EVALUATION
OF
THE "GLOBAL CLASSROOM" TELECOMMUNICATIONS PROJECT

A Two Year Collaborative Pilot Project involving
the Whalesong Foundation Ltd and
the Victorian Department of School Education

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Mr Bill Coppinger
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Dear Bill and Andrew

It is with much pleasure that I forward the report of the evaluation of the "Global Classroom" Telecommunications Project which was contracted with you on 20 August 1996.

The evaluation has highlighted the trend evident in any new innovation of varying degrees of uptake of the innovation. The support you provided school coordinators through the processes that were established and implemented was a major factor in the uptake, particularly in the first year, of the two year collaborative pilot project between the Whalesong Foundation Ltd and the Victorian Department of School Education.

The major focus of the report is on the professional development support for teachers participating in the project. The findings are relevant beyond this project to approaches to professional development in a wide range of educational settings.

Within the funding available for the evaluation it was only possible to undertake a small study to gain an impression of the influence on teachers, students and the school generally on an involvement in the Global Classroom project. A more detailed study would provide a significant contribution to this area of research for which there is a dearth of information.

My colleague, John Atkinson and I valued the opportunity of undertaking this evaluation which was required as per your Agreement with the Department of School Education.

Yours sincerely

Elaine Atkinson (Dr)

EXECUTIVE SUMMARY

1. The two year "Global Classroom" Telecommunications Project (GCP) was designed to enhance the application of telecommunications technology to the improvement of learning and teaching in Victorian schools. The pilot project, a joint venture of the Department of School Education (now the Department of Education) and the Whalesong Foundation Ltd (which set up the I*EARN Australia Centre at Broadford Secondary College), was conceived in four phases over 1995 and 1996 to eventually involve 300 schools.

2. I*EARN, the International Education and Resource Network, is a non-profit organisation working to involve young people around the globe in collaborative theme-based projects with the potential to 'make a meaningful contribution to the health and welfare of the planet and its people'.

3. This evaluation study, commissioned towards the end of the project, was to focus particularly on the professional development component of the GCP, while also gathering limited information regarding outcomes. Sites visited, survey of school GCP coordinators and analysis of documents were the data gathering strategies employed.

4. The number of schools enlisted in the project met the target of 100 in the first year, but fell somewhat below the target for the final two phases, reaching a total of 244. A significant number of these schools only managed to achieve limited involvement for a variety of reasons, particularly 1996 schools.

5. Professional development and support in Phases 1 and 2 was provided largely by the Project co-directors at the I*EARN Australia Centre. In Phases 3 and 4 a 'Learning with the Internet' training program of 5x2 hours was conducted at venues around the state by specially trained "I*EARN mentors, chosen from the teachers who had entered the GCP in the previous year or by other Internet trainers (some of whom had little experience of I*EARN projects). Complete training coverage of the enlisted GCP schools was mainly achieved for Phases 1 and 2 schools but only partly achieved for 1996 schools.

6. Those who did attend the training programs found them helpful and most very helpful. Specific strengths and weaknesses of the training programs and support system, as perceived by survey respondents, are summarised in the body of the report. In general, the quality of the training and support provision was praised in many respects, but others complained of difficulty in accessing necessary training and support and perceived a need for more basic and on-going assistance for those with limited technological expertise.

7. In those schools which had been participating strongly in the GCP during 1995 and 1996, many positive outcomes were perceived. Teachers with key involvement were highly enthusiastic about the potential of the Internet and of interactive projects like those available through I*EARN to contribute to learning and teaching in a major way, and a whole range of positive effects on student performance and attitudes were noted. Some of the Phases 3 and 4 schools with only several months involvement could already see gains.

8. For other schools, handicapped by lack of resources or of ready access to needed expertise, the exercise was one of considerable frustration. They could see the potential, but were unable to tap it.

9. The GCP has shown that the ability to communicate and work collaboratively on worthwhile, meaningful tasks with fellow-students around the world adds a dimension to school learning that is too valuable to be given any but the highest priority.

10. There is an obvious need for channelling increased levels of equipment, expertise and other forms of support towards the application of telecommunications technology to learning and teaching in schools.

CONTENTS

1. The Global Classroom Telecommunications Project

The two year Global Classroom Telecommunications Project which commenced in 1995 was available to all schools in the State of Victoria, Australia, through a selection process. It was developed as a joint initiative of the Directorate of School Education (now the Department of Education) and the Whalesong Foundation. The Foundation is a not-for-profit organisation formed by a group of Victorian teachers dedicated to the concept of cooperative teaching and learning on a global scale, making use of the Internet.

Whalesong (an imaginative title based on theories of whales around the world being able to communicate with each other by 'songs' transmitted through the oceans over great distances) was established in 1994 and became a member of the International Education and Resource Network (I*EARN). The Constitution of I*EARN, also a non-profit organisation, and with headquarters in New York, describes its mission thus:

> The vision and purpose of the International Education and Resource Network is to enable young people to undertake projects designed to make a meaningful contribution to the health and welfare of the planet and its people.

The I*EARN philosophy emphasises world-wide collaborative learning through active engagement of young people in purposeful projects designed to achieve observable social and/or environmental outcomes and utilising the widest possible range of interactive technologies.

I*EARN focuses on working through primary and secondary schools as well as a range of youth-service organisations. Over 1500 schools in more than 30 countries are now I*EARN participants.

In 1994 the Whalesong Foundation, with the cooperation of Broadford Secondary College, set up the I*EARN Australia Centre at that school.

The report of the Victorian Government Working Party on the Use of Technology as an Education and Communications Facility in Schools, handed down in 1994, was the trigger for an approach by Whalesong to the Directorate of School Education. The Working Party Report took the position that the key to more successful implementation of Information Technology in Schools lay in directing attention to 'the human dimension'. It proposed that the issue "be addressed through structured professional development programs based on information technology and an understanding of such matters as learning, change and the factors that affect school culture."

Convinced that the Working Party specifications could be ideally met through the adoption of the I*EARN model, the Whalesong Foundation developed a proposal for a two year state-wide telecommunications project. In November 1994, the Victorian Directorate of School Education agreed to support the proposal and the pilot Global Classroom Telecommunications Project was born. Each year an agreement was negotiated between the two parties.

The stated goals of the Project were to:
• enhance student learning utilising telecommunications technology
• assist Victorian teachers in the assessment and application of telecommunications technologies in schools
• expose Victorian teachers and students to the I*EARN collaborative theme-based project model
• support and develop student generated projects which make a meaningful contribution to the health and welfare of the planet and its peoples
• determine the impact of the use of telecommunications technology "in context" on teaching methodologies, student learning and school curriculum design.

The Project was conceived in four phases, initially involving schools already having relevant experience, expertise and/or resources for effective participation and then utilising an evolving network of both centralised and locally-based professional development and support to progressively engage more schools, teachers and students in the Project. It was planned that 100 schools would be involved in 1995 (Phases 1 and 2) and a further 200 schools (i.e. 300 in all) by Phase 4, in the latter half of 1996.

In Phases 1 and 2 the Whalesong co-directors, Bill Coppinger and Andrew Hocking, provided both training and support to all the schools involved. Selected students and/or parents, as well as teachers, sometimes took part in the training sessions, which were conducted at Broadford Secondary College for schools in reasonable proximity, in Melbourne or, in other cases, in the trainee school itself.

In Phases 3 and 4 (beginning Terms 2 and 3, 1996, respectively) training was provided by I*EARN mentors (chosen from those teachers who were already successfully involved in the Project, and who had completed the Internet Training Program offered by the Department of Education in February 1996 in conjunction with the Computing in Education Group of Victoria (CEGV)). Where that was not possible, teachers could attend training sessions offered by other Department of Education Internet trainers. Fifteen I*EARN mentors (among them the trainers and the Whalesong co-directors) were designated to provide support in 1996.

Schools involved in the Global Classroom Project had to have identified at least one teacher and group of students who would devote at least one period per week to the Project. They needed to provide a suitable computer and modem and were given a budget of up to $300 for telecommunications support together with I*EARN membership (value $250 per year).

The I*EARN Australia Centre provided each participating school with a support package of materials made up (in 1996) of:

- the I*EARN Australia Telecommunications Handbook - a well-produced, clearly presented and well-sequenced manual in loose-leaf format containing both information (e.g. about the various I*EARN projects in which schools might be involved) and procedural guidelines;
- a concise Getting Started in the Global Classroom document, itemising support material available, initial steps to follow and contact details of the I*EARN members;
- an I*EARN Projects Update booklet, produced by the I*EARN International Secretariat, giving progress information on continuing and new I*EARN projects initiated by members in various parts of the world and indicating opportunities for participation;
- the most recent copy of 'Interaction', the newsletter of I*EARN International;
- copies of 'Icarus' and of 'War and Peace', examples of publications by Australian students and their teachers resulting from I*EARN projects and incorporating contributions of students around the globe.

The target of 100 schools was achieved in 1995, but there was a shortfall (144 compared with the target of 200) in the number of new schools joining the project in 1996.

2.   Evaluation of the Global Classroom Telecommunications Project

As a condition of funding the Global Classroom Telecommunications Project the Directorate of School Education required that an evaluation be undertaken in each year of the two year Project.

Evaluation of Phases 1 and 2 was conducted 'in house' by the two Project co-directors on the basis of insights gained from their involvement with the Project, particularly their interactions with participants both face-to-face and through various communication technologies, augmented by information gained from a detailed survey administered to all participating schools and teachers in late 1995.

A comprehensive evaluation report was forwarded to the Department of School Education in March 1996. The report is informative and provides considerable background to the Project and the I*EARN philosophy, together with detailed analysis of the responses to each survey question. Student survey data is also reported, although no details are given of the process for collecting this information.

For the second year of the Project it was agreed that an external evaluation should be undertaken and in August 1996 Dr Elaine Atkinson of the University of Melbourne was approached by Bill Coppinger and Andrew Hocking of The Whalesong Foundation and subsequently invited to conduct the evaluation. Given the very limited time and resources available it was agreed that the primary focus should be the training component of the Project (Attachment 1). A survey of GCP coordinators in participating schools was to be undertaken following preliminary site visits to approximately six schools chosen to reflect the diversity among those involved in the Project. As well as assisting the design of a suitable questionnaire, the site visits would also be used to provide some 'snapshots' of the Project's impact on schools, teachers and students.

The principal evaluator attended, as an observer, an I*EARN workshop for Phase 3 participants held at Deakin University's Burwood campus on Friday 23 August 1996. Between Friday 18 October and Friday 8 November the evaluation team visited a total of seven schools, three within the Melbourne metropolitan area and four rural; three being primary schools, three secondary and the seventh spanning both primary and secondary; ranging in size from a rural school of some 30 students to a secondary college with an enrolment of approximately 1400. The list of schools visited and the staff and students who were interviewed is at Attachment 2. The interview schedules developed for staff and students involved in the Project is at Attachment 3.

On Friday 15 November, 1996, an additional visit was made to Broadford Secondary College, site of the I*EARN Australia Centre and the first Australian school to be involved with I*EARN projects.

In all schools the evaluators were able to observe the telecommunications facilities being used and to interview the GCP co-ordinator, most if not all of the main participating teachers, some non-participating teachers, a selection of participating students, in most cases the principal and in some instances parents and/or ancillary staff.

Following the site visits a questionnaire was finalised and forwarded to all GCP co-ordinators via the I*EARN Australia Centre (Attachment 4). Although the earlier intention had been to restrict the questionnaire to professional development issues associated with the Project, the evaluators chose, in consultation with the Whalesong co-directors, to include some questions concerning GCP outcomes for teachers, students and schools.

The site visits had shown that GCP involvement, and particularly involvement in I*EARN projects, was but one (albeit important) component of schools' utilisation of information technology and the Internet - and often difficult to isolate. Accordingly the findings of the evaluation will be discussed within this broader context.

Table 1: Number of GCP Co-ordinator Responses to the Questionnaire

Entry Phase	School type	Total number of schools participating		No. and percentage of responses	
1995 Phase 1	primary	10		4	
	post-primary	13		3	
	P-12	1	24		7 (29%)
1995 Phase 2	primary	32		12	
	post-primary	42		13	
	P-12	2	76	1	26 (34%)
1996 Phase 3	primary	13		9	
	post-primary	16		6	
	P-12	2	31		15 (48%)
1996 Phase 4	primary	85		32	
	post-primary	27		9	
		1	113	1	42 (37%)
Overall			244		90 (37%)

Note: 2 responses indicating 'no action at all' are included in Table 1 but not in calculating percentages later on

The response rate to the survey was approximately 37 per cent ranging from 29 per cent to 48 per cent across schools entering the project in each of the four phases. As will be seen from the findings presented in this report it is apparent that many schools, especially among those commencing in Phases 3 and 4, were able to make little progress in 1996. GCP co-ordinators in such schools no doubt felt unable to respond adequately to the questionnaire and so many did not

complete and return it. The facts that the survey results were otherwise consistent with the perceptions reached in site visits and that the later returns were yielding no significant new information led the evaluators to the view that the findings presented herein are adequately representative. Had resources and time permitted it, follow-up contact would have been made with a random sample of non-responding schools to further confirm this.

3.   Participation in the Global Classroom Telecommunications Project

The numbers of schools listed as officially joining the Global Classroom Project in each of its four phases were shown in Table 1. From the information gathered in this evaluation it is clear that entering the project and actively participating in it are two different things.

The school I*EARN coordinators were asked in the questionnaire to provide information about why and how the school chose to become involved; the extent to which teachers and students are using the Internet and participating in the GCP; which I*EARN conferences/projects the school is involved with; and the nature of professional development and support services utilised. The responses show a wide variation in the level of participation. The pattern of participation and reasons for it will be discussed in this and following sections of the report.

Factors influencing participation in the Global Classroom Telecommunications Project

Survey Q2(ii) asked respondents to describe why and how the school chose to become involved in the GCP and to comment on the principal's involvement.

A small proportion of responses were merely procedural (e.g "We saw the notice in School News and responded to it.") without elucidating the factors which influenced participation. The great majority of GCP coordinator responses, however, described in detail the reasons for their schools' involvement and many commented on factors contributing to the extent and level of effectiveness of their participation. Some schools mentioned two or more factors.

Table 2: Rationale for Involvement (Q2ii)

Factor Mentioned	Total frequency of mention (%)
1. Learning factors For example: a major and exciting new avenue of learning; a means of improving learning; develop curriculum materials, exemplary programs	20
2. Communication factors For example: explore globalisation; help to overcome isolation; enable us to 'meet the world'; communicate with other people and schools	28
3. Utilitarian For example: enhance use of technology; make better use of resources; means of getting onto the Internet; opportunity to enhance resources; natural extension of previous international projects; way of gaining access to professional development	64
4. Philosophical factors For example: consistent with our charter, plan, philosophy, curriculum; we are comfortable with the I*EARN philosophy; we like to be innovative	19

5. *Influence factors* For example: persuaded to join by I*EARN mentor, another colleague; impressed by seeing what another school/teacher is doing	14

Table 2 summarises the reasons given for participation in the GCP. Reasons were seen to fall into five categories, as shown, and the frequencies with which reasons within each category were mentioned are indicated. Some respondents reported a combination of several reasons, others only one. Clearly, there was considerable diversity in the reasons given for participation, some schools entering the project with strong philosophical and/or pedagogical commitment, others for more utilitarian reasons or, one suspects, so as not to be 'left behind'.

The most frequently mentioned reasons were ones in the group termed 'utilitarian'. Most commonly respondents talked about the school wanting to 'extend the use of technology' or similar terms, although some gave different utilitarian reasons. The desire to extend communication with others was particularly evident with rural schools, while factors relating to learning, to compatibility of the project with the school's philosophy or charter, or to the influence of other participating schools or teachers were each common to a substantial number of schools.

Some specific examples of responses across these categories follow:

"An exciting new avenue for learning and sharing ... We wanted to be one of the first schools involved." *Phase 1*
"(We wanted) to develop computer use across subject areas and to involve students in global issues." *Phase 2*
"A desire to broaden social/educational horizons ..... *Phase 2*
"The school had a commitment to using Internet facilities to become involved in collaborative work with other schools locally, nationally and internationally." *Phase 3*
"To develop further the school's charter priority - computers in education." *Phase 4*
"We found this a way to bridge the gap of distance for a small rural school." *Phase 1*
"With our connection to the Internet last year we were looking for direction and support and felt the GCP would give both ..." *Phase 4*

Open-ended comments on the role of the principal, taken in the context of the total response to the questionnaire, indicated that cases in which the principal took a key leadership role and those where the role was more a supportive one were roughly equal in number. Successful participation could follow in either case, depending on how the principal exercised the role adopted and, of course, on many other factors.

Actions of principals to which respondents referred and which characterised the role as 'key' or 'supportive' are listed in Table 3.

Table 3: Role of the Principal in Supporting Involvement in the GCP

Role of the Principal
1. Key role - (either democratically or autocratically): For example
• persuaded staff to develop proposal; delegated a staff member to prepare submission
• played a major part in developing the submission
• undertook training
• involved in training/ assisting staff
• gave major funding priority
2. Supportive role: For example
• agreed with/encouraged staff in developing submission
• took steps to provide time release, funds, facilities

In only one instance was there a report of the principal's actions hindering participation.

"The principal saw the advertisement in the School News and thought I should do it."	*Phase 1*
"The principal is a driving force in technology education."	*Phase 2*
"School administration has been supportive, but not 'hands on' interested ....."	*Phase 2*
"The principal was very encouraging, providing time, training and any help required."	*Phase 4*

> At Anderson's Creek Primary School the principal has been active for some four years in building up computing resources to a high level; has played a lead role in developing the GCP submission and was himself providing after-school training for teachers - a decision having been taken in 1994 that all staff should develop the skills to utilise computers in their teaching.
> *(information gained during site visit interviews)*

Several schools referred to the major contribution of the school librarian/s. Some of the 'most heavily' involved and successful GCP schools are ones where library staff have been prominent in initiating and facilitating both the initial application to join the GCP and subsequent implementation by staff and students.

> At Bairnsdale Secondary College the school's two librarians initiated the school's submission for participation in the GCP, encouraged and helped the teacher who became the school's I*EARN coordinator and subsequently mentor, and have since worked closely with teachers and students, facilitating Internet contacts for them and supporting their participation in I*EARN conferences and other activities. They have also assisted in running the 'Learning with the Internet' inservice courses for teachers in the district.
> *(information gained during site visit interview)*

Extent of participation

Survey Q2(iii) sought information about the extent to which GCP schools were participating in both use of the Internet and the GCP (I*EARN) projects. Table 4 summarises the responses by Phase of entry into the Project.

Table 4: Extent of Participation by Teachers in the Internet and the GCP by Entry Phase as Perceived by GCP
                    Coordinators

Proportion of all teachers in the school	Percentage of responses from that entry Phase			
	Entry Phase 1 (%)	Entry Phase 2 (%)	Entry Phase 3 (%)	Entry Phase 4 (%)
Using the Internet				
< 10%	0	12	36	14
10 - 30%	57	56	43	26
>30%	43	16	21	33
Nil	0	8	0	24
No response	0	8	0	2
Using I*EARN activities				
< 10%	14	44	50	17
10 - 30%	57	12	29	12
>30%	29	8	7	12
Nil	0	36	7	57
No response	0	0	7	2

It can be seen that:
- in general, more teachers were using the Internet than were actively participating in I*EARN activities. This was particularly evident in Phase 4 respondents but also the case to a surprisingly high degree among Phase 2 respondents.
- many Phase 2 and Phase 4 respondents reported no teachers actively involved in the GCP as such, although many of these cited problems (particularly technical ones) as reasons for this and hoped to participate more extensively in 1997.
- Phase 1 schools responding reported the highest levels of participation, particularly in I*EARN projects/conferences, though the small number responding here is cause for caution in interpretation.

*I*EARN conference participation*

School GCP coordinators were asked to list particular I*EARN projects/conferences they were or had been involved with. The responses shown in Table 5 reveal a wide diversity of choice exercised among the many I*EARN conferences available as teachers sought to meet the needs of their students in the context of school location and characteristics coupled with local curriculum emphases.

Victorian teachers and students involved in the GCP have been very active in initiating innovative projects which have attracted participation from other schools, locally and around the globe.

Table 5: I*EARN Project and Linking Conferences in Which Responding Schools Involved

I*EARN Conferences
1. Projects
• iearn **aqua** - water watch, water habitats, stream watch, aquatic puzzle, river mammals
• iearn **authors** - Lewin anthology, war and peace, national identity, newspapers
• iearn **environ** - nuclear energy, weather monitoring, environmental mystery
• iearn **family** - children in crisis, children of the world, healthy families
• iearn **first peoples**
• iearn **go for it**
• iearn **global art** - identity, indigenous
• iearn **holocaust genocide**
• iearn **ideas**
• iearn **kidscan** - children's literature, poetry, special places, teddy bear,
• iearn **math**
• iearn **one day** - Christmas traditions, day in holidays, Kodak Olympic, orientation day
• iearn **uv**
• iearn **ventures** - faces of war
• iearn **vision**
2. Linking
• iearn **circles** - learning circle mindworks
• iearn **youth** - visitors book, sister schools, keypal exchanges

From the questionnaire responses the I*EARN projects with the greatest numbers of participating schools would appear to have been:

• AQUA - water monitoring

• AUTHORS - especially the LEWIN anthology

• ONE DAY - 'holidays' and 'Christmas traditions'

• KIDSCAN - especially 'teddy bear'

• GLOBAL ART.

> At the small, rather isolated two-teacher Moonambel Primary School in the Pyrenees region of Victoria the principal (who is also one of the teachers) won a Teaching Initiatives Award for involving her students in gathering weather data and sharing it by modem with other schools in the Colorado-based 'Kids as Global Scientists' project. The prize was used to purchase an automated weather station which is building up a computerised weather data base for the people of Moonambel. The school joined the GCP and participated in the Global Art project as well as initiating a project in which information about foods and diets - as well as recipes - is being exchanged between schools around the world.   *(information gained during site visit interview)*

4. Professional Development and Other Support for Teachers in the Global Classroom Telecommunications Project

Organised professional development and support within the project

For the 24 Phase 1 schools a half-day conference was organised in July 1995 as part of a five day I*EARN international teachers meeting held at the University of Melbourne and almost all school GCP co-ordinators attended. Some had alternative, or additional, sessions at Broadford Secondary College and many also had training workshops in their own schools. All these sessions were conducted by the Project co-ordinators, Bill Coppinger and Andrew Hocking. Almost all survey respondents from Phase 1 categorised these sessions as 'very helpful' (Table 6).

Having been selected on the basis of existing experience, interest and expertise, key teachers in these schools were, in general, less in need of further training and support than those in subsequent phases of the Project.

The 76 Phase 2 schools were also invited to attend the July 1995 half-day conference with some Phase 1 participants providing assistance to the Project co-ordinators. Some 80 per cent of the Phase 2 coordinators responding to the survey indicated that they attended, with opinion as to whether it was 'very helpful' or 'somewhat helpful' being equally divided. Two post-primary schools reported having sessions at Broadford Secondary college.

Some of the I*EARN mentors and Internet trainers for 1996 were drawn from Phase 2 schools: These people were among those who conducted the 5 x 2 hour 'Learning with the Internet' program. One other Phase 2 school reported participating in this program but not the half-day conference for Phase 2 schools.

Some 20 per cent of Phase 2 respondents do not appear to have attended either of these professional development programs.

Table 6: Formal Professional Development Support for Teachers in the Global Classroom Telecommunications Project

Support provided to assist	Entry Phase	support used (%)	support very helpful (%)	support some-what helpful (%)	support little or no help (%)	no rating (%)
a) half day conference at the beginning of the project - in Melbourne	'95 1	57	57			
	2	80	32	40	8	
	'96 3	7	7			
	4	12	12			
- at Broadford Secondary College	'95 1	29	29			
	2	8	8			
	'96 3	7	7			
	4					
- in own school	'95 1	57	29	29		
	2					
	'96 3					
- at a local venue	4	10	7	2		
b) the materials you received at the beginning	'95 1	100	85	14		
	2	92	44	40	4	4
	'96 3	93	36	43		14
	4	67	38	19	2	8
c) the five 2hr sessions offered over a number of weeks by an Internet trainer who was - also an I*EARN mentor	'95 1	14	14			
	2	16			4	12
	'96 3	21	14			7
	4	36	17	12		7
- not an I*EARN mentor	'95 1	14	14			
	2	8				8
	'96 3	21	7	7		7
	4	7	2	5		
d) the I*EARN mentor in - facilitating projects	'95 1	43	29	14		
	2	12	4			8
	'96 3	36	21	14		
	4	24	17	5	2	
- being there to provide support when required	'95 1	29	29			
	2	12	8	4		
	'96 3	50	21	14	7	7
	4	29	21	5	2	
e) an Internet trainer, not an I*EARN mentor, in being there to provide support when required	'95 1	14	14			
	2	16	16			
	'96 3	50	21	29		
	4	5	5			
f) Bill Coppinger and Andrew Hocking at the I*EARN national office located at Broadford SC	'95 1	100	71	14		14
	2	64	48	16		
	'96 3	71	50	7	14	
	4	24	17	7		

Applications for Phases 3 and 4 of the Project were invited in Victorian School News, 21 March 1996, indicating that 'training in classroom techniques and Internet technology' would be offered to Phase 3 schools in the second term of the 1996 school year and to Phase 4 schools in the third term. It was the "responsibility of schools to attend the training sessions in their area". The training was to comprise a 'learning with the Internet' package of 5 x 2 hour sessions, normally taken over five weeks, presented by an Internet trainer who was also, in many cases, an I*EARN mentor. There were 31 schools accepted into Phase 3 of the Project and 113 into Phase 4.

Replying to Q3(i) of the evaluation survey in early December 1996 only 6 of the 14 Phase 3 respondents and 18 of the 42 Phase 4 respondents indicated that they and/or colleagues had undertaken the training package. It can only be assumed that participation among non-responding schools would have been even less, and probably much less.

The whole Project was delayed for some two months at the beginning of 1996 due to various reasons, including international coordination issues undertaken by the I*EARN Australia Centre and the phased in process used by the Department of School Education of allocating the $800 Internet grant to schools.

Phase 1 and 2 schools drew extensively on the support available from the Project co-ordinators at the I*EARN Australia Centre, who devoted a great deal of time and effort to giving assistance by visiting people in their schools, inviting them to Broadford and/or communicating by phone, fax or on-line. This support was much appreciated by participants, the great majority of respondents reporting it 'very helpful'. The Project co-ordinators indicated that this extent of support could not have been possible without the strong administrative backing provided by the office manager of the Centre, employed three days per week.

As the number of schools involved grew, the level of demand made it increasingly difficult for the co-ordinators to respond promptly to all the calls made on them. Although they managed this to a remarkable degree, inevitably some participants began to feel that they were not getting the support they needed.

The introduction of the mentor system in 1996 was an excellent strategy for addressing the training and support needs as the pilot Project moved towards full implementation in Phases 3 and 4. However the needs were not merely proportional to the number of participating schools, since increasingly the schools joining the project were commencing with little expertise and hence greater need for training and support. Pressure of responsibilities within their own schools limited the availability of the mentors to help others, although their support was certainly highly valued by almost all those who accessed it.

Bill Coppinger and Andrew Hocking continued to be the target for a disproportionate share of requests for assistance and still somehow managed to be 'very helpful' to the great majority (Table 2) of those who approached them.

Quite a few schools reported receiving substantial support from Internet trainers who were not I*EARN mentors.

Other avenues of support

School GCP co-ordinators were also asked in Q3(ii) for information about other formal or informal professional development support or activities (beyond those listed in Table 2) which had assisted implementation of the project. The responses (independent of Phase) can be summarised as follows:

- Participation in I*EARN or other conferences (e.g Computers in Education Group of Victoria) and workshops.
- Various network training programs or other relevant in-service activities (such as those conducted by Waterwatch).
- Relevant university or TAFE courses, both specific (e.g Graduate Diploma in Computer Education) and more general ones which develop transferable skills.
- Collegial (often mutual) support from administrators or other participating teachers, whether within the school or through on-line communication, both informal and formal (the latter through organised groups such as Magnet Dispersed Science and Technology Group, OZ Teacher Forum or I*EARN mentors group.
- Help provided by individuals with expertise, either from within or beyond the school.
- Resource provision, such as employing a part-time technician or aide with appropriate skills or establishing Internet accounts for key personnel.
- Visits to exemplary GCP schools.
- Spending time, at school or home, exploring the Internet and/or the I*EARN Conference sites or utilising appropriate software. One respondent particularly recommended the OZE Kids Goodies disk.

Some 30 per cent of respondents did not report any 'further' support or activities in these or other categories.

Support offered to non-participating teachers by participating school GCP co-ordinators

The GCP co-ordinators were asked to indicate the nature and extent of support they had provided to other teachers to assist their participation in the pilot Project. Responses relating to some key forms of support itemised in Q4(i) are summarised in Table 7.

Table 7: Extent of Support Provided for Other Teachers (Q4i)

Extent of support you provided other teachers to assist their participation in the Global Classroom project	Entry Phases	considerable (%)	minor (%)
a) being an I*EARN mentor	'95 1&2	25	
	'96 3&4		
b) being an Internet trainer as well as an I*EARN mentor (*an Internet trainer but not an I*EARN mentor)	'95 1&2	25	6
	'96 3&4	4	2
c) coordinating network projects	'95 1&2	18	6
	'96 3&4	7	4
d) developing professional development materials	'95 1&2	22	9
	'96 3&4	11	7
e) presenting at meetings of participating teachers	'95 1&2	38	13
	'96 3&4	16	11
f) other - informal assistance	'95 1&2	41	6
	'96 3&4	14	5
g) other - as exemplar to other teachers, formally presenting to others/other schools	'95 1&2	13	9
	'96 3&4		

Naturally most support has come from people who entered the Project in Phases 1 and 2, since they are the group from whom the I*EARN mentors were drawn and they have also had far more time in which to develop their own expertise and share it with others. The main additional forms of support given to participating teachers which respondents added to the table were:

• informal one-to-one assistance, both verbal (information, advice, encouragement) and practical, sometimes in the classroom.

• being an Internet trainer but not an I*EARN mentor.

• being an exemplar for other teachers (e.g demonstrating to visitors).

Asked in Q4(ii) to report ways in which they had sought to encourage non-participating teachers to use the Internet and/or become involved in the project, over 70 per cent of responding I*EARN coordinators replied with one or more of the following:

(a) Within their own schools

- Providing information and/or reporting on developments to staff or learning area meetings, School Council or in the school newsletter.
- Arranging or conducting professional development sessions and encouraging staff to attend.
- Informally telling teachers what is available and/or encouraging their participation in projects.
- Giving practical/technical assistance.
- Distributing or displaying printed material.

(b) Beyond their own schools (mainly I*EARN mentors)

- Speaking at conferences, principals' meetings, school curriculum days, etc.
- Giving advice or practical help to teachers in other schools.
- Publishing or putting professional development material on the Internet.
- Encouraging teachers taking Internet in-service programs to join GCP.

The remaining respondents either indicated that they had not or not yet sought to help non-participating teachers or else did not answer that question.

Perceived strengths and weaknesses of professional development and other support within the project

The great majority of respondents who had participated in the organised professional development programs, and a number who had not, accepted the invitation in Q5 to describe what they saw to be the strengths and weaknesses of the professional development and support available in association with the project. In all 66 respondents answered this question.

Perceived weaknesses are summarised in somewhat more detail than strengths because this information, together with the suggestions which follow in the next section, is important to guide planning for the future.

(i) *Strengths*

Approximately 40 per cent of the respondents who had undergone training commented positively on the quality of the training provided, in some cases praising the trainers and in others referring to the programs themselves. They perceived the trainers to be proficient, sometimes associating this with them being active practitioners, and several remarked on the commitment and enthusiasm shown by mentors and/or the project coordinators.

.."inspiring and dedicated teachers ... excellent model to follow"	*Phase 4*
.."People who are actually using the technology are doing the training "	*Phase 2*
"Initial support with Andrew and Bill visiting our school, setting up the computer and showing us what to do was excellent"	*Phase 1*

The training was described by a number of people as practical (or "hands on"). Some commented specifically on the 'Learning with the Internet' program:

"Good sound overall familiarity with Internet usage."	*Phase 4*

Some respondents saw strength in the way the professional development support was conceived, referring to there being "a sense of vision evident"; the training being "curriculum (or project) focused"; being "well-structured in line with the philosophy of the GCP/I*EARN"; and providing "clear guidance". The mentor system was commented on favourably by some 10 respondents:

"Having a contact person (mentor) to direct questions to and provide back-up (is a strength)."	*Phase 4*

Another positive feature for a number of respondents was the opportunity to interact with other teachers in the project and establish collegial networks:

"Good to meet other teachers and form links/networks etc."	*Phase 3*

Other strengths noted by smaller numbers of respondents included the I*EARN Handbook and other support materials provided; the value of the online support available; ready availability of help whenever sought; and the provision of some funding support.

One interesting comment related to the publicity for the in-service education being "widely directed to attract the 'non-boffin'".

(ii) Weaknesses

Whereas the focus of identified strengths was mainly on quality aspects, the great majority of comments about perceived weaknesses were concerned with quantitative issues relating to the level of support available. These issues fall into categories pertaining to:

- *Time pressure:* some 30 per cent of respondents to Q5 complained of being 'asked to do more and more' in the time available and hence not being able to fit in attendance at in-service, encouraging or helping colleagues, or simply exploring and practicing with the technology.

> "It takes time to become accustomed to the 'methodology' of the project and this is one thing teachers don't have a lot of."
> *Phase 3*

- *Reach:* almost as many respondents claimed that not enough teachers were being reached by the professional development programs offered, either because of the time pressures noted above, or because there were not enough training opportunities available, particularly in the local area where they could be more readily accessed.

Furthermore, for many teachers professional development support needs to be ongoing, not transitory.

> "Classroom teachers need to attend courses which are local and offered several time per year, to enable as many as possible to participate".   *Phase 4*
> "Our staff have waited all year for one opportunity which commenced in November .."   *Phase 3*

"Reach" was also seen to be a problem by quite a number in relation to support. Slow or inadequate responses by mentors or the I*EARN Australia Centre were noted by some Phase 3 and 4 respondents as well as a lack of follow-up with some schools new to the project. A couple of respondents referred to delays experienced in receiving materials.

> "Potential is high if more support was given. I am disappointed as to the support received when I was an enthusiastic participant"   *Phase 4*
> "Some teachers are keen to do more, but most are apprehensive and don't know what's available. Technical support is virtually non-existent and inservices are distant, expensive or both."   *Phase 2*
> "Lack of time available to mentors to assist teachers"   *Phase 3*

- *Resourcing:* some 15 per cent of respondents described as a serious weakness the lack of provision of technical and other relevant support to schools so that problems (particularly with the technology) could be resolved rapidly. Extreme frustration over this issue was not

uncommon and it has clearly been a major factor limiting the takeup of the Global Classroom Project.

> "We have had constant technical difficulties ....I felt we needed more intensive support ....someone to come to our school and in-service staff on our own PCs, then technical difficulties could have been solved on the spot"
> *Phase 3*
> "Schools need unlimited 24 hour access to the Internet. Operating on expensive 2-3 hour per day/week is next to useless for a whole school"   *Phase 3*

Others again commented on the 'mismatch' between the technological resources used in the training and the equipment people have in their schools - both in extent and type. One mentor, from a different perspective, was disappointed that training schools had not been provided with the technological resources to maximise their effectiveness in giving support to other schools.

A further resource issue felt to be a weakness by several was the cost to the school of CRT replacement, thereby inhibiting participation in the professional development programs rather than encouraging it.

• *Content:* a substantial number of respondents, particularly from primary schools, felt that the training programs were neither long enough, nor basic enough, to equip teachers for participating in the global classroom. There was insufficient time devoted to basic computer skills and basic information. A number also saw a need in the 'Learning with the Internet' program for much more emphasis on locating, interpreting and participating in the I*EARN conferences.

> .."The conferences are not specific enough for those starting out. They tend to have a global approach ...
>   *Phase 4*
> ".. there should be a training course in which every session centres on I*EARN projects - facilitating, trouble shooting and initial setting up of the computer"   *Phase 4*

Respondents' suggestions for improving the professional development and support associated with the project

As would be expected, suggestions for improvement from respondents largely tended to mirror the perceived weaknesses outlined above, both in substance and frequency of mention. However it is important to recognise that a suggestion or idea proposed by a single individual may have just as much merit as one emanating from many sources. Suggestions, grouped by topic, were:

1. *Training Provision*
- More training opportunities should be available
- Training needs to be more localised, so that it is readily accessible
- Training needs to be more extensive, for those who need that, as well as more basic and 'user-friendly', avoiding technical jargon:
    - how to use a computer
    - how to use Internet software
    - how to participate cost-effectively
    - how to locate and participate in I*EARN projects
- All GCP applicants should be required to participate, with their classes, in online training as a condition of funding
- Professional development should also be directed at administrators, focussing both on the educational benefits of information technology and how to manage the costs associated with it.

2. *Resources and Ongoing Support*
- Adequate ongoing technical support should be available to enable access to it on a day-to-day basis
- Teachers with expertise should be given time to support others in their schools
- Free state-wide Internet connection should be provided to schools
- Training schools should have routers and ISDN links to facilitate training and support
- Mentors need to initiate contact with schools embarking on GCP participation
- Technologically-based support should be more extensively developed.

3. *Networking*
- An in-service day for all member schools for the purpose of project planning would be very valuable
- Area support groups involving regular district meetings, initially organised by I*EARN mentors, should be established
- Regular telephone/online conferences could be organised.

5.   Perceived Impact of Involvement in the Global Classroom Telecommunications   Project

School I*EARN coordinators were asked in the survey (Q7) to categorise the extent to which they perceived involvement in the GCP had affected a variety of variables relating to themselves, students and the school. The responses are summarised in Table 8. In interpreting this information it is important to recognise that the responses are only perceptions and also that for schools entering the project in Phase 3 and particularly Phase 4 there had been little time for effects to become evident. Most respondents from schools which had not yet or had only very recently commenced active participation felt unable to answer this question at all. Some were able to respond in relation to some of the variables but not others.

To reduce the complexity of the table responses from all schools entering the project in 1995 (Phases 1 and 2) have been summed, as have those from all schools entering in 1996 (Phases 3 and 4). While there are apparent differences in some cases between Phases 1 and 2 and between Phases 3 and 4, as well as between primary and postprimary schools, the small numbers of responses in particular categories and the differing proportions of primary and postprimary schools from Phase to Phase make it impossible to draw conclusions from those differences with any confidence.

The following points, however, can be made about the data in Table 8, reinforced by information gained during the visits to schools:

- Schools that had been participating strongly in the project for at least a year perceived positive outcomes (and in many cases strong positive outcomes) in relation to many of the variables listed.
- Phase 3 and even Phase 4 schools which had managed to achieve a substantial level of involvement in a short time also tended to perceive positive outcomes on many variables, though understandably not as strongly positive in general as for highly involved Phase 1 or 2 schools.

Table 8: Perceived Effect, if at All, of Involvement in the Global Classroom Telecommunications Project

The effect, if at all, of involvement in the Global Classroom Telecommunications Project	Entry Phases	Strong positive (%)	Some positive (%)	little or none (%)	some negative (%)	no response (%)
a) your attitude towards teaching	'95 1&2	59	22	0	3	16
	'96 3&4	23	27	2	0	48
b) your understanding about how learning takes place	'95 1&2	34	31	16	0	19
	'96 3&4	9	34	9	0	48
c) student performance (I*EARN classes)	'95 1&2	36	22	9	0	33
	'96 3&4	13	9	13	0	65
d) attitudes of participating children/ students towards: - school learning	'95 1&2	34	34	3	0	29
	'96 3&4	14	12	9	0	65
- other cultures	'95 1&2	41	25	3	0	31
	'96 3&4	14	12	9	0	65
- the environment	'95 1&2	38	28	3	0	31
	'96 3&4	14	12	9	0	65
- working together with others	'95 1&2	41	22	6	0	29
	'96 3&4	18	11	7	0	64
- the learning programs of their class(es)	'95 1&2	28	22	9	0	41
	'96 3&4	11	14	9	0	66
- development of exemplary materials	'95 1&2	31	16	16	0	37
	'96 3&4	9	7	14	0	70
- development of exemplary courses or course components	'95 1&2	13	34	13	0	40
	'96 3&4	4	9	16	0	71
- involvement of students in planning and coordinating classroom activities	'95 1&2	22	31	13	0	36
	'96 3&4	7	16	9	0	68
- involvement of students in planning and coordinating events and other projects	'95 1&2	25	25	13	0	37
	'96 3&4	9	14	11	0	66
e) the learning programs of your non-participating class(es)	'95 1&2	9	31	31	0	29
	'96 3&4	0	9	23	0	68
f) incorporating network learning into classes generally within the school	'95 1&2	19	31	22	0	28
	'96 3&4	0	18	14	0	68
g) incorporating telecollaboration into classes generally within the school	'95 1&2	19	38	16	0	27
	'96 3&4	0	16	12	0	72
h) attitudes towards use of the Internet in the school by - students	'95 1&2	50	25	3	3	19
	'96 3&4	32	18	0	0	50
- staff	'95 1&2	34	41	0	3	22
	'96 3&4	20	29	4	2	45
- by parents	'95 1&2	28	25	13	0	34
	'96 3&4	16	16	5	2	61
i) parental involvement	'95 1&2	3	31	31	3	32
	'96 3&4	2	20	12	0	66
j) community involvement	'95 1&2	6	28	31	3	32
	'96 3&4	2	9	21	0	68

k) any other effects (specify)	'95 1&2					
	'96 3&4					

The strongest positive effects were perceived in relation to:

- respondents' own attitude towards teaching - "This project has rekindled my enthusiasm for teaching" was a recurring comment during the school visits - and interestingly, though to a lesser extent, their understanding of how learning takes place.

> "I believe this to have had the biggest impact on my teaching (25 years) of any single change."   *Phase 1*
>
> "It has given me a new lease of life in teaching."   *Phase 2*
>
> "It has reignited my passion for teaching ... I feel I can help to make a difference to kid's lives."
> *GCP Coordinator, Kurnai College, KODE campus in interview*

- attitudes of students towards school and learning and towards other cultures and/or the environment (depending on the nature of the I*EARN projects in which they participated).

> "The children love it. It makes them aware that they are part of the world...."   *primary school, Phase 4*

> The Koorie Open Door Education (KODE) Campus of Kurnai College at Morwell has cooperated with Bairnsdale Secondary College in initiating the I*EARN First Peoples project, in cooperation with the indigenous communities in these areas of Gippsland. Both schools have seen significant gains in the self-esteem and attitudes to school of the Koorie students as they have become involved in researching their local indigenous culture and communicating features of it on the Internet. Links established with indigenous people in America and elsewhere have opened their eyes to comparable aspects of their cultural heritage and common issues confronting them. One girl returned to Bairnsdale Secondary College on the first day of the 1996 school year with a whole lot of research she had done during the vacation on 'stolen children'.   *(information gained during site visit interview)*

> The concentration of the (Koorie) students is much better when they are using computers ... Their attendance has become much more consistent ... some come to school early in the hope of being able to use the Internet ... a very big motivator. *(information from site visit interview, teacher, KODE Campus)*

- willingness and effectiveness of students in working and sharing with others and in taking increased responsibility for planning and coordinating activities within the classroom and, in some cases, beyond.

> At Keilor Downs Secondary College the I*EARN coordinator, also one of the mentors, has always fostered cooperative learning in her classes and considers the GCP an ideal medium for this. An elected Student management Team organises student access to computers and ensures students adhere to an agreed 'code of conduct'. Teacher and students negotiate goals and associated activities, in the context of curriculum requirements, with the students taking major responsibility in many ways. They have shown great initiative in instigating and making contacts with students around the world in carrying out a variety of I*EARN projects. A number of students have gained enormously from presenting to teachers and community members at meetings and conferences, exemplifying their work and the skills they have acquired. *(information gained during site visit interview)*

> At Alexandra Secondary College the GCP coordinator took four other teachers and several students to an intensive training session at the I*EARN Australia Centre. These students, prominent in the 'Talkback Classroom' project the coordinator runs on community radio (not part of the GCP project), have become quite highly skilled in using the Internet and take considerable responsibility for assisting teachers and other students.   *(information gained during site visit interviews)*

- commitment of students to producing quality work, with a particular emphasis on effective communication, for a real (and frequently international) audience.

> "With the potential audience and a real purpose for writing children are aware they must produce their best.
> *primary school, Phase 4*

> Working on the I*EARN projects adds meaning to what students do. They seem really motivated and put a lot more effort into their work products in order to communicate with people from other cultures.   *(information from site visit interview with librarian, Bairnsdale SC)*

- general performance of students in classes involved with I*EARN projects.

> My GCP class (who are exchanging information about themselves and their lifestyles with students from Peurto Rico) have dramatically improved their writing skills. They are more self-motivated and want to improve their writing.   *(information from site visit interview with teacher, Bairnsdale SC)*

- attitude of students and, to a somewhat lesser extent, teachers and parents towards use of the Internet.

> The GCP work makes school much more interesting and exciting ... the Internet is more fun that books ... I know a lot more about computers, the Internet and so on ... it helps your education, your future ... you can't lose out on it.   *(information from site visit interview, Year 9 student, Alexandra SC)*

- incorporating network learning and/or telecollaboration into classes generally within the school.

> At Anderson's Creek Primary school the Internet is now a major and continually growing component of the educational program. There is an Internet connection in the library and another in the computer laboratory with a router that enables 14 machines to be linked to it. Mini-labs of several machines each are being developed progressively in the classrooms. Classroom practices in the school have changed enormously as the technology has been introduced.
> *(information gained during site visit interviews)*

In only a few cases did schools see that they had yet been able to use their participation in the GCP to influence learning programs of classes not directly involved or to substantially boost parental or community involvement.

> As a result of GCP involvement, Kyneton Secondary College (Phase 1) has received a funding grant from the local Shire Council to purchase water monitoring equipment for use in the GCP and is represented on the Shire River Improvement Committee, as well as establishing ongoing links with various community officials and land/water care organisations. *(information from survey response)*

> At Anderson's Creek Primary School parental support has been a vital element in developing the school's emphasis on information technology. Parents have raised funds for equipment, have supported the school's participation in the GCP and, through business connections, been able to assist in solving technical problems that have arisen.
> The principal, some staff and four parents have run computer classes in the evenings for some 65 parent participants. One evening Grade 4 students 'amazed' their parents when they described their involvement in setting up the school's WWW Homepage. Commenting on this event students clearly expressed their perception, with some surprise, that "our parents were learning from us." *(information gained during site visit interviews)*

The very few perceptions of negative effects stemmed from frustration at not being able to access the Internet or I*EARN conferences, generally due to technological difficulties, and/or to gain the assistance needed for successful implementation.

Schools which had, for various reasons, made little progress since being accepted into the GCP pilot either did not respond to this question or perceived 'little or no' effect of their involvement. Even some of these schools, though, did perceive limited positive outcomes, usually in terms of attitudes of students and/or staff towards use of the Internet.

Clearly, for those schools which have achieved successful use of the Internet and in chosen I*EARN projects, there have been substantial benefits. The challenge now is to enable many more schools, and ideally all, to experience the same opportunities and benefits.

6. Concluding Comments

The Global Classroom Telecommunications Project has clearly demonstrated the enormous potential of utilising the Internet and I*EARN projects and conferences for enhancing teaching and learning in schools. Impressive, and sometimes remarkable, outcomes have been achieved in schools which have had all or most of the following:

- computer hardware and software which is at least adequate in quantity and sophistication
- reliable and reasonably rapid access to the Internet
- the resources to fund access time, CRT release for training and other costs
- at least one staff member or other readily accessible resource person with the expertise to overcome most technical problems encountered
- at least one staff member with the vision, commitment and expertise to see the curriculum possibilities, bring at least some of them to fruition and, in the process, encourage and enthuse others
- a principal who is at least strongly supportive and desirably proactive in encouraging and supporting the developments
- additional staff who can 'share the vision', have or develop technical expertise and be amenable to changing aspects of their teaching methodology.

> "The GCP was a fantastic launch pad for our school to embark on network learning."   *PS, Phase 2*
> "The project and the Internet has the potential for a huge impact on teaching and learning ....."   *PS, Phase 4*
> "The GCP has provided me with a new outlook on teaching. I am inspired to learn new ways to use technology to enhance teaching and learning. I have come a long way in 5 months and am now in a position to make informed decisions."   *PS, Phase 4*

Other schools, often handicapped by deficiencies in some of the areas above, can see the potential and have taken positive steps, but made less progress than they might have hoped. In some instances this has been because of specific problems; in other cases a carefully paced approach has been adopted as a matter of policy.

> "The experiences have been positive (though) due to technical difficulties we have not been able to participate to the extent we would like."   *PS, Phase 2*
> "The global classroom is very exciting ... but ... we are only making a small contribution at this stage. Lack of time and hardware make it very difficult."   *PS, Phase 2*
> "Although we have not got involved with I*EARN projects the GCP provided the initiative for us to connect and use the Internet ... The main obstacles (to full participation) remain
> - insufficient time for staff to assess projects and skill themselves in technology
> - access to the Internet (single dial-up connection) and computer facilities of school."   *PPS, Phase 2*

The principal of Whittlesea Primary School, with a Graduate Diploma in Computer Education, has been encouraging technological developments since coming to the school in 1994. Gradually the equipment has been upgraded and a small number of teachers keen to increase the use of technology in the classroom have been encouraged and supported. The school joined the GCP in Phase 3 and the whole staff opted to attend an in-service at the I*EARN Australia Centre at Broadford SC. At the time of visiting, the teacher most advanced in classroom use of the Internet had her students beginning to explore an I*EARN site. As the principal said, "It is a very gradual process and by the end of 1997 we hope to have many more staff participating."

(information gained during site visit interviews)

For many other schools the experience has not been positive as they have struggled with technical problems and lack of support necessary for success. A substantial number of survey respondents called for more training, particularly for the large body of teachers who are still computer novices and need ongoing support to develop both skills and confidence. Meeting high costs of on-line time was also a major problem for many rural schools, in particular.

"The project was, overall, a very frustrating exercise." *PPS, Phase 2*
"We had quite a lot of trouble connecting and staying 'online'. Kids (and teacher) got quite frustrated with access ... it would have been an advantage to have someone local to act as a guide." *PS, Phase 2*
"The potential seems endless ... (but) ... too steep a technological learning curve." *PPS, Phase 2*
"Most of Term 3 was lost with I*EARN closing its conferences and so a lot of excitement about joining the project evaporated. ... Our news server is very slow ... The poor access time has stopped me preaching about the web because at our school 'www' stands for waiting, waiting, waiting!" *PPS, Phase 4*
"Potential fantastic: reality different. DOE needs to put more funding into resources and training." *PS, Phase 4*
"The Ministry needs to work out their priorities and put in more human resources and set up cheap, practical, on-going courses for inexperienced teachers. Also provide technical expertise, free state-wide Internet connection." *PS, Phase 2*

The co-directors of the GCP project, Bill Coppinger and Andrew Hocking have found that, as the number of involved schools has grown, the commercial responsibilities of operating the I*EARN Australia Centre have become the dominating concern, to the potential detriment of important educational endeavours. The decision was made to close the Centre at the end of 1996.

In 1997 the Department of Education intends to provide on-going support for network training and the dissemination of good practice through conferences, SOFWEB and other avenues of promotion.

Network learning through the Internet is not just "another educative technique." Information technology and the Internet are acquiring an ever more integral role in almost all areas of human activity. It is imperative that all students develop facility in using these continually developing technologies. The Global Classroom Telecommunications Project has confirmed as well the great educational benefits offered by the Internet. Paramount among these is the opportunity for students to communicate with their peers around the world. It is through our youth that the ideal

of a harmonious global society has its greatest chance of realisation in the decades ahead. Initiatives like I*EARN have the potential to create the context in which profoundly important social, economic and environmental goals become achievable.

It is therefore crucial that the Department of Education take steps to extend the developments begun through the GCP as expeditiously as possible. The availability of personnel with the time, as well as the expertise, to provide ongoing training and support to all schools, together with the resources to enable all schools to access the Internet as required, should be accorded the highest priority.

The GCP has also shown that network learning is not, as some would see it, most appropriately undertaken by individuals in isolation. Rather, through projects of the type developed by I*EARN, it has proved to be a highly effective avenue for cooperative learning in group settings. Participation in I*EARN projects and conferences should continue to be encouraged and supported by alternative means.

> "Telecom projects such as the GCP have the potential to:
> • motivate students and teachers
> • change the relationship between teacher and students (making them) ... equal partners in a shared adventure."
> *PPS, Phase 1*
> "A wonderfully supportive group of visionary educationalists ... An exhausting but exhilarating experience."
> *PS, Phase 1*
> "This has been a most positive project which has opened the world to this school ... The assistance of Bill and Andrew in the beginning phase was exceptional." *PS, Phase 2*
> "The GCP has highlighted the imperative on educators to prepare their clientele for a challenging and changing future. It has fostered student-centred classrooms and has provided me with an opportunity to access a broad network of motivated teachers willing to work collaboratively for a clearly defined outcome."*PPS, Phase 2*

In conclusion, on the basis of information obtained through this evaluation, it is assessed that The Whalesong Foundation Ltd has satisfactorily provided the services it contracted with the Victorian Directorate of School Education in the Service Agreement (Attachment 1).