

A framework for sustainability

Sustainability Plan, Work Package 5

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[Note to partners: this is a revised and final version of the initial Sustainability Framework Document. The framework draws on continuing work by DCU and JYU, on comments received from the University of Groningen and on various discussions held in Gothenburg in August 2012.]

1 General introduction and purpose of this document

Sustainability issues are at the core of any language related project seeking to provide medium and long term online solutions to identified educational problems and to enable the transformation of teaching and learning practices that are in line with the aspirations of European states with regards to the development of the knowledge society. However, frameworks to assist project partners in their endeavour to develop sustainable online educational products and services are few and far between.

Sustainability concerns have permeated all aspects of the SpeakApps project. Ensuring the sustainability of the project beyond the initial funding period has indeed been a key priority from the outset, as clearly stated in the grant agreement. The SpeakApps Consortium thus set out to develop a conceptual and methodological framework, which was then used to devise and implement a sustainability plan specific to the SpeakApps environment, products and services. As work progressed, it became clear that such a framework could form the basis for project quality enhancement and review, and that it could be of use to other projects with similar aims. In this document, we explicate the sustainability framework that was developed as part of Work Package 5. We hope that the framework and its potential applications will be of assistance to other project teams.

2 Background and rationale

2.1 On sustainability

Sustainability is a complex concept that gives rise to many definitions and interpretations. As can be read on the *Sustainability Measures* website, “there may be as many definitions of sustainability and sustainable development as there are groups trying to define it” (Sustainable Measures, na). Indeed, many entities seek to be ‘sustainable’ and expressions such as *sustainable development*, *sustainable communities*, *sustainable society*, *sustainable business*, *sustainable production*, *sustainable agriculture*, etc., abound in the mass media as well as the academic literature.

Although they are likely to diverge in their particular approach to sustainability, environmental and social scientists may share a number of core definitions and precepts. Or at least, they may agree on what sustainability is *not*, as noted by *Sustainability Measures*:

“Notice that, in the context of sustainability, ‘sustain’ does not mean that nothing ever changes. Nor does it mean utopia, that nothing bad ever happens. Sustainability is not about maintaining the status quo or reaching perfection. A sustainable community seeks to maintain and improve the economic, environmental and social characteristics of an area so its members can continue to lead healthy, productive, enjoyable lives there”. (Sustainable Measures, <http://www.sustainablemeasures.com/node/28>)

Similarly, “‘develop’ does not mean continually getting bigger” (Sustainable measures, na):

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“Sustainability does not mean sustained growth. At some point, a sustainable community stops getting larger but continues to change and improve, to develop in ways that enhance the quality of life for all its inhabitants. [...] A sustainable community is one where development is not unlimited growth; rather it is the enhancement of what already exists in the community. A sustainable community is not stagnant; sustainability does not mean things never change. On the contrary, it means always looking for ways to improve a community by strengthening the links between its economy, environment and society. A sustainable community is also not a utopia. It is not a community where nothing ever goes wrong. Sustainability does not mean that businesses never fail or that people never go hungry or that pollution never happens. Sustainable means that when problems arise, we look for solutions that take into account all three parts of the community instead of applying a quick fix in one area that causes problems in another.” (Sustainable Measures, <http://www.sustainablemeasures.com/node/29>)

The above quotes point to the need for an approach to sustainability that draws on ecological views of the world and systems theories. A system is a set of interacting and interdependent components that form an integrated whole, bigger than its parts, and can be *closed* or *open*. While closed systems do not permit interactions across their boundaries, an open system exchanges with its environment. A system can be *self-organised* and/or *self-sustainable*. According to Haken (2008), “self-organizing systems are adaptive and robust. They can reconfigure themselves to changing demands and thus keep on functioning in spite of perturbations.’ In a business context, *self-sustainability* can refer to a system’s capacity to sustain itself both as a financially independent unit and as a unit with a dynamic governance structure which allows the system to expand and transform its operations.

2.2 On language

Traditionally, language has been viewed as a fixed system, a code to be acquired, rules to be learned and put to practice. However, it is now increasingly seen as a complex dynamic system, operating in an environment that it itself part of a complex system (Larsen-Freeman, 2012). Rapid technological developments (e.g. Web 2.0, 3D-graphical environments, etc.), the ubiquity of digital and mobile devices, and the emergence of new social and learning spaces force us to rethink language and language learning in systemic and ecological terms. Our approach to language and to language teaching and learning in digital environments is firmly rooted in the sociocultural tradition (Lantolf & Thorne, 2006). Our pedagogical designs (Blin, 2010; Blin & Jalkanen, 2012) are informed, *inter alia*, by ecological approaches to language learning (van Lier, 2004), dialogism (Linell, 2009), Cultural Historical Activity Theory (CHAT) and the theory of expansive learning (Engeström & Sannino, 2010), and Dynamic Systems Theory (DST). They are mindful of the situatedness of language and language practices (Pennycook, 2010). They place *linguaging* (or language as action), which “refers to linguistic actions and activities in *actual* communication and thinking” (Linell, 2009: 274, italics in the original) and *agency* at the core of teacher and second/foreign language education (Blin & Jalkanen, 2012; Jalkanen & Taalas, 2012).

Following Ahearn (2011), we define agency as the “socioculturally mediated capacity to act” (p. 112), which enables both teachers and learners to be “masters of their own lives” (Engeström, 2007: 363) by controlling their behaviour with the help of the artefacts that they collectively or individually constructed (Engeström, 2007: 367), and by contributing to the transformation of the contexts and activities in which they participate. Teacher and learner agency is key to the sustainability of SpeakApps. In other words, the future of the system is contingent, not only on its financial self-sustainability, but also on the SpeakApps community’s capacity over time to

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direct and to contribute to the evolution and transformation of the SpeakApps platform, tools, and pedagogical artefacts.

2.3 On SpeakApps

The results (outcomes) of the SpeakApps project, namely its emerging pedagogies, templates, tools, spaces, users, and networks, are all components of a small open system, the *SpeakApps System* (hereafter referred to as *SpeakApps*), which, according to the Grant Agreement (Annex I), aspires to be self-organised and self-sustainable. Earlier documents¹ outlined four interdependent components that comprise the SpeakApps system and need to be looked at from a sustainability perspective. Following a brief content analysis of the initial grant application, these components can be aligned to the aims, processes and expected outcomes of the project:

1. Pedagogical development and support (e.g. learning, activities, materials, tasks, practice, skills)
2. Community (e.g. users, learners, students, teachers, developers)
3. Platform and tools (e.g. tools, services, platform, environment, open)
4. Business model and exploitation plan (e.g. exploitation, institutions, plan).

Figure 1. Extract from the initial SpeakApps application form (Wordle)



In the next sections, we outline the core components of a sustainability framework for e-learning language projects as well as a set of indicators that can be used to measure how well a consortium is addressing sustainability issues.

3 Defining sustainability objectives and strategies

A sustainability framework for language e-learning projects, such as SpeakApps, which aspire firstly to provide pedagogical and technical solutions to an educational problem, and secondly, to create and support online learning communities around a particular aspect of language teaching and learning, is a tool to help project consortia think beyond the immediate results of

¹ WP5_D12-13_SustainabilityRoadmap.pdf and WP5_D12-13_TowardsSustainability.pdf, December 201

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their project, decide what results and outcomes should be exploited after the end of the funded period, formulate strategies to ensure the sustainability of these results and outcomes, and develop robust exploitation plans and business models that will guarantee the sustainability of project results.

The results of projects such as SpeakApps can be divided into three distinct, yet interrelated, categories: pedagogy and professional development, community building, and platform and tools. Strategies for the sustainability of results in the *pedagogy and professional development category* seek to provide the basis for the improvement of teaching, learning and practice of a set of intercultural or language skills, linguistic competences and other transferable skills (e.g. 21st Century Skills) beyond the contexts of those initially involved in the project. Similarly, they seek to further enhance teacher initial and continuing professional development through the development of pedagogical designs and artefacts that continue to be relevant to the target audience. Strategies for the sustainability of results in the *community building category* concern not only community creation and maintenance but also the community' capacity for transformation and creativity. Finally, strategies for the sustainability of the *platform and tools* aim to enable the maintenance and further development of a platform or tools so that they continue to respond to the needs of the target audience beyond the completion of the project. To be successful, the strategies for ensuring the sustainability of the project exploitable results need to be supported by a robust *business model*.

The sustainability framework we present here doesn't seek to provide for the maintenance of products and services that are no longer relevant to the intended users, nor for the preservation of particular organisational structures and processes. It is underpinned by a view of online language teaching and learning systems as being open, flexible, and adaptive to ways of using tools and artefacts for purposes that may be distinct from the ones they were originally designed for. The framework for sustainability developed in the context of the SpeakApps project is thus concerned with the self-organised continuation of a project, and with the self-sustainability of its operations, activities and communities as they evolve over time and across multiple spaces. The sections below outline issues and questions that can be used to frame a sustainability and exploitation plan in context.

3.1 *Pedagogy and professional development*

3.1.1 Resources and materials for the online language classroom

- Which resources and materials (e.g. tools, tasks, task templates, evaluations, teacher and learner stories, etc.) produced during the project will be made available to support online language learning activities?
- Will these resources and materials continue to be developed after completion of the project?
- Who will contribute resources and materials after completion of the project?
- Will there be quality enhancement mechanisms in place?
- Will these resources be made available primarily to teachers? To students? To both?
- Under a Creative Commons Licence?
 - Which one? Will mixing and remixing be allowed? Further dissemination?
 - Who will decide?
- What will happen to these resources and materials when the project comes to the end of its life-cycle?

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3.1.2 Resources and materials for continuing professional development

- Which resources and materials produced during the project will be made available to support to support long term pedagogical development?
 - Pedagogical models to help teachers realise and unleash the pedagogical potential of a new environment or new tools? Of new pedagogical practices?
 - Guidelines to assist teachers in using these models in their own context?
- Will these models and guidelines be periodically revised in light of new theoretical and pedagogical developments?
- Will training courses/events be offered to teachers after completion of the project? For how long?
 - Online? Face-to-face? Blended learning?
 - Who will be responsible for setting up and delivering these courses/events?
- Will a syllabus and accompanying materials for teacher training be freely available? Under a Creative Commons Licence? Other?
- Will this syllabus be periodically revised to include new pedagogical models and guidelines in light of new pedagogical developments with regards to the teaching and learning of languages and teacher training? By whom?
- What will happen to these resources and materials when the project comes to the end of its life-cycle?

3.2 Community building

- What kind online community has been created during the project?
 - Open or close?
 - Developer/open source software community?
 - Teacher community?
 - Learner community?
- What is its primary focus?
 - Production and sharing of resources (pedagogical activities)
 - Use and reuse of the resources by end users (whether teachers or learners)
 - Pedagogical discussions and reflections around available tools and artefacts?
 - Continuing professional development?
- How will this community evolve after completion of the project? What will be its primary focus? Will it be able to expand and transform its goals and activities? How?
- How will it be supported after completion of the project?
- Will 'Tech stewards' (Wenger, White, and Smith, 2009) be appointed? What will their role be?
- How will the end of the community life-cycle be managed?

3.3 Platform and tools

- To what extent does the platform deployed during the project provide the community with a space and tools for networking, interaction, sharing experiences and knowledge, and creating and sharing user created artefacts (e.g. pedagogical designs, tasks, materials, audio/video-recordings, digital stories, etc.)?
- Will the platform and tools continue to be maintained and developed after completion of the project? By whom? For how long?

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- Will tools be released to the public/target users?
 - When
 - Where will files for download and local installation be located?
 - Upgrades?
- Do community members have access to an integrated support system?
 - Technical/user manuals?
 - Knowledge base? FAQ?
 - User forums?
 - Access to tech stewards?
- Will support continue to be provided to community members after completion of the project? Will it be expanded to respond to emergent needs? How will these needs be identified?
- How will the end of a tool life-cycle be managed?

3.4 Business model

- Who are the stakeholders?
 - Project partners
 - Project collaborators during project life cycle
- Market size and project results positioning
 - Who are the competitors?
- What are the costs attached to the exploitation and dissemination of the project results beyond the life cycle of the project?
- How will they be met?
 - Contribution from partners?
 - Contribution from users?
 - External funding?
- What are the potential risks and barriers?
 - Acceptance by target groups and audience?
 - Technological risks and barriers?
 - Competition?
- Will some of the project results be commercialised?
 - Ownership of results to be commercialised?
 - Intellectual property and copyrights issues?
 - Opportunities for commercialisation and constraints?
- Governance and management
 - Partners' roles and responsibilities
 - Partners' benefits
 - Life cycle of project results exploitation
 - Exploitation agreement

4 Sustainability indicators

The list below provides a set of provisional sustainability indicators that can be used to measure how well a project team is doing with regards to the exploitation of its results. These indicators can help project partners identify the potential for further development and emerging sustainability issues as well as assist them in the implementation of short, medium, and long

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term solutions. Indicators that will actually be used by project partners will be determined by the project results being exploited and the exploitation objectives and planned activities.

Sustainability Indicators	Description
<i>Pedagogy and professional development</i>	
Number and types of artefacts (e.g. resources and materials for the language classroom or professional development) being used by users of the system	Defines the basic needs for the resources and materials available to users
Number, types, and origin of new artefacts contributed by users of the system	Defines the basic needs for the resources and materials available to users and the system capacity to meet them Measures the renewed offering of resources and materials May also indicate the level of engagement and creativity exhibited by users of the system
Number, types and location of training events organised; number and category of participants to these events	Defines the needs for professional development in areas covered by the project results and outcomes
<i>Community building</i>	
Number and type of users	Defines the ongoing basic needs for the project services and resources
Number of new users	Measures the growth of the community in terms of membership and (re-) defines the basic needs for the system
Number of postings and sustained interactions in community space(s)	Defines the needs for community space

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Sustainability Indicators	Description
Focus and quality of users' contributions to the construction of new knowledge and to the transformation of practice with regards to the teaching and learning of the skills and competences that are the focus of the project.	<p>Measures the development of user agency, development of knowledge and skills, and impact on teaching and learning practices</p> <p>Indicates possible changes in the community primary focus</p> <p>May also measure the potential or actual development of research capabilities</p>
Number and focus of interventions by Tech Steward	Indicates the needs for community stewardship
<i>Platform and tools</i>	
Evidence of additional tools used by users to perform project related tasks	<p>Indicates whether the project tools meet the needs of the target users</p> <p>May also demonstrate the community's capacity to explore new avenues, to innovate, and to transform their teaching and learning context</p>
Number of files downloads	Measures the needs for the project platform and tools
Number and type of queries to Support System	Indicates volume of technical breakdowns, disruptions, glitches, etc.
Number and type of queries to Support System that have been satisfactorily resolved	Measures the system's capacity to resolve technical issues
Versioning structure and number of versions	Measures the system's capacity to provide and disseminate timely upgrades
Number of successful integrations into institutional VLEs	Defines the institutional needs for the products and services, and measures the system capacity to meet these needs

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Sustainability Indicators	Description
Number of successful integrations into PLEs	Defines the personal needs for the products and services, and measures the system capacity to meet these needs
Business model	
Quarterly review of income and expenditure, profit and loss account	Measures the financial viability of exploitation of project results
Number of paying users over time	Defines the needs for products and services and users' willingness to pay for these products and services Indicates the actual market size for the project products and services
External funding (private or public sector)	Measure the attractiveness of the products and services for external bodies (e.g. industry,
Review of number and type of competitors	Indicates competition trends and positioning of products and services
Exploitation Consortium Annual Report	Indicates viability of commercial entity and effectiveness of governance structure

5 Developing an exploitation plan

Once agreed by all partners, clear project sustainability objectives and strategies will enable the project team to develop and agree on an exploitation plan, which could include the following:

- Exploitable project results
 - Description of result (e.g. for each project deliverable and additional results)
 - Motivation for exploiting result (e.g. key benefits)
 - Target groups for result
- Exploitation Strategies
 - Consolidating Strategy
 - Multiplying Strategy
 - Mainstreaming Strategy
- Partners' and end-users' exploitation interests and activities
 - Interests and commitments

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- Local opportunities for exploitation
- Action plan
- Consolidated Exploitation Activities of Partners
 - Overview of planned exploitation activities after completion of the project
 - Lifecycle and timeline (short, medium, and long term)
 - Actors (e.g. project partners, internal end-users, external end-users)
 - Monitoring/Evaluating
 - Further development
- Post- Project Dissemination and promotion of results outside the consortium and existing user base
 - Maintenance and development of current dissemination channels (link to current dissemination plan and UOC)
 - Partners' future dissemination plans (e.g. planned publications, training workshops)
- Plan for end-of-life of exploitable results and outcomes
 - Resources (maintenance of cyberspace)
- Business model
 - Stakeholders
 - Market
 - Risks and barriers
 - Financial Aspects
 - Costs
 - Pricing and revenues
 - Governance
- Evaluation of implementation of exploitation plan
 - Choice of indicators
 - Methodology
 - Data collection methods
 - Data analysis and interpretation
 - Conclusions and future plan

An essential objective the project is that the outcomes will be widely known about and widely used. In other words, "the results generated, the lessons learned and the experience gained by each project team should be made available to the widest possible audience" (LLP Handbook, 22). The purpose of this exploitation plan is to describe how the project results will be exploited. EU education and culture programmes and initiatives incorporate five strategic levels for dissemination and exploitation:

1. A clear rationale for and objectives of dissemination and exploitation
2. A strategy to identify which results to disseminate and to which audiences – and designing programmes and initiatives accordingly
3. Determining organisational approaches of the different stakeholders and allocating responsibilities and resources
4. Implementing the strategy by identifying and gathering results and undertaking dissemination and exploitation activities
5. Monitoring and evaluating the effects of the activity.

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Even though exploitation and dissemination are closely linked concepts, but nevertheless two different processes. The difference is crystallized in the following extract from IRMA project's exploitation plan:

Exploitation phase is different from dissemination, although a comprehensive exploitation strategy should include dissemination activities. Dissemination focuses solely on publicising good practices, whereas exploitation is much more about collaboration and continuing development, endeavouring to utilise project results and incorporate them into training systems and practices. Exploitation can be described as the process of disseminating and exploiting project's outcomes with a view to optimising their value, enhancing their impact and integrating them into training systems and practices at local/national as well as European level. It should cover exploiting the results of projects; further developing project results in different contexts and situations (e.g. regions, countries, sectors); recognising good practice and encouraging relevant key players to do so; embedding project results into the practices of organizations; and mainstreaming project results into local, regional, national or European provision. The ultimate aim of exploitation is to feed the lessons of the Lifelong Learning Programme into policy development at national and European level. This is accomplished in two main ways, by ensuring that results are disseminated to relevant players. Exploitation activities are intended to turn project results and achievements into reality at European level. (IRMA 2009: 21.)

In the SpeakApps project, exploitation plan and dissemination plan are two different documents. In addition, a comprehensive sustainability framework has also been developed. In this exploitation plan, sustainability of the project results is approached from three perspectives, namely *consolidating, multiplying and mainstreaming*.

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