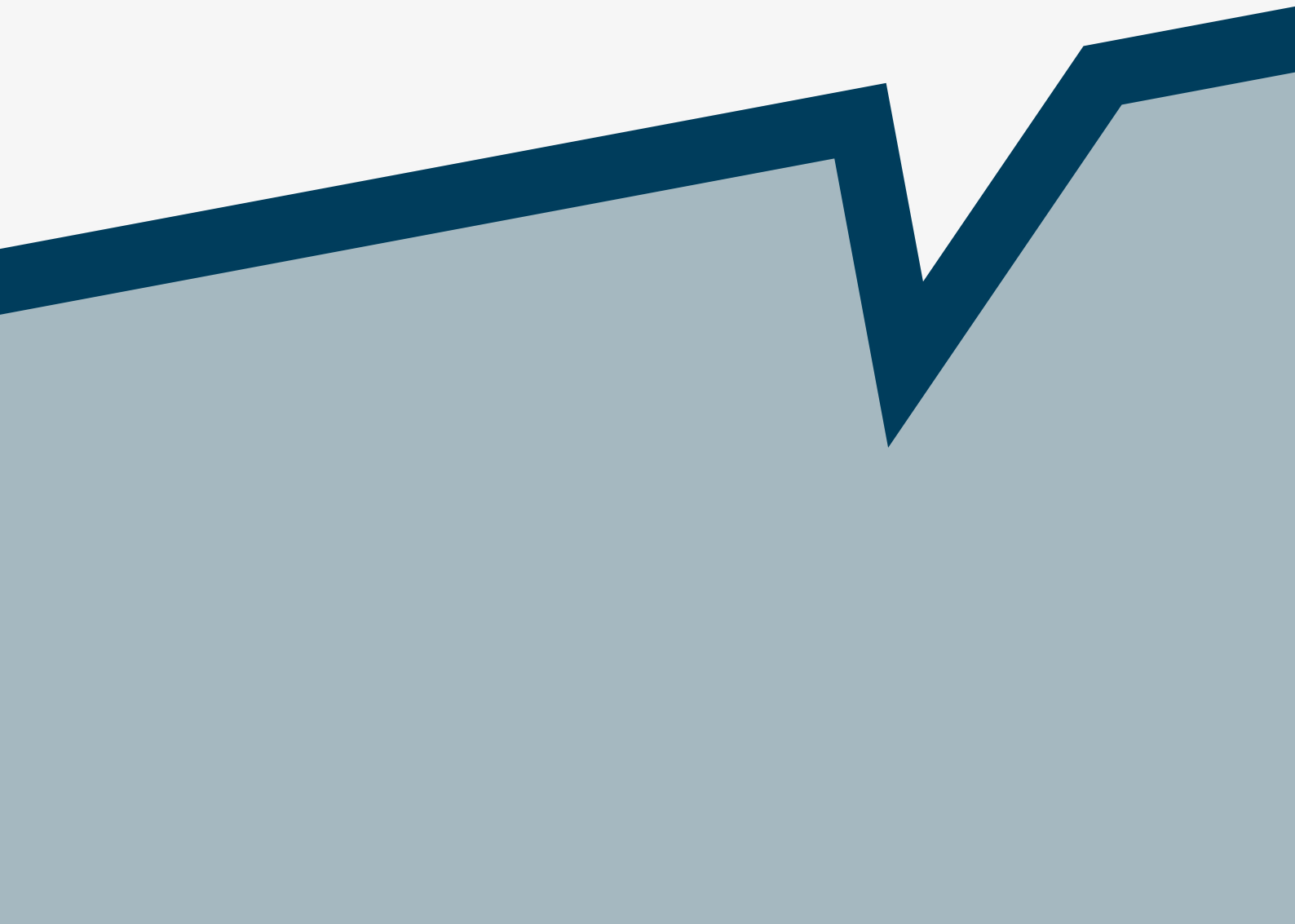# Results Report

Lecturer's Report

Course Evaluation – WiSe 2024

Course: "Foundations of Mathematics, Gruppe 1"

Michael Vrazitulis

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

Contents

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. Additionaly, 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 rewiev 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 by Deming 1982 (own and extended visualization)

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

Overview of teaching goals:

- 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

Overview of 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): {**lm6:item:text**}
- Simulation exercises/Role-play (students as agents and decision makers in a simulation): {**lm7:item:text**}
- Case study (practical example cases that require processing a large amount of information): **not included**
- Group Work (independent work on a topic in groups): {**lm9:item:text**}
- Excursion (Field trip with a scientific or practical goal): {**lm11:item:text**}

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. 6 students have participated in the survey. That means that the results of the survey are based on **6 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?	20 %	—	60 %	20 %	—	5	17 %	2.8	1.0
How much prior practical experience on the topics of this course (e.g. job or internship; research projects) did you gather beforehand?	—	20 %	20 %	20 %	40 %	5	17 %	3.8	1.2

	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?	20 %	40 %	20 %	20 %	—	5	17 %	2.4	1.0

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	20 %	20 %	40 %	20 %	—	5	17 %	2.6	1.0
topics already discussed on this course	20 %	60 %	20 %	—	—	5	17 %	2.0	0.6
topics discussed in other courses	20 %	20 %	60 %	—	—	5	17 %	2.4	0.8
your practical experience (e.g. in a job or internship, research projects) in the field	—	60 %	40 %	—	—	5	17 %	2.4	0.5

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	17 %	1.6	0.5
I am able to give an overview of the course content.	80 %	20 %	—	—	—	5	17 %	1.2	0.4
I now feel able to tackle a typical problem within this course's field.	20 %	80 %	—	—	—	5	17 %	1.8	0.4
I am able to depict complex course matters.	20 %	80 %	—	—	—	5	17 %	1.8	0.4
I am able to identify discrepancies and similarities of varied course content (e.g. discrepancies between different models or procedures etc.).	40 %	40 %	20 %	—	—	5	17 %	1.8	0.7
Because of this course, I am able to better evaluate the quality of professional articles on relevant topics.	20 %	—	80 %	—	—	5	17 %	2.6	0.8

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.	20 %	60 %	–	20 %	–	5	17 %	2.2	1.0
The course has reinforced my wish to continue my studies.	40 %	40 %	20 %	–	–	5	17 %	1.8	0.7
I enjoy solving the assignments given to me in this course.	80 %	–	20 %	–	–	5	17 %	1.4	0.8
In this course, I have learned things that excite me.	20 %	40 %	40 %	–	–	5	17 %	2.2	0.7
I engage with topics of the course beyond the course itself - just for fun.	–	–	60 %	40 %	–	5	17 %	3.4	0.5

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.	60 %	40 %	–	–	–	5	17 %	1.4	0.5
Because of this course, my ability to apply theoretical knowledge to practical problems/tasks has improved.	60 %	20 %	20 %	–	–	5	17 %	1.6	0.8

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.	80 %	20 %	–	–	–	5	17 %	1.2	0.4
structured the entire course well.	60 %	40 %	–	–	–	5	17 %	1.4	0.5
clearly presented the course content.	100 %	–	–	–	–	5	17 %	1.0	0.0
explained new terms and concepts in a precise manner.	80 %	20 %	–	–	–	5	17 %	1.2	0.4
was able to clearly explain complex matters.	100 %	–	–	–	–	5	17 %	1.0	0.0
gave illustrative examples that supported the comprehension of the course content.	60 %	40 %	–	–	–	5	17 %	1.4	0.5
gave helpful advice to tackle difficulties with comprehension.	100 %	–	–	–	–	5	17 %	1.0	0.0
repeatedly established links to topics already discussed.	100 %	–	–	–	–	5	17 %	1.0	0.0
asked questions that gave students the opportunity to review their own understanding of the course content.	60 %	–	40 %	–	–	5	17 %	1.8	1.0

The lecturer ...	fully applies (1)	rather applies (2)	party applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
gave students the opportunity to engage more deeply with topics interesting to them.	60 %	20 %	–	20 %	–	5	17 %	1.8	1.2
used varied methods to deliver the course.	40 %	60 %	–	–	–	5	17 %	1.6	0.5

3.3.2 Support outside of the Course

The lecturer ...	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	not used	Amnt.	Missing	Avg.	s
was easily reachable for questions and concerns.	60 %	20 %	–	–	–	20 %	5	33 %	- *	- *
took sufficient time for the individual concerns of the students.	40 %	40 %	–	–	–	20 %	5	33 %	- *	- *

* No value is displayed because of too few respondents.

3.4 Statements about the Module

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
The learning goal of the course was made clear by the lecturer.	100 %	–	–	–	–	4	33 %	- *	- *
The learning goal of the course is reflected in the teaching methods and the type of examination.	100 %	–	–	–	–	4	33 %	- *	- *

* No value is displayed because of too few respondents.

	fully applies (1)	rather applies (2)	partly applies (3)	rather not applies (4)	does not apply at all (5)	Amnt.	Missing	Avg.	s
The learning goal of the module was made clear by the lecturer.	75 %	25 %	–	–	–	4	33 %	- *	- *
The lecturer explained the linking between the learning goal of the course and the learning goal of the module.	75 %	25 %	–	–	–	4	33 %	- *	- *

* No value is displayed because of too few respondents.

3.5 Statements about the Learning Atmosphere

In the context of the lecture, ...	always (1)	often (2)	occasionally (3)	rarely (4)	never (5)	Amnt.	Missing	Avg.	s
course participants interacted respectfully with each other.	80 %	–	20 %	–	–	5	17 %	1.4	0.8
sufficient opportunities for the exchange with other students were offered.	40 %	–	60 %	–	–	5	17 %	2.2	1.0
I actively participated (questions, comments, discussions).	80 %	–	20 %	–	–	5	17 %	1.4	0.8
I had enough time to discuss difficulties I had with any topics.	40 %	40 %	20 %	–	–	5	17 %	1.8	0.7

3.6 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	40 %	60 %	–	–	–	–	5	17 %	1.6	0.5
the assignments/exercises provided	100 %	–	–	–	–	–	5	17 %	1.0	0.0
the scripts/texts provided	60 %	20 %	20 %	–	–	–	5	17 %	1.6	0.8
the recommended literature	20 %	–	–	20 %	–	60 %	5	67 %	- *	- *

* No value is displayed because of too few respondents.

3.7 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)	80 %	–	20 %	–	–	–	5	17 %	1.4	0.8
organisation of the course (e.g. preparation)	80 %	20 %	–	–	–	–	5	17 %	1.2	0.4
offer of additional materials and media (e.g. further literature, videos)	40 %	60 %	–	–	–	–	5	17 %	1.6	0.5
support for students' communication (e.g. chats, forums)	40 %	–	–	40 %	–	20 %	5	33 %	- *	- *

* No value is displayed because of too few respondents.

3.8 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	33 %	- *	- *
I found the workload appropriate (expected workload is about 10 hours per week).	25 %	50 %	25 %	–	–	4	33 %	- *	- *
The lectures and lecture materials were well-designed.	75 %	25 %	–	–	–	4	33 %	- *	- *

* No value is displayed because of too few respondents.

What did you like about this course?

This open question has been added by you.

- Definetly liked the lecturer, the assignments, and the video material provided. I also highlight the approach to gaining access to the exam. Knowing that really trying would also get you in the exam made the course feel more relaxed and actually improved my motivation.

- I found the weekly meetings very helpful. The assignments were of great value to check my own progress.

Do you have suggestions for improving this course?

This open question has been added by you.

- I preferred the in-class presentation of the course material over the video lectures. I think I'd preferred it if the in-class meetings were the main lecture while videos were used as an additional aid.
- Move set theory to the beginning as it is always used in Computer Science and ASP
- Perhaps the written material. Trying to read the book the course provides as a reference, "'Mathematical Techniques"', felt confusing as someone with no prior knowledge in the area. I would really appreciate having more options in that department. Similarly, I also wish there were additional exercises for practice in each unit. Simply so I can do the assignments, and later on review my knowledge with new problems.
- Some topics like defferentiation and multivariable calculus were only introduced in one lecture and we had only one week to grasp the concepts and do the assignments. I consider these two topics to be rather difficult and that they should be split into two weeks like other topics. Instead, simpler topics like matrix algebra could be introduced using only one lecture/week and sets could be tought together with probability I. I think that the two weeks of differentiation and multivariable calculus were very harsh with lots of workload and too little time to understand the new topics introduced. As a result I feel that I did not have enough time to understand these concepts fully and it will be a struggle for me in the exams.

4   Overall Assessment of the Course

	very high (1)	rather high (2)	partly high, partly low (3)	rather low (4)	very low (5)	Amnt.	Missing	Avg.	s
My knowledge increase is …	50 %	25 %	–	25 %	–	4	33 %	- *	- *

* No value is displayed because of too few respondents.

	very good (1)	rather good (2)	partly good, partly poor (3)	rather poor (4)	very poor (5)	Amnt.	Missing	Avg.	s
Altogether, I think this course is …	100 %	–	–	–	–	4	33 %	- *	- *

* 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   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	33 %	- *	- *

* 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: 2 (33 %)

Median for course: 7	Absolute	Percentage
2	1	25 %
6	1	25 %
9	1	25 %
>9	1	25 %
Total	**4**	**100 %**

7 Information about Degree and Study Semester

Answers

Missing: 2 (33 %)

Mean for course: "- *"	Absolute	Percentage
1.	4	100 %
Total	**4**	**100 %**

* No value is displayed because of too few respondents.

Answers

Missing: 2 (33 %)

Mode for course: "Master"	Absolute	Percentage
Master	4	100 %
Total	**4**	**100 %**

8 Information about Trainings and further Services related to Teaching

8.1 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*

8.2 For new Teachers

With the *Teaching Professionals Programme*, the **Potsdam Graduate School** offers a targeted further qualification in academic teaching. You can also find out more about support, further education and networking at: *www.uni-potsdam.de/de/pogs*

8.3 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/