Teaching for active learning: Guidelines for teachers

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1. Teaching for active learning

Active learning is defined as a learning process whereby the focus is on the individual learner and their active engagement in that process. It should be noted that learning is defined as a process of a relatively permanent change of behaviour of an individual, primarily as a result of the learner's activity. In that sense, every learning is active learning. However, in pedagogy and psychology the syntagm *active learning* is used to emphasise the importance of the activity of the learner/student in the process of learning and to argue against teaching characterized by passivity of the learners/students, which unfortunately appears too often in practice. The role of teachers in achieving active learning is crucial, since it is their task to organise teaching that will stimulate learners/students and ensure that they do not only passively receive and reproduce information, but learn actively, cooperatively, and critically (Bell & Kahrhoff, 2006; Peko & Varga, 2013; Vizek Vidović, Benge Kletzien & Cota Bekavac, 2002).

In pedagogy, two approaches to teaching are recognized[1] – teaching to transmit information (Teaching as Transmission) and teaching to encourage active learning (Teaching for Critical Thinking). The main features of the two approaches are summarized in the table below.

Approaches to teaching	
Teaching to transmit information (Teaching as Transmission)	**Teaching to encourage active learning (Teaching for Critical Thinking)**
Focuses on the transmission of teaching content from teacher to learners/students.	Focused on creating teaching content as part of an active and collaborative relationship between teacher and learners/students.

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[1] Many authors have written about this dichotomy, such as: Paolo Freire, who differentiates between the *banking model of education* and *liberating education* (2002); Matthew Lipman, who compares the standard paradigm of normalized teaching practices and the reflexive paradigm of educational practices for critical thinking (2003); David Klooster (2002), who opposes *traditional* to *modern* education; and Vlasta Vizek Vidović (2002), who writes about teaching as information transfer and teaching to encourage deeper understanding or teaching guided to shape the learner's experience.

Learners/students are passive recipients who mechanically memorise and reproduce the teaching content.	Learners/students actively shape teaching content and think critically about it.
Learning outcomes are predominantly defined only for lower achievement levels (memorising and comprehension)	Learning outcomes are defined for all achievement levels (memorising, understanding, application, analysis, evaluation, and creation).
Learning outcomes are predominantly defined only for the cognitive domain – the aim of the teaching process is to acquire knowledge.	Learning outcomes are defined for the cognitive, psychomotor, and affective domain – the aim of the teaching process is to acquire knowledge and develop skills and values.

Table 1. Approaches to teaching

Teaching aimed to encourage *active learning* (Teaching for Critical Thinking), which makes the essence of contemporary (higher) education, is discussed in more detail below. Guidelines for teachers to encourage active learning are given[2] (a) through an explanation of key didactic elements – learning outcomes, teaching content, teaching methods and forms of class organisation, assessment methods, and classroom environment, precisely from the perspective of active learning, and (b) by highlighting the importance of constructive alignment of said didactic elements.

2. Learning outcomes

Planning teaching based on the principles of active learning cannot be exhausted with learning outcomes aimed at the lowest achievement levels – memorising and comprehension. For example, *Upon completion of the programme, students will be able to list the most important representatives of certain periods in English literature ending with the 18th century.* or *Upon completion of the programme, students will be able to define basic concepts and describe the basic principles of phonetics and phonology.* In teaching based on the principles of active learning, learning outcomes aimed at the lowest levels of achievement (Bloom, 1956; Anderson & Krathwohl, 2001) are just a starting point and one part of the teaching process that necessarily involves learning outcomes aimed at higher achievement levels as well – application, analysis, assessment, and creation (Ibid). At the same time, it should be noted that, in addition to learning outcomes in the cognitive domain, teaching for active learning also includes learning outcomes in the psychomotor (aimed at developing skills) and the affective domain (aimed at developing attitudes and values). Therefore, upon active participation in a teaching programme aimed at active learning, students are expected to be able to list key concepts, define key phenomena, give examples, apply the topic in practice, evaluate phenomena, formulate their own attitudes towards the topic, etc., but also to develop certain skills (i.e., to guide a discussion, to actively listen, etc.) and values (e.g. openness, initiative, responsibility, tolerance, etc.).

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[2] Guidelines are based on the generic teaching model for critical thinking (Buchberger, 2020).

Guidelines for teachers: learning outcomes
To encourage active learning, formulate learning outcomes aimed at different achievement levels and in different domains.
Examples of learning outcomes[3] aimed at encouraging and achieving active learning Upon active participation in the teaching programme, students will be able to • Identify relevant information about the topic, • Differentiate between relevant and irrelevant information about the topic, • Interpret relevant information about the topic, • Interpret the phenomenon from different perspectives, • Give examples that additionally explain the topic, • Evaluate key phenomena related to the topic (e.g. list advantages and disadvantages), • Justify a hypothesis related to a certain phenomenon, • Recognize reliable sources of information, • List the features od reliable sources of information, • Differentiate between reliable and unreliable sources of information, • Give an example of an argument related to the topic, • Debate argumentatively about a topic, • Structure pieces of information into a coherent unit, • Moderate a discussion, • Actively listen other interlocutors and ask questions related to the discussion, • Create own vision and suggest solutions, • Invent and innovate existing practices, • Demonstrate openness towards discussions, • Demonstrate initiative in work, • Formulate own attitudes about a topic, • Justify own attitudes about a topic, • Evaluate different attitudes about a topic, • Respect other opinions about a topic, • … *To encourage active learning, teachers can use these guidelines as scaffolding to independently design and innovate their teaching.*

Table 2. Guidelines for teachers: learning outcomes

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[3] These examples of learning outcomes are generic formulations that require further specification depending on the teaching content. For example, specifying the following learning outcome: *Students will be able to evaluate key phenomena related to the topic (e.g. list advantages and disadvantages)* would result in: *Students will be able to evaluate different approaches to translation.* It should also be noted that there is a difference between learning outcomes formulated for a course unit as a whole (*Upon active participation in the course, students will be able to…*) and learning outcomes formulated for a specific lesson or topic (*Upon active participation in class, students will be able to…*).

3. Teaching content

The key to encourage active learning is overcoming teaching aimed at information transfer, whereby teachers predominantly transfer content to students, while they mechanically memorise it, understand the basics, and then reproduce it. When teaching for active learning, teachers approach the teaching content so that they expect their student to reach different achievement levels defined by learning outcomes, starting from the lowest level (memorising 'only' key information), towards understanding, application, analysis and evaluation, all the way to creation, e.g. by developing arguments and opposing or coming up with possible solutions to posed problems, etc. In other words, when teaching to encourage active learning, teachers approach the teaching content in such a way that they aim at selecting key information related to the content; differentiating relevant and reliable information; explanation and interpretation of teaching content; giving examples while interpreting the teaching content; connecting previously acquired teaching content while acquiring new content; connecting teaching content with content from other courses; connecting the teaching content with the requirements and the dynamics of the labour market; connecting the teaching content with everyday situations; applying teaching content in practice; presenting the teaching content from different perspectives; questioning the teaching content and assumptions on which it is based; recognising and formulating arguments related to the teaching content; formulating and providing arguments to support own attitudes towards the teaching content; forming and providing arguments and questioning different attitudes towards the teaching content.

Guidelines for teachers: teaching content
Approach teaching content through interpretation, analysis, synthesis, application, evaluation, and innovation – not just reproduction.
Example: The teacher asks students not only to define basic terms from English morphology and syntax, but also to provide arguments and take a stance regarding controversial issues in English morphosyntax.
To encourage active learning, teachers can use these guidelines as scaffolding to independently design and innovate their teaching.

Table 3. Guidelines for teachers: teaching content

4. Teaching methods and forms of class organisation

Research shows that students memorise very little of the content transferred by teachers' oral presentation. Additionally, there are findings that suggest that listeners' attention is decreasing after 15 minutes of one-sided oral presentation. All this points to the importance of overcoming the dominant understanding of the teaching process as merely giving *ex cathedra* oral lectures to transfer teaching content to students. Furthermore, these findings highlight the need to teach active learning in practice, by applying various teaching methods (from traditional ones, such as oral presentation, conversation, writing, demonstrating, etc. to contemporary

active learning techniques such as brainstorming, the INSERT method, the KWL method, written conversation, etc.). Applying different teaching methods results in distancing from reducing teaching to only frontal instruction and in active implementation of collaborative forms of class organisation – pair work, group work, and teamwork. Teaching to encourage active learning also involves combining different forms of class organisation, from individual and frontal, to different types of collaborative learning. Finally, teachers are expected to create and innovate their teaching methods and forms of class organisation.

Guidelines for teachers: teaching methods and forms of class organisation

Implement active teaching methods and collaborative learning techniques in the classroom, with an aim to continuously innovate teaching.

Examples of active teaching methods (Benge Kletzien, Cota Bekavac & Vizek Vidović, 2002; Vizek Vidović, Benge Kletzien & Cota Bekavac, 2002).

1. **Conversation / Asking questions** is a teaching method whereby the teacher does not give all the information to students but asks them questions about the teaching content so that students can arrive at answers on their own. This enables students' increased activity, evokes previous knowledge, ideas, different perspectives and approaches to teaching content, etc.

2. **The INSERT method** is an interactive way of engaging readers to read critically by finding in the text: (1) information they are already familiar with (symbol: +); (2) new information / information that can be learned by reading (symbol: !); (3) unclear, confusing information (symbol: ?); (4) information they wish to know more about (symbol: →). The symbols are inserted on the margins of the text or written separately into an INSERT handout sheet.

3. **The KWL method** (*I know – I want to know – I learned*) is a teaching method that encourages thinking about what students know (previous knowledge), wish to know (motivation), and what they have learned (synthesis). Students fill in the K and W columns of the table before the content is covered (i.e. before reading a text or before a teacher's presentation) and the L column after it was covered.

4. **Written conversation** is a written communication structured so that the teacher chooses a topic that pairs of students write comments about back and forth, in silence. This method fosters a high degree of concentration and an intensive form of interaction between students. The greatest advantage of this method is that it provides a space and opportunity for equal activity of all students (especially those that find it harder to participate in oral discussions and conversations).

5. **Written discussion** is a method that guides a discussion by adopting individual forms of class organisation (although it can be used in other forms of class organisation, such as pair- or groupwork). Students are given handouts where they write down: (1) the topic of the discussion; (2) questions; (3) important information; (4) answers to posed questions with valid arguments; (5) additional questions opened by the discussion; (6) commentary (written or graphic). Written discussion fosters interactive learning, deep concentration, and precision in adopting attitudes. Finally, it should be noted that written discussion, just like written

conversation, provides a space and opportunity for equal activity of all students (especially those that find it harder to participate in oral discussions and conversations).

6. **Academic controversy** is a teaching method that involves active involvement of students through discussion, in such a way that they represent a certain stance, regardless of their own opinion on the topic at hand. Academic controversy fosters deeper understanding of the topic from different perspectives, encourages critical thinking and values of empathy, tolerance, and responsibility.

To encourage active learning, teachers can use these guidelines as scaffolding to independently design and innovate their teaching.

Table 4. Guidelines for teachers: teaching methods and forms of class organisation

5. Assessment methods

Bearing in mind the examples of learning outcomes presented above, the assessment of students' achievements should include those assessment methods that go beyond just looking for one correct answer. Therefore, active assessment methods involve the process of assessing students' work with an emphasis on applying different assessment procedures (from multiple choice questions to essay-type questions, both oral and written). Additionally, when teaching to encourage active learning, teachers should not be focused only on the assessment of the learned material, i.e. assessing the achievement of learning outcomes (summative assessment), but also on formative assessment that relies on assessment for learning and assessment as learning (Earl, 2003). When assessing for learning, the level of current achievement of defined learning outcomes is assessed, without grading, to guide the ongoing learning process. Through assessing as learning, students are involved in the assessment process, e.g. through peer assessment, self-assessment and evaluation of the teaching process, whereby students learn in the process. Finally, active assessment methods involve an element of self-criticism, i.e., teachers' self-assessment, whose task is to develop values of self-criticism, for both themselves and their students.

Guidelines for teachers: assessment methods
Apply methods of both summative and formative assessment in the teaching process.
Examples of tasks[4] that aim at assessing the actively learned teaching content – summative assessment.   - Single out the main idea about X.   - Specify the importance of X.   - Give examples of X.   - Interpret X from the perspective of Y.

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[4] These examples of tasks are generic formulations that require further specification depending on the teaching content.

- Compare X and Y according to criterion C.
- Classify X according to criterion C.
- List the features distinguishing X from Y.
- List the similar features of X and Y.
- List the advantages of X.
- List the disadvantages of X.
- List the ways to overcome disadvantages of X.
- Propose a solution for fixing the problems of X.
- Make a decision related to situation X.
- Ask a question to debate X.
- Formulate your own opinion in the debate about X.
- Defend your opinion on X.
- Come up with a suggestion about X.
- …

Examples of activities for students that apply formative assessment – peer assessment.

Peer assessment: students' paper presentation	
Name and surname of the student presenting the paper / Name and surname the student assessing the paper	
Criteria	1 – Not at all; 2 – Mostly not; 3 – Partly; 4 – Mostly yes ; 5 – Completely
All the formal criteria are satisfied (presentation follows the given guidelines; work is presented, not read; the allotted presentation time is not exceeded, etc.)	1 2 3 4 5
Interpretation of material is followed by selection of key information and useful examples.	1 2 3 4 5
Both verbal and nonverbal communication is used to effectively present the paper.	1 2 3 4 5
There is interaction with colleagues.	1 2 3 4 5
Work is presented in a clear and structured manner.	1 2 3 4 5
Work is presented in accordance with professional and academic standards (professional terminology is used, relevant and recent research findings are presented).	1 2 3 4 5
Work is presented in an original and creative manner.	1 2 3 4 5

To encourage active learning, teachers can use these guidelines as scaffolding to independently design and innovate their teaching.

Table 5. Guidelines for teachers: assessment methods

6. Teaching environment

Asking students challenging questions, engaging them in a serious dialogue in which they show mutual respect, but also express disagreement with opinions of others has shown to be an important element of teaching that encourages active learning (Shim & Waltzcak, 2012). Creating an environment that allows incorrect answers and helps student overcome the fear of answering incorrectly is particularly motivating and encouraging for students' participation. Finally, it is important that teaching for active learning occurs in an environment of stimulating interaction and involvement of all participants, dialogue, and mutual respect.

Guidelines for teachers: teaching environment
Create and encourage a teaching environment that fosters interaction, openness, dialogue, and mutual respect.
Example Encouraging a teaching environment that fosters interaction, openness, dialogue, and mutual respect is achieved by applying various active teaching methods. It exactly such an environment that active teaching methods require. For example, discussion as a teaching method requires participants to demonstrate openness, dialogue, and mutual respect. *To encourage active learning, teachers can use these guidelines as scaffolding to independently design and innovate their teaching.*

Table 6. Guidelines for teachers: teaching environment

7. Constructive alignment

Constructive alignment is the process of adjusting planned learning outcomes to teaching (i.e. teaching methods and forms of class organisation) and assessment (i.e. assessment methods) (see more about CA in Anderson, 2002; Biggs, 2014). Designing and writing quality learning outcomes is the basis for achieving quality teaching and it sets out clear guidelines for the teaching process – teaching methods, forms of class organisation and assessment methods
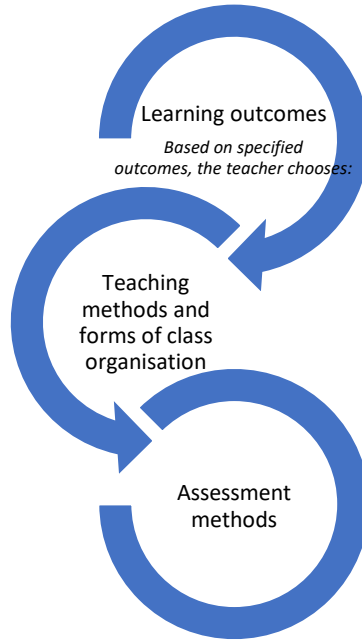
Figure 1. Constructive alignment of didactic elements

Guidelines for teachers: constructive alignment
Adjust teaching methods, forms of class organisation, and assessment methods to formulated learning outcomes.
Example

Constructive alignment		
Learning outcomes	Teaching methods and forms of class organisation	Assessment methods
Students will be able to point out the advantages and disadvantages of different approaches in lexicology.	Asking questions, pair work Note: There isn't a single correct answer as to which teaching method and form of class organisation fits the achievement of the formulated outcome. There are more possibilities to achieve this. In order to achieve a desired learning outcome, teachers should apply teaching methods that will allow students to list all the advantages and disadvantages of approaches in lexicology.	Essay task Note: There isn't a single correct answer as to which assessment method fits the achievement of the formulated outcome. There are more possibilities to achieve this. In order to assess the level of achievement of the desired learning outcome, teachers should apply assessment methods that will allow students to list all the advantages and disadvantages of approaches to lexicology.

	Clearly, teaching that aims to achieve the formulated learning outcome cannot be reduced to oral presentation, but it is necessary to apply active teaching methods. Likewise, the same outcome can be achieved through various forms of class organisation.	Clearly, the formulated outcome cannot be assessed through a multiple-choice question task; instead, students should be allowed to produce their own answers.

To encourage active learning, teachers can use these guidelines as scaffolding to independently design and innovate their teaching.

Table 7. Guidelines for teachers: constructive alignment

8. Conclusion

To conclude, students' active role in the teaching process requires guiding them towards active learning, which is why teachers play a significant role in that process. In order to encourage active learning, teachers should:

1. Plan teaching based on learning outcomes aimed at different levels of achievement (memorising, comprehension, application, analysis, evaluation, creation) and different domains (cognitive, psychomotor, and affective).
2. Approach teaching content through interpretation, analysis, synthesis, application, evaluation, and innovation, and not mere reproduction.
3. Apply active teaching methods and collaborative forms of class organisation in teaching and continuously innovate their teaching.
4. Apply active methods of summative and formative assessment.
5. Strive towards a teaching environment that fosters interaction, openness, dialogue, and mutual respect.

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