end of Term 1.
4	The most common professional learning activities conducted in Term 1 were sharing resources and experiences, answering questions about the program and gaining the support of the principal.
5	Classroom teachers more frequently taught PC, observed colleagues teaching PC, invited a colleague to observe them teaching PC and advocated with the principal than other PLFs. The other PLFs more frequently visited schools to see how PC was being implemented, presented information sessions for a group of principals or to district or sector policy makers, leaders or consultants.
6	The PLFs presented 28 workshops in Term 1 and they planned to present 46 more workshops during the year. Most workshops were the Introduction to Primary Connections workshop.
7	Most PLFs modified the professional learning resources to suit the local context. Suggestions for modifying the professional learning resources included breaking the one-day Introduction to Primary Connections workshop into smaller modules and adding more work samples.
8	Key factors influencing PLFs' effectiveness in their roles include support from their line manager, having access to quality resources, schools' interest in the program, time to present workshops and availability of time in schools for staff to attend workshops, and access to curriculum units for workshops.

Discussion and Conclusions

The survey of PLFs was conducted at the end of Term 1 which was a relatively short period of time since they had completed a three-day workshop that prepared them for the role of PLFs. A little less than half of the PLFs were teachers while the remainder had professional roles with district or central offices of education departments, with science organisations or professional associations. The professional roles of the PLFs influenced their opportunities for conducting various forms of professional learning activity. Although most of the PLFs had not had an opportunity to conduct a workshop in Term 1, they had maintained the gains in confidence and self-efficacy as a PLF developed during the January workshop. Palmer's (2006) research would suggest that there would be further enhancements of self-efficacy following opportunities to conduct workshops, however, it should be noted that confidence and self-efficacy levels of PLFs were relatively high.

School-based PLFs had opportunities to show other teachers at their school the PC curriculum resources, share their experiences with the program, answer questions about PC, invite colleagues to observe them teaching PC to their class and gain the support of the principal for the implementation of PC at their school. These activities are consistent with the role of school science coordinator or teacher-leader. School-based PLFs also conducted workshops at other schools, however, they faced the difficulties of leaving their own class and school for the day and organising funding for a relief teacher.

Non school-based PLFs had more experience of facilitating professional learning and greater confidence and self-efficacy for facilitation than the school-based PLFs (Hackling, 2006). These PLFs had greater opportunity to visit schools to see how PC was being implemented, conduct workshops at other schools, and provide information sessions to groups of principals or to curriculum leaders.

The roles of the two groups of PLFs could be seen as complementary, with school-based PLFs supporting implementation within schools like a leader-teacher and occasionally conducting workshops for neighbouring schools, while the other PLFs provided information sessions for leaders within a district or sector and conducting workshops for schools.

The PLFs planned to present further workshops during Terms 2-4 and most of these would be the Introduction to Primary Connections workshop. Most PLFs modified the supplied professional learning resources to suit the local context and needs, which indicates the decision to provide the resources in digital form and encourage PLFs to do such modification has paid off. The PLFs would like the one-day Introduction to Primary Connections workshop provided in shorter modules so that it could be presented in sessions at staff meetings and after school for schools that would not commit a pupil-free day for the workshop. PLFs also indicated they would like additional work samples to enhance these resources. Further research data will be gathered by focus groups to gain detailed information about how the modules can be enhanced.

Key factors enhancing the effectiveness of PLF include the support of their line-manager, access to quality resources and schools' interest in the program, and for non school-based PLFs their position and the associated communication networks to which they have access. Inhibitors include the difficulty in accessing pupil-free days for science professional learning and for school-based PLFs the problems of organising release from their school to work with neighbouring schools. Access to PC curriculum resource books appears to have been a limiting factor in some schools in Term 1.

Implications

Some data is emerging to guide the revision and enhancement of the professional learning modules and the first priority is to provide the Introduction to Primary Connections workshop as a series of smaller modules.

Further data will need to be gathered from focus groups to guide further revisions of modules.

Jurisdictions and sectors will need to carefully consider who they nominate for PLF training in January 2007. It is evident from the research that school-based and non school-based PLFs have opportunities for different types of professional learning activities.

Support of line-managers is one of the most crucial factors influencing the effectiveness of the PLFs. There needs to be continued advocacy for making science a priority in primary schools by the Academy project team and by reference group members so that PLFs' line managers give them the support they need to be effective in their role.

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Appendix

End of Term 1 PLF questionnaire

Australian Academy of Science: *Primary Connections* Program

End of Term 1 Professional Learning Facilitators Questionnaire

Dear Colleague

We seek your perceptions of your confidence and self-efficacy as a professional learning facilitator, information about your activity as a facilitator, and any issues or concerns with your role or resource or professional learning needs.

Data from this survey will be aggregated and summarised so that it will not be possible to identify any respondent in any reports of this research. Data will be used for research purposes only. We request your name for follow-up purposes only.

Please answer this questionnaire honestly and frankly. Respond in the way that it is, rather than portraying things as you would like them to be seen.

Professor Mark W Hackling
Edith Cowan University

ID number

For office use only

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Your background

Your name: _____

State/Territory: _____

Sector: Government / Catholic / Independent / Other

Name of workplace for 2006: _____

Your professional role for 2006: _____

Your self-efficacy and confidence as a professional learning facilitator

Please indicate the degree to which you agree or disagree with each statement below by ticking the appropriate box to the right of each statement:

SA = Strongly Agree; A = Agree; UN = Uncertain;
D = Disagree; SD = Strongly Disagree

Item	Statement	SA	A	UN	D	SD
1	I am effective in eliciting teachers' prior knowledge and beliefs and adjusting the professional learning workshop to meet the needs of the teachers					
2	My science content knowledge enables me to answer teachers' science questions effectively					
3	My knowledge of effective science teaching practices enables me to answer teachers' science pedagogy questions effectively					
4	I am quite comfortable with having my professional learning workshops evaluated					
5	I am able to pose engaging tasks for teachers to work on in small groups in my workshops					
6	My deep understanding of the culture of primary schooling enables me to give valuable advice to teachers on matters of primary science pedagogy					
7	My deep understanding of the culture of early childhood education enables me to give valuable advice to ECE teachers about science pedagogy					
8	My deep understanding of literacy teaching practice enables me to give valuable advice on integrating literacy education into science education					

Please rate your confidence with facilitating professional learning workshops on the following aspects of primary science and literacy teaching

VC = Very confident; C = Confident;
LC = Limited confidence; NC = No confidence

Item	Aspect	VC	C	OK	LC	NC
1	An introduction to *Primary Connections*					
2	Coordinating the science program in a primary school					
3	Auditing current practice					
4	Assessment of learning in primary science					
5	Conducting investigations in primary science					
6	Cooperative learning strategies					
7	Developing literacies needed for learning science					
8	Using an inquiry model to plan primary science units of work					

OFFICE USE	
var	code
sef1	
sef2	
sef3	
sef4	
sef5	
sef6	
sef7	
sef8	
cfac1	
cfac2	
cfac3	
cfac4	
cfac5	
cfac6	
cfac7	
cfac8	

What types of *Primary Connections* professional learning activities have you engaged-in since the January workshop in Canberra and today's date?

Code	Activity	Number of times
1	Answering questions about *Primary Connections*	
2	Showed the *Primary Connections* curriculum units to a colleague	
3	Sharing your experiences with *Primary Connections* with colleagues.	
4	Teaching *Primary Connections*	
5	Engaged in journaling, analysing and reflecting on your own science teaching practice	
6	Observing a trial teacher/colleague teaching *Primary Connections*	
7	Invited a colleague to observe you teaching *Primary Connections*	
8	Visiting a *Primary Connections* trial school to see how they have organised the program within their school	
9	Engaged in gaining the Principal's support and planning for the implementation of *Primary Connections* at your school	
10	Made a short presentation outlining the features of *Primary Connections* to school staff	
11	Presented an information session for a group of school principals	
12	Presented an information session for a group of district/sector curriculum area leaders/policy officers/consultants	
13	Facilitated the Introduction to *Primary Connections* workshop	
14	Facilitated the School Coordinators workshop	
15	Facilitated the Auditing workshop	
16	Facilitated the Investigating workshop	
17	Facilitated the Assessment workshop	
18	Facilitated the Literacies of science workshop	
19	Shown video clips from the *Questioning Minds* DVD	
20	Other	
21 22	Have you presented a workshop or paper at a conference If yes, name of conference:	
23 24	If you have presented an information session or workshop at a school • Name of school: • Number of people who attended:	

Planned professional learning activity
Are you currently scheduled to present any *Primary Connections* professional learning workshops later this year?

Yes / No (circle one option)

Which workshop? _____

Where will the workshop be presented? _____

When will it be presented? _____

Feedback on the *Primary Connections* professional learning resources

If you have used any of the *Primary Connections* professional learning resources, please provide feedback on the resources.

Which *Primary Connections* professional learning resources have you used?	Did you modify the resource to suit the local context?	How can this resource be improved?

Feedback on your role

What factors are enabling you to be effective in your role as a *Primary Connections* professional learning facilitator?

_____

_____

_____

OFFICE USE	
var	code
ws06	
wsnam	
wsloc	
wstim	
rec1	
rec1mod	
rec1imp	
rec2	
rec2mod	
rec2imp	
rec3	
rec3mod	
rec3imp	
eff1	
eff2	
eff3	

What factors are limiting your effectiveness as a *Primary Connections* professional learning facilitator?

_____

_____

_____

What further support (resources, training etc) do you need for your role as a *Primary Connections* professional learning facilitator?

_____

_____

_____

_____

Any other comments

_____

_____

_____

_____

Thank you for responding to this questionnaire

OFFICE USE	
var	code
lim1	
lim2	
lim3	
sup1	
sup2	
sup3	
oth1	
oth2	
oth3	