



May 14th, 2009

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Start up meeting



(Photo: Alex Stromme)

What can I say? It was a huge pleasure to be there, and to meet so many people for the first, second or third time after such a long application process. Now you can actually do some science education!

Allan Blake from Strathclyde has prepared some notes (below) and a formal minute of the General assembly is also attached. We have circulated the minutes separately as this is a formal requirement within the consortium agreement.

Apart from the very nice group photo which Alex has contributed, and the portrait gallery created by Rune, we would like to publish some of your photos from the meeting and the Saturday excursion. So please send them in! I have a big mailbox...(in fact two of them).

Shared understandings

In any communal enterprise there have to be shared understandings of what we are doing, what we are trying to achieve and so on. A good example of the importance of this is the national workshop programme, combining the work of WP2 and WP3 in one event. I didn't explain this clearly enough as it evolved and there was therefore some confusion about how the programme would work. The meeting discussed this at length and I also had conversations with many of you about specific aspects of the workshop.

The outcome of all this discussion is now becoming available on the wiki and you will find a link from the home page to a page called <national workshops programme>. Here you will find, and can edit, discussion of what the workshops are designed to achieve, and how they will operate. It is important to remember that the shared understanding of the workshop

programme is still evolving. Although we have to carry out such a programme to conform to the Description of Work (i.e. STAN82), its exact nature is something which we can establish together.

More on this after the Mind the Gap meeting in Lyon this Thursday and Friday.

S-TEAM website/wiki

The S-TEAM wiki is now operational, using an open source system called *Confluence*. Potentially this means that some features of the site can be modified by all partners, at any time.

Access details are being emailed now.

Pages are described as 'children' if they are one level down from the main page, and presumably as 'grandchildren' (etc) at levels below 'children'.

Current features include:

- News
- Useful documents for download
- Newsletter archive
- Partner list
- Individual WP pages these will be based on the WP descriptions and will therefore have sub-pages describing partner activities, down to the level of a page per deliverable. This will enable recording of progress and discussion of issues around individual items, especially the more complex deliverables such as the two books or DVD/video materials.

The D-Space archive is also in prototype form and will be accessible from the Wiki.

TV documentary

Ayelet from IIT who will be working on the proposed TV documentary (del.10.3) has suggested that you should think about the most interesting or exciting aspects of your own work, for possible inclusion in the outline. A paragraph or two would be fine, send it to Ayelet ayelet@technion.ac.il

Newsletter changes

From the next issue the newsletter will be changing to reflect our 'official' visual identity and also to serve a wider audience. Whilst it will continue to be a source for news about S-TEAM, the more detailed internal issues will be posted in the Wiki, to allow for more interactivity and a more comprehensive source. The newsletter will be developed to inform our external stakeholders of what we are doing, and we would like to hear from anyone with suggestions of names/emails for the mailing list.

Best wishes and thanks once again for a successful and enjoyable meeting

The management support team

Contact:

Peter Gray

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S-TEAM START-UP MEETING, TRONDHEIM, 7TH MAY 2009

Compiled by Allan Blake, small additions by Peter Gray

- 1 WORKSHOP 1: WORKPACKAGE ONE, S-Team General Assembly
- 2 Approval of the consortium agreement gained. (Note: this was removed from the official minutes as technically the CA authorises the general assembly and not the other way around -my (PG) mistake when compiling the agenda)
 - 3 Workplan approved.
 - 4 Budget approved.
- 5 Project and its outputs will be open free of charge to public scrutiny.
- 6 Management structure approved. Management board will meet approx 10 times during project. Reporting structure in 6-month periods. Each workpackage sets up its own committee, involving at least one member from another wp.
- 7 National liaison partners (who address/respond to the national agenda of each country, which may not be consistent/ frictionless across nations) approved.
 - 8 Comments: none.
 - 9 S-TEAM PRINCIPLES
- 10 Project will be set up such that wps can operate autonomously.
- 11 STEAM is not a research project per se, but is concerned with the distribution/dissemination/transfer of research. The project will provide a structure for accomplishing this. The

project's action is about support and implementing the findings of research. The project must talk to teachers if it is to succeed.

- 12 The project has 72 deliverables (more if individual sub-items are counted).
- 13 STEAM: one big idea, or a lot of little ones? Do they have a common or disparate direction(s)?
- 14 Teacher knowledge/practice is a contingent process, STEAM to provide the toolkit?
- 15 Repertoire of action; partnerships (involving reciprocal learning); lifelong learning. These are the keywords for the project.
- 16 The project values diversity/ context/contingency, and might strive for coherence as opposed to consistency, say.
- 17 STEAM isn't a journey, but a renovation discussion of metaphors in relation to the project.
- 18 WORKSHOP 2: NATIONAL AND EUROPEAN CONTEXT, WP2, WP3, WP9.
- 19 These wps are about finding out what's happening.
- 20 Wp2 Mind the Gap. Consortium of countries looking at how inquiry is used in classrooms. Doesn't look specifically at teacher education. Looking at cultural differences and policy. The focus is on the dissemination of successful models. Critical look at cultural differences in education/ cultures of education.
- 21 The NLPs will be involved in wp2 contact point should be established.
- 22 Wp2 will bring countries together to discuss policy.

- 4 S-teaminquest newsletter 8: may 18th 2009
- 23 Gap between policy and implementation, a focus for MtG and wp2.
 - 24 Wp2 reports in M9 of project.
- 25 Worth bringing STEAM to the attention of National Departments of Education. For the purpose of influence/ dissemination.
- 26 Wp3 SINUS: with the aim of improving classroom instruction.
- 27 Wp9 INDICATORS, INSTRUMENTS AND MEASUREMENTS.
- 28 WP9 will provide us with sets of indicators that can be used within STEAM and beyond.

29 FINANCIAL AND ADMINISTRATIVE ISSUES

- 30 Consortium agreement, final version, circulating.
- 31 Management board to collect information on progress of project every 6 months.
- 32 Progress reports to made by each partner and each work package every 6 months (at least in the first 18 months).
- 33 Teacher replacement costs no budget allocation at present, although some funds can be redirected towards this, albeit taken from elsewhere.
- 34 The budget/financial reports must act as a reality check against the ambitions of the project and wps.
- 35 6 month recording cycle reflects the above.
- 36 Period 1 (m1-18): 55% of budget; period 2 (m19-36): 45% of budget. 4.7M Euros.
- 37 Payments from commission: accession to the general agreement must

be signed by at least 10 participants as a condition of initial payment by EC.

- 38 Budget should reflect the real salary rates in each country.
- 39 In the financial report, estimates are not permitted.

40 PAYMENTS TO PARTICIPANTS

- 41 Preconditions for first payment: signed accession to the GA (by each partner); signed consortium agreement (by each partner); banking information. This is dealt with by institutions' financial authorities.
- 42 Payments in six-monthly instalments from NTNU to each partner. This allows sufficient cash flow, as well as providing flexibility within the consortium (i.e. the reallocation of person months/duties).
- 43 Indirect costs: must be more than 7% of eligible direct costs (indirect costs are overheads for example, computer, rent for offices, administrative staff).
- 44 40% chance of STEAM being audited by EC; wp financial report to be seen by institution's auditor. Each partner is legally responsible for their financial accounting.
- 45 Do we declare average or actual personal costs? Check, and if average contact Per Inge regarding certificate on the methodology for average personnel costs.
- 46 Other direct costs would include teacher release funds (not personnel costs).
- 47 Timesheets personnel costs have to be documented by this means, showing how much time individuals work on STEAM. This to show that you are not

charging for any numbers of hours twice (ie once by STEAM, once by another funding source). At minimum, record number of hours charged to this project (can be done per month, but more typical is hours per day). Separate entries on timesheet for each wp that an individual works on.

- 48 Internal reporting to occur every 6 months.
- 49 External reporting occurs twice throughout project.
- 50 Contacts: Per.Andresen@ntnu or andreas.v.ellefson@ntnu
- 51 National liaison partners. List of questions about inquiry-based science as it applies to each country. These questions will come out from Peter/Doris. Early Autumn for info from national policymakers.
- Policy seminar to bring policy level players into the project. 10-12 participants. Each country holds a workshop with invitations to policymakers, GTCS, HMIe, Scottish Government, LTS, SSSERC, teachers, teacher-educators, etc, attended by someone from WP2. Each country describes the state of the art of science education as identified by the players at the workshop. STEAM could produce official invitations to key players invoking the might of the EC. 2000 Euros allocated within each budget for WP2 workshops. NLPs have each been allocated 3pm in WP3 to cover the tasks of setting up and attending the workshops.
- 53 Each partner compiles a national policy statement of about 10-12 pages- or is this the document provided by Doris? Official policy reports, actual implementation of policy in classrooms. Guidelines to come out from Doris.

S-TEAM START-UP MEETING, TRONDHEIM, 8th May 2009

1 WORKSHOP 4: WORKPACKAGE 4

- 2 Enhancing teacher collaboration and collective work, with the intention of helping teachers cope with diversity in the classroom, e.g. achievement, gender differences, as well as the dissemination of these activities in France.
- 3 Start up conference in Grenoble 20-21 October.
- 4 All materials will be made available in English (only the book on teacher collaboration will be in French alone though with the possibility of foreign rights).
- 5 A series of workshops will be held in months 8-10, based on motivation, though social skills of pupils could perhaps be taken into account (depending upon what theory of motivation is employed).

6 WORKPACKAGE 7

- 7 Argumentation: the evaluation of knowledge in the light of evidence.
- 8 Existing evidence suggests that teachers do not use argumentation, they lack training in it.
- 9 Danger that STEAM becomes a project that produces a lot of individual deliverables that don't cohere. Where for example does argumentation lie in relation to inquiry in science? Is there a way to distribute to information to one another about, principles, existing knowledge, where we stand, common understandings of inquiry in science?
- 10 Common terms, concepts, understandings might be shared by the establishment of a STEAM Wikipedia? In fact, this is up and running and NTNU will shortly be in touch with user details.

- 11 Management board meetings could have an active agenda to seek coherence.
- 12 WP6 each partner is providing a (succinct) literature review for sharing with partners.
- 13 National Liaison partners will receive deliverables from all wps, as a means of possible national integration, as well as for coherence across wps.
- 14 WORKPACKAGE 8: Scientific literacies.
- 15 The integration of scientific literacy into teacher education to provide teachers with specific competencies.
- 16 Policy level; action level (teaching- examples of good practice)); teacher professional development (the role of scientific literacy in teacher training in different countries).
- 17 Main deliverable will be a web page with resources and interactive possibilities. Teachers themselves will upload 1 minute videos of scientific literacy techniques in practice in the manner of Youtube. Videos can be rated for usefulness by viewers.
- 18 Concept maps used to show interconnected pathways/matrix from phenomenon to outcome.
- 19 A common agreement on the definition of scientific literacy will be important (though not simple to arrive at). A page may be devoted to this on the website.
- 20 WORKSHOP 3: WORKPACKAGE 5, TEACHER EDUCATION
- 21 Agree on timeline for events/ deliverables by mid-June.

- 22 Collaboration with video case studies of experienced teachers produced by wp6. Chapter on the early stages of professional development in wp6.
 - 23 Conference in stage 2 with wp6.
- 24 Diversity in the early stages may be productive.
- 25 Definition of scientific literacy to be established in relation to definition of scientific inquiry, which may be produced by Mind the gap.
- 26 Mismatch between methodology in ITE (instruction in/example of inquiry science) and the ability to put this into practice in schools. Partly the effect of the school structure, but also nature of beginning teaching which in itself is demanding, over and above the ambitious demands of inquiry based practice.
- 27 Which workpackage covers the first three years of beginning teaching?
- 28 The pressures, fixity of the national curriculum may inhibit the spread of methods/ideas about inquiry based practice to stakeholders, policymakers. The curriculum is packed, there is a responsibility to get good exam results. But these are not mutually exclusive phenomena.

29 WORKPACKAGE 6

- 30 Ongoing professional development in science education.
- 31 Wp6 may address those teachers who are 3-5 year into their careers.
- 32 Algorithm in Adobe Photoshop obscures the features of participants in video clips that wp6 plans to use.
- 33 Training modules based on two different types of case studies, one based

upon data collection, one based on preexisting models.

- 34 Areas of collaboration between wps5 & 6: each partner in wp6 is compiling an internal report (month 6); the training module (months 18 & 26); the combination of pre-service and in-service professional development putting experienced and inexperienced teachers together.
- 35 It is important to address the needs of recently qualified teachers is this part of ITE or professional development. It would be important to clarify this within the project. It may be productive to let findings emerge in the first 6 months and then see if there are any gaps, or natural alignments.
- 36 Important to recall that there are 5 phases of teacher development: ITE; newly qualified teachers; ongoing professional development; but also recruitment, as well as disillusionment. How will the project reinvigorate disengaged members of the profession? Who are the stakeholders in these five populations? And given these populations, what do we need by 'advanced methods' in 'STEAM'?
- 37 If all packages are to contribute to wp6 book; but who then is the intended audience? Will it be a book for teachers or a book for teacher educators? Where is the emphasis? The book will be better defined in the coming months. The direction may be towards professional development first, science teaching methods next.
- 38 The book is project-wide, rather than only belonging to/responsibility of wp6.
- 39 New teachers can work as change agents within the school, which emphasises the importance of teacher education.

- 40 Can STEAM change the way teachers see themselves? Alter the perception from curriculum deliverers to problem solvers.
- 41 National workshops will need to ask what inhibits the introduction of inquiry based practice in classrooms at a policy level as well as at a philosophical level.

42 UPDATE FROM MANAGEMENT BOARD MEETING

- 43 Time sheets are recommended as the means of monitoring billable hours. A standard timesheet will be circulated.
- 44 It was agreed as a general assembly, that any question of approval or suppression of publications/public/web based material will be delegated to the management board. In the consortium agreement it's stated that we have to circulate intended, draft publications for approval. Subsequent to STEAM, the wiki/website will be maintained for at least two years.

45 REFERENCE GROUP

- 46 External evaluators will be appointed, two or three people, who will formally evaluate the project and report to the project. These will be academics with a good, relevant track record, who will have complete access to the project. A reference group/project advisory group will also be appointed (administered by Pernilla Nilson), comprised of as diverse an array of international stakeholders/ potential users (in contrast perhaps to the academic evaluators) as possible. Members of either of these bodies can be suggested by STEAM members by Friday 22nd May.
- 47 Management board meeting invited Doris Jorde to be deputy coordinator for the purpose of covering for Geir.

48 Three general assemblies are planned. (one down, two to go!)

49 NATIONAL WORKSHOPS

50 Between Sept and Nov there will be a series of national workshops one in each country run by the national liaison partners. Possibly a two day workshop attended by Doris and Matthias. 10 or 12 people/stakeholders, (particularly policymakers, also teachers, students, parents) per workshop. We want fresh knowledge from them; a list of questions that are to be asked by/at the workshops will be circulated. A 10 – 12 page report to be submitted (a template will be provided) to Doris. A combined workshop of the NLPs will follow, with the full report being competed in month 9. Travel expenses to be claimed from individual budgets, and person months allocated within wp3. Section B.2.4 of STAN contains details. A combined opportunity to collect policy data and disseminate STEAM and SINUS.

51 WORK PACKAGE 10

- 52 Good media relations, professional project outputs, and translation will be addressed by wp10. The wp will run dissemination generally. Everyone has an allocation of person months within wp10. An end of project conference will be a means of dissemination. The project website will largely be an internal device – it won't be pushed as a means of dissemination. The national workshops will provide information about who to talk to (that is the key national stakeholders) to make a difference. Wp10 will track dissemination routes, as well as making sure the media are involved. Peter Gray is the point of contact. Posters, flyers, leaflets will be circulated by wp10.
- 53 Keep a register of all dissemination activities.

54 The European Information Provider can be tapped for translation (startup Christmas 2010). They will be able to provide translation on demand, if there is a demand.

55 TERMINOLOGY

- 56 Scientific literacy; inquiry; teacher education; motivation; professional development; argumentation; these terms could warrant a thematic discussion page on the wiki. These concepts may defy precise definition, and indeed any such definition may suppress their depth, and teachers may in any case reject our definitions and develop their own pragmatic definitions.
- 57 Definitions should perhaps be broad rather than exclusive.
- 58 Definitions will be necessary for internal communication and understanding, but these may not extend to alternative populations or teacher repertoires (for example).
- 59 Conception/articulation/ understandings may be preferred to 'definition', which contains an implicit sense of closure.
- 60 STEAM materials should themselves be advanced. Methods and methodology should be advanced. Modern ways of delivery for modern teachers to modern pupils.
- 61 Connections to other EU projects could be established.
- 62 SCHEDULE FOR NEXT 12 MONTHS
- 63 21/22nd April, mind the gap meeting in Lyon. Friday 29 May, Deadline for ASE applications (paper here is a deliverable). 31 August ESERA conference in Istanbul (management board meeting there). Sept 28 ECER Vienna (symposium and informal meeting). Keep Peter posted

- 9 S-teaminquest newsletter 8: may 18th 2009
- on National Workshop dates. And inform Matthias and Doris on dates for workshops, who have to be in attendance.
- 64 National Workshops must be run in the autumn.
- 65 Mid Nov-Dec, collective national workshop summing up findings from individual national workshops.
- 66 April 2010, non-mandatory annual report will be produced describing progress to date.
- 67 Invitations from other projects and networks will be publicised on the project website and members are encourage to accept/attend.

S-TEAM members as at 24/04/09

NTNU

Geir Karlsen,
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