Seminar 1 in "SciPub in SE" course

The focus of seminar 1 is scientific processes and community as well as bibliometrics. To prepare for the seminar you should (before the seminar) do the preparatory tasks (numbered T1 to T4 below). Submit your PDF file at least 4 hours before the seminar 1. After the seminar you should do the assignment tasks (numbered T5-T7 below). Submit one PDF file with your answers within 10 days of the finish of seminar 1.

Tasks and time expectations
To show my expectations, I expect your pre-seminar preparations to take roughly the following amount of time (per task):

Preparatory Tasks	Time
T1. Think about the below set of prep questions (PQs) and write down your spontaneous answers to them (without researching the internet or reading up on related material)	~2h
T2. Read the study material for seminar 1 and update your answers to the PQs	~5h
T3. Search for other material/papers related to the PQs, list them in the doc with your answers, update your answers to PQs based on the additional material you found	~2.75h
T4. Produce PDF and send to examiner **at least 4 hours before the start of the seminar**	~0.25h

Your answers should be brief (but condensed), i.e. in 7-15 sentences summarize your final view/answers in relation to the questions. You can refer to other peoples insight (use normal references like [Feldt2012] in the text and then have a list of references at the end) but your answer should be your own and explain why you hold it.

To show my expectations, I expect your post-seminar assignment to take roughly the following amount of time:

Assignment Tasks	Time
T5. Based on our discussion at the seminar and your own investigations afterwards answer the assignment questions (AQs) listed below.	~1h
T6. Write a short report as described below in "Assignment report".	~2.75h
T7. Submit one PDF file containing your answers to AQs and the short report. Send it to the course examiner **within 10 days of Seminar 1**.	~0.25h

Prep questions
PQ1. What is science?

PQ2. How is science different from engineering?

PQ3. How is science different from a process improvement project in a company (for example, trying to find a better way to capture bugs found during early stages in software projects)?

PQ4. What kind of science is Software Engineering?

PQ5. Why is publication important in science?

PQ6. Why is a scientific/research community central for scientific processes?

PQ7. What are the two most common bibliometric measures out there and how are they calculated?

Prep study material
PSM1. Feynman and others, "What is science? What is a scientific theory?", http://www.youtube.com/watch?v=_JjT_6_mX1k (at least watch the first 5 minutes, after that not so focused)

PSM2. Steven D. Schafersman, "An Introduction to Science - Scientific Thinking and the Scientific Method", http://www.geo.sunysb.edu/esp/files/scientific-method.html

PSM3. The Karolinska Institutet Bibliometrics Project Group, "Bibliometrics - Publication Analysis as a Tool for Science Mapping and Research Assessment", 2008-10-09, version 1.3, http://ki.se/content/1/c6/01/79/31/introduction_to_bibliometrics_v1.3.pdf

PSM4. Nature Editorial, "Count on me", Nature 489, 177 (13 September 2012), doi: 10.1038/489177a, http://www.nature.com/nature/journal/v489/n7415/full/489177a.html (also read the comments at the bottom of the page)

Assignment questions
AQ1. Who is the SE researcher with the highest h index? How did you find out?

AQ2. What are the advantages and disadvantages/risks with bibliometric metrics such as the h index?

AQ3. Does the usefulness of the measures differ between research areas? For example, is the medical area (as per PSM3) different from Software Engineering?

AQ4. Should you be aware of these measures in your own academic career/project? Why? How?

Assignment report

Write a short report that:

- a, Describes your focus area (within SE) briefly
- b, Identifies the top 5 researchers in your focus area, based on "sensible" bibliometrics
- c, Identifies the top 5 papers in your focus area, based on "sensible" bibliometrics
- d, Identifies a very important paper from your focus area which is not among the top 5 papers you identified with bibliometrics
- e, Discuss why this paper is important and why you think it is not ranked high based on bibliometrics