

Building successful educational repositories

Consolidated recommendations report

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OJ L 79, 24.3.2005, p. 1.



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Introduction

This report attempts to sum up the key points that have emerged during discussions and presentations throughout the three year project period of the EdReNe network.

The conclusions are presented as recommendations targeting most of the stakeholders of educational repositories. These recommendations are presented very briefly here, and more information and background can be found in both the thematic synthesis reports and presentations and proceedings from strategic seminars and expert workshops.

All recommendations originate from the issues discussed and prioritized by members during the previous workshops and seminars. Recommendations are grouped according to the four major themes around which discussions have been organised:

- Repository strategies
- **Engaging users**
- **Rights Issues**
- Standards and interoperability

Within these themes, the recommendations are given in the order in which networks members have given them priority. The priority is judged from the surveys that members filled in either during group discussions at the final strategic seminar (Standards and Interoperability and Rights Issues) or individually afterwards (Repository strategies and Engaging Users)². Members were asked to rate the individual recommendation on a scale from 1 (strongly disagree) to 5 (strongly agree). Priority in this report is assigned from the percentage of answers that were either 4 or 5 for the specific recommendation. This percentage is given for all recommendations. Apart from providing links to other relevant EdReNe reports providing the background for the recommendation, each recommendation is also accompanied by (selected) comments from the survey.

The first three years of the EdReNe network has seen a number of fruitful discussions and developments within the areas discussed. It has however at the same time highlighted the need for continuing the collaboration and exchange of knowledge as the initial themes are continuously evolving, and the network in addition has identified a number of neighbouring problem sets, which would be relevant to continue cooperation on, in order to sustain and further develop the success of educational repositories and use of digital learning resources.

² Eight groups with a mix of different stakeholders discussed therecommendations during the final strategic seminar, in an attempt to build consensus. Time did not allow for group discussions on the recommendations for the final two themes, why members were asked to fill in the surveys as individual organizations. A total of 23 members answered these surveys within the time frame given.



Repository strategies

The majority of educational repositories share the overall goal to enable educators and students to have seamless access to high quality learning resources and to support sharing, repurposing and remixing of these. This has been a long standing vision and many experiences have been collected during the last ten to fifteen years.

On the strategic level of setting up the infrastructure to support this goal, the recommendations are:

1 95% (65%)

Leverage the support of existing communities of practice by supporting their needs

Selected comments:

"Remember that communities of practice are like living organisms they grow and decay, split and merge and constantly change. Supporting them must be a very flexible process - ideally determined by the community."

"These are your early adopters, your ambassadors who are the first to understand and work with the material. This is a common marketing principle"

"Very important. Teacher to teacher support is often accepted better than other forms of support. Communities of practice often foster good initiatives themselves that result in generating good learning materials."

"Existing communities of practice could influence the ways that digital learning resources are used to benefit others. Therefore it is essential to understand their needs and support them."

Read more: Synthesis report

(http://edrene.org/results/deliverables/EdReNeD3.4TSR_Repository_strategies.pdf), workshop proceedings (http://edrene.org/workshops/repositories/index.html)



2 87% (70%)

Take advantage of generally used, open standards to allow for the broadest range of partnerships, future adaptability and innovation

Selected comments:

"One of the greatest benefits of open standards is that many people can integrate with your system without ever needing to contact you. Another is that people who have already developed tools based on open standards will find they can use your system with no extra effort."

"Use standards that are 'as broad as possible".

"In case you want/have to make money with your repository you also have to consider certain closed formats."

"Some of the education specific standards are necessary to remain perceptible as an educational repository (Google will never describe resources in the way in which teachers need a description)"

"Strongly agree with using general open standards, but some education specific standards may still be important to use..."



3 87% (61%)

Engage with all stakeholders early in the planning process and base development on user needs

Selected comments:

"This is basic market research - provide the users with what they need."

"Users needs should never be ignored, but users often need help to prioritize their needs and are often not aware of ict possibilities and relations between information exposed."

"Users don't always know what they need – that's why marketing is needed :-)"

"Stakeholders will know their own needs, so it is very important to involve them in the planning process... and at the same time not reduce the freedom to support and even create new needs and practices."

"Stakeholders are good in evaluating and assessing value from their perspective. Giving influence on the concrete design and development should however be handled carefully."

"Important to identify both positive (users, investors etc) and negative (competitors...) stakeholders."

"Important not just during start-up"



4 83% (70%)

Support open licensing to increase impact of funding and maximize possibilities for reuse and repurposing

Selected comments:

"Perhaps the most powerful contribution of open licensing is in triggering new commercial business models, because in the end must really good learning content will come from professional publishers"

"It is the better alternative for countries where schools don't have large budgets to buy licensed e-learning materials."

"There is still a lot of work to be done in convincing organisations that Open Licensing does not mean loss of copyright."

This is the vision that brings you into the never ending discussions with the publishers: Welcome!

"A commendable suggestion but not always feasible?"

"Where possible. Avoid violation by putting CC license on copyrighted content."



5 78% (65%)

Acknowledge that integration with a range of tools and services will greatly benefit uptake and use of digital learning resources

Selected comments:

"What is useful, is the ability to integrate with the tools/service that the user selects."

"A repository could be considered a set of services. So user interface, community development, portals... are really not part of a repository. So it is not only necessary but apart from content it in fact defines the repository."

"The most frequently used resources are those which can be adapted to suit specific circumstances in specific classrooms. Providing a standard set of tools which integrates with the learning resources is an excellent way to encourage use and more-importantly re-use."

"The information alone is not as engaging as we would often like to think. People like social applications and information surrounding the actual educational content."

"Common authentication is important!"

"As little effort as possible for the users, if we want them to use it. Integration with other tools is essential."

A common authentication solution would really foster the large use of digital learning resources

"As long as you live by 'keep it simple, keep it safe', giving your content added value is very smart."

"Quality is still often the most important criterion for the uptake and use of learning resources."



6 78% (39%)

Carefully build a sustainable business case based on the broad existing evidence base

Selected comments:

"It is essential to re-evaluate the business case regularly if the organisation is going to be sustainable."

"Education is quite conservative, so waiting for a 'broad consensus' might result in a slow innovation path"

"Sustainability is often the key factor to success. Also gathering existing evidence and building a business case is a good way to illustrate the working model."

The business case has to be focussed on the benefits to learning and teaching and should use as its evidence base not just the stated views of users, but also analysis of their behaviour and the strategic requirements of the central education authority.

"It is important to have both a strong business case and a strong educational/pedagogical case to support sustainability."

"When trying to build a sustainable business case you will have to understand the real needs and objectives of building a repository. That's an excellent approach. "

"The challenge is to find a broad existing evidence base... evidence is patchy as well as often poorly documented or benchmarked."

"I'm sure a business case can help and can lead us to more possibilities. But at this moment we don't have one..."



Engaging users

In order to be a success any educational repository needs to attract a high number of returning users. Many successful major web sites support this goal by building active and engaged user communities and the same trend is now seen for educational repositories that were often initiated long before the advent of the social web.

These efforts have been the focus of many of the discussions within this theme, and have led to the following recommendations:

1

Analyze user behaviour to support development

100% (83%)

Selected comments:

"But remember also to analyse the users who stopped or didn't use the system."

"I strongly support the idea of user behaviour research being done in advance of proposed development work. It often isn't done as people think they "know" what users do (or will do). "

"One of the most important ways of determining development needs is to examine what people do rather than what they say."

"Understand, measure, take action"

Read more:

Synthesis report (http://edrene.org/results/deliverables/EdReNeD5.4TSR_Engaging_users.pdf), workshop proceedings (http://edrene.org/workshops/engagement/index.html)



It should be easy for users to invite friends

96% (74%)

Selected comments:

"This is a good way to encourage use but not all communities are open and so friends may need to belong to the community before they can be invited. "

"The word-of-mouth recommendation is very important in the teachers world as they are often sceptic to advertising."

"Yes, although most of the users you'll have thanks to oral communication and promotion: teachers advising colleagues to use your website in the teachers' room"

Read more: Synthesis report, workshop proceedings

3

Make it easy to participate – for all members

95% (91%)

Selected comments:

"Barriers to participation are the single biggest problem."

"Barriers to entry should be kept to a minimum. This is about engaging the maximum number of users rather than selecting sub-sections."

"Participation makes it more likely for people to come back - though they shouldn't get the feeling that they have to participate."

"This is quite hard! You'll always have users saying they find the website too difficult, while others find it perfect like it is."



Keep it simple

92% (83%)

Selected comments:

"Keep it simple is good advice if you have a single objective. However, in education it is sometimes complicated. "

"Simplicity is the most difficult thing to obtain. But it is a goal in itself."

"Especially because engaged users can have totally different backgrounds and skills."

"It should be easy to be a low-committed user also; with no picture, no contributions and so on."

Read more: Synthesis report, workshop proceedings

5 87%

(52%)

A strong community cannot be built quickly – plan for long term sustainability

Selected comments:

"It is better to build on existing communities than try to create new ones."

"Unfortunately there is all too often a mismatch between the time needed to develop the community and the period of funding allocated to it. It is important to plan for long term sustainability, particular financial."

"if you really have what people want, your community is going to be big in a short amount of time. The question is how sustaining it is and how long-lasting, but if it is well nourished by responsible people also a quickly built community can be very strong."

"It's about habits that cannot be changed from today until tomorrow"

"Really depends on the type of community. If you hit a niche you might be lucky and the community will grow quite quickly. Sustaining it will however take a lot of work."

"The first years are the most important. Build your image as the website created by the users."



6 83% (70%)

A dedicated and skilled community manager is essential

Selected comments:

"Most likely several, probably part-time, will be needed."

"Our experience is that online COPs need a key facilitator to encourage and motivate the users. Without this, users log in less frequently. "

"Where there is no moderator or strong leader/manager, then activity tends to die off and the community withers."

"Communities of teachers working in disparate and often geographically disperse schools tend to slacken if they are not 'stimulated' or when not given objectives of focus. A 'skilled community manager' is a key figure in maintaining a healthy online teacher community."

"A community is unlikely to flourish without the input of a skilled facilitator who knows when and when not to intervene."

"There is so much work in sustaining a social network, and so many things that need done that only people who really understand and actively use the social web have a good shot at making it happen."



7 78%

(65%)

Build trust and defend your brand

Selected comments:

"Trust is the only way you're getting content from your users and on the other side have your users do some marketing for you and recommend your site to colleagues and friends."

If trust, reliability and reputation are established the brand shouldn't need to be defended.

"The users must feel safe as part of the community, and they must know that response on comments and questions they contribute with will be done in a respectful manner."

"In many ways the community does that for you if you do a good job."

"Be online at Twitter, Facebook, ... Follow what they say about your website/brand. React if needed. Keep communication positive. Be honest. Don't promise the impossible."

Read more: Synthesis report, workshop proceedings

8 74% (61%)

Describe why you want an online community

- to yourself and all involved stakeholders

Selected comments:

"This will be complex. Any one individual may belong to several communities and use each community for different purposes. It is probably better to build up sets of community scenarios."

"Less fashion, more function. A crefully written spec should justify all features that purport to 'engage users' and have some metric on what that increased engagement will be."

"Experience...with setting up communities indicates that much more sharing takes place within them than outside."

"Also communicate it to the users, do not only 'describe' it in strategies and papers..."

"To know why you want people to join the community is essential for the ability to run the community."



Reward user activity

70% (35%)

Selected comments:

"Of course. No-one will return unless there is some reward. However, different people respond to different types of reward: points, recognition, prizes, good downloads, etc and a range of rewards is probably necessary. It is also likely that reward mechanisms will need to be regularly refreshed."

"While altruism is all very good, a reward structure for the contribution of resources and/or the introduction of new members is effective. Hence the number of loyalty programs in the commercial world."

"Feedback, communication is reward enough."

"Rewards or incentives should not exclude types of users. Not all users are doing everything equally well - and those who 'only' download resources may use them well in their classes - and talk about their experiences with colleagues which are not at all using learning resources from your repository."



Keep moderation to a minimum

65% (39%)

Selected comments:

"Censorship of exchanges is inappropriate for a professional service and should be kept to an absolute minimum. However if the meaning of moderation is to stimulate debate or to suggest alternative pathways or threads, then more rather than less moderation is required. However the key is the skill of the moderator."

"Let the community do its work."

"Do not be afraid to moderate when and if necessary."

"In communities like this the risk is already minimal so moderation should be easy."

"Don't moderate much, but stay visible. If you want your site to seem alive it's good that moderators are online for questions or that they stay active in discussions they find interesting."

Read more: Synthesis report, workshop proceedings

11

Make the community the centre of your web site – never hide it

65% (26%)

Selected comments:

"The community aspect is key to user engagement but the repository can be a layer beneath the community web site or a part of it - there is no hard and fast rule."

"Some users do not want to participate in an online community but they do want to access useful learning objects. While the community is the lifeblood of a site, it should be possible to participate more passively."

"It is vital to have a community of users as an integral part of the site and to have a clearly identifiable link to the community on the front page, and to have an easy route of entry to that community, but to state that should be the centre is perhaps a little too strong."

"The community is rather important but should not always be at the centre of attention."

"Depends on why you want users to come to your site – are you welcoming consumers and not just contributors."



Encourage and facilitate real life meetings between users

30% (13%)

Selected comments:

"While this is clearly desirable it is likely to be effective in a some scenarios (e.g. regional school group) but much less practical in others (global open-sharing web site)."

"The whole point of an online community is to make them feel connected. Focussing on real life meetings could disenfranchise some rural users."

"It must be the users own initiative to meet in real life. In small countries people often meet in real life on different occasions anyway."

"These will happen organically and at the users own cost."

"We have the experience that virtual communities work best when users know and can meet in real life."

"Face to face meetings - even only occasionally helps to build stronger bonds in an online community. "

"Yes, whenever budget makes it possible."



Rights issues

The most general conclusions that can be drawn from the discussions within the EdReNe network are that current copyright legislation is not in tune with what would be expected and considered fair in relation to education, and that currently the strongest and most often heard response from the educational sector is to use open licensing while waiting for a reform of copyright law. And between the various open licensing schemes available Creative Commons is by far the most widespread and developed scheme – also for educational purposes, and even for supporting hybrid business models bridging the "sharing economy" and traditional commercial publishing economies. This is however by far the only thing needed to have commercial content providers and user generated content coexist and provide the synergy that should be possible within the scope of the law.

Within this theme there is a trend to have more discrepancy between the views of commercial providers and those of public agencies, but (a reasonable degree of) consensus has also been reached on a number of concrete recommendations. These recommendations target different groups of stakeholders, which are mentioned in parenthesis following each suggestion:

1 100% (100%)

Establish coherent licensing strategies for (publicly funded) learning resources (policy makers)

Selected comments:

"Yes, for publicly owned learning resources, not in general for learning resources."

"Consideration should be given towards an open system that provides the opportunity of making resources available within the public domain."

"Needs coherence within states + within countries + within EU...."

"Here is really a role for policy makers, they could enforce open licensing for education content produced within public education context."

Read more:

Synthesis report (http://edrene.org/results/deliverables/EdReNeD6.3TSR_Rights_Issues.pdf), workshop proceedings (http://edrene.org/workshops/rights/index.html)



2 100% (100%) Clearly express usage rights to users when depositing or accessing resources (repository owners)

Selected comments:

"Very strongly agree."

Read more: Synthesis report, workshop proceedings

3 100% (80%) Set up institutional policies and strategies concerning IPR (institution management)

Selected comments:

"The focus should be on raising the awareness about the general topic of IPR in schools. This would be a possible role for EdReNe for the future."

"Policy from the educational authorities needed."

"Many institutions already have it...but often it is equivalent to 'no risk'."

Read more: Synthesis report, workshop proceedings

4 100% (60%)

Support equal access to market to maximize innovation (publishers and content providers)

Selected comments:

"Wide access should be guaranteed allowing clear understanding of the different types of content available."

"It is in everyone's interest to do this."

"As long as it does not demand constant development of the repository just to meet demands from all content providers."



5 90% (90%)

Encourage institutions to engage in sharing and production of open content (institution management)

Selected comments:

"Important to help them not violate any rights in the process as well."

"Yes, but it is necessary to obtain the funding."

"Yes, for publicly funded institutions."

Read more: Synthesis report, workshop proceedings

6 90% (70%)

Interesting new business models should be showcased (publishers and content providers)

Selected comments:

"This is more or less the business' own responsibility."

"It is up to the commercial sector to decide if this should happen."

"Some models available now, but need more sophisticated models that show mixing of commercial and non-commercial content. Also need new partnership models between publishers and institutions."

"Not just about encouraging teachers to share, etc, it's about outlining models (between prefunded + refunded suppliers)."



7 90% (60%)

Provide guidance and training on use of Creative Commons licenses (repository owners)

Selected comments:

"Time consuming but nevertheless necessary."

"Is it not necessarily the repository owners job to give training - however they should comply to a framework regarding the provision of guidance."

"But need to be more balanced. Not just CC. Also must provide guidance for all kinds of licences including commercial content."

"But make it clear that CC is only an expression of the IPR, not the IPR itself, and explain its limitations."

Read more: Synthesis report, workshop proceedings

8 80% (70%)

Provide recommendations and guidance on how to remix "incompatible" content (teachers and students)

Selected comments:

"Concrete guidance with examples and use cases is needed."

"It is important to explain the different aspects of compatibility. "

"We agree on the guidance-part as this is what helps teachers and students NOT break laws."

"Need to prepare for this as a lot of work is involved in educating users in this regard. Difficult to decide which type of guidance is the most important as remixing is so varied right now."



9 80% (50%)

Encourage use of CC-BY licenses when publishing own work (teachers and students)

Selected comments:

"Other licenses shouldn't be a problem either, although CC-BY offers the best possibilities for remixing."

"Informed decision by users on choosing the appropriate license. This can only be achieved through the education of end users on the terms of licensing."

"CC-BY should be considered as the starting point - on the provision that they understand the ethical and moral conditions and implications of making such a decision."

"There needs to be a policy at government level to encourage it."

Read more: Synthesis report, workshop proceedings

10 70% (60%)

Advocate reform and development of copyright law (policy makers)

Selected comments:

"Has to be done at European – or global – level."

"From a publisher's view it is not very realistic."

"The law has to be coherent and usable."

"Common harmonization between national legislation and European/global requirements. There needs to be a balance between rights of the publisher and the right of user. "

"This issue goes way beyond Educational Repositories – although they are certainly affected dramatically."



Standards and interoperability

It seems striking that many of the most successful repository initiatives - measured in terms of active users - have not heavily engaged with educational technology standards. Community based approaches would by nature tend to focus on solving user needs with already available tools – i.e. a focus on iterative "good enough" approaches instead of relying on implementation of specific standards. This leads to the question of whether current standardization bodies and organisations are in sync with actual user needs.

The reflections and discussions during EdReNe workshops clearly support the need for interoperability on many levels. The recommendations drawn from these discussions are not intended to recommend a specific standard but rather point directions at a higher level, as consensus was built between a number of different stakeholders. Common to all of them is however the need to use standards to support user needs.

The recommendations have been assigned the following priorities:

1 100%

(100%)

Present clear and easy-to-understand information on usage rights

Selected comments:

"The usage rights must be clear for the producers and the final users."

"Need clear simple statements that are easy to understand - for example icon format."

"Be able to use usage rights as a search mechanism."

"Licenses are often very confusing for users. Information presented clearly is important to avoid people misunderstanding usage rights."

"This is a key issue for contributors."

Read more: Synthesis report

(http://edrene.org/results/deliverables/EdReNeD4.3TSR_Standards_and_interoperability.pdf), workshop proceedings (http://edrene.org/workshops/standards/index.html)



2 100% (91%)

Support the development of 'sharing as a culture' by providing user friendly mechanisms for depositing and repurposing

Selected comments:

" Necessary to have a community around the repository to support this."

"The 'sharing as a culture' can be supported by breaking up big collections/packages into singles assets/learning objects which can be reused by the teachers. We are looking forward to appropriate business models that are supporting publishers/professional developers."

"It is necessary to influence sharing because sharing is not a natural process, there are many blockers."

"Sharing as a culture is seen as a key aim."

Read more: Synthesis report, workshop proceedings

3

Make it easier to find quality content

82% (82%)

Selected comments:

"Include web 2.0 quality assurance tools (star rating, download number etc.)."

"Quality of metadata is very important too."

"Define some elements that help defining quality, ex. accessibility, interactivity"

"Need formal and informal ways of identifying different levels of quality."

"Need to be able to accommodate multiple definitions of quality."

"Very important. Quality assurance and quality criteria are vital topics for users."



4 82% (82%)

Open up information silos by a strong focus on web services, APIs and other ways of allowing seamless integration across services.

Selected comments:

"Repositories have to interface with many systems."

"Web services need to be open but also easy to use."

Read more: Synthesis report, workshop proceedings

5 81% (36%) When content standards are encouraged, this should be done with central guidance

Selected comments:

"A top-down strategy for fixing standards does not work anymore. Specifications develop locally and develop to standards trough usage. Standards should be developed as a common benefit and as output of coordination of expert groups/user group."

"There is a need for a process that leads to consensus first - mainly on a national level."

"Central guidance is good but depends on coherent networks that have credibility from within community at specific levels e.g. national/international."

"Exemplification would be useful in terms of awareness raising."



6 54% (45%)

Minimize the number of repositories necessary to access for any given user

Selected comments:

"It should be possible to use one access point for a federated search *or* go to each repository and search there."

"Many users would prefer to use a widget for search from within their preferred virtual workplace."

"The number of access points should be decreased and not the actual number of repositories."

"One point of access - but not reducing the number of repositories."

"We all agree that there should be one user experience presented to users or a 'front end' - but there could be multiple repositories federated behind the scenes."

"Very essential. Users want only one place where they can get all information."



Future work

As evident by the nature of the recommendations given in this report there is still a lot of issues to discuss and develop further within the four overarching themes discussed within EdReNe. The recommendations given do not express 'the eternal truth' as network environments change dynamically and rapidly.

This report concentrates on a limited number of themes that have been the focus of the network, specifically addressing educational repositories. In addition the workshops and seminars have seen the beginning of a number of new or closely aligned themes that would be relevant to give more attention in future work of the network.

These include common file formats for content for interactive whiteboards, curriculum mapping efforts, interaction and cooperation with national broadcasters and cultural heritage repositories (e.g. Europeana) etc.

EdReNe will address these themes in future work in collaboration with other stakeholders and networks.