

Annual Project Meeting
Wednesday, 13th May, 2015

Report on WP3 task 2:
To boost MCM innovation potential and attract
new scientists, potential SME partners, and
other research partners

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Background:

I have developed a training course on generic research skills that lasts, typically, 3.5 days for all modules of the course.

I teach this as 40 contact hours (8 ECTS) to Year 1 PhD students at Belgrade University.

The full course has 7 half-day modules:

Good quality research

Scientific writing

Presentation skills (poster, oral)

Proposal writing skills

Self-management skills

Career development

Supervision skills



The plan:

Year 1 - good research, scientific writing

Year 2 - presentation skills, proposal writing and

Year 3 - self-management, career development
and good supervision

Year 1 training completed during the week 19-23
January, 2015.



The work:

1. A self-assessment questionnaire before the course on the level of participants' existing skills.
2. Analysis of self-assessment questionnaires
3. Day 1 on good quality research
4. Day 2 on scientific writing
5. Course feedback evaluation and analysis



1. A self-assessment questionnaire

A - Good quality research:

1. Which (calendar) year did you start doing some sort of research?

2. In which institution (Faculty or Department) do you do/will you do your research? _

3. What is the subject area of your research?

Skill	Skill level				
	0	1	2	3	4
1. I can demonstrate original, independent and critical thinking, and the ability to design good quality research experiments.					
2. I have knowledge of recent advances within my research field and related areas.					
3. I recognise limits/ boundaries in my research knowledge/ skills and draw upon/use sources of support as appropriate.					
4. I am familiar with appropriate statistical methods to analyse my data and am confident in their use.					
5. I understand what is needed for quality control of every aspect of my research.					
6. I am able to interpret and evaluate critically my findings and those of others.					
7. I am aware of all ethical aspects of doing my research (such as data manipulation, fraud, dubious practices).					
8. I am aware of issues relating to the rights of other researchers, and of others who may be affected by the research (e.g. confidentiality, ethical issues, attribution, copyright, malpractice, ownership of data).					



Skill Level: 0 - Unaware, 1 - Aware, 2 - Informed, 3 - Capable, 4 - Recognised

1. A self-assessment questionnaire

B - Writing scientific papers:

1. How many scientific publications in SCI or SCI-E list journals in English do you have?

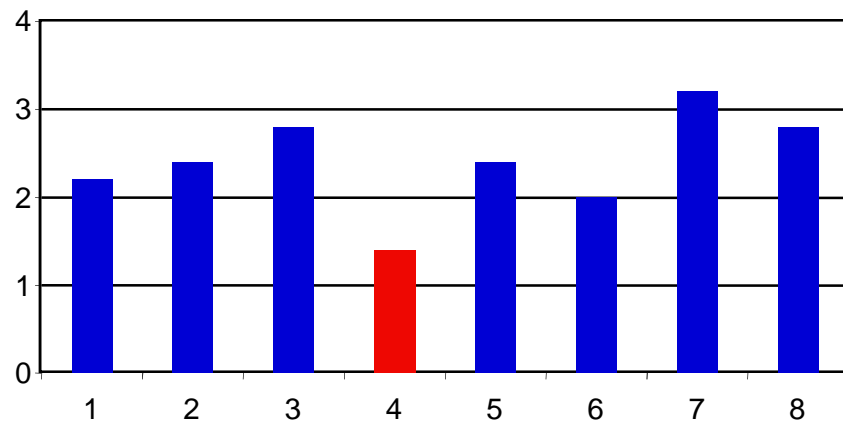
2. How many *other* scientific publications (conference proceedings, papers in Serbian, etc) do you have?

3. How many scientific publications of any sort have you written (at least 50%) yourself? _____

Skills	Skill level				
	0	1	2	3	4
1. I can find and download relevant scientific publications.					
2. I am familiar with journal Impact Factors, SNIPs, and other quality metrics.					
3. I can find and download information on relevant scientific journals, their Impact Factors, scope and author instructions.					
4. I know how to 'sell' my manuscript to an international journal.					
5. In general I can write clearly and in a style appropriate to purpose (e.g. scientific and popular articles, documents, thesis).					
6. I know how to write a good quality scientific manuscript.					
7. In particular, I can write confidently and clearly in English.					
8. I know how to present my research results in the most suitable visual format (tables, graphs, etc).					
9. I can contribute to promoting the understanding of my research field by writing for the non-specialist public.					

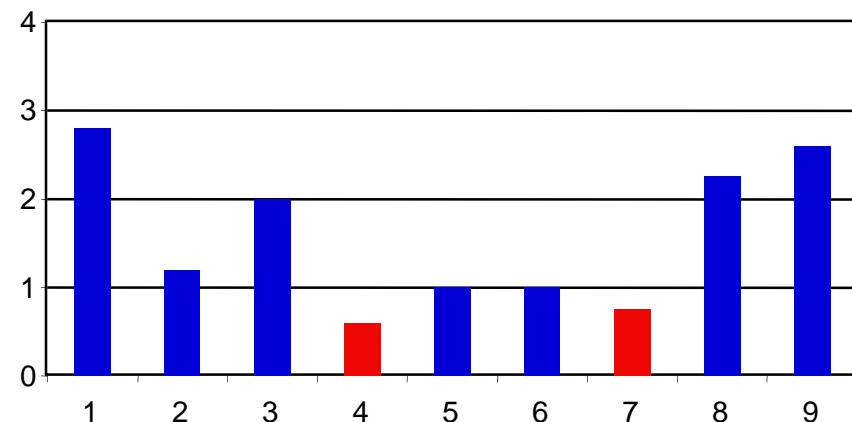


2. Analysis of LOVCEN self-assessment questionnaires



A - Good quality research:

4. I am familiar with appropriate statistical methods to analyse my data and am confident in their use.



B - Writing scientific papers:

4. I know how to 'sell' my manuscript to an international journal.

7. In particular, I can write confidently and clearly in English.

3. Day 1 on good quality research

Introduction to the course

Learning outcomes

Research philosophy

Module 1 (Good quality research)

Looking for the truth

Considering all the factors

Hypothesis testing

The research cycle

The research pyramid

Principles of experimental design

The Null Hypothesis

Reducing the errors

Data quality control

A group exercise to design a piece of research to identify factors
and develop hypotheses

Discussion on experimental design and reducing errors



4. Day 2 on scientific writing

Module 2 (Scientific writing)

Your marketing strategy

Recognising whether you have good quality science

Different types of research papers

Impact factors and SNIPs

Selecting a suitable journal

Open access and online journals

Journal instructions for authors

“Once upon a time ... they all lived happily ever after”

The abstract

Recommendations for Introduction, Materials and Methods,
Results, Discussion

Examples of data presentation

Fraud and plagiarism

Improving the text, and the English

The refereeing process

Discussion on problems identified in a manuscript for review.



5. Course feedback evaluation form

Academic research skills Course (Good research, Scientific writing) Assessment Form, LOVCEN, 21-22nd January, 2015

Give a score from 1 (strongly disagree) to 5 (strongly agree) to the following:

1. This was a good/useful course
2. The course fulfilled your expectations
3. The course went at the right speed
4. The course contained new information
5. The course should be useful for your research career
6. The speaker was audible and clear (you could hear the speaker)
7. The speaker seemed sufficiently knowledgeable of the subject matter
8. The speaker made the course interesting/enjoyable
9. Understanding the spoken English was easy (5)/difficult (1)
10. Understanding the written English was easy (5)/difficult (1)
11. The exercises during the course were/will be helpful
12. The length of the modules was about right
13. The course was well-organised

Was there any part/section of the course that should be expanded? If so, which?

Was there any part/section of the course that should be shortened? If so, which?

What was the most interesting/helpful part or section of the course?

What was the least interesting/helpful part or section of the course?

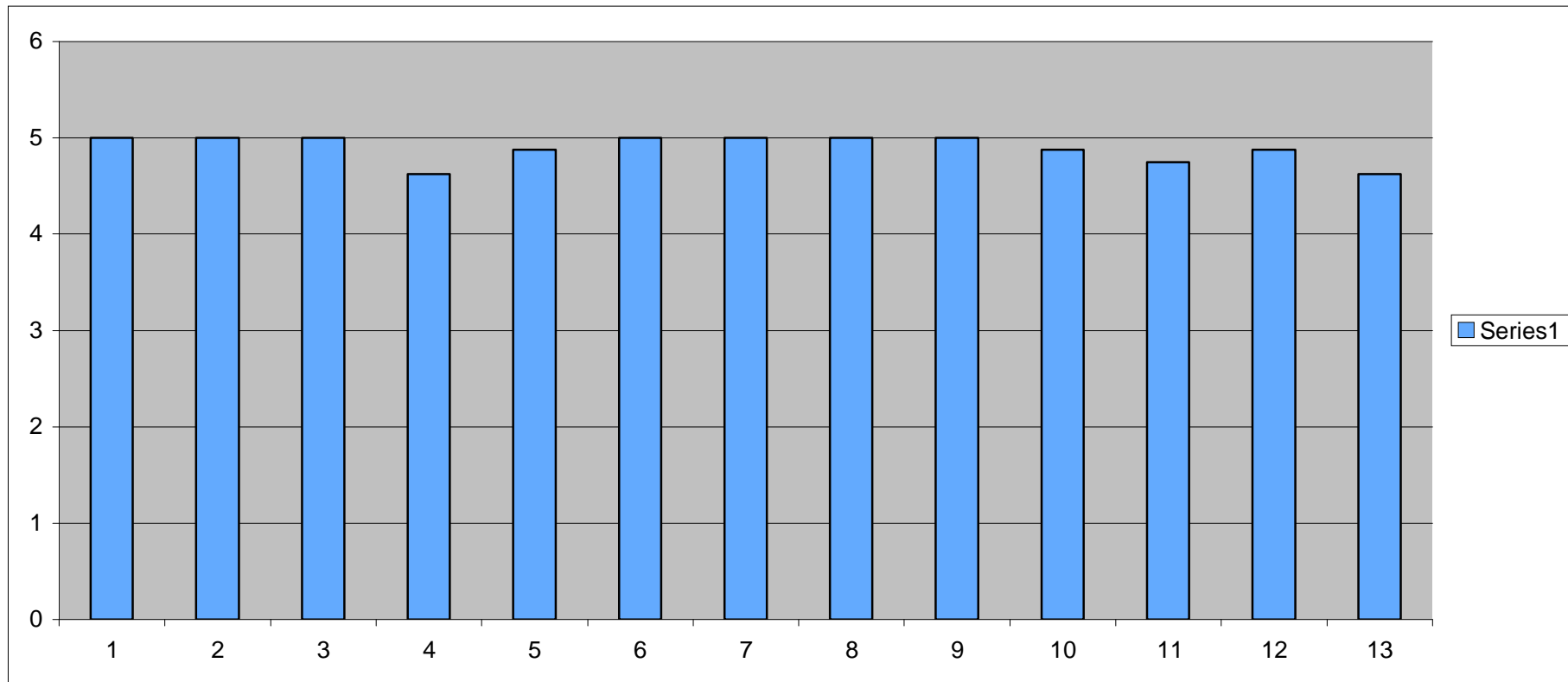
Please add here any other comments you have:

My research subject area is:

I am a: Student Lecturer (Professor) Other



5. Course feedback analysis from 8 people (1 to 5):



Lowest mean score was 4.63 for two statements:
4. The course contained new information, and
13. The course was well-organised.

Report on WP3 Task 3.2:

Report on training course at University of Montenegro, Biotechnical Faculty, 20th - 23rd January, 2015

The four-day visit to Podgorica was divided into the following tasks:

Tuesday, 20th January:

Arrival in Podgorica, discussion with Dr Igor Pajovic about plans for the two-day training course, technical arrangements about facilities, and final preparation of PowerPoint presentation for Day 1 of the training course.

Wednesday, 21st - Thursday, 22nd January:

Training course on Good quality research (day 1) and Scientific writing (day 2) from approximately 09.00 to 17.00. Activities included final preparation of PowerPoint presentation for Day 2 and uploading course documents into a Dropbox folder at the end of each day.

Friday, 23rd January:

Analysis of participant course assessment questionnaires and preparation of activity report.

The 2-day training course was part of a larger training course, to be given to LOVCEN project participants in three parts during the three years of the project. The first part of the course given on 21st and 22nd January focused on Good quality research and Scientific writing. The course consisted of PowerPoint presentations, exercises for participants to do working in groups of 2-3 as well as discussion sessions.

In total, 10 participants attended the course, with eight people present on both days. Participants represented five of the LOVCEN project institutions in Montenegro: Biotechnical Faculty (6), University of Montenegro Computer Information Centre (1), Institute of Public Health (1), Hydrometeorological Institute of Montenegro (1), and Natural History Museum of Montenegro (1).

Course assessment questionnaires were completed by eight participants at the end of Day 2 (Excel spreadsheet attached). The course was well-received by every participant, who found it interesting and helpful. Of 13 statements to be assessed in the feedback questionnaire, seven received perfect scores of 5.00, four others had mean scores at least 4.75, and the lowest mean score was 4.63 for two statements: 4. The course contained new information, and

13. The course was well-organised.

Over 90% of scores were 5/5, and the lowest score was 3/5 (on one occasion).

It was good to find that each of the eight participants gave 5/5 for their understanding of spoken English.

Where a preference was given, three participants found the second day (Scientific writing) more helpful than Day 1 (Good research).

Arrangements for the course worked well, with good facilities for the presentations, and a flip-chart available for participant exercises. I got the impression it had been well-organised.

