



Centre Management Board

Meeting Time: Wednesday 15 October 2014: 13.00-15.00

Place: A 7001, Gimlemoen

Minutes (not yet accepted)

36/14 Welcome: attending: MAN, FR, ES, SG, LEM, ABF, MB, IJK, IE, HHG, ST, FrodeR, HB
Apologies received from MN, CVB.

37/14 Agenda for meeting agreed:
Additional item: A 'forkurs' for mathematics teacher education? (MAN).
UiA photographer invited to photograph the Board at work at 14.00.

38/14 Minutes from meeting held on 17.06.14 accepted as an accurate record after ES added to list of attendees.

39/14 Matters arising from the minutes not included in the agenda:

Olov Viirman has been appointed to the post-doctoral position. His family will remain in Uppsala and it has been agreed with Olov that he will be able to use his 'home-office in Uppsala' regularly there will be regular 'skype meetings' with MatRIC leader, and Olov will be present at MatRIC events and activities, and contribute fully to MatRIC's work. The arrangement appears to work well.

40/14 Centre Leader's report (Attachment #1) received.

Numbers of participants in MatRIC activities were updated: Newsletter subscribers: 95; Facebook subscribers: 60; Conference in Trondheim: fully booked 100+

Attention was drawn to questions at the end of the report relating to the profiling of UiA and MatRIC. There were points later in the agenda where these would be discussed.

More detail of discussion with ProTed was requested:

At the meeting 1 September (at UiO) four MatRIC representatives, (SG, LEM, CVB, Hans Kristian Nilsen) met with ProTed leaders and mathematics specialists working within ProTed. Meeting included discussion and presentation what each Centre is doing. ProTed presented two of their projects. Exploration of areas for further collaboration. Helmer Aslaksen will come at the annual conference, and he might come to UiA to present a seminar.

A further meeting took place between the two Centre project managers from which the proposal for a joint ProTed and MatRIC was floated. LEM told that this is in the early process and the goal is for a meeting this year to explore further the possibility for a joint Event/workshop(s).



Frode R suggested his presentation of MatRIC at the SEFI conference in Birmingham in September could be added to the calendar.

Question was asked about whether it is in order to invite others to join in the MatRIC Facebook page – answer: yes most certainly!

There was a request to say more about meeting with UHR about the development of a 'forkurs' or refresher course in mathematics to support students in the transition from upper secondary school to university. LEM told about the meeting at UHR on 8 September and the decision to set up an editorial board for the production of net resources; Morten Brekke, Tom Lindstrøm (UiO) and Anders Sanne (NSMO) would be on this board. UHR would contribute to the development of resources, it is hoped that MatRIC too can make a contribution because this seems to be an important opportunity to provide high quality mathematics support materials and engage MatRIC in a major national development. More about this would be included under agenda item 41/14 about the Centre budget.

41/14 Plans and budget 2015

LEM and SG outlined the major activities proposed for 2015 (see annexe #1) and the budget for these proposals. It was explained that we would end 2014 with a substantial balance, but this was partly due to appointments beginning part way through the year, partly because of the start-up phase – entering a cycle of activity, and partly due to finding our way in terms of expenditure and being sure to stay within budget. On 8 October in the national budget it was announced that included an additional 1 million kroner for each of the three SFUs established at the beginning of 2014. An additional activity plan was presented to explain proposals for the use of this money: a mathematics support (drop-in) centre, a mathematics teaching course for newly appointed university level mathematics teachers, a your researchers group/forum for PhD researchers, supervisors and post-doctoral researchers working in the area of university level mathematics teaching and learning (see annexe #2).

The budget proposal, especially the expansion programme resulted in a lively discussion:

Drop in Center: Is it in the agenda for MatRIC that has a national focus, to do this within UiA, i.e. meeting a local agenda?

Two campuses: Something to be solved by UiA if there needs additional funding, not only look to the faculty for support. Important to monitor what the students are struggling with. There has been done some work for high school pupils we might look at.

The Centre will have a research agenda which will make a national contribution we can advocate the support centre nationally

OK to spend money also internally. If this is established several places we can make studies and make comparisons. Learn from each other – capacity issue – how to solve that the students come all at the same time and do not like to wait.



If MatRIC does this and does research on how it works – this can stimulate other institutions to do the same and MatRIC can work for a network of the institutions who provide mathematics support/ drop in centre.

Drop in centre will be very visible at the campuses. And make MatRIC better known internally. The master students are a resource and have taken all the mathematics courses. Users could register the kind of questions in some way. We need to look at what is being done across the country and abroad.

Also we need to think of how to do this regarding the field of the teacher, cannot expect the teachers to know everything.

MAN: A good idea, makes MatRIC very visible and a positive effect at UiA. Important to include master students as a resources in this.

Very positive with a drop in centre also in Kristiansand. In Loughborough it was the teachers who worked at the centre – also positive for the teachers who will understand more of what the students are struggling with.

There is already some research. Needs more research especially to develop methodology that exposes impact of mathematics support. SG read extracts from a research review paper:

Matthews, J., Croft, T., Lawson, D., & Waller, D. (2013) Evaluation of mathematics support centres: a literature review. *Teaching Mathematics and its Applications* 32, 173-190.

MAN suggested that MatRIC could apply for some money from the Vice principal for education.

The proposal for developing a course for university mathematics teachers was supported, noting that regular university level teaching courses are very general. An organized course for mathematics teachers – will be very good. There is a big need for this. Will help strengthen the quality of education.

An additional suggestion:

Use 200-300 000 NOK to buy professional communication services: e.g. making brochure, make it professional done. Maybe share a person. **It was agreed to find money within the budget to do this.**

Frode R remarked that the proposal for a special edition of NOMAD was very good, but we need to make contact with him (as Editor of NOMAD) to reserve make a formal proposal and reserve the 2017 issue for this purpose.

The Board accepted the activity plan and budget proposals, with the adjustments noted above. The final decision will need to wait until after the University budget has been published and we know the amount of the university contribution to MatRIC for 2015.

42/14 Webpage development. We hope to launch phase one of the MatRIC website in November, we are now engaged in a sequence of meetings with the developers so that we can discuss the design as it emerges.

43/14 Marketing MatRIC, how does MatRIC present UiA in MatRIC publications? S



SG showed the newsletter development, presented the new newsletter, presentation... we want to achieve a balance.

Different opinions were expressed:

MatRIC: will be known by its result. Try to have a MatRIC 'hat', not the UiA 'hat'. We will not forget that UiA is hosting us. Newsletter: not the place to promote UiA.

Where does the centre belong? Readers of the Newsletter or website want to see the information very clearly.

An external view: UiA can be more visible – logo. The national aspect is very important

It is necessary to find the balance between UiA and MatRIC. Want the logo to be more visible. Proud of the centre. Need to find a balance.

Comment from NOKUT observer « MatRIC har blitt lagt merke til nasjonalt».

Agreed: Simon, Line and Marit meets with Communications Director Paal Pedersen.

44/14 Reports from NTNU and NMBU

From NTNU:

A Post-doctoral researcher has been appointed. Announcing a new permanent position for a Mathematics Education Researcher (Associate Professor level) the focus should be on research at University level mathematics.

Survey to check and monitor what the students spend their time at, what kind of resources they use, their motives and strategy for learning.

From NMBU

Margrethe Naalsund was unable to attend the meeting, she sent a brief written report, this is attached (annexe #3)

45/14 Any other business

MatRIC Leaders were asked if they were making any response to the call for a national test for newly qualified mathematics teachers. It was explained that LEM had attended a meeting at UHR to discuss this issue on 10 October. We did not think MatRIC as a Centre should take a position on the politically charged issue of whether tests should be implemented or not, but if the decision were to introduce a test MatRIC wants to be ready to contribute to the production of student support materials. However, the decision about where to focus the test (in the first instance) within the breadth of professions education is still to be taken. If the decision does involve mathematics we will try to ensure that MatRIC is involved.

Owing to pressure of work Rolf Biehler has requested to step down from the International Advisory Board. Nevertheless he wishes to maintain contact with MatRIC and will host a visit from a small MatRIC group in the spring 2015. Further discussion about the IAB will take place with remaining members when it meets at the conference in Trondheim in November.



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Next meeting: at the Annual Conference, Friday 28 November 13.00-14.40 (to be continued after conference closing session if necessary. IAB have suggested they meet with the Management Board for a combine IAB-MB meeting.

The meeting closed at 15.08.



Annexe #1

Plans for Activities 2015, Budget 2015

1. We invest in our **working groups** – very important for MatRIC
 - a. 20 pst. for the 4 Coordinators.
 - b. Video- and simulation workshop in May 2015.
 - c. Teacher Education workshop, spring 2015.
 - d. Video workshop, autumn 2015.
 - e. Travel and work within the working groups.

Comments:

We plan for all the four working groups to have workshops in 2015 with travel and accommodation covered for the participants. We still need to invest in bringing people together.

2. **Annual conference** November 2015.

Comments:

We want this to become a regular Event. Everyone teaching mathematics at University level should know of this happening. There is good feedback on making these national Events. We will look into what the cost will be for the 2014 event.

3. **Centre Visit.**

Comments:

The study trip to Loughborough was a success and we decided when we were there to look into the possibility of bringing the people from MEC to Norway. We will set some concrete goals for the next meeting. For example, we might aim for a special issue of NOMAD for which presenters write an introductory paper which gets revised after presentation at the event and then goes through the NOMAD review process. Thus, people who attend are supported to get a publication from their participation.

4. **Digital resource in mathematics**, investment together with UHR.

Comments:

We think that making a digital resource to tighten the gap between college and university level mathematics is in the spirit of MatRIC and that we should invest in this. It also helps us building the network for the video working group.

5. **Research Grants.**

Comment:



We think we should continue to do this. It is very good for networking and making activities in the Centre. It also stimulates the research for teaching and learning mathematics at university level which is one of the core purposes for MatRIC.

6. **Student activities** 300 000 kroner

Comment:

This includes some work done for MatRIC by students, and some student activity in relation to video production. We want to facilitate student engagement.

7. Webpage

Comment:

We enter phase two of the webpage which will include log in functionality, interactivity, simulations.... This will be put to tender in 2015. The webpage is very important to us and will in many respects "be the centre".

Others:

Salary, IAB, MB, Participation at Conferences, some smaller things.



Annexe #2

Revised MatRIC Budget (proposals).

We were surprised and delighted to learn that each of the SFUs established at the beginning of this year will receive an additional 1 million NOK from NOKUT/KD. The additional income means that we can realise some plans that we have discussed earlier, but laid aside because of cost.

1. Drop-in Centre

We want to experiment with a “Drop-in centre” to support students experiencing difficulty with their mathematics. Drop in centres are proving very popular in the UK and one of the first Centre of Excellence (SIGMA) there has been very successful in doing this. We believe this could have an immediate and positive effect on students’ experience and performance. The plan is to run two “drop in centres” one each at the Grimstad and Kristiansand campuses as a pilot during the autumn semester 2015. We will monitor the centres’ activity and student response to evaluate whether each should be continued, however, without additional funding it will be difficult to maintain two centres through the whole year without additional income, or the curtailment of other MatRIC activities. This could be something for MatRIC to help facilitate at other campuses across Norway as well if it proves to have a positive effect at UiA.

We propose that the Centres will be open 20 hours a week (5 hours a day, Monday-Thursday), with one mathematics specialist (could be a PhD fellow) available. We also want to co-opt one person to a 0,3 position to take responsibility for managing the Centres. This would be 0,2 for the first six months of 2015 as the Centres are being set up, and 0,4 position during the second half of the year, allowing one day per week at each Centre.

2. Course in university level mathematics teaching

We believe there is a need for a national course for university level mathematics teachers, in particular those new and recent entrants to the profession, the course could also be open to PhD fellows who are used as teaching assistants and may be experienced teachers who want to work on developing their practice. If MatRIC were to take the lead in developing and running such a course it would place UiA as a significant contributor to mathematics teaching in Norwegian universities and university colleges. The course would also contribute to MatRIC’s network building. This is also an effective way of help improving the teaching at university level – across Norway.

The course would use national and international leaders in mathematics teaching at higher education level. The initial thought is that the course will comprise a 4 day block early in (or before the start of) the autumn semester and three single days spread throughout the autumn and following spring semesters. We propose a 0,2 position for a person who will lead and organize the course.

3. Young researcher network



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It has been our intention to create a network of young researchers in university level mathematics teaching and learning. The main participants in this network would be PhD fellows who are working on university level mathematics teaching and learning research, their supervisors and post-doctoral researchers in this area of research. MatRIC will be able to fund seminars and workshops that will focus on theoretical frameworks, methodologies and cutting edge research in teaching and learning mathematics at university. The network will have a coordinator.



Annexe #3

Report from NMBU

Vi jobber med å ansette en ny person, som bl.a. skal ha ansvaret for å koordinere det prosjektet vi har (KoSDEM) og jobbe spesifikt med linken til MatRIC. Vi håper å få det på plass innen noen uker nå.

Det vi har gjort er å samle en rekke aktiviteter og prosjekter knyttet til læring og undervisning av matematikk under et paraplyprosjekt – «Kompetanse, samarbeid, differensiering og engasjement i matematikkutdanningen – fra grunnskole til universitet» (se prosjektbeskrivelse under «News from NMBU»). Joakim og jeg har laget og gjennomført en spørreundersøkelse knyttet til det regneverksted-tilbudet (en av aktivitetene i KoSDEM) som nye studenter får knyttet til introduksjonsemettet i matematikk, Kalkulus1. Dette var fagdidaktiske spørsmål knyttet til studenters kompetanse, læring og motivasjon. Vi skal utover høsten bearbeide disse dataene, og meningen er å skrive en rapport som beskriver og drøfter regneverkstedet. Vi bruker denne kunnskapen som bakgrunn («pilot») til en mer omfattende studie neste høst. Resultater herfra håper vi å publisere. Uansett, dette er erfaringer og kunnskap vi tenker kan være sentralt å formidle via MatRIC.

Det vi tenker som viktig arbeid fra vår side fremover er: en person som jobber med å ha oversikt over alle aktiviteter og prosjekter i hovedprosjektet, som kommuniserer godt med alle ledd og som kan planlegge og utvikle samarbeid, rapportering og formidling på tvers av aktivitetene («løfte blikket»). Dette vil kreve en del jobb, og vi håper at en nytilsatt person kan ha en viss prosentdel av stillingen sin inn i dette arbeidet (dette er ikke avklart).

I tillegg er vi nå i dialog med en fysiker (ved samme institutt men ikke ved vår seksjon) om et forskningssamarbeid. Ham har vært med i en rekke av disse aktivitetene fra starten og er brennende interessert i skole og utdanning,. Dette er veldig spennende og relevant for samarbeidet med MatRIC tenker jeg. Men dette må vi også komme nærmere tilbake til.