

9. Evaluation

The product evaluations to be carried out are summarised in the detailed product descriptions in Appendix F. Evaluation results are recorded as part of the end-product review.

9.1 Intended audiences

The evaluation will be geared towards 'intended use by intended users' (Patton, 1997). These stakeholders include:

- The funders and other national bodies concerned with the use of network technologies in education.
- Other educational institutions and consortia with a need to track and facilitate student progression and to share education-related information.
- Senior managers and policy makers at the consortium institutions.
- Members of the project team(s)
- Members of staff using the outcomes of the project, in particular: administrators, IT/IS staff, academic staff.
- Current and future students.

The evaluation strategy is designed to take into account the particular interests of the different stakeholders at national and institutional level. For the most part, these interests and the likely issues arising (see Evaluation Issues below) have been identified in advance by the project plan. However, in order for the evaluation to be sensitive to the needs of specific intended users there will be:

- an initial survey of key stakeholders at each institution to provide a baseline for measurement of impact and to identify any specific local interests or issues
- ongoing consultation between the Evaluation and Dissemination Team and Project Board to ensure that the evaluation strategy remains responsive to issues arising in the course of development
- support and encouragement to institutional team leaders to consult local stakeholders at key points in project implementation

The evaluation design will therefore be kept as participative and flexible as possible (Parry-Crooke & Croft-White, 1998).

9.2 Objectives of the evaluation

The objectives of the evaluation are three-fold:

1. to quality assure the project deliverables
 - (a) on behalf of the funders
 - (b) to ensure consistency across institutions
 - (c) to ensure that quality and timeliness of deliverables allows dependent activities to be taken forward as per project plan
 - (d) to trigger appropriate financial arrangements as agreed by the project consortium
2. to formatively assess the process of project development
 - (a) to allow feedback and adaptation by project teams
 - (b) to allow lessons learned in the course of the project to be disseminated to other institutional and national stakeholders
3. to summatively assess the impact of the project
 - (a) at the level of institutions
 - (b) at the level of the consortium, including national impact of the project

In addition, as the evaluation team is drawn from members of project staff with full workloads (both project-focused and institutional), it is important that the evaluation process is *efficient* and has *minimal impact* in terms of time involved. It will therefore be integrated with other project activities as far as possible. The need for prior expertise in evaluation methods will also be kept to a minimum.

9.3 Overall evaluation process

Evaluation (and dissemination) activities will be the responsibility of a subgroup (termed 'E&D') reporting to the main project management board. The E&D steering group will be comprised of representatives from all of the initial participant institutions in the Consortium, drawing in the essential dimensions of organisational, pedagogical and technical expertise where required. An External Evaluator will be appointed and will serve as an additional member of the E&D group.

The responsibilities of the E&D group will be:

- To develop an appropriate Evaluation Strategy
- To develop and monitor the process of quality assurance of deliverables
- To oversee the work of the External Evaluator
- To report regularly to the Project Board
- To oversee and deliver the interim and final Evaluation Reports, via the Project Board, to the Funders

The responsibilities of the External Evaluator will be:

- to assist in the development of an appropriate evaluation strategy
- to provide external monitoring to the process of quality assurance
- where appropriate, either to provide external quality assurance of deliverables or to identify alternative sources of relevant expertise
- to report to and attend Project Board when required
- to carry out impact evaluation at the Consortium Institutions
- to collate the lessons learned in the course of project development
- to advise and support members of the project team in carrying out evaluation activities at their respective institutions
- to write the interim and final Evaluation Reports

9.4 Quality assurance of deliverables

Given the large number and wide variety of deliverables, QA procedures need to be flexible and time-efficient. There is also a requirement for deliverables to be signed off in a timely fashion for funds to be released, which precludes complex systems of referral.

In this situation, peer evaluation can be a highly effective tool. Advantages are:

- Members of the project teams are already familiar with project objectives and key quality issues likely to arise. They can quickly engage with the significant features of each deliverable.
- Peer review encourages collegiality, shared responsibility, and an ethos of collaboration.
- Lessons learned in the process of reviewing other deliverables can be taken on board in development.
- Reviewers have an incentive to undertake QA reviews quickly and fairly.

The main disadvantages are:

- There is the possibility of biased judgment favourable to colleagues
- Valuable external input to the development process may be missed.

The overall QA strategy will therefore make use of peer review augmented by external assessment of key deliverables. The exact procedure for signing off will vary according to the nature of each deliverable and its place in the project plan. However, the generic process can be illustrated as follows (Figure 5):

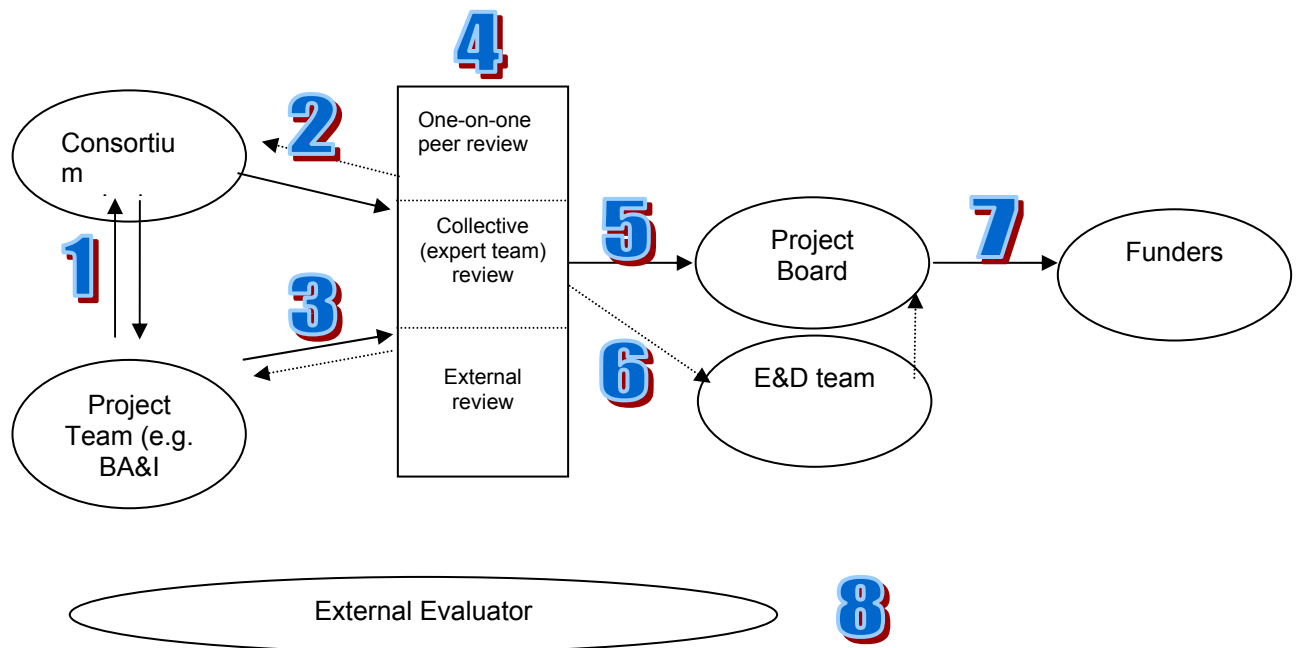


Figure 5: The quality assurance process

1. Deliverables for the project as a whole – i.e. centrally managed and developed outcomes – are tested iteratively with consortium institutions for their fitness and feasibility in context. This takes place through normal channels of project communication.
2. Deliverables from each CI – i.e. outcomes that are locally implemented – are submitted for review. Generally this will either be for one-on-one peer review or for collective review by the relevant sub-group. Feedback is given.
3. Deliverables for the project as a whole – i.e. centrally managed and developed outcomes – are submitted for review. Generally this will be collective review by members of the sub-group e.g. CI representatives and/or review by an appropriate external evaluator. Feedback is given.
Review will be by submission of the relevant product sheet with objectives clearly marked as met, development steps completed, and the evaluation criteria satisfied. Where this is not the case, reasons should be given. Feedback will indicate what further work, if any, is needed to bring product up to satisfactory standard. Further notes on the different review processes are given below.
4. Sign-off. Product sheet is satisfactory and any technical deliverables or implemented systems have been tested to satisfaction by the reviewer(s). Funding is released.
5. End of product report submitted to Project Board.
6. End of product report and product sheet submitted to E&D team for process evaluation (see below). Summaries incorporated into evaluation reports.
7. Reports submitted to Funders.
8. External evaluator monitors process of product review to ensure effectiveness and timeliness of feedback.

One-on-one peer review will be carried out by corresponding team members from different CIs. In phase one, peers will be allocated in a ‘round the clock’ fashion (see Figure 6); in phase two, new CIs will be paired with existing CIs. Different peers will be allocated for different products to facilitate communication among the site teams and to prevent complacency developing within a ‘buddy’ pair. Product sheets and test outcomes can be exchanged by email, ensuring rapid response times.

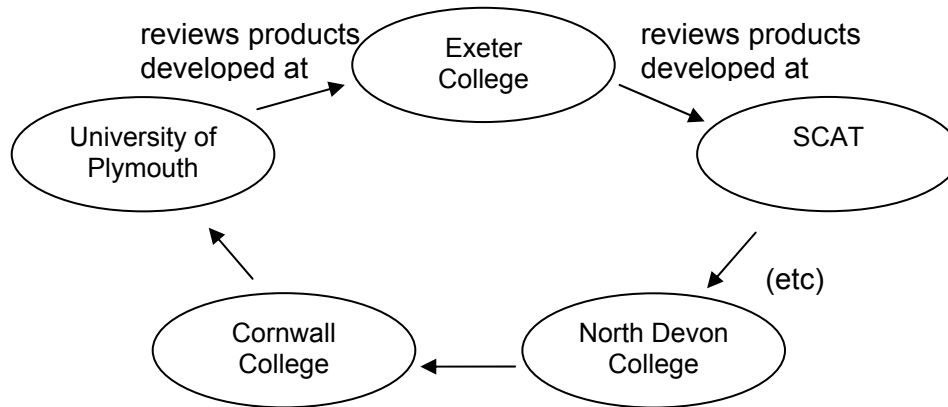


Figure 6: example of ‘round the clock’ peer review

Collective (expert team) peer review will be carried out by the full team responsible for a product, including any external stakeholders that have been involved in its development (e.g. commercial partners). This will typically require a meeting of the full team with testing of the relevant product, in addition to the submission of a product review sheet.

External review will call on either the external evaluator or an alternative expert to evaluate a product. This will be particularly important where conformity to national and international schemas is required (i.e. in standards). Alternative sources of expertise include contacts at the JISC, CETIS, the commercial partners, the LSC and the Northern Ireland Integrated Managed Learning Environment based in Belfast.

As indicated above, the exact process of review process, as well as the general criteria for acceptance, will depend on the nature of the deliverable. Table 1 summarises the general situation for each product type. Individual products will have their own evaluation criteria and in some cases these will be dependent on previous products. For example, the criteria for evaluating a technical system will in part be derived from the specification. The Evaluation Strategy needs therefore to be read in conjunction with the separate product sheets to gain a full picture of the Quality Assurance process.

Type of deliverable	Evaluation criteria	Evaluation process
Agreement	Agreement by all parties Acceptance by Project Board and funders Conformity to relevant statutes (e.g. Data Protection)	No additional evaluation necessary
Business process specification	Fitness to purpose (i.e. totally and efficiently specifies BPs involved) Conformity with existing best practice Feasibility at each implementation site	Collective (BA&I team) review with input from each CI site External review wrt best practice.
Technical specification	Fitness to purpose (i.e. totally and efficiently specifies system required) Conformity with (or extension of) existing national and international standards* Conformity with requirements of commercial partners* Feasibility at each implementation site	Collective (Tech team) review with input from each CI site External review (CETIS and commercial partners)
Technical system	Conformity to relevant project specifications Scalable as necessary Transferable to other sites as necessary	Pilot studies (interfaces) Collective (Tech team) review with input from each CI site

Technical implementation	Achieves or contributes to overall project objective Ready for use by intended users Systems in place for continued management and maintenance	Pilot studies One-on-one peer review
Business process implementation	Conformity with relevant project specifications Achieves or contributes to overall project objective Actually used by intended users Training needs analysis has been conducted: training is in place as appropriate Scalable as necessary Potentially transferable to other sites	Pilot studies One-on-one peer review
Dissemination activities	Awareness of project nationally Lessons learned in course of project development are being applied at other sites	External evaluator

*The four subgroups with responsibility for Standards will be liaising with external bodies who will be able to assess conformity of the delivered standards. A short statement on conformity may be requested by the E&D group or the external evaluator in respect of: PDP (national standards groups and other projects working in this area); SCR to SR interface and SCR/SR to VLE interface (IMS LIP and Enterprise standards as assessed by CETIS and accepted by core commercial partners); Authentication (liaison with the JISC Sparta project).

Table 1: Summary of evaluation criteria and process for each type of project outcome

9.5 Formative assessment of project processes

The aim of formative assessment is to record the ongoing progress of project development, both to identify and remediate potential problems, and with a view to developing some key lessons for other institutions and stakeholders.

It will be the task of the Project Board and relevant teams to address problems that may arise with project development. However, reports to the Board will be selectively analysed by the E&D team for evidence of:

- changes in project plan
- unanticipated risks and difficulties encountered
- unanticipated benefits and solutions found
- key issues arising and decisions taken
- significant differences among CIs
- effectiveness of overall project processes

Where necessary to illuminate any of these points, further information will be elicited from team members by email or telephone, or exceptionally by face to face interview. If significant issues arise, these will be noted for further exploration at Project Board and at the end of year review. The external evaluator will also facilitate a short focus group at each end of year review to draw out lessons learned in the course of project development. A summary report of these lessons learned will be submitted to the Project Board.

It will be important to separate these activities from the quality assurance process, as negative lessons are extremely valuable but may go unreported. The external evaluator will therefore have a more visible role in process evaluation than in quality assurance.

9.6 Evaluation of project impact

The overall impact of the project can readily be assessed against its original objectives (see Figure Four below). However, the impact on different stakeholder groups will vary and this must also be taken into account.

For convenience, the impact assessment for each objective can be subdivided into:

- impact on technical systems and processes (immediate stakeholders = project teams, staff directly involved with the processes of registration, administration, student records etc)
- impact on learning and teaching (stakeholders = current and future students and staff of participating CIs).
- national impact (stakeholders = other institutions, funders and national bodies)

Table 2 illustrates how these various impacts will be evaluated. Note that 'survey' indicates a general consultation exercise and may be conducted by paper-based or email questionnaire, or by face-to-face or mediated interview, as dictated by the issues under investigation and the resources available.

The impact on learning and teaching in particular is likely not to emerge until late in the development process or even several months after the outcomes of the project have been successfully implemented. It will therefore be particularly difficult to summatively assess this impact, and the interests of these stakeholder groups will be particularly taken into account in all product testing and quality assurance procedures.

More specific issues against which impact may be assessed will be sought by interview at partner institutions. To ensure the continuing relevance of these issues as the project progresses, there will be ongoing liaison between the Evaluation and Dissemination Team and the Project Board. The evaluation is therefore designed to be both participative and flexible (Parry-Crooke & Croft-White, 1998).

Objective	Impact on CI systems and processes	Impact on experience of students/staff	National impact
achieving single registration for all partnership students at Consortium institutions	End of relevant product reports End of stage reports Baseline and final audit	Student pilot studies Baseline and final audit Survey of students/staff	Recording and analysis of lessons learned
achieving rapid, efficient transfer of data between Consortium members to achieve co-registration of students	End of relevant product reports End of stage reports		
achieving timely access to relevant VLE course materials throughout the Consortium from the point of initial, single registration	End of relevant product reports End of stage reports	Student pilot studies Survey of students/staff	Recording and analysis of lessons learned
providing a mechanism for the transfer of results deriving from Consortium VLEs to the Student Records Systems of involved Consortium members.	End of relevant product reports End of stage reports Baseline and final audit		Recording and analysis of lessons learned
providing Consortium students with permanent, personal web portal access to Consortium PDPs.	End of relevant product reports End of stage reports	Student pilot studies Survey of students	Recording and analysis of lessons learned
producing a specification for alternative transfer between SCR and VLE.	End of relevant product reports End of stage reports		Specification conforms to existing international schemes and standards Specification is usable and transferable Recording and analysis of lessons learned

Objective	Impact on CI systems and processes	Impact on experience of students/staff	National impact
working with vendors to ensure the benefits can be extended to the wider JISC community.			Assess transferability of outcomes Survey of commercial stakeholders
evaluating the project as it progresses and disseminating the lessons learned to the wider JISC community.			Production of reports and publications Survey of national stakeholders
further objectives identified in the course of initial baseline assessments		as appropriate	as appropriate

Table 2: Process for assessing the impact of the project against initial objectives

9.7 Summary key actions for Evaluation team

Stage One

Establish E&D team and appoint External Evaluator
 Formulate Evaluation Strategy
 Develop product sheets for evaluation of outcomes
 Develop additional Baseline Audit questions for CIs
 Support CIs in undertaking Baseline Audit

Stages Two to Five

Oversee quality assurance process as products are signed off
 Provide or arrange for external review of key deliverables
 Process evaluation of selected reports
 Follow up key issues with questions/interviews to project team as appropriate
 Baseline audit of new institutions at Phase Two
 Provide end of year reports on lessons learned

Stage Six

Final audit of CIs for comparison with baseline
 Survey of students/staff to assess impact on learning and teaching
 Survey of commercial and national stakeholders to assess national awareness and impact
 Final report on process evaluation (lessons learned)
 Final report on impact evaluation

10 Dissemination

10.1 Overview

A number of levels for dissemination are identified in this strategy (see Figure 7). Dissemination activities within each institution will share practice and inform stakeholders at the local level. This **primary intended audience** includes staff of the University and partner colleges with a responsibility for managing and implementing student record systems. Within each institution, a person with responsibility for evaluation and dissemination locally has been identified. At this level, the focus of this strategy is dissemination for awareness, understanding and action.

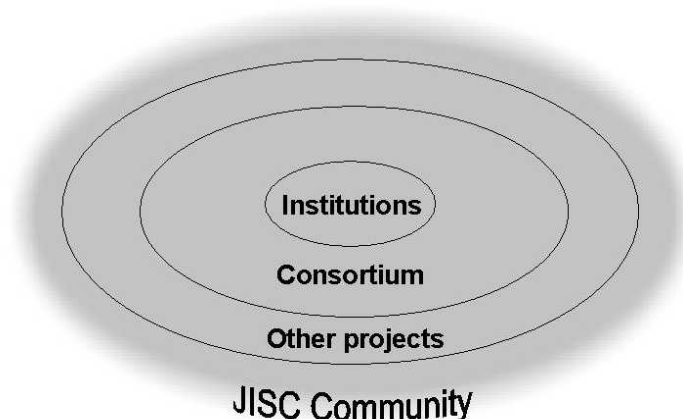


Figure 7: Dissemination activities

Other intended audiences span related projects (such as the Northern Ireland 1/01 project), and the wider JISC community including, for example, the CRA (Centre for Recording Achievement) and CETIS (Centre for Educational Technology Interoperability Standards). At this level, the focus of this strategy is on dissemination for awareness, and for understanding.

This tiered approach provides opportunities for sharing information, results, examples of good practice and solutions to problems from the individual institutions, both within the partnership and wider audiences.

Inevitably, some issues will prove difficult to resolve. Through dissemination activities outlined in this strategy, the project will aim to raise awareness of the issues, and the potential benefits of developing a common approach. In this way, sufficient momentum will be gained to support further development in the longer term.

A key part of the dissemination strategy will be to share information with JISC, other partnerships and associated organisations at all stages of the SHELL Project.

10.2 Dissemination Methods

Dissemination methods span a range of activities, from presenting a conference paper at an international conference to simply mentioning a project issue in context at a departmental meeting. It is intended that through the dissemination methods outlined in this strategy, all participants in this project will be encouraged and empowered to inform others, thereby raising the local and national profile of the project.

Furthermore, the social complexities of achieving successful organisational change are well documented, indicating that dissemination activities that involve and actively engage people are likely to have a far greater impact.

Publications will therefore be supported with a programme of conferences, seminars, meetings and workshops, combined with supporting articles in newsletters, press releases and institutional websites. In particular, a programme/project conference will be held, with

invitations extended to other stakeholders and interested parties such as JISC, other partnerships, software vendors and educational developers.

Emerging specifications, lessons learned and recommendations arising will be disseminated through conference papers, journal articles and publications. A dedicated project website will be developed, to which regular progress reports from the project will be posted.

10.2.1 Project Logo and 'identity'

A logo for the SHELL project, together with associated materials (such as letterheads etc.) has been developed, agreed and circulated for general usage by partner institutions.

10.2.2 Project Website

A project website has been developed and will be maintained over the lifetime of the SHELL project (and possibly beyond.) In addition to an introductory home page, this website contains sections for:

- News (Announcements, Forthcoming dates);
- Project Overview (A short summary of the key aspects of the project);
- Publications (Documents, Press releases, Newsletters);
- Events (Conferences, Roadshows, Presentations, Workshops etc.);
- Links (to partner college websites, related projects and documents);
- FAQ (including a glossary of terms and definitions);
- Contacts (Contact details for the project and team).

A key part of this website is the 'update service'. This allows interested parties to leave an email address, with project updates also being circulated via this channel.

10.3 Dissemination activities within partner institutions - Introductory Workshop

A two day introductory workshop was held in April 2002, with invitations extended to all partner institutions. This workshop aimed to develop a common understanding of the project and its aims, and involve the widest range of stakeholders from the outset

10.3.1 "Project Roadshows"

A series of "SHELL Project Roadshows" were developed and held at the University of Plymouth and Cornwall, North Devon and Somerset Colleges. At the time of writing a further roadshow is scheduled for Exeter College. These "Roadshows" consist of a welcoming introduction by the local College, followed by three short presentations:

1. Introduction to the national context and the SHELL Project;
2. The details of the SHELL Project deliverables and activities;
3. How the project will be evaluated, and the implications for learning & teaching.

An informal session follows the series of presentations, aimed at bringing together college stakeholders to discuss the project in the local context.

Further 'Roadshows' will be designed and developed to address the needs of the participants, and to support institutions who will become more active in Phase 2 of the Project.

10.3.2 Mailing Lists

A mailing list has been established by JISC for the 1/01 programme. In addition to this, local mailing lists exist to share information between identified groups and team leaders.

10.3.3 Team Leader Co-ordination meetings

A regular series of Project Team Leader meetings has been established. Chaired by the Project Manager, these meetings occur approximately fortnightly, serving to disseminate actions and discuss issues across the four teams.

10.3.4 Local Newsletters

The process of raising awareness of colleagues in each institution will be supported through a series of articles in local institutional newsletters. These will aim to disseminate to as wide an audience as possible within the institution.

In the University of Plymouth, an article appeared in 'Upfront' (a University wide newsletter available to all staff) and in departmental newsletters such as 'DetailS' (a newsletter primarily for Information and Learning Services, encompassing administrative and technical staff). Similar profile raising articles will be developed in partner colleges.

10.4 Dissemination to the wider JISC community - Conference Papers & Posters.

At the time of writing, the ALT-C (Association of Learning Technologies Annual Conference) had accepted a short paper regarding the SHELL Project for September 2002.

The ICCE (International Conference on Computers in Education) have accepted a poster presentation on the project titled "The JISC SHELL Project: Connecting learning environments in higher and further education in the UK." for December 2002.

A SHELL Project Poster will be developed in conjunction with the JISC (Joint Information Systems Committee). This will be presented at ALT-C and at other workshops / events relating to the JISC 1/01 programme.

Preparations are under way for a short presentation to the 7th Annual Conference for Staff and Educational Developers organised by SEDA (Staff and Educational Developers Association).

10.4.1 Developmental workshops

The work of the SHELL project will be supported through 'developmental workshops', which aim to bring together project teams with specialist support and advice from external consultants or facilitators. For example, the SHELL project team recently met with the Northern Ireland Project and the CRA in a workshop organised and facilitated by the JISC. Further workshops have been organised to discuss the project with software vendors.

10.4.2 Briefing paper

A short briefing paper was developed (and included in the "Roadshow Pack") to introduce the project and participant institutions, defining its range and scope of activities and deliverables

10.4.3 Progress Reports

As the project develops, progress reports will be made publicly available through the website. (Progress report 1 has already been published.) Further progress reports will summarise the work of each team as the project develops, each led by a short introductory overview provided by the Project Manager describing the overall project status.

10.4.4 Series of Case Studies

A short series of five developing case studies (one from each of the core partners) will be disseminated to the partnership and the wider JISC community, illustrating individual learners and other stakeholder experiences. These case studies will serve to guide and inform at these stages, contributing also to the projects final evaluation report.