

Based on the knowledge generated from the Australian Flexible Learning Framework projects and selected external literature, the Quick Guides series provides an introduction to key issues related to flexible and online delivery of Vocational Education and Training (VET).

Success Factors for Collaborative Development of Content to Support Online Learning

Australian Flexible Learning Quick Guide Series

Scope of this guide

This Guide reviews success factors for the collaborative development of content to support online learning. It deals particularly with issues which may arise when the collaboration is between different types of organisations with diverse cultures and expectations, for example an educational institution and a commercial software developer.

This Guide focuses on collaborative projects in which the primary goal is to develop content to support online learning (other terms for this include 'courseware' and 'learnware'). Content is defined broadly to include not just learning resources for direct use by students, but other products such as support materials, communication systems and assessment tools. (Collaboration can also be for other purposes, for example to conduct research, marketing or professional development activities.)

Why is it important?

As educational institutions world-wide seek to meet increasing demand for relevant, timely, and cost-effectively produced content and course material a greater number are looking to partnership or collaborative arrangements to:

- improve cost-efficiencies and achieve economies of scale
- provide a greater and more diverse skill and knowledge base from which to operate
- access specialist expertise for the purpose of increasing their own staff capabilities and organisational capacity
- utilise or gain access to larger or specific technical/infrastructure resources
- leverage marketing advantages
- improve product outcomes, and
- meet client and specific market group needs.

Collaboration is a key principle of the Australian Flexible Learning Framework:

"... collaboration is an increasingly essential characteristic of the information economy, even in a fiercely competitive environment. Collaboration is no longer an alternative to competition. It is fast becoming a fundamental strategy through which organisations can achieve competitive advantage." (AFLF p.8)

Many projects within the Framework are based on collaboration. For example collaboration between different sorts of organisations is explicitly sought in the guidelines for the development of Flexible Learning Toolboxes.

There are many different collaborative models and the activity goes under many terms; partnership, outsourcing, and strategic alliance are probably the most common. Other related terms include: skill sharing, teamwork, networks, and a more recent term, 'business-to-business (B-2-B) cooperation'. The collaboration can be formal or informal, with agreements ranging from full formal commercial contracts to less formal agreement arranged verbally or in writing. Primarily in this guide we are talking about partnerships denoting a business relationship (formal or informal) that has been established for the purposes of designing and/or developing content for online delivery. We are referring to 'partnership' in a general sense, not necessarily to 'partnership' as an ongoing legal entity.

Common Issues and Challenges

Many of the issues and challenges associated with collaborative development are the same as those faced in any team development project - keeping projects on target, team building and relationship management, instigating and managing quality controls, systemising activities and so forth. There are however particular challenges or issues associated with external arrangements and partnerships. We are not separating the two but listing here common issues and challenges faced in collaborative development projects. Principal issues are:

- Determining whether you need a partner
- Identifying and choosing appropriate collaborative partners
- Contractual arrangements
- Issues associated with project management
- Working relationships and managing the partnership
- Copyright and ownership
- Quality Assurance
- Defining and reaching agreement on total costs and benefit
- Choosing product development models
- Dealing with business tensions.

Critical success factors, lessons learned and strategies adopted against some of the issues listed above are summarised in the following table. Suggested useful references and further reading are at the end of this Guide.

Critical Success Factors - Collaborative Development of online content

Issue	Critical Success Factors	Lessons learned and strategies adopted
<p>Determining whether you need a partner</p>	<p>Being very clear about what you want to achieve with the project then assessing how best to achieve your end aim giving consideration to what you have and what you need.</p>	<p>Partnerships can be formed for many reasons: The partnership may be to form a strategic alliance with a particular group or entity, or to fill a void or business objective. If assessing whether a partner is required to complete a project best steps listed by Stahmer & Green (n.d., sec. 1, 2 & 3) are to:</p> <ul style="list-style-type: none"> • Develop a strategic framework within your organisation • Define the objectives of the project • Stocktake and assess the skills and resources within your own team or organisation and match to your requirements • Identify [and detail] the missing skills and/or assets required in your project. <p>Developing a strategic framework up front enables potential commercial interests to be identified by the organisation before they begin rather than after the event (which might change the nature of the project or partner relationship); provides a vehicle of ownership and empowerment for the internal champions. The authors claim this step can make a vital difference to what you seek in partnerships, how the project is conducted, and end outcomes.</p>

Issue	Critical Success Factors	Lessons learned and strategies adopted
<p>Finding and choosing collaborative partners</p> <ul style="list-style-type: none"> Finding and choosing partners and people of the right type for mutual and best gain, and who fit with the culture of the organisation. 	<p>Ensuring the right mix team to provide the range and type of skills required for the project, and best fit to match the culture of the team and organisation.</p> <p>Ensuring the partner can deliver.</p>	<p>Specific findings on success factors included:</p> <ul style="list-style-type: none"> The importance of having a well balanced team and not a dominance of product expertise over instructional design and content expertise. (A shortage of instructional design capabilities is an often reported issue (Toolbox Series 1; Toolbox Series 2)), Project Management was an area of weakness identified by Stahmer & Green's research (n.d.). It is important that Instructional designers have expertise and experience in designing for online environments (Aumann 2001, p. 3) The importance of the role of project manager – being able to provide leadership as well as project management ability (Aumann 2001, p. 2; Stahmer & Green n.d., sec. 3). In a joint project the manager may be from one organisation or the other, or managed jointly. Having control of the project management usually (but not always) gives greater control over the project. The critical importance of having good selection criteria and the means to validate people's credentials and ability when entering into formal contracts in particular. The two-step selection process worked well in the Toolbox projects (Toolbox Series 1; Toolbox Series 2). When tendering for suitable partners or teams making sure the guidelines are very specific and describe in detail the project requirements, expectations, deliverables, and critical timelines (Toolbox Series 2; Stahmer & Green n.d. sec. 3). <p>Steps for choosing collaborative partners might include:</p> <ul style="list-style-type: none"> Using the list of missing assets and skills to guide your search Specifically target your search. Use creative people as well as technical people in your network of spotters or advisers when starting the hunt, and when assessing organisational fit. (Stahmer & Green n.d., sec. 3, Stage 2) Developing vetting processes for selecting partners or team members that: <ul style="list-style-type: none"> share or fit in with the ethos of the team and other stakeholders provide ways of proving skills or ability of the applicant or potential partner

Issue	Critical Success Factors	Lessons learned and strategies adopted
<p>Contractual arrangements</p> <ul style="list-style-type: none"> Whether to formalise the arrangement, in what way, and to what degree. 	<p>Ensuring that each of the parties understand the policies and practice within one's own institution and of the others and the policies of any governing agency.</p> <p>Documenting all decisions and arrangements and making sure all parties are in agreement, and have clear understandings on the arrangement.</p>	<p>Whether or not to formalise the arrangement, and to what degree has often been based around culture. Goodwill and fostering a spirit of collaboration can be in tension with more structured, often more rigorous, principles associated with the need for improved accountability, and tighter management controls and legal protection for individuals, the academy, and the business entities.</p> <p>Specific findings on success factors included:</p> <ul style="list-style-type: none"> The value in seeking advice from experienced others and identifying those whom might help on contractual and agreement decisions. Developing methods to assess the level of partner commitment Checking for legal impediments before commencing a project (CIT 1999, Conclusion 2) <p>If formalising a partner relationship there is value in:</p> <ul style="list-style-type: none"> Developing a written project proposal Writing an internal business plan (for your own organisation) Developing a joint business plan Develop a Memorandum of Understanding and/or formal contract. There is good argument for developing both (Stahmer & Green n.d., sec. 3). Providing a degree of flexibility for adjustments during the life of the project. <p>The important things are for both parties to be absolutely clear on the objectives, roles, responsibilities, and relationships, as well as the project details. Things like copyright, ownership (including after the product completion); valuing 'in-kind contributions'; product service responsibilities need to be worked out and agreed up front.</p>
<ul style="list-style-type: none"> Knowing what people, instruments or resources are available to use of assist with partnership or contract decisions 		<ul style="list-style-type: none"> Institutions and State and national authorities are gradually adding to the body of resources and knowledge to assist business planning. When exploring the range of options and matters relating to contract and business arrangements check these sources and critically review for appropriateness. Networking with colleagues, other professionals, interest or discipline groups, electronic networks, and so forth to find out what others have done and to learn from the experiences of others can prove fruitful.

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<ul style="list-style-type: none"> Assigning contributions by each partner and the benefits to each 	<p>Research, good communication, reaching agreement up front.</p> <p>Having an open and flexible mind for the different possible models.</p>	<p>This can be a difficult area and can be a source of disagreement, particularly if the partnership does not achieve the expected outcomes or go according to plan. Concerns here are fairness of agreement, costing the intangibles, putting a price on intellect, determining project and after project life, costing existing resources, amortisation of any purchases brought specifically for the project, costing product support, and scoping the agreement. Penalties for non-performance need to be factored in also. Sliding scales on returns on investment or cash penalties can work better than fixed values (Stahmer & Green n.d., sec. 3, Stage 4, Step 5).</p> <p>Particular challenges occur when the entities have entirely different motivations, modus operandi, etc. For example commercial entities may have a totally different costing and value system to an educational institution. (Stahmer & Green n.d., sec. 3)</p> <p>The experiences of most projects overwhelming speak to the need for good communication between all parties and the need to reach agreement before the project begins. It is good protocol also to document agreements. (Stahmer & Green, n.d.; Green & Stahmer 1999.)</p>
<p>On project management</p> <ul style="list-style-type: none"> Defining and achieving project goals. 	<p>Paying due attention to the definition stage and detailing as far as possible the project goals and intended outcomes detailing how these might be achieved and the interrelatedness of the project components.</p> <p>Choosing the right project manager who has the time, skills, and ability to follow through on project requirements and has good project management ability.</p>	<p>The more one undertakes joint projects or partnerships the more one learns about defining and achieving project goals, but developing skills this way can be a costly experience. Using an experienced project manager is very likely to be cost-effective in the longer term. (Stahmer & Green n.d., sec. 3)</p> <p>Project managers require good management skills, people and communication skills, and an understanding of the media the project is going to produce. (Stahmer & Green n.d., sec. 3)</p> <p>If Project Management is to sit in one organisation or the other give consideration to the experience of project staff when choosing.</p>
<ul style="list-style-type: none"> Bringing a project in on time and on budget. 	<p>Attention to planning detail up front.</p> <p>Having organisational structures and the management responsibilities clearly defined and communicated to all.</p> <p>Enabling and empowering staff to successfully perform required tasks</p> <p>Making sure the project has full endorsement and support from both entities to avoid unanticipated blocks.</p> <p>Implementing good control over timelines and tasks.</p>	<p>Project experiences indicate the need for:</p> <ul style="list-style-type: none"> Good planning can make a critical difference to the outcome, timelines and budget. Planning includes doing an accurate assessment of the skills, ability, and availability of personnel, and predicted costings (Aumann 2001, p. 9; Stahmer & Green n.d., sec. 3). Seek progress reports on progress and have communication mechanisms that actively seek projection of anticipated problems. Ensuring all parties know their responsibilities and the consequences of their performance or non-performance (Stahmer & Green n.d., sec. 3). Establishing mentor relationships between senior and junior or experienced and less experienced staff if required. (Aumann 2001, pp. 8-9) <p>Difficulties reported in the Toolbox Projects apart from time delays beyond the projects control, was the managing and coordinating of professional specialists which was more difficult than anticipated.</p>

Issue	Critical Success Factors	Lessons learned and strategies adopted
<p>Maintaining good relationships with stakeholders and amongst the team</p> <ul style="list-style-type: none"> Finding best ways of meeting the challenges of working with diverse and/or distributed working groups, and across different cultures. 	<p>Building and maintaining good relations and trust among the players.</p> <p>Having very clear communication lines and strategies.</p> <p>Maintain regular communication with stakeholders.</p>	<p>Stahmer and Green's research indicates that this is probably the single largest challenge in a content development partnership (n.d., sec. 3.5.3). As in all projects of this type commonsense strategies prevail.</p> <p>Tips and hints to foster project team relationships include:</p> <ul style="list-style-type: none"> Making sure all parties know and understand the value of the project and are committed to it (Stahmer & Green n.d., sec. 3) . Having clear structures to avoid ambiguities or overlaps in domains of responsibility. Choosing a project manager with good people management skills or having someone who attends to the group dynamics and fosters good morale and relationships among the team (Aumann 2001, p. 1 & 3). Toolbox project evaluations showed that projects that took a holistic vision of product development—tying product development in with professional skilling of staff, and systems development—on the whole did better than those that adopted a single focus. Adopting a proactive approach to fostering good relationships pays off, e.g. paying attention to team building, reporting highlights and achievements, regularly communicating with team members to identify possible sources of tension.
<p>Copyright and ownership</p> <ul style="list-style-type: none"> Implementing QA processes to ensure compliance on copyright and IP statutes and ethical and moral requirements, including the tracking of copyright and IP status, and policy agreements. 	<p>To have clear and timely processes built into the project plan for dealing with copyright and IP matters.</p>	<ul style="list-style-type: none"> Understanding and keeping on top of legal requirements on use of third party material, and identifying what one needs to know. It is important to resolve potential tensions amongst the various players with regard to ownership and rights, especially if multiple parties are involved (Stahmer & Green n.d., sec. 3.5.3)
<p>Quality Assurance</p> <ul style="list-style-type: none"> Ensuring the product developed meets usability criteria and meets the needs of the intended market/audience. 	<p>If dealing with commercial or non-educational entities it is vital they understand the nature and needs of the end audience.</p>	

Issue	Critical Success Factors	Lessons learned and strategies adopted
<p>Product development models</p> <ul style="list-style-type: none"> • Conceptualising and exploring new models of operation and management—'thinking outside of the square'. 		<p>We found little, other than CIT's report, on the comparison of models. Aumann presents models of three different partnership arrangements based on 'instructional design', 'technology', and a 'skill sharing' model. There appears to be no one dominant model of development. Each project to a degree is unique.</p> <p>The issue for collaborative development is to choose a development model that sits well with both parties. Exploring different project models and project operations may be fruitful to partnerships that are new to product development projects.</p> <p>If adopting a prototype-based product development methodology then the prototype should be seen as a pivotal point for process refinement, development testing and proof of concept and be a major sign-off point (Toolbox Series 1, p. 9).</p>
<p>Dealing with Business Tensions</p> <ul style="list-style-type: none"> • Collaboration in a competitive environment. 	<p>Understanding market forces and respecting business needs when entering into partnership operations.</p>	<p>The Strategy 2000 Toolbox Evaluation Project (Toolbox Series 1) found that in many instances competition still took precedence over collaboration. Stahmer & Green warn that in some instances it was not realised until projects were well into development that partners turned out to be competitive rather than complimentary (n.d. sec. 3, Stage 1, Step 5)</p> <p>The challenge to organisations seeking partnerships is to find ways of leveraging the benefits and exploiting mutual gains of joint ventures, whilst respecting the individual institution or entity's prime need for economic viability and protection of their market power and territory.</p>
<p>On overseas partnerships</p> <p>The Australian Flexible Learning Framework Strategy 2001 Marketing International Project has suggested that further research is required to provide insights into partnership and twinning arrangements which would comply with government regulatory frameworks, and business models overseas. To market successfully overseas some countries advocate or require the development to be in partnership. Government endorsement can be slow in some countries. Partnering with overseas partners requires an understanding of the culture, politics, and specific needs of that country. Those wanting to enter these markets need to do thorough research before they begin (IDP 2001).</p>		

Resources from Australian Flexible Learning Framework projects

Partnerships in the development of online learning materials

Aumann T, Richardson C & Weller S, (2001), Paper and workshop presented at NET*Working 2001, Brisbane.

Based on the joint and separate experiences of Swinburne TAFE and Online Learning Australia working with others in partnership on the development of online learning materials the authors have identified critical success factors for collaborative development projects. They also describe and compare three collaborative development models in terms of their respective strengths and shortcomings.

http://flexiblelearning.net.au/nw2001/01_attending/program/tuesday.htm

http://flexiblelearning.net.au/nw2001/01_attending/papers/8_9Auman.doc

Online Delivery with Other VET Providers

Canberra Institute of Technology (CIT). 1999. Report of ANTA Project

A good study of various collaboration models specific to VET. Evaluates various collaboration with external vendors and providers. Points of note from this project were the findings that: Legal barriers can work against cooperative models. Providers seeking to cooperate in the delivery of online programs should first check for likely legal impediments and resolve these before commencing; and producers of online learning materials must be quite explicit in the specification of software that will be used (ie. browser type and versions etc).

Toolbox Projects

[Series 1] Toolboxes for Online Learning: Evaluation Report of the ANTA Toolbox Initiative 1998-1999. Prepared by Queensland Open Learning Network. (Series 1)

[Series 2] Online Learning Products – The Next Wave. Final Evaluation Report of the Management and Development of the Series 2 Toolbox Program (Abridged). Prepared by Queensland Open Learning Network.

Of particular note, from these projects was the common finding on the importance of project team composition and the need for the right mix of people in the product development team; the need for detailed specifications; and attention required to planning and communication up front and during the life of the project.

<http://flexiblelearning.net.au/toolbox>

E-VET Marketing – International Project

IDP Education Australia, (August 2001). Final Report: International Education Markets for Vocational Education and Training Online Products and Services: A Research Audit conducted as part of Strategy 2001.

This report provides some (but not detailed) insights into relationships with overseas markets.

<http://flexiblelearning.net.au/projects/internationalmarketresearch.htm>

Other Resources

Partnering for Learnware: Case Studies and Critical Success Factors

Lyndsay Green and Anna Stahmer, August 1999. A report sponsored by The Office of Learning Technologies Human Resources Development, Canada.

An 86 page reporting case studies of examples of partnerships for learnware development, analysing the critical success factors that made the projects work.

<http://olt-bta.hrdc-drhc.gc.ca/resources/reportsx.html>

http://olt-bta.hrdc-drhc.gc.ca/resources/Partner99_e.pdf

References

Aumann, T, Richardson, C & Weller S 2001, *Partnerships in the Development of Online Learning Materials*, Paper and workshop presented at NET*Working 2001, Brisbane.

http://flexiblelearning.net.au/nw2001/01_attending/program/tuesday.htm

http://flexiblelearning.net.au/nw2001/01_attending/papers/8_9Auman.doc

[AFLF] *Australian Flexible Learning Framework for the Vocational Education and Training System 2000 – 2004*.

<http://flexiblelearning.net.au/aboutus/keydocuments.htm>

[CIT] Canberra Institute of Technology 1999, *Online Delivery with Other VET Providers*.

Green, L & Stahmer, A 1999, *Partnering for Learnware: Case Studies and Critical Success Factors*, The Office of Learning Technologies Human Resources Development, Canada.

<http://olt-bta.hrdc-drhc.gc.ca/resources/reportsx.html>

http://olt-bta.hrdc-drhc.gc.ca/resources/Partner99_e.pdf

IDP Education Australia 2001, Final Report: *International Education Markets for Vocational Education and Training Online Products and Services: A Research Audit*, conducted as part of Strategy 2001.

<http://flexiblelearning.net.au/projects/internationalmarketresearch.htm>

Stahmer, A & Green, L n.d., *Decision Tools: What to consider When Partnering for Learnware*, The Office of Learning Technologies Human Resources Development, Canada.

http://olt-bta.hrdc-drhc.gc.ca/publicat/tool_e.html (not currently available online)

[Toolbox Series 1] Queensland Open Learning Network, *Toolboxes for Online Learning: Evaluation Report of the ANTA Toolbox Initiative 1998-1999*.

[Toolbox Series 2] Queensland Open Learning Network, *Online Learning Products – The Next Wave. Final Evaluation Report of the Management and Development of the Series 2 Toolbox Program (Abridged)*.

<http://flexiblelearning.net.au/toolbox>

Reference as:

Backroad Connections Pty Ltd 2002, *Success Factors for Collaborative Development of Content to Support Online Learning* (Version 2.00), Australian National Training Authority.

HTML and PDF versions available at:

<http://flexiblelearning.net.au/guides/collcontent.html>

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