

Results Report

Lecturer's Report

Course Evaluation – WiSe 2023

Course: "Foundations of Mathematics, Gruppe 1"

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Questionnaire: "SET.UP - Lehrzielorientierter Online-Fragebogen"

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1 Introduction and Structure of the Report

Dear lecturers,

this report informs you about the results of the evaluation conducted in your course using the **customized SET.UP questionnaire**. It provides an overview of your teaching aims and the opinions und assessment of the students in your course. Therefore, you were asked about your teaching aims for the course. Additionally, the students were asked about different aspects concerning the teaching-learning conditions and their individual learning outcomes. The aim of the report is to give you a platform to self-evaluate your teaching aims and outcome based on empirically founded data. The process comprises four steps. The structure of the report follows this four-step logic:

Step 1: Definition of your individual teaching aims

The survey is adjusted to your individual teaching aims and methods, which were defined beforehand. The teaching aims and methods, specified by yourself, are listed in **chapter 2**.

Step 2: Conduct of the survey

Depending on your teaching aims and methods defined before the survey, the questionnaire includes questioning modules related to the teaching-learning conditions and the learning outcome. You can find the students' responses **from chapter 3 onwards**.

Step 3: Discussion of the results with your students

The results of the evaluation can now be discussed with the students in your course. This will give you the opportunity to discuss the perceived strengths and weaknesses of the course with the students personally and to compare it with your own perception. Results of the lecturer survey of 2018 show that nearly a quarter of all lecturers do not discuss their evaluation results with their students. However, the review process and the thus resulting derivation of teaching improvements are essential components of the evaluation cycle (see figure 1).

Step 4: Further development of your teaching

If you are looking for new ideas or advice related to the subject of teaching, you can check the report's **last chapter** which provides you with further information on programmes and institutions (university-internal and -external).

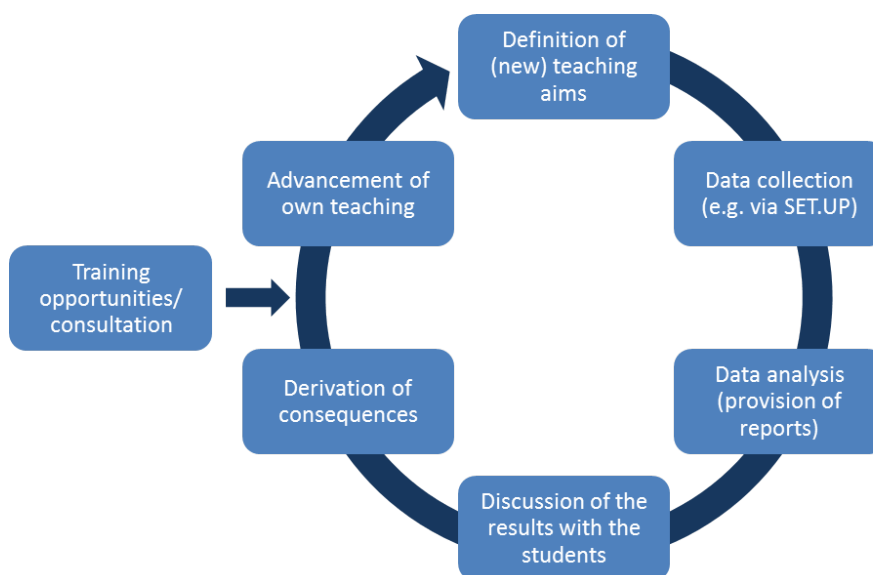


Figure 1 – evaluation cycle

2 Information provided by the Lecturers

Prior to the survey, you had the opportunity to define your teaching aims and name the teaching methods you were planning to apply in the course. The questionnaire is based on these learning aims and methods. Below, you can find an overview of the information indicated by you.

2.1 Defined Teaching Aims

- **Basic Knowledge (e.g. reproducing important concepts):** included
- **Specialized Knowledge (e.g. working through contradictions in the learning content):** included
- **Working Methods (e.g. looking more effectively for subject-related information):** not included
- **Presentation Skills (e.g. giving better presentations):** not included
- **Communication Skills (e.g. formulate more precise verbal statements):** not included
- **Cooperation Skills (e.g. contribute to the planning of the group work):** not included
- **Self-Responsible Working (e.g. setting better learning goals):** not included
- **Increased Interest in Subject (e.g. having learned things that I find exciting):** included
- **Combination of Practical and Theoretical Aspects:** included
- **Research:** not included
- **Teacher Training:** not included
- **Other teaching aim Question: Because of this course, I can. . . :** not included

2.2 Applied Teaching Methods

- **Lectures (own presentation by the lecturer):** included
- **Student presentation (presentation by students):** not included
- **Lecturer-run discussion (discussion is led by instructor):** not included
- **Student-run discussion (discussion is led by students, e.g. following a student presentation):** not included
- **Exercises (e.g. solve exercise handouts):** included
- **Simulation exercises/Role-play (students as agents and decision makers in a simulation):** not included
- **Case study (practical example cases that require processing a large amount of information):** not included
- **Group Work (independent work on a topic in groups):** not included
- **Excursion (Field trip with a scientific or practical goal):** not included

3 Answers given by the Students

Below, you can find the answers provided by the students concerning their acquisition of competence and the teaching-learning situation in the course. If you did not choose any competencies, those will not be shown. 10 students have participated in the survey. That means that the results of the survey are based on **10 student opinions**.

3.1 Prior Knowledge

	a lot (1)	rather much (2)	some (3)	less (4)	none (5)	Amnt.	Missing	Avg.	s
How much prior knowledge did you have concerning the topics of the course?	–	22 %	22 %	56 %	–	9	10 %	3.3	0.8
How much prior practical experience on the topics of this course (e.g. job or internship; research projects) did you gather beforehand?	–	–	11 %	56 %	33 %	9	10 %	4.2	0.6

	to a very great extent (1)	to a large extent (2)	to a moderate extent (3)	to a small extent (4)	not at all (5)	Amnt.	Missing	Avg.	s
To what extent has your prior knowledge been helpful to follow the content of the course?	22 %	11 %	44 %	22 %	–	9	10 %	2.7	1.1

Question text: How often could you relate the course content to the following?

	always (1)	often (2)	occasionally (3)	rarely (4)	never (5)	Amnt.	Missing	Avg.	s
with your specialised prior knowledge	–	14 %	29 %	29 %	29 %	7	30 %	3.7	1.0
topics already discussed on this course	14 %	57 %	14 %	14 %	–	7	30 %	2.3	0.9
topics discussed in other courses	–	43 %	43 %	–	14 %	7	30 %	2.9	1.0
your practical experience (e.g. in a job or internship, research projects) in the field	–	–	33 %	33 %	33 %	6	40 %	4.0	0.8

3.2 Self-estimated Competencies

3.2.1 Expertise

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
I am able to recall important terms/facts from this course.	40 %	60 %	–	–	–	5	50 %	1.6	0.5
I am able to give an overview of the course content.	40 %	60 %	–	–	–	5	50 %	1.6	0.5
I now feel able to tackle a typical problem within this course's field.	40 %	40 %	20 %	–	–	5	50 %	1.8	0.7
I am able to depict complex course matters.	20 %	40 %	20 %	20 %	–	5	50 %	2.4	1.0
I am able to identify discrepancies and similarities of varied course content (e.g. discrepancies between different models or procedures etc.).	20 %	40 %	40 %	–	–	5	50 %	2.2	0.7
Because of this course, I am able to better evaluate the quality of professional articles on relevant topics.	40 %	40 %	–	20 %	–	5	50 %	2.0	1.1

3.2.2 Specialised Knowledge

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
I now find the topic more interesting than at the beginning of the course.	40 %	–	20 %	–	40 %	5	50 %	3.0	1.8
The course has reinforced my wish to continue my studies.	40 %	20 %	20 %	–	20 %	5	50 %	2.4	1.5
I enjoy solving the assignments given to me in this course.	–	60 %	20 %	–	20 %	5	50 %	2.8	1.2
In this course, I have learned things that excite me.	20 %	20 %	–	60 %	–	5	50 %	3.0	1.3
I engage with topics of the course beyond the course itself - just for fun.	20 %	–	–	40 %	40 %	5	50 %	3.8	1.5

3.2.3 Link between Theory and Practice

	fully applies	rather applies	partly applies	rather not applies	does not apply at all	Amnt.	Missing	Avg.	s
Because of this course, I better understand the practical significance of topics discussed.	40 %	60 %	–	–	–	5	50 %	1.6	0.5
Because of this course, my ability to apply theoretical knowledge to practical problems/tasks has improved.	40 %	60 %	–	–	–	5	50 %	1.6	0.5

3.3 Statements about Teaching Quality and Support

3.3.1 Knowledge Transfer by the Lecturer

The lecturer ...	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
provided clear learning objectives.	83 %	17 %	–	–	–	6	40 %	1.2	0.4
structured the entire course well.	83 %	17 %	–	–	–	6	40 %	1.2	0.4
clearly presented the course content.	60 %	20 %	20 %	–	–	5	50 %	1.6	0.8
explained new terms and concepts in a precise manner.	83 %	17 %	–	–	–	6	40 %	1.2	0.4
was able to clearly explain complex matters.	83 %	–	17 %	–	–	6	40 %	1.3	0.7
gave illustrative examples that supported the comprehension of the course content.	80 %	20 %	–	–	–	5	50 %	1.2	0.4
gave helpful advice to tackle difficulties with comprehension.	100 %	–	–	–	–	6	40 %	1.0	0.0
repeatedly established links to topics already discussed.	60 %	20 %	20 %	–	–	5	50 %	1.6	0.8
asked questions that gave students the opportunity to review their own understanding of the course content.	40 %	40 %	–	20 %	–	5	50 %	2.0	1.1

The lecturer ...	fully applies	rather	partly	rather not	does not	Amnt.	Missing	Avg.	s
	(1)	applies (2)	applies (3)	applies (4)	apply at all (5)				
gave students the opportunity to engage more deeply with topics interesting to them.	60 %	20 %	20 %	–	–	5	50 %	1.6	0.8
used varied methods to deliver the course.	25 %	25 %	50 %	–	–	4	60 %	- *	- *

* No value is displayed because of too few respondents.

3.3.2 Support outside of the Course

The lecturer ...	fully applies	rather	partly	rather not	does not	Amnt.	Missing	Avg.	s
	(1)	applies (2)	applies (3)	applies (4)	apply at all (5)				
was easily reachable for questions and concerns.	100 %	–	–	–	–	5	50 %	1.0	0.0
took sufficient time for the individual concerns of the students.	100 %	–	–	–	–	5	50 %	1.0	0.0

3.4 Statements about the Module

	fully applies	rather	partly	rather not	does not	Amnt.	Missing	Avg.	s
	(1)	applies (2)	applies (3)	applies (4)	apply at all (5)				
The learning goal of the course was made clear by the lecturer.	75 %	25 %	–	–	–	4	60 %	- *	- *
The learning goal of the course is reflected in the teaching methods and the type of examination.	75 %	25 %	–	–	–	4	60 %	- *	- *

* No value is displayed because of too few respondents.

	fully applies	rather	partly	rather not	does not	Amnt.	Missing	Avg.	s
	(1)	applies (2)	applies (3)	applies (4)	apply at all (5)				
The learning goal of the module was made clear by the lecturer.	50 %	50 %	–	–	–	4	60 %	- *	- *
The lecturer explained the linking between the learning goal of the course and the learning goal of the module.	50 %	25 %	25 %	–	–	4	60 %	- *	- *

* No value is displayed because of too few respondents.

3.5 Statements about the Learning Atmosphere

In the context of the lecture, ...	always	often	occasionally	rarely	never	Amnt.	Missing	Avg.	s
	(1)	(2)	(3)	(4)	(5)				
course participants interacted respectfully with each other.	100 %	–	–	–	–	5	50 %	1.0	0.0
sufficient opportunities for the exchange with other students were offered.	80 %	–	20 %	–	–	5	50 %	1.4	0.8
I actively participated (questions, comments, discussions).	20 %	20 %	60 %	–	–	5	50 %	2.4	0.8
I had enough time to discuss difficulties I had with any topics.	60 %	40 %	–	–	–	5	50 %	1.4	0.5

3.6 Information on hybrid courses

Question text: You indicated that this is a hybrid course. Which format of participation did you make use of more often?

Answers		
Missing: 8 (80 %)		
Mean for course: "- *"		
	Absolute	Percentage
always presence (1)	0	0 %
mainly presence (2)	0	0 %
partly presence, partly online (3)	0	0 %
mainly online (4)	2	100 %
always online (5)	0	0 %
Total	2	100 %

* No value is displayed because of too few respondents.

The two cross-tabulations below show the joint distribution of the questions about the participation format in hybrid courses: *You indicated that this is a hybrid course. Which format of participation did you make use of more often?* and the behavior of the students in the course: *How often did the following apply?* Here, the respective participation format for hybrid courses is first crossed with 'active participation in the course' and then with 'time to discuss difficulties with any topics'.

Interpretation aid: In each cell of the cross-tabulation table, the number of cases is indicated to which a certain combination of expressions of the two questions applies. If an expression of the variable is not present in the data at all, this is marked with NaN (not a number).

Note: The percentages are the column percentages. Row and column totals are also given.

Interpretation aid: In each cell of the cross-tabulation table, the number of cases is indicated to which a certain combination of expressions of the two questions applies. If an expression of the variable is not present in the data at all, this is marked with NaN (not a number).

Note: The percentages are the column percentages. Row and column totals are also given.

Question text: Please indicate to what extent you agree with the following statements about the hybrid teaching of the course.

	fully agree	rather agree	partly agree	rather not agree	do not agree at all	Amnt.	Missing	Avg.	s
	(1)	(2)	(3)	(4)	(5)				
Communication and exchange between participants in presence and online work well.	100 %	–	–	–	–	1	90 %	- *	- *
When I participate online, I feel considered enough.	100 %	–	–	–	–	1	90 %	- *	- *
The technical equipment on site makes it possible that the online participants can be seen and understood well.	100 %	–	–	–	–	1	90 %	- *	- *
The technical equipment on site makes it possible that the presence participants can be seen and understood well online.	100 %	–	–	–	–	1	90 %	- *	- *
When I participate online, I have no disadvantages compared to presence participants.	100 %	–	–	–	–	1	90 %	- *	- *

* No value is displayed because of too few respondents.

Question text: What was your main reason for participating in this hybrid course?

3.7 Statements about the Learning Materials

Question text: How helpful were the following materials for your understanding of the course contents?

	very helpful (1)	rather helpful (2)	partly helpful (3)	less helpful (4)	not helpful at all (5)	no provision	Amnt.	Missing	Avg.	s
the media used for presenting the course content	80 %	20 %	–	–	–	–	5	50 %	1.2	0.4
the assignments/exercises provided	60 %	20 %	20 %	–	–	–	5	50 %	1.6	0.8
the scripts/texts provided	60 %	20 %	–	20 %	–	–	5	50 %	1.8	1.2
the recommended literature	–	50 %	25 %	–	–	25 %	4	70 %	- *	- *

* No value is displayed because of too few respondents.

3.8 Statements about Online Media

Question text: How helpful would you rate any online media used for the following aspects?

	very helpful (1)	rather helpful (2)	partly helpful (3)	less helpful (4)	not helpful at all (5)	not used	Amnt.	Missing	Avg.	s
supply of content (e.g. scripts, notes)	60 %	40 %	–	–	–	–	5	50 %	1.4	0.5
organisation of the course (e.g. preparation)	60 %	40 %	–	–	–	–	5	50 %	1.4	0.5
offer of additional materials and media (e.g. further literature, videos)	50 %	25 %	25 %	–	–	–	4	60 %	- *	- *
support for students' communication (e.g. chats, forums)	80 %	20 %	–	–	–	–	5	50 %	1.2	0.4

* No value is displayed because of too few respondents.

3.9 Custom Questions

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
I learned a lot from this course.	75 %	25 %	–	–	–	4	60 %	- *	- *
I found the workload appropriate (expected workload is about 10 hours per week).	25 %	25 %	25 %	–	25 %	4	60 %	- *	- *
The lectures and lecture materials were well-designed.	25 %	75 %	–	–	–	4	60 %	- *	- *

* No value is displayed because of too few respondents.

What did you like about this course?

This open question has been added by you.

- I found the videos accompanying the course very well-made, and I feel like they explained the concepts well. I also liked that the lecturer was very friendly and approachable for any questions, and it felt like he genuinely enjoyed the subject matter. Finally, the workload was perfect for an introductory course (quantity-wise and difficulty-wise).
- It was very suitable for me to learn at my own pace with the provided videos for each topic. I frequently asked the lecturer about topics which were difficult for me or how I could improve or enhance my knowledge and skills on certain topics. His answers were always fast and thorough and helped me, besides the videos and exercises, to emerge myself deeply into the topic.
- The in-person meetings were super helpful, especially discussing some tasks. The lecture notes were of great help!
- The videos of the professor explaining the topics are well made, easy to follow and understand. For me, a person who

hated math and thought I would never connect my life with this, the course showed an absolutely different side of math - the exciting math. Besides, the professor was not forgetting to men-

tion the names of specific signs and functions, or even was repeating them from time to time, it really helped to get the information better. Thanks to our lecturer, Michael, I stopped being

afraid of math and actually found it interesting. His love to the field has spread on me too, and I now see why people connect their lives with it.

Do you have suggestions for improving this course?

This open question has been added by you.

- A lot of the lecture notes graphs are missing - I believe this was mentioned in class at some point as being done on purpose by the previous lecturer, but I feel like it might be useful having them actually printed out somewhere for reference. And, this might be a personal preference, but I did not like the switch to online teaching (this is in case there are plans for making it permanent). It might be more convenient, especially when it comes to a "flipped classroom" class, but at that point we might as well do only self-study for the whole thing. I think the course benefits from having an in-person Übung session.
- Some topics, such as integrals, seem to be needing a bit more time for the explanation. The topic is indeed deep and difficult, that is why, especially for people not used to think in math terms in general, more time is needed. The main issue I faced: the last two videos on YouTube about the probability, especially the very last one have numerous advertisements. I do not pay for YouTube subscription and find it very annoying to have an add every two-two and a half minutes while watching a lecture which is already difficult to follow because of the topic.
- There were a few minor errors in the material, but I guess this will sort itself out over time. Or already has, because the lecturer nearly immediately took note of mistakes and corrected them.
- the examples that you went through in the videos were in absolutely no relation to the homework assignments. Especially tasks involving proofs took hours on end, with no real relation to the lecture content or my study program. It is frustrating beyond belief to have to do that each week over again, without seeing any real point in it. For in-person meetings, it would have been nice to focus on tasks more. Not just talking through the homework assignments, but doing some additional tasks (students by themselves, as groups, ...you name it). Again, I think this is due to the assignments just being a ridiculous great amount of work.

4 Overall Assessment of the Course

	partly high,					Amnt.	Missing	Avg.	s
	very high (1)	rather high (2)	partly low (3)	rather low (4)	very low (5)				
My knowledge increase is ...	50 %	50 %	—	—	—	4	60 %	- *	- *

* No value is displayed because of too few respondents.

	partly good,					Amnt.	Missing	Avg.	s
	very good (1)	rather good (2)	partly poor (3)	rather poor (4)	very poor (5)				
Altogether, I think this course is ...	75 %	25 %	—	—	—	4	60 %	- *	- *

* No value is displayed because of too few respondents.

5 Comparison of Means

Please note: The given means only show the results at the time of inquiry. All information is based on the participation of at least five participants per item. If there are no means listed, less than five students have answered the question.

6 Open Comments

6.1 Aspects beneficial to Learning

The students' answers to the open questions were taken on a separate questionnaire sheet which remained with the lecturer.

6.2 Problems and Suggestions for Improvement

The students' answers to the open questions were taken on a separate questionnaire sheet which remained with the lecturer.

7 Workload

	fully agree (1)	rather agree (2)	partly agree (3)	rather not agree (4)	do not agree at all (5)	Amnt.	Missing	Avg.	s
The workload for this course was manageable for me.	50 %	25 %	–	–	25 %	4	60 %	- *	- *

* No value is displayed because of too few respondents.

Question text: *How many hours per week on average do you spend on the taken course during this semester?*

Answers

Missing: 6 (60 %)

Median for course: 9

	Absolute	Percentage
5	1	25 %
9	1	25 %
>9	2	50 %
Total	4	100 %

8 Information about Degree and Study Semester

Answers

Missing: 7 (70 %)

Mean for course: "-. *"

	Absolute	Percentage
1.	3	100 %
Total	3	100 %

* No value is displayed because of too few respondents.

Answers

Missing: 6 (60 %)

Mode for course: "Master"

	Absolute	Percentage
Master	4	100 %
Total	4	100 %

9 Information about Trainings and further Services related to Teaching

9.1 Didactics at the University

Covering a lot of aspects on how to organize teaching and courses of studies, the Network **Studienqualität Brandenburg (sqb)** offers a wide range of programmes and information to lecturers.

You can find the current workshop programme online: www.faszination-lehre.de

9.2 For new Teachers

The **Potsdam Graduate School** offers targeted further qualification in academic teaching training to doctoral candidates (*Junior Teaching Professionals*) as well as post-docs and junior professors (*Senior Teaching Professionals*).

You can find more information online:

<https://www.uni-potsdam.de/en/pogs/career-development/teaching-professionals>

9.3 E-Learning

The work of the **Department Teaching & Media at the ZfQ** aims to improve the quality of studies through the sustainable integration of E-Learning into the teaching at University of Potsdam.

You can find out all about the various offers for designing teaching and using digital media (in teaching) at:

<https://uni-potsdam.de/zfq/lehre-und-medien/>

