



Quality Assurance Certification of English Medium Instruction Competencies in English-taught Degree Programs:



Environmental Governance (MEG)

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1. Certification Framework

Aim of Quality Assurance

In line with the ongoing internationalization of higher education, more and more universities offer English-medium instruction programs. The University of Freiburg currently offers 20 degree programs which are entirely taught in English, some of them specifically geared towards an international student body. The challenges of learning and teaching in a (usually) non-native language in a multilingual, multicultural classroom are manifold. Therefore, the University of Freiburg has tasked the English Medium Instruction (EMI) team to develop a diagnostic assessment procedure which ensures the linguistic and communicative quality of teaching in English. The procedure is aimed at degree programs interested in obtaining a quality seal assuring the linguistic and communicative quality of English-medium instruction in the program.

The English Medium Instruction Team

The English Medium Instruction (EMI) project is one of seven measures within the framework of the BMBF-funded (Federal Ministry of Education and Research) *Quality Pact for Teaching* at the University of Freiburg (funding code 01PL11007). The project is housed at the Language Teaching Centre (SLI) and the co-directors of the project are Gregg Dubow and Dr. Susanne Gundermann, supported by Louise Northover.

2. Certification Procedure

If at least 80% of permanent or long-term teaching staff in a program are certified, the program will be awarded a quality seal (Certified English Medium Instruction Competencies). This seal has a validity of five years. After its expiry, the seal can be renewed. Teachers who have been certified already and are still teaching in the program will not have to undergo further assessment.

Classroom Visit

The EMI team visits and video-records one English-taught class per teacher after agreeing in advance on a date. All students are to be notified about the visit, its purpose and the recording. In addition, the teacher sends the EMI team the teaching material envisaged for the class in advance so that the EMI team can prepare for the visit and take better notes during the class.

Student and Teacher Feedback on the Lesson

Upon conclusion of the lesson, the students are asked to fill in a feedback questionnaire. The questionnaire consists of questions about how the students perceived the linguistic and communicative quality of the lesson. This questionnaire allows valuable insights into the quality of teaching in English from an insider perspective. Student responses count as 33% of the final results of the observed lesson. The teacher also receives a similar questionnaire which he/she fills out after the class as a self-reflection on the communicative intention of the lesson. The teacher self-assessment also serves to juxtapose students' views of the session with those of the teacher.

A Feedback Meeting

Approximately 7-14 days later, the teacher and the EMI team have a feedback meeting. During this meeting, the teacher receives the video recording taken of his/her lesson, the summarized results of the student feedback, and the EMI team analysis on communicative language competencies.

3. Diagnostic Assessment

Based on language and specific communication criteria for the purpose of teaching in English, the EMI team and the students rate the linguistic and communicative quality of the lesson.

3.1. Score Calculation

- There are two categories (linguistic competencies and communicative competencies), each category has five criteria.
- Each criterion is evaluated based on the recorded classroom visit.
- Scores 1-4 are awarded (1 being the best and 4 the worst score).
- The average for the five criteria in each category is calculated to provide an overall score for that category.
- The threshold score is 2.0.
- The EMI team's scoring evaluation is merged with the student evaluation scores. The two scores for each category are combined with a 2:1 weighting into a final score.

 \rightarrow If the final score for each category is between 1.0 and 2.0, the quality threshold is met.

 \rightarrow If the final score of one or both categories is above 2.0, the quality threshold is not met and the teacher is not certified.

3.2. Linguistic Competencies

L.1	Fluency	Speech is fluent with rare instances of language-related hesitations which do not disrupt comprehension.	
L.2	Articulation and Pronunciation	Pronunciation (phonemic sound contrasts) is clear to understand, word stress is accurate according to target language standards, and articulation does not require extra listener effort.	
L.3	Grammatical Accuracy	Grammar is accurate according to target-language standards with only minor or rare inaccuracies which do not disrupt comprehension.	
L.4	Lexical Range and Accuracy	Lexical choice is accurate according to target-language standards and semantically transparent (avoidance of opaque idiomaticity); lexical range is broad enough to elaborate on subject-specific content and to compensate any lexical gaps.	
L.5	Code Consistency	Code is consistently English, both in speech and writing. If a language other than English is used, a follow-up explanation or translation in English is provided.	
L. Total		The linguistic performance might occasionally require extra listener effort but does not impede comprehension.	

3.3. Communicative Competencies

C.1	Cohesion	Cohesion in the session is achieved through a range of cohesive devices, the structure and objectives of the session are clearly expressed, and the lesson pace is appropriate.
C.2	Prosody	Speech rate is appropriate and does not require extra listener effort and prosodic variation (intonation, stress, pauses) to enhance student comprehension can be observed.
C.3	Initiation and Integration of Student Input	Student input and comprehension are facilitated through teacher questions and student contributions are anchored and integrated into ongoing classroom discourse.
C.4	Response to Student Input	Responses to student questions or contributions are sociolinguistically appropriate, if necessary comprehension is negotiated through adaptation of (non- or para-) verbal communication (variation in prosody, use of additional media or body language).
C.5	Intercultural Transparency	Locally specific concepts or matters are contextualized and explained in advance for the multicultural classroom.
C. Total		The communicative performance stimulates student participation and facilitates comprehension.

4. Course of Studies: Environmental Governance (MEG)

Twenty-two teachers (thirteen professors, one junior professor and eight post-docs) took part in the certification procedure during the summer term 2016 and the winter term 2016/17. All twenty-two teachers were certified. In total, 800 student feedback questionnaires were filled in. Of course, most students filled in the questionnaire multiple times as they attended many of the courses. Graphs 1 and 2 below depict the aggregate results for the 10 quality criteria assessed during the certification. Each bar represents the score range for the respective competency and the red line illustrates the mean score for that competency.



4.1. Certification Summary – Linguistic Competencies

Graph 1: Linguistic Competencies: Environmental Governance (MEG)

Linguistic competencies of teachers in the program were at an advanced level. In particular, lessons were characterized by accurate academic vocabulary (*e.g. patchwork of paradigms, underlying assumptions, room to manoeuvre, etc.*) as well as subject-specific vocabulary (*e. g. oxidize it, scientific misconduct, moisture evaporates, infrastructure intersects,* and many other examples).

Furthermore, many lessons included nice examples/analogies, which conveyed specific concepts in more general and accessible terms (e.g. "a red line, a threshold", "How do you cage the water balance of your little hydrological system, your potted plant? [...] this is essentially how you can imagine most of the world's river basins", comparing agency to a school of fish, comparing caged birds to restricted capital). There were isolated instances of inaccuracies in pronunciation and lexicon. They are listed below, but only a few lexical mixups are believed to have caused misunderstanding during the class.

Recurring word stress mistakes		
*Capital letters represent stressed syllable.		
What was said	What is correct	
RE-view(s)	re-VIEW(S)	
par-a-ME-ter	pa-RAM-e-ter	
As-PECT	A-spect	
deCADE DEcade		
imPACTs IMpacts		
Com-MENTS	COM-ments	
RO-bust	ro-BUST	
EF-fect	ef-FECT	
Recurring phonetic issues		
Phonetic explanation	Example words	
Th - th $[\theta, \delta]$, not t sound or s sound. To properly pronounce th, make sure your tongue touches the back of your teeth.	thought, methodologies, something	
V - to differentiate between $/v/$ and $/w/$, make sure your top teeth touch the inside of your bottom lip when pronouncing words with $/v/$.	value, valley, version, visible, vapor, everywhere	

Linguistic competency 2 – Pronunciation

Miscellaneous pronunciation issues		
these vs. thisWhen pronouncing these, the <i>i</i> - sound is long not short. The vow is / <i>i</i> :/ as in GREEN. It's a tense vowel sound. On the other hand sound in this is short. The vowel sound is /I/ as in SILVER		
scarcity	First syllable scar rhymes with hair, not car	
host	Host rhymes with coast and most, not cost and lost	

Linguistic competency 4 – Lexical accuracy

Incorrect words but meaning was clear		
What was said	What is correct	
Let's briefly recover	Let's briefly review/recap	
We are <i>delayed</i>	We are behind schedule	
Incorrect words and meaning was not clear		
We can <i>play</i> out this economic power	We can <i>use</i> this economic power (as an advantage)	
This fact is sometimes overseen	This fact is sometimes <i>overlooked</i> (not seen, missed)	

4.2. Certification Summary – Communicative Competencies



Graph 2: Communicative Competencies: Environmental Governance (MEG)

Some comments for specific criteria are provided in the following.

Communicative competency 1 – Cohesion

General strengths: Most lessons began with clear and explicit outlines communicating to students what was going to be covered in the lesson(s). In addition, language use on a micro-level (signposts) - to signal transitions to new topics - to highlight important info or contrasts and to communicate to students connections between previous and/or future lessons, was quite explicit, which enhances cohesion of the lesson and ease students cognitive load.

Recurring weakness: While some lessons addressed general learning objectives or were formulated from the we-perspective (*e.g. ...and that's what we will look at*) or addressed teaching objectives (*e. g. ...telling you a bit about the field...*), **explicit** learning objectives were rarely observed (they may have been given on day one of the course). A well formulated learning objective is SMART (Specific, Measurable, Attainable, Relevant, Time-specific) and formulated from the student's perspective. Including these at the beginning of each lesson crystallizes what students should be able to better do by the end of lesson(s) and allows students to selfmonitor whether they have achieved the learning objectives stated at the beginning of the lesson. This added degree of explicitness and transparency is an especially helpful tool to facilitate learning in an international classroom so that students from around the world with different education backgrounds, learning styles, and even language levels can better extract the main points and objectives of 90 minute lessons taught in a foreign language.

Communicative criterion 3- Initiation and Integration of student input

General strengths: Lessons were characterized by questions to elicit student responses. Questions were usually open-end (e. g. *How can we conceptualize globalization?*) to ascertain student knowledge. Some questions were more targeted - yes/no questions -(e. g. *Do you see any significance in that?*) to elicit short responses from students and check their understanding of certain topics. Many questions posed by teachers used specific verbs, a feature which makes questions more accessible for students since it directs them more, e.g. "What would you criticize about this theory" is more explicit than "What do you think about this theory?".

Recurring weakness: It is worth mentioning the importance of integrating student input during lessons. When posing questions and eliciting student input, teachers need to ensure that the whole class heard/understood what was said. More than once, we observed students giving answers in a low voice and/or in an accent not everyone was familiar with. While the teacher may have understood the input, it was difficult for us – and we assume for the other students – to understand what was said. Teachers either need to ask students to speak up or repeat the essence of the student input so that the entire class is on the same page.

General observation: The degree of interaction in observed lessons was quite high and marked by explicit teacher questions and/or mini-tasks for students to work on and discuss. Some feedback to student comments consisted of one or two word responses, such as "Right", "Exactly", or "Yeah". Students benefit much more from brief interactions with the teacher/expert when feedback is explicit. In other words, teachers need to expand a bit on what was right or valid or not necessarily the case. This point inevitably ties into the skill of integrating student input. The more explicit feedback is, the more students from different learning cultures are guided in assessing their understanding of content.

Communicative criterion 5 - Intercultural Transparency

Due to the nature of the program, instances of host-culture specific context requiring transparency were observed in lessons, especially concerning locations and specific environmental issues in Germany.

- Reference to Stuttgart 21
- Reference to *EEG*
- Reference to Weil am Rhein
- Reference to Landkreis Hochschwarzwald
- Reference to *Water quality in Seepark*
- Reference to the state of Baden Württemberg
- Reference to the German health care system
- Reference to German/European history
- Reference to Lidl

Based on one observation, it was hard to judge whether students had been previously exposed to these concepts/locations. Bear in mind that students, especially in first semester, will not be able to understand/follow many of these locally specific references. Bigger issues such as Stuttgart 21 or Energiewende undoubtedly need much context for international students to truly understand their significance/meaning in a similar manner as an informed German does.

5. Recommendations and Ideas

The certification focused on the linguistic and communicative competencies of teaching staff. Beyond these competencies, we would like to share some best practice recommendations for teaching in English with an international student body. These recommendations pertain more to teaching methodology and research has shown that they can heighten the learning effect for students:

• Make the lesson structure as explicit as possible. Communicating lesson structure helps students better remember specific content of a lecture, i.e. "Our lesson today will cover three points. First, we are going to...". For more on different lecture structures one can use, see (also) 5.1.

- Communicate learning objectives at the beginning of a lesson to help students orientate themselves as to what they are expected to learn, i. e. to be able to do, after the lesson. While students may not necessarily achieve a stated objective by the end of a lesson, the motivated student who reviews a lecture again will work towards the learning objective, i.e. Now I am able to explain the difference between method A and B. For more on formulating explicit learning objectives, see (also) 5.2.
- Consider micro-methods to activate students in lectures. Although lectures are usually accompanied by tutorials and the main aim of lectures is to present facts, brief periods of interaction (task students work on individually or in pairs) allow students to question and/or monitor understanding while gaining/generating knowledge. This will inevitably help students learn and allow tutorials to be more focused on 'problem' areas. Furthermore, listening to a 90 minute lecture is demanding on human's attention span capabilities. The average attention span is anywhere between 10-15 minutes before it begins to wane. *For more on micro-methods to activate students, see (also) 5.3.*

5.1. Learning objectives

Why learning objectives?

Explicitly addressing learning objectives at the beginning of your lectures in the multilingual, multi-cultural learning environment have numerous benefits.

- Clarify your intent and increase the chances of you and the learner ending up there
- Guide the planning and delivery of instruction
- Help the learner by explicitly stating expected student performance at the end of the lesson/course
- Allow for you to assess level of learning
- Enable students to self-assess their learning progress

Qualities for learning objectives based on Mager (1984)

Identify desired **performance** - Use *observable, action verbs* to describe intended student performance. It may be as simple as "*list* the main advantages of defining learning objectives". Avoid vague verbs like *understand or know*, which are harder to measure or assess.

Include **conditions** if appropriate - Time limitations, work in a lab or in the field or the use of certain tools, manuals, procedures.

Determine **criterion/standard** for desired student behavior – A criterion/ standard in learning objectives answers questions like 'how many?','how fast?' or 'how well?'.



Figure: Mager's qualities for explicit learning objectives.

Source:https://www.slideshare.net/heatherdowd/writing-objectivesusing-abcd-method-presentation

SMART learning objectives

• Specific	Specifically – says what student will be able to do Measurable – can be observed by the end of the training session	
• Measurable		
Achievable	Attainable for students within scheduled time and specified conditions	
• Relevant	Relevant to the needs for future skills of students	
• Time Framed	Time-framed - achievable by the end of the training session	

Bloom's taxonomy of Educational Objectives (1956)

Bloom identified three *domains* of educational activities for learning: **cognitive**, **affective**, **and psychomotor**. Figure 1 on the left categorizes the cognitive domain, which consists of six levels of knowledge. The premise is that in order to understand a concept, one must first remember components of or facts about the concept, then in order to apply the concept one

must (fully) understand it, and so on. *This* categorization of knowledge levels can further help teachers devise explicit learning objectives which align to the level the teacher wants students to achieve for a certain lecture.

Please note that there are systems, such as the Structure of Observed Learning Outcome (SOLO), which have been devised to formulate learning objectives. Bloom's taxonomy, however, is the most widely applied one today.



Figure: Bloom's 6 levels of knowledge. Source: http://www.nwlink.com/~donclark/hrd/bloom.html

Examples of optimized learning objectives in line with Mager's qualities and the SMART principle

vague	explicit	
You will learn (vague performance) about a type of test (vague standard) to detect HIV.	You will be able to <i>properly perform</i> (measurable performance) a <i>Western</i> <i>Blot test</i> (clear standard) to detect HIV.	
I will try to explain (teacher perspective) some tests (no standard) used to detect HIV.	At the end of this lecture, <i>you</i> (student perspective) will be able to <i>identify and describe</i> (measurable performance) <i>five</i> <i>major tests</i> (standard) used to detect HIV <i>in the field</i> (specific condition).	

Participants will know more (vague performance) about learning objectives (vague standard). Participants will be able to *state* (measurable performance) *three key qualities required for explicit learning objectives* (specific standard) and *apply* (measurable performance) them to *their own tertiary teaching context* (specific condition).

5.2. Lecture structures

The following section stems from Donald Bligh's authoritative book on lectures "What's the Use of Lectures?" as well as the online series "Teaching in Universities and Colleges" from <u>Epigeum</u>.

Preface

Regardless of the lecture structure(s) you use in your teaching, the most important aspect is to communicate the structure to your students at the beginning of a lecture. Students find it easier to remember details within a stated structure and a clearly communicated lecture outline along with explicit learning objectives help give students a clear road map for a lecture.

In the spirit of best practice teaching, each of the structures in this reader is bookended to tie together the big picture for students in a course. In other words, each lesson would begin with 1. brief summary of the previous lesson/tutorial/homework **and** 2. explicit mention of current lesson structure and learning objectives. The lesson would ideally end with 4. brief summary of lesson **and** 5. preview of the next lesson/homework assignment.

Hierarchical - The classic lecture structure which reads like an outline.

1. Summary of previous lecture/tutorial
2. Communicate lecture structure, learning objectives and motivation/relevance
3. Hierarchical structure
Topic 1 A. B.
Topic 2 A. <i>i. ii.</i> B.
Topic 3 A. B.
4. Summary of this lecture
5. Preview upcoming lecture/Address next assignment

Principles and Examples - If you want to center your lecture around tangible, real world examples, this is a nice lecture structure to use. The number of principles and examples is of course flexible.

1. Summary of previous lecture/tutorial		
2. Communicate lecture structure, learning objectives and motivation/relevance		
3. Principles and examples structure		
Dringinlo A	Example 1	
Frinciple A	Example 2	
Dringinlo D	Example 1	
Principle B	Example 2	
4. Summary of this lecture		
5. Preview upcoming lecture/Address next assignment		

Endpoint - This lecture structure can heighten student motivation by showing the result at the beginning. The lecture then focuses on the steps and details required to achieve the result. Ideally, this structure can be applied to many different types of endpoints (working device, structure of a protocol, successful experiment, properly written abstract, etc...).



Thesis-Antithesis - This is an appropriate meta-structure to compare and analyze two competing theses. In addition, summaries and evaluations of each thesis are nice opportunities to include students

1. Summary of previous lecture/tutorial		
2. Communicate lecture structure, learning objectives and motivation/relevance		
3. Thesis-Antithesis structure		
Main thesis	Anti-thesis	
Intro to thesis	Intro to anti-thesis	
Point 1 - Evidence	Counterpoint 1 - Evidence	
Point 2Counterpoint 2- Evidence- Evidence		
Summary/review Summary/review		
Synthesis/Evaluation		
4. Preview upcoming lecture/Address next assignment		

Chain structure - This lecture structure lays out the logical sequence of a process. The inclusion of repeating some steps before moving on to (more complex) steps in the process is a nice approach to re-emphasize key points.



Matrix - This structure allows you to compare methods/solutions you apply to certain problems/situations. At the end of a lecture, a matrix can depict an overview of the covered methods/solutions with the respective result(s).

1. Summary of previous lecture/tutorial			
2. Communicate lecture structure, learning objectives and motivation/relevance			
3. Matrix structure			
	Problem/Situation 1	Problem/Situation 2	
Method/solution A	Result 1A	Result 2A	
Method/solution B	Result 2B		
Method/solution C Result 1C Result 2C			
4. Summary of this lecture			
5. Preview upcoming lecture/Address next assignment			

5.3. Micro-methods to activate student learning

Motivation for this mini-reader

Figure 1 represents average student attention spans during lectures based on studies reported in Bligh (1998). Basically, students' attention spans fall significantly after the first 15 minutes and recover slightly at the end of lectures.



Figure 1: Attention spans in a passive lecture

Figure 2: Attention spans in an active lecture

Figure 2 shows how interrupting passive lectures with an activating task can regenerate attention during a lecture. Embedding a brief activation task (answering questions in writing/ discussing with others) during a 90 minute lecture not only recaptures students' attention but it also deepens learning.



Figure 3: How students' best learn

Figure 3 illustrates that the more active the type of learning, the more profound the learning effect for students.

In light of these studies, the English Medium Instruction (EMI) team has compiled a nonexhaustive list of student-centered methods on the following pages. The methods stem from personal teaching experiences, teaching workshops we have attended, and articles and resources cited in the reference section. This mini-reader of activation methods provides teachers with ideas and tools to use in their English-taught classes. The methods here go beyond inviting student questions and aim to activate students in lectures, foster deeper

thinking, and enhance learning. The next section lists fundamental questions to consider when planning activation tasks in your lecture.

List of guiding questions when planning an active learning activity

The following two sections stem in large part from the <u>University of Minnesota Center for</u> <u>Educational Innovation</u> website.

- What are your objectives for the activity?
- Who is interacting? Should students pair up with someone with a different background? (e.g. different previous degree, ...)?
- When does the activity occur during the class (beginning, middle, end)? How much time are you willing to invest on individual activities?
- Will students write down their answers/ideas/questions or just discuss them?
- Will students turn in the responses or not? If they are asked to turn them in, should they put their names on them? Will you give students a minute or so to reflect on the answer before discussing it or will students be prompted to jump right into a discussion?
- How will work be shared with the whole class? How will you share the feedback and insight you gain from their responses?
- When students respond to a question, how are you going to ensure that they leave with confidence in their understanding? Often, if the various student answers are followed with the instructor's input, students become frustrated. Even with a question that has no absolute "right" answer, students want to know what the instructor's stand on the question is.

Keys to success that should be kept in mind when applying the following methods:

- Start from the first day of class and **create a culture** with your students, i. e. "This is one way we are going to learn in my class".
- Use **methods** you believe will **add to student learning** in your course. If you are skeptical of the method, it will likely come across as so for your students.

- Start small and be brief. Explain the aim of the exercise and what students should do.
- **Don't use the same techniques too often**. One technique per week is reasonable. Plus using different types of tasks will appeal to and motivate different types of learners (analytical, kinesthetic, visual, auditory) in your class.
- Vary the accountability by occasionally having students turn in the work, which you comment on the following week. Doing so also provides teachers with valuable feedback on what students have (not) understood.
- Request students vary their seating arrangements to increase their chances to work with different people and thus tap into different sources of knowledge and viewpoints.
- **Randomly call on students to share answers**. The benefit being that students are held accountable for doing the activity.
- Include some content from in-class activities in the formal evaluations in some way. For example, include a short essay question that was used in a think/pair/share exercise.
- **Be candid with the students** as to why you are asking them to do these things. Explain attention span, the need for engaging material individually and socially, and that research shows better learning occurs by using active learning.
- Always try the question or task yourself first. Whenever possible, also try it on a colleague. Collect feedback and modify where necessary.

The next section describes activation methods for a lecture setting and their benefits to both students and teachers.

Activation methods

• Pose study question(s) orally or an a slide

Allow students 2-3 minutes to formulate an answer to the question (in writing/pair discussion/individual thinking) before discussing their responses. Study questions can also be given at the end of class and discussed at the beginning of the next class. By labelling it a study question, *student motivation* should ideally increase.

• Have students formulate potential exam questions

Ask students to write down a **potential exam question** (give them roughly one minute) **based on the content covered in the current or previous lecture**. Then ask a couple of volunteers to pose their question to the rest of the class. This activity during the questions & answers slot helps students in *self-monitoring* their lecture comprehension and learning progress and gives you an idea what they perceived as essential so far.

• Buzz groups

Using a prompt (image, problem statement, a formula or model with an error), **pose a question which students should quickly address/discuss with their neighbours**. After 1-2 minutes, ask some volunteers to summarize what they discussed. This **quick pair/share approach** can be used so that students summarize previously covered material and give the teacher feedback on *student comprehension levels*. It can also *activate students* to topics that will be covered while giving the teacher a first impression of current knowledge levels. (View <u>video</u> from the Duke Center for Instructional Technology whereby a teacher gets students to discuss questions/problems in a large lecture).

• Think/pair/share

This works well for **pre-planned questions** from the teacher or even for a good question posed by a student (using student questions for an in-class activity is one way to integrate student input into a lesson and acknowledge the validity of the student's question). First each student **thinks about the question** on his/her own (you may ask them to write some notes). Then students **pair up** with a neighbour to are thoughts and/or **synthesize ideas**. Thirdly, the teacher calls on a couple of pairs to **share** what they discussed/prepared. The teacher can document the input on the board. A well-thought out question can *generate student ideas* that connect to the next topic you plan on addressing.

• Silent answer summary

Have students note down in a few sentences or bullet points what they perceived as the **core message of the lesson** (give them 1 minute). Then the teacher briefly **summarizes the lecture** (orally or on a prepared slide) and asks students to compare their notes with the summary. This method helps students to individually check *whether they achieved the envisaged learning goal* of the lecture. Teachers can also collect students' written answers to *gauge student learning progress* and/or address potential misconceptions/errors in the next lesson.

• Knowledge probes

Prompt straightforward responses (short answers, showing of hands in response to multiple choice questions, flash cards) from students before diving into a topic. Such probes are meant to help teachers *determine effective starting points of instruction,* i.e. will the topic be new or a review for students? This in turn helps teachers determine an appropriate lesson pace. Knowledge probes can also be done electronically before a lecture via a questionnaire. Teachers can present results of a questionnaire to begin a lecture and thus make students' knowledge levels among their peers transparent while focusing student attention on common misconceptions/errors and on what will be covered in a particular lesson.

• Two minute paper

Ask participants to **write** on a topic or in response to a question that you've developed for the session **for 2 minutes**. This is a nice method when teachers are having students *move from one cognitive level to the next*, i. e. understanding of content to application or analysis of content. The added medium of writing allows students to write down answers before discussing them. This method can also be employed when a particularly good question comes from students.

• Two column method

Before tackling a problem or applying concepts, teachers can help students more fully consider a problem or concept by **employing a two-column method of generating and recording responses to a prompt** – e.g., "Benefits of material X /Drawbacks of material X". For this, the teacher has to set up two columns on the board/flip chart and ask students for input (that was already covered) that will support the columns. You might ask half the class to focus on column one and the other half to focus on column two. This method allows students to *review and compare acquired knowledge* (lower cognitive level). An add-on to this method is to have students generate a third column which lists how to apply that knowledge (higher cognitive level), i. e., "Material x is appropriate to use in fabricating device y because...".

• 3-2-1 format

For this review method, the teacher provides **3 pieces of content information** covered in lecture x or in an assigned reading (i.e. three types of cells, three techniques to..., three types of forces in...). Then the teacher has students **write/discuss 2 examples** or uses of the information covered as well as **1 unresolved question/point of confusion**. The teacher needs to be very specific as to the scope of the 3 pieces of content information so that this method remains focused. This method allows *students to check comprehension and teachers to hear what is (still) unclear for students*.

• Collaborative summaries (Power point karaoke)

Have slides/handouts prepared that either contain **review questions or have missing information** (see Jakee 2011). Students work on answering questions and/or filling in missing info. Teacher then reconvenes class and prompts students to share answers. Teacher can either have answers to questions already prepared on the slide and simply clicks in the answer at the appropriate time or teacher can write answers on slide instantaneously via electronic pen. This method allows *students to actively take part in a summary while checking their comprehension. Teachers can simultaneously gauge student learning progress and address 'inadequate' answers*.

The next section briefly describes the flipped classroom, a meta-level teaching strategy that has been employed in many university courses using video lectures.

Meta-level teaching strategy to enhance student activation

• Flipped, or inverted, classroom

The flipped classroom is a pedagogical model in which the **typical lecture and homework elements of a course are reversed**. Students view lectures online in advance to gain knowledge which is then deepened in the actual class via problem sets/group tasks. The teacher's in-class role switches from the provider of knowledge (the lecturer) to a facilitator of learning (guiding exercises and giving feedback). While this model requires increased preparation upfront (carefully prepared recorded lectures with questions/tasks), the level of learning with the teacher is undoubtedly more effective. The following <u>website</u> provides a nice first overview on the flipped classroom.

5.4. Further support options

• EMI Classroom Visit with Feedback

If colleagues in your department are interested in receiving feedback on linguistic and communicative competencies for teaching in English, a <u>classroom visit (with</u> <u>optional video recording) can be arranged upon request</u>. Additionally, for those who have already had a classroom visit with feedback, a follow-up visit provides an opportunity for feedback on particular competencies, which you would like to improve on or adapt based on feedback received after the first classroom visit.

• One-on-One training

Should you be seeking one on one sessions to work on particular aspects of teaching in English (making lectures more interactive, handling strange sounding student accents, conducting oral exams), individual sessions can be arranged <u>upon</u> request.

• EMI Workshops

Tailored workshops: Are you and a small group of like-minded colleagues interested in having a workshop on Teaching in English? Potential topics include lecturing in English, initiating student input in your teaching, handling student input, leveraging diversity in the international classroom and others. We have an open ear and welcome additional requests you may have. Simply email us at emi@sli.uni-freiburg.de.

Standard workshops: Go to our <u>workshop page</u> to read about workshops we offer for all teachers at the University of Freiburg, their content, and dates.

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