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EVICAB
European Virtual Campus for Biomedical Engineering

WP5: Final report

Developing New Administrative Practices

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Report

REPORT TITLE Developing new administrative practices
WORK PACKAGE 5. Developing new administrative practices
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ABSTRACT This report summarizes the conclusions of the extensive discussion of the WP5 members during the Tallinn meeting and (rather limited) influence of the following email discussion during Autumn 2006 thus reflecting the WP5 status before the Linköping meeting. The conclusions concern the suggested EVICAB organizational structure description and substantiation, including the respective organizational schemes, and define further questions to be answered during following meetings. The formulated structural information has – since August 2006 – been used by technical partners when implementing some of the organizational software. It is accepted that the conclusions are not final and may be modified during further meetings and discussions, namely as the response to work progress in other work packages. Attachments: Diagrams of organizational schemes
KEYWORDS Student administration, Curriculum management, Tutoring, Databases,
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Work package 5

"Developing new administrative practices"

WP5 status report

November 2006

This report summarizes the conclusions of the extensive discussion of the WP5 members during the Tallinn meeting and (rather limited) influence of the following email discussions during Autumn 2006 thus reflecting the WP5 status before the Linköping meeting. The conclusions concern the suggested EVICAB organizational structure description and substantiation, including the respective organizational schemes, and define further questions to be answered during following meetings. The formulated structural information has - since August 2006 - been used by technical partners when implementing some of the organizational software. It is expected that the conclusions are not final and may be modified during further meetings and discussions, namely as the response to work progress in other work packages.

Content of the report

1. Overall structure of WP 5 management

According to the WP5 discussions during the Tallinn meeting, the following organizational conclusions have been accepted:

- The organizational centre of the WP 5 is Brno UT
  (BUT – Jiri Jan coordinating)

- Contributors - the basic sources of ideas and formulation of tasks
  for Mediamaisteri partner:
  LiU (MI) Michail Ilias
  TU (JV) Juri Vedru
  BUT (JJ) Jiri Jan

- All other EVICAB participants should provide optional but welcome comments and suggestions

- Realization of IT solutions, i.e. basically a sink of information from WP5, also providing corrective suggestions
  Mediamaisteri (MMG) group (MR) Mats Rajalakso

- Generic organizational rules for the WP5:

  - All information exchange in WP5 should go via BUT (present email address jan@feec.vutbr.cz).

  - All contributors are expected to bring their ideas and suggestions, and also to comment on all WP5 materials.

- The contributors will be informed about any intended conclusion or requirement to MMG (including preliminary ones); their comments will be shared with others and finally may lead to modifications.

- The director of EVICAB will be informed on any final requirement to MMG; his consent is a necessary condition to start the implementation work.

- As to the overall EVICAB organization, see the attached diagrams.

2. Structure of the student administration

Following conclusions have been made as a result of Tallinn and following discussions:

- The EVICAB is – from the organizational point of view – a roofing institution but is only partly involved in student administration.

- There should be a simple **central administration of EVICAB** at the RGI, maintaining databases of all present and past students and of the available courses. The administration also provides an easy way for enrolment of applicants into EVICAB courses:
    - it receives the applications,
    - checks the eligibility of a student - his valid enrolment in his own local university ("*student university*") and possible prerequisites for a particular course based on the submitted documents,
    - arranges the enrolment into the required course at the "*course-university*" based on somehow established cooperation of EVICAB with all the course-universities. (The form of cooperation is given by an agreement between the university and the EVICAB administration. See also the respective organizational diagram.)

- The EVICAB will keep records on all the EVICAB courses and also the basic student data (name, birth, nationality, EVICAB courses attended, results of final exam and credits awarded – these data to be delivered by the course-offering university after the course is finished). Precise tentative specification of the database was to be formulated before 31st July 2006 by WP5 group (suggestions were kindly requested from partners). Based partly on this specification, the MMG implemented the first steps towards the required database structure; localization: server of TUT-RGI.

- It is supposed that the student – besides being a regular student at his own ***"student-university"*** anywhere in Europe (or even elsewhere) – will enroll, as a visiting student, in the ***"course-university"*** offering the particular requested EVICAB course. The main administrative record of the student with respect to this EVICAB course, including all the intermittent and final results of the course, will be kept by the course-university. It means that there is no need for this detailed student administration at the EVICAB centre.

- Any course certificates will be issued by the *course-university*, no certificates will be issued by RGI or EVICAB.

- The degree diploma will be issued by the *student-university* that may (and should) recognize the EVICAB course as a part of the student's curriculum. No diplomas will be issued by EVICAB or RGI as the EVICAB concerns.

- Possible realization of the link between the student-universities and course-universities via EVICAB MOODLE information system is suggested above (see also the organizational diagram).

- Recommendations for the possible support (financing) of tuition at the course university via European Socrates funds are to be formulated by GS (Göran Salerud, LUT).

3. Curriculum management

Conclusions:

- A generic recommended biomedical-engineering curriculum ("EVICAB curriculum") will be formulated in WP2, together with the valid current list of presently available EVICAB courses. BUT group recommends basing the curriculum on the BIOMEDEA report published as a result of several European conferences on teaching of biomedical engineering. It has been observed that most probably, the set of available courses will not be complete (i.e. covering the entire EVICAB official recommended curriculum by EVICAB electronic courses) in a near future.

- However: The EVICAB curriculum is not binding for the students. They are responsible to their own student-university. It is expected that the student-university will (hopefully) recognize a particular EVICAB course (and the credits obtained thanks to passing the EVICAB course) in frame of the local curriculum of this particular student.

- Therefore: WP5 will arrange for placing the recommended EVICAB curriculum on web-pages of EVICAB together with the list of available EVICAB courses as soon as both are formulated from WP2. It is presently felt that no other curriculum management from administration point of view is needed.

4. Tutoring methods and approaches

It has been found that there is a strong overlap in this area with the areas belonging primarily into other working groups, primarily WP2 and WP3. No decisive conclusions are therefore made here. Depending on the chosen tutoring methods and approaches, the respective organizational measures will be formulated also in WP5. Some related preliminary standpoints of WP5 can be found in the Spring study made in WP5.

A. Tutoring methods: e-learning x contact tutoring

Conclusions: waiting for conclusions from WP2 and WP3

A1. Learning-material mediated tutoring:

Conclusions: waiting for conclusions from WP2 and WP3

A2. Interactive tutoring:

Conclusions: waiting for conclusions from WP2 and WP3

B. Two different approaches:

a. teacher-based tutoring

b. instructor-based tutoring

Conclusions: waiting for conclusions from WP2 and WP3

5. specific technical problems in teaching process

This report formulates (partly still preliminary) conclusions to the questions raised by the Spring study of the WP5. The main questions are the following:

- how to monitor if the students have problems in their learning

  Conclusions:

  - No EVICAB contact with students will be made via emails (danger of viruses, uncontrolled load for tutors etc.).
  - All the EVICAB student communication will be arranged entirely via MOODLE web pages (arranged for EVICAB and physically situated at RGI server).

- how to provide the interaction across the network (synchronously or asynchronously)

  Conclusions:

  - The preferred mode is asynchronous (for organizational and technical simplicity and availability even in countries where the Internet is less reliable and/or slower). It is also simpler and more comfortable for teachers – easier but not bothering availability of the teacher. However, after discussion it was concluded that the synchronous communication including real-time video and audio should be considered as an alternative wherever possible.

- which media are to be used: e-mails, chat, IRC, Skype, discussion forums, teleconferencing, net meeting, Messenger, …

  Conclusions (see above):

  - no email (reasons: danger of viruses etc., teachers privacy)
  - preferred:

    MOODLE web pages of EVICAB (situated at RGI) working in different modes

- how the teachers and tutors are accessible or visible:

  Conclusions:

  - The teachers can only be contacted by students via the EVICAB MOODLE web pages, either off-line or on-line depending on installed modes and on possibilities on the side of the student. If the off-line contact is considered (which should be always available as an alternative for all tasks), a reasonable maximum delay time of teacher's response should be defined.

- how to keep the motivation of students on:

  Conclusions:

  - The intensive and active work in the course is in the primary interest of each student and therefore is left on his/her responsibility.
  - The EVICAB administration and course presentation should be attractive and maximally simplifying the administrative tasks so that the student's interest and motivation does not get lost.
  - MOODLE should inform both involved universities on registration (or even interest) of a student in a course (possibly also issuing e-mails in parallel).
  - Possible motivation may come from both the course-university and/or the student-university.
  - Keep the Moodle as a generic and comfortable means of communication.

- Provide interesting and well-done e-learning material: MMS might be providing service for the authors of e-learning courses etc.

- how to deal with downloading the courses from MOODLE by users:

  Conclusion:

  - Downloading of e-learning course material should not be allowed, in order to prevent problems with unauthorized versions (and also different versions by the original author).

- feedback means: student's evaluation of courses

  Conclusion:

  - Evaluation of courses by students should be anonymous, and organized via a particular MOODLE feature (page)

6. Student authentication

Student authentication is considered a serious issue. The following conclusions have been accepted:

6.a. Authentication during the course

Conclusions:

- During the course, simple personal pass-word to EVICAB MOODLE pages is sufficient, possible cheating (if any) only causes improper preparation of the student for the final exam and might lead to a failure there thus not endangering the credibility of the obtaind results.
- This less severe approach applies also to running tests requiring primarily understanding of the course material (testing of concepts and thinking, not primarily facts), providing that the teacher designs the appropriate way of checking (which is recognized not to be an elementary task). Otherwise (e.g. for semi-term written exams) similar precautions as for the final exams are needed; however the present opinion is that such decisive tests should be possibly avoided as it would require complicated arrangements (see the final exams).

6.b. Authentication during tests and final course exams

Conclusions:

- In contrast to partial tests during the course, the final written exam authentication must be strict, excluding any possibility of cheating (both in the proof-of-knowledge respect, and as to the identity check of students

concerns). The only possibility seen presently as recognizable by WP5 participants is the checked personal presence in closed rooms.

- However, geographically distributed exams are possible provided that they are synchronized at different "student" universities and use the same questions and problems; this seems to be a solution, providing that all the student responses are checked and classified centrally by the same "course" teacher(s). This would mean *locally organized closed-room written exams*, all under supervision of local assistant assigned by the respective student-university for the EVICAB program – this should be organized by all the involved student universities at the same time.
- The exam questions will be centrally and synchronously distributed from the course teacher (thus from the course-university) via MOODLE web pages.
- All answers will be sent immediately to the course guaranteeing teacher, who will organize the common evaluation of all responses from all student universities. The answers of students might be communicated to the course teacher directly in real time via the MOODLE web page or sent by the assistant electronically afterwards as off-line individually formulated and then collected PC files, or even as handwritten answers on paper subsequently scanned and then electronically transferred.
- The WP5 accepted the "emergency case" recommendation with respect to the Internet exams: Always an alternative possibility of answering, independent on the network technical status and means should be available and offered to students.

7. Structure of EVICAB databases

As the result of the Tallinn discussions, and local BUT discussions based on the above formulated administration principles, the following structure of EVICAB databases has been formulated by the end of July and submitted to discussion among the EVICAB partners. This material has been also partial utilized by MMG when implementing some of the EVICAB software. The conclusions are as follows:

Two databases are needed:

Student database (data on students studying the EVICAB courses – filled in primarily by the applying students; some items added automatically or by the EVICAB administration, see below)

Course database (data on the EVICAB accepted courses and the respective course universities and tutors – filled in by the course universities or by the EVICAB administration based on agreements with the Course universities)

Suggested structure of the Student database:

EVICAB Identity Number
Password

Last name
First name
Middle name
E-mail address
Phone/Fax number
Nationality
Date of Birth

Gender

Student's contact address:

Street + no., city, country, state, ZIP/postal code

Student-university:

University Name

Faculty, Department

Address:

Street + no., city, country, state, ZIP/postal code

E-mail address

Phone/Fax number

Person responsible for international affairs (name, function, email)

Consent received (even for the last requested course): YES/NO

List of selected EVICAB courses for the current academic year

List of passed EVICAB courses + exam results + credits

Comments:

- *Identity number: assigned automatically to a student at his first contact with EVICAB, at following contacts either the number or the name or email is given by the student and the system should complement the other personal data.*
- *Password: assigned by the system after the student has been accepted by EVICAB.*
- *Red items: filled in by the student at the first contact, later modifications possible with the password*
- *Consent of the student university: on the EVICAB application MOODLE page, there should be a link to a printable form where the university (the person responsible for foreign affairs) would confirm that the concrete EVICAB course will be accepted by the university (i.e. credits counted) and that the university*

would provide assistance with the final exams (closed room + supervision). The form should be physically printed, signed and sent to EVICAB administration either by mail or via fax. After obtaining the signed form, EVICAB administration would change the CONSENT item to YES. When the form is not received in a month time since the application, the application (for a particular subject) would be deleted and the student would be dismissed from the course.

- *List of selected courses is formed by the student selecting from a list of available courses (based on the Course database).*
- *List of passed courses – filled in gradually by the EVICAB administration based on the reports from the Course universities (or alternatively, directly by the course universities).*

Suggested structure of the Course database:

Course name
Academic year
Semester/Trimester
Course tutor
University, Faculty, Department
Address, telephone, email, other contacts – invisible to the students
Credits
Summary of the course content
Lecture/tutorial detailed syllabus
Other-activities form and content
Prerequisites
Literature
Technical/computer hardware/software requirements

Comments:

- *Filled in completely by the course-university or by the EVICAB administration based on agreements with the Course universities.*
- *From this database, the list of available courses visible on application MOODLE page is derived.*
- *Besides the Course database, containing the really available courses, there should be a MOODLE page with the ideal EVICAB recommended BME curriculum (which does not need to correspond exactly to the course offer, neither in course names nor in completeness of the offer).*

9. Topical tasks

The following tasks were recognized during Tallinn meeting that concern the WP5 activities (to the date of this report writing most of them are already done or under preparation).

A. Establish the first version of the EVICAB database (deadline: end of September 2006). Therefore:

i. The EVICAB will keep records on all the EVICAB courses and also the basic student data (name, birth, nationality, results of final exam and credits awarded – these data to be delivered by the course-offering university after the course is finished). Precise specification of the database (to be formulated by 31st July) is the task of WP5 group, the implementation is being done by the MMG, while the database is physically localized on the server of TUT-RGI.

ii. The first version of EVICAB curriculum should be formulated by WP2 and WP3; then the corresponding partial conclusions with respect to organizational issues of the WP2 and WP3 working area would be designed.

iii. The suggested first specification of the EVICAB data structure is to be formulated at BUT and submitted for discussion and approval by the EVICAB director (Deadline: 31st July) – done.

iv. Implementation of the test version of the database including the respective MOODLE features would be done by MMG (deadline: 30th September) – see the MOODLE pages.

B. Recommendations for the possible support (financing) of tuition at the course universities via Socrates funds would be formulated by Göran Salerud (LUT).

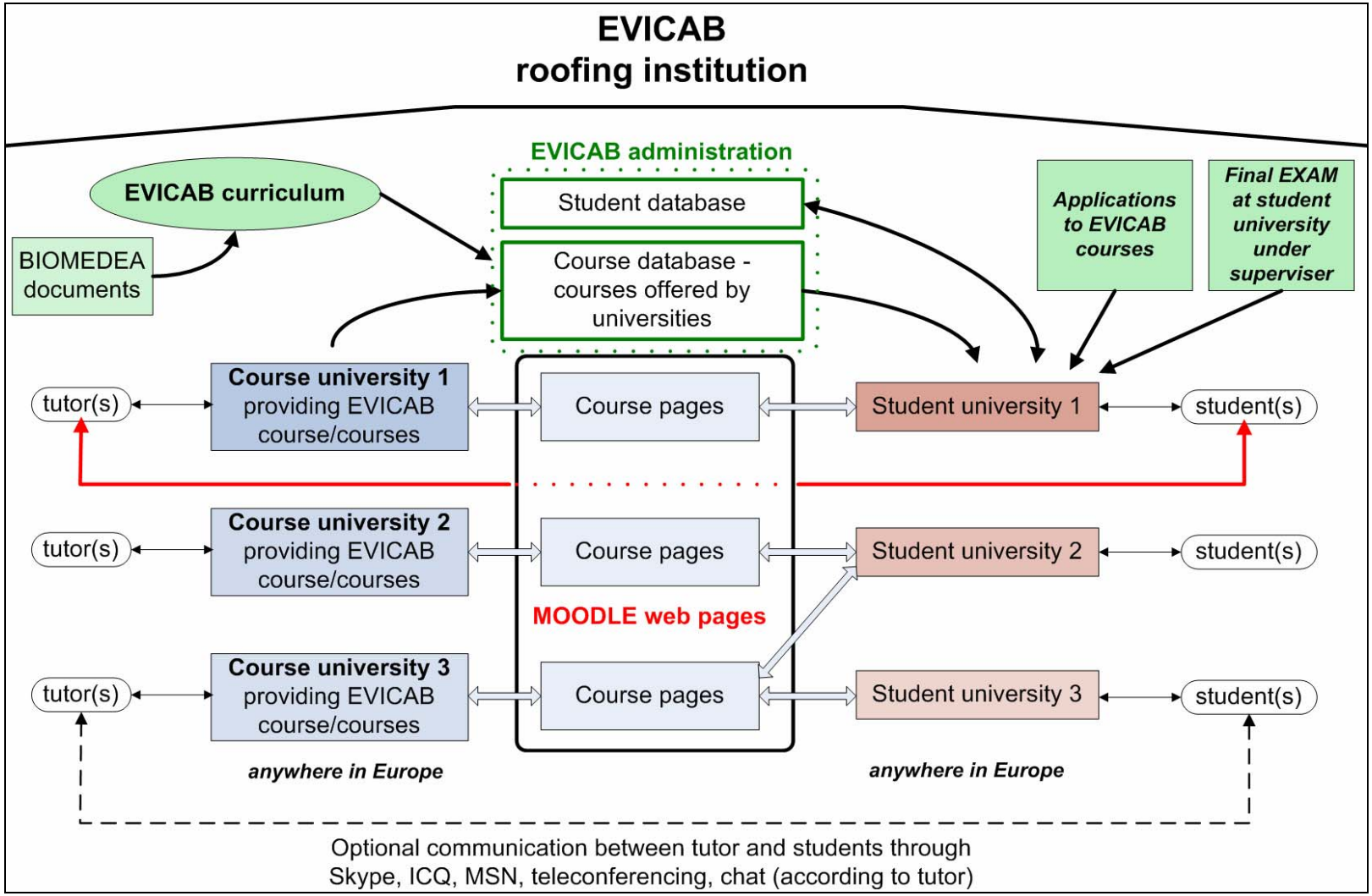
C. Any other suggestions or comments from all EVICAB participants are continuously welcome.

Jiří Jan (BUT), 10. 11. 2006

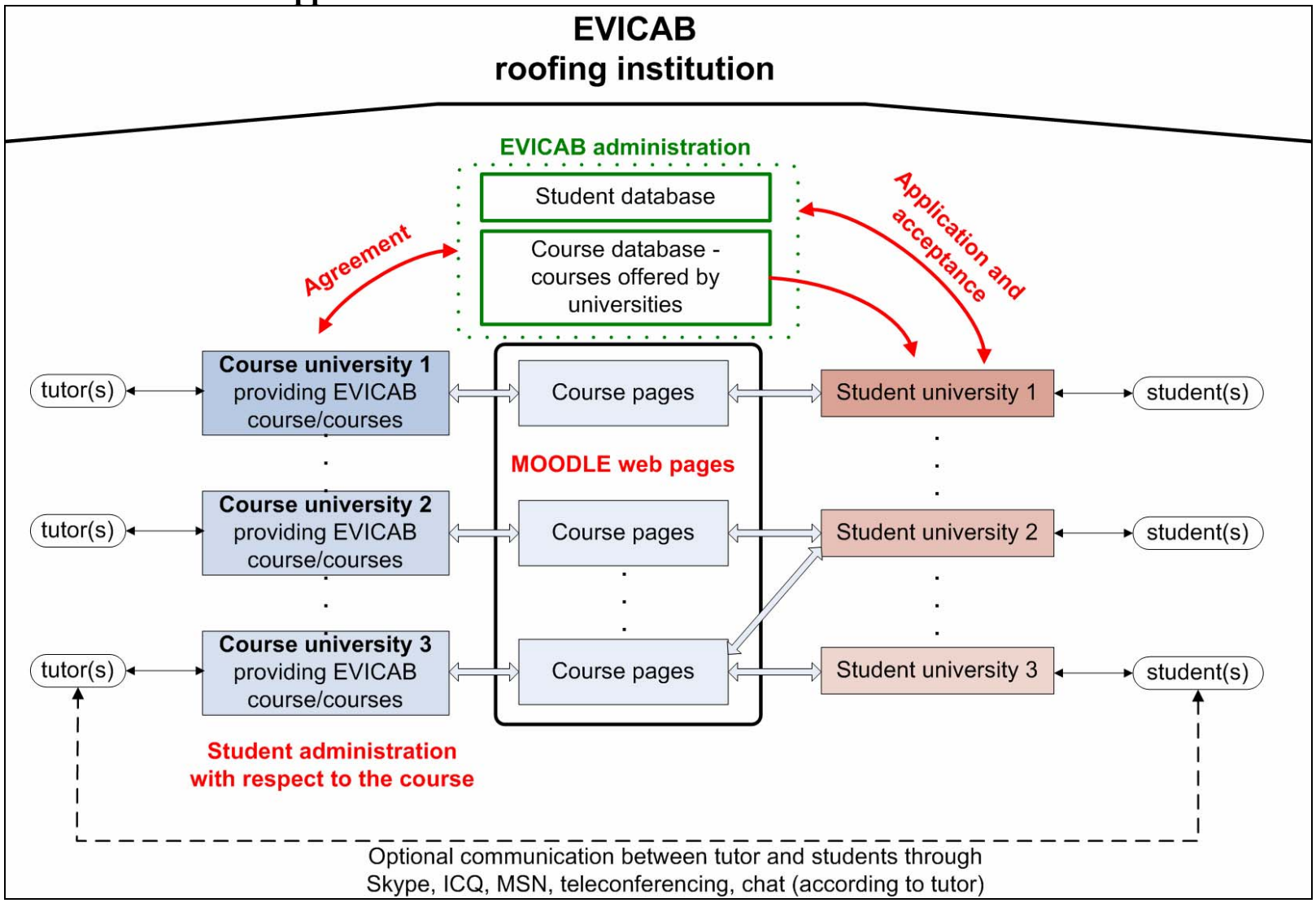
Attachments:

Diagrams of organizational schemes

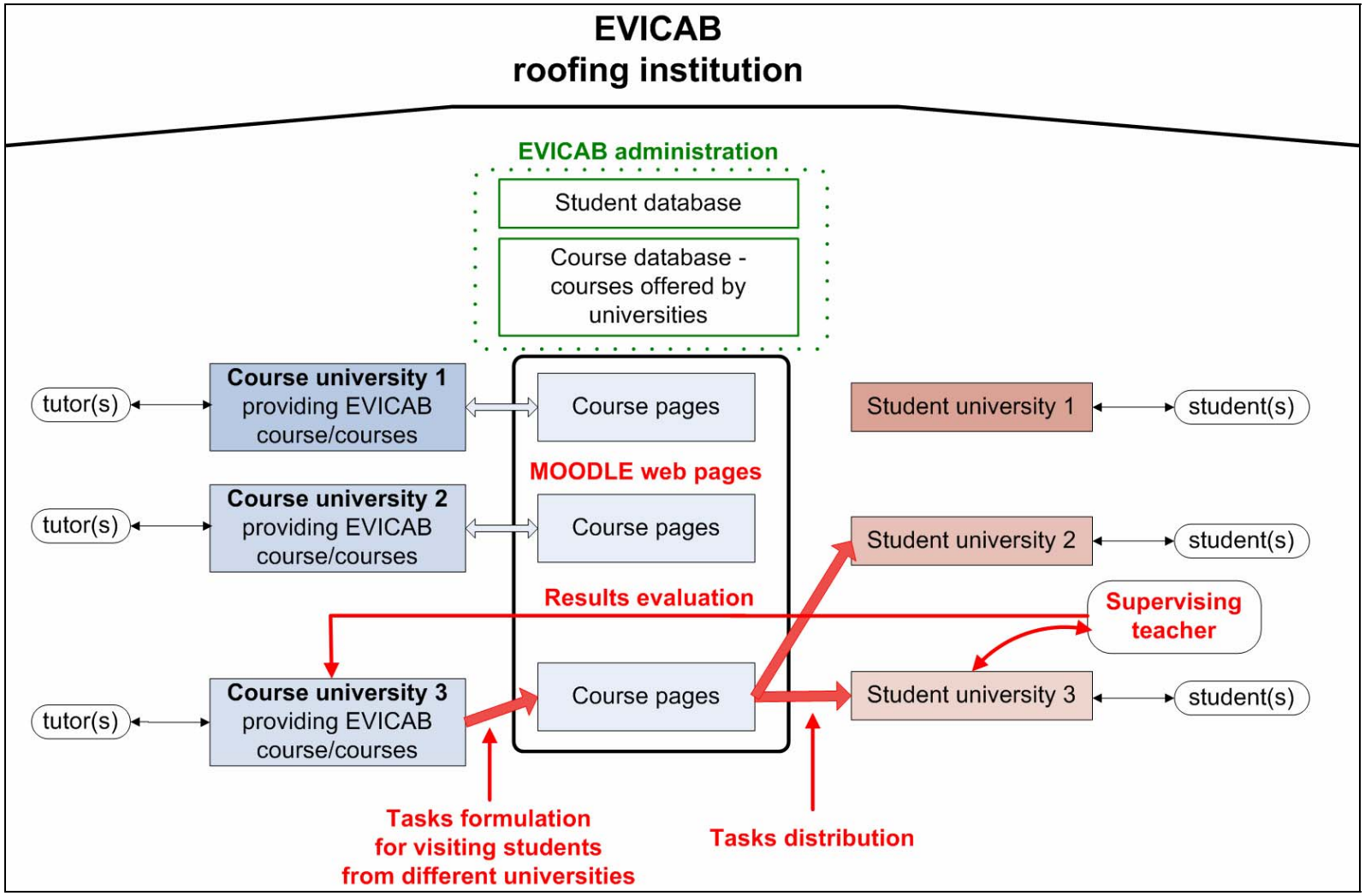
1. EVICAB Structure: Overview



EVICAB Structure: Applications



EVICAB Structure: Exams



EVICAB Structure. Study