ALTII

Inventory of best practices

ALTII

About:

Name: Active learning through improved
interactivity – ALTII

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About Inventory of best practices

On the following pages you can find several examples of good practice that were developed as part of the ALTII project.

Examples of good practice were created by project partners:

Srednja Ekonomska šola in gimnazija Maribor
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with the cooperation of **Faculty of electrical engineering and computing** (Zagreb, Croatia) and project coordinator **Aquilonis** (Zagreb, Croatia).

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Digital Marketing

Methodology – Digital Marketing	
Class/Course	Digital marketing
Students' age/level	lSecondary school with 15 – 18 years old students This topic is done at 3rd year, so students are 17-18 years old.
Unit title	Digital marketing and social media
Author	Maja Vičič Krabonja
Duration	90 minutes
Unit and methodology summary (up to 150 words)	Digital marketing is a very broad term. Since it is this is the first lesson of the course, it is important for students to understand basic terms and also for teacher to see how the students understand the meaning of it and what is their attitude towards digital marketing and how they are using social media.
Methodology tags	audience response system, lecture, discussion
Significance	For further work on the topic of digital marketing it is very important to be on the same page on basic terms definitions and to know which social media are students using and how. This is why it is essential to use ARS, to get a clear picture of students' views (they are sometimes shy to make them public, or they try to oblige teacher - saying TicToc is nonsense), attitudes and knowledge. Results, that are visible on the board are also excellent point for discussion.
Assessment	Formatively through the answers on ARS

Methodology – Digital Marketing

Classroom physical organization	Individual access to mobile devices (or computers) – also it should be easy to change its layout for group discussion
Number of students	Ideally up to 32, so there are not to many group or number of participants in one group can be up to 4-5. Nevertheless we have done it with two combined classes with 55 students altogether (but also two teachers at the same time) and it turned out fine, since there were more opinions to discuss. Is such a big group it would be impossible to achieve a set goals without ARS.
Included activities with duration and rationale/ motivation	1. Motivation (10 min) – Teacher leads the checking of previous knowledge on the difference of marketing and advertising and announces a new topic: Digital marketing. 2. Theoretical development (25 min): - Students are using ARS answering an open-ended question: How do you understand term Digital marketing. - Teacher is leading the discussion on the topic using students' answers, explaining what is correct and what is not (and why). - Teacher explains the difference between online marketing, digital marketing and marketing. - Teacher explains growth of online users and social media users using data https://datareportal.com/reports/digital2022-july-global-statshot - Using ARS students are individually making a self-evaluation on their use of social media: • Which social media do you follow regularly? (Choosing from the list) • How would you describe yourself as a user of social media (I'm using is because of friends, I'm using for news, to see what is going on, I'm a passive user – I share and comment mostly, I'm active user – I'm posting a few times a week, Social media are a waste of time. • What appeals you the most on social media? (Open ended question) - Teacher is commenting on answers, then students are working in groups and discuss how those findings can be useful for planning digital marketing strategies. - Each group writes their conclusions on ARS (open ended question) - Teacher is leading a discussion, students are wirtting down the conclusions. 3. Theoretical development (25 min): - In the second part students are individually answering questions using ARS: • When are you usually using social media? Choose hours when you are usually active)

Methodology – Digital Marketing	
Included activities with duration and rationale/ motivation	• Have you ever bought anything online because of information find online? (Yes/No) • Describe what attracted you to online shopping and how did you like the experience. • Write down, what did/would attract you to online shopping (of something you did not intend to buy in the first place). – Teacher is commenting on answers, then students are working in groups and discuss how those findings can be useful for planning digital marketing strategies. – Each group writes their conclusions on ARS (open ended question) 4. Knowledge and understanding assessment (30 min) Students in groups prepare short idea on how to promote (online) chosen product. They present their idea and those prove their knowledge and understanding of basic concepts on digital marketing. While working they can also write questions for teacher or students in other groups using ARS – questions are displayed on the board. Teacher leads presentation of crated examples.
Alternative activities	Questions can be put orally to student and teacher is choosing which students will answer and explain. It can be done, but not all the students will be in the same position.
Why is this unit selected?	Students think they are very familiar with the topic, but actually they are not. So this is the way to reflect on their own use of social media and at the same time to think on how to use social media in digital marketing.
Can the described methodology be applied to other topics or courses?	I think yes, everywhere the teacher is interested in the thinking and point of view of students.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact. The use of ICT is supporting the teaching and learning process. Lesson can be done live or via ICT. It creates learning opportunities for student, to practice and develop their digital and social competences.

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Document management and creation

Methodology – Document management and creation	
Class/Course	Document management and creation
Students' age/level	Secretary and personnel work 1st year Adult learners in age 20+, who have completed upper secondary education and have started working in a study-related field.
Unit title	Sources of language support and practical language correction
Author	Kätlin Kask-Adamson
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The lesson is an introduction to a larger topic: "Document creation". The students learn about the different sources of language databases and online dictionaries and implement the gained knowledge in practical work with the dictionaries and databases (Part I, 45 min). After that students will get a theoretical lecture about the typical mistakes that people make in writing an e-mail, after wich students will get an e-mail to edit.
Methodology tags	interactive lecture, individual work with questions, discussion, online game
Significance	This lesson is an introduction to a larger topic: Document management and creation. Knowledge of correct language in documents is particularly important to secretaries and office workers so that the documents they create are grammatically correct and presentable. When a student goes to work or an internship in a larger company where the language editing works also lies on their shoulders then it is easier to to that kind of work because they have the knowledge what reliable sources to use.

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Assessment	This is an introductory lesson. Before the lesson students take a self control test to assess their previous knowledge about typical mistakes made in sentences and grammar overall. The test is not graded in any way but is used to encourage a discussion amongst students. During the lesson when using language databases the work students do is not assessed to prevent discouraging them. Rather an oral feedback is given by the teacher and students by analyzing the worksheet together
Classroom physical organization	The lesson takes place in a computer class where all students can use a computer with an internet connection. If a school has good Wifi connection, the lesson can take place in any classroom, in which case students will use their laptops or tablets. The teacher must be able to use a data projector, computer. By combining Moodle (educational platform in Estonia) the lesson can be taken completely in the web or participating in a hybrid lesson.
Number of students	In order to have more different experiences in the class and to be able to create a discussion, there could be at least 6-8 students. For a larger number of learners, the class can be (but not necessarily) divided into smaller groups for discussion
Included activities with duration and rationale/motivation	1. Introduction. (2-3 min) 2. Find out prior knowledge using a teacher made test in Learningapps.org. (5 min) Students complete the self control test according to their existing knowledge. 3. Mutual teacher-led discussion using the AudIT tool and questions: - What was/were the most difficult question/questions for you? - Did you get any new knowledge or repeated some topics that you have learned before? What was it? (5 min) 4. Theoretical development I part. - Theoretical development using a Prezi slide show where the teacher shows some language databases/dictionaries and their specificities. Also the teacher provides students some examples how to use these databases and dictionaries (10 min) Interactive lecture on the topics: "What are the most relevant online dictionaries and language databases to use? A short video about different online dictionaries.

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Methodology – Document management and creation

Included activities with duration and rationale/motivation	5. Practical work with online dictionaries and databases where students need a computer with Internet access. Students have a worksheet (in Moodle) with different tasks that need to be done. Each of those tasks is connected to one of the dictionaries or databases covered in the theoretical development part. The worksheet is loaded into Moodle after it is finished. (18 min) 6. Reflection about the covered subject with 3 questions using the AudIT tool: - What kind of new knowledge did you gain during the short lecture and practical assignment? - What covered database or dictionary could be the most useful/beneficial in my future job? - Do you use some kind of language database or dictionary besides these covered in the cass. If so then what kind? Bring examples. 7. Feedback and summary of the lesson. (2-3 min)
Links to additional unit materials	- Learningapps test for introduction - Prezi slide show for theoretical development - Worksheet for practical work (password eestikeel)
Alternative activities	The theoretical part can be handled without a presentation, asking students questions and discussing their answers together. It would be good if the teacher has paper material with basic concepts. In this case,it is possible to share it with the learners
Why is this unit selected?	It is important that before acquiring a more in-depth understanding of the subject of Document management and creation learners acquire the basic things needes to create a document - correct language.
Can the described methodology be applied to other topics or courses?	I have used lessons with a similar structure to conduct different theoretical lessons. Prezi allows for an fun type of lecture where learners can watch videos or can listen to the lecture in audio (when teacher has prepared it so, in this case the Prezi slide show can be used in independent work). Moodle gives students a good ad secure access to different materials for the course. The lesson must be divided into different activities and during 45 minutes there must be some theoretical work, some practical and also some mutual discussion and reflection.

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Methodology – Collection and storage of information	
Class/Course	Business management support
Students' age/level	Business Organizers 2nd year Adult learners in age 20+, who have completed upper secondary education and have started working in a study-related field.
Unit title	Collection and storage of information
Author	Vilve Pohla
Duration	90 minutes
Unit and methodology summary (up to 150 words)	The lesson is an introduction to a larger topic: "Document Management". The purpose of this lesson is to explain the basic concepts (information, data, document, document and archive management) and to find common answers to the questions: Does and why does an individual have to deal with document management? Why do companies have to deal with information, document and archive management? Students get answers to these questions through active discussion and reading different study materials
Methodology tags	interactive lecture, individual work with questions, discussion, online game
Significance	This lesson is an introduction to a larger topic: Why and what documents need to be managed in the company? What are the parts of the document management process and how do they relate to legislative acts? As some learners work for themselves or their families in a small company, knowledge of document management processes is particularly important to them so that the company's activities are documented in accordance with the law. When a student goes to work or an internship in a larger company, it is easier for him or her to understand why the company's document management is organized in this way.

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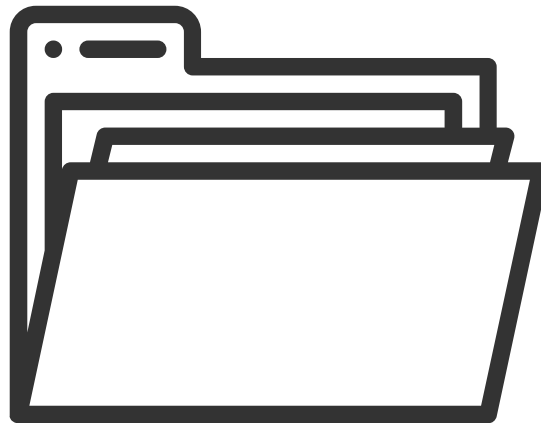## Methodology – Collection and storage of information

Assessment	What is assessed before/during/after the unit and how? – formatively, summatively, service learning projects As this was an introductory lesson, there was no direct assessment. The purpose of the questionnaire completed at the beginning of the lesson was to find out the students' prior knowledge.
Classroom physical organization	The lesson can take place in a computer class where all students can use a computer with an internet connection. If a school has good Wifi connection, the lesson can take place in any classroom, in which case students will use their smartphones, laptops or tablets. The teacher must be able to use a data projector. To facilitate group discussions, it is desirable to arrange the tables so that 3-4 students can work together. By combining the features of Nearpod and Zoom or Google Meet, the topic can be treated as a completely web-based or hybrid learning lesson.
Number of students	In order to have more different experiences in the class and to be able to create a discussion, there could be at least 6-8 students. For a larger number of learners, the class can be divided into smaller groups for discussion.
Included activities with duration and rationale/motivation	1. Introduction. (5 min) G 2. Find out prior knowledge using Google Forms. (7-10 min) Learners complete the questionnaire according to their existing knowledge. Before filling it out, I will explain that it gives us background material on how to proceed with the topic. Learners complete the questionnaire. 3. Theoretical development I part (25 - 30 min) - Theoretical development using AUDiT (Text table mode). Interactive lecture, conversation on the topics: "What is information? What is data? How is the data different from the information? What do data and information have in common? What is communication? Why is it necessary to collect, mediate and store information? Why is it necessary to manage the process of collecting and storing information in the company? What sub-processes are involved in the company?" Learners give examples of a company where they have had an internship or are already working. During the discussion, I ask guiding questions: "What are your responsibilities in the institution's document management process? Who is responsible for the document management process in the company? Etc."

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Methodology – Collection and storage of information

Included activities with duration and rationale/motivation	4. A little relaxation break. (2 min) Learners do stretching exercises and rest their eyes. 5. Game "Document Management Concepts" in Learningapps (10 – 12 min). 6. A short summary of the game (3 min). Students can answer the questions, "What surprised you? What was the hardest?" 7. Theoretical development II part (10 min) – Theoretical development using Nearpod.com/AudIT tool (text table). Interactive lecture, conversation on the topics: "What is a document? Why are documents needed? What are the characteristics of a document?" 8. Task (5-7 min): "Think about information that is published on the organization 's website or on social media channels (such as Twitter or Facebook). What information is necessary and reasonable to manage as documents and what should be done about it? " 9. Discussion and conclusions (5 min): "What kind of information needs to be kept as documents?" Based on the previous task, students discuss what information on the web is sensible to store as documents. 10. Feedback and summary of the lesson. (5 min) In the Nearpod, each student answers the question: "Name one thing that was new to you today (which you did not know before)." After the written answer, the students can also comment on their answer. 11. Have a good time and see you next time!
Links to additional unit materials	Introductory Questionnaire (Google Forms) Game "Document Management Concepts" (Learningapps) Study material in Moodle "Business management support". Guest access password: kylaline
Alternative activities	Instead of the Google questionnaire, you can use the KWL (I Know - I Want to Know) chart by having the first 2 sections (I know and want to know) completed at the beginning of the lesson. You can then summarize and write the students' existing knowledge and wishes on the board. For a larger group, this table can be completed as a group. The theoretical part can also be handled without a presentation, asking students questions and discussing their answers together. It would be good if the teacher has paper material with basic concepts. In this case,it is possible to share it with the learners. By summarizing the topic, you can fill in the third column of the KWL chart

Methodology – Collection and storage of information

Why is this unit selected?	It is important that before acquiring a more in-depth understanding of the subject of document management, learners acquire basic concepts and understand the corresponding terms in the same way
Can the described methodology be applied to other topics or courses? Which?	I have used lessons with a similar structure to conduct different theoretical lessons. Nearpod allows for an interactive type of lecture where learners can answer questions and ask questions using personal smartphones. The Nearpod environment also allows you to save responses and return to responses as needed. The teacher can see the answers of each student in real-time. The lesson must be divided into different activities and during 90 minutes there must be one relaxation break for 2-3 minutes
What is innovative in the described approach? (in accordance with the Priorities and Topics from the project application)	I'm not sure it's very innovative, but the use of various online tools (Nearpod, Learningapps, Google Forms) allows those who can't be in the classroom to take an active part in the class for some reason. Students can participate in the class online and as a teacher I had to give the floor to them during the conversations. I think that with such an approach, students have the opportunity to participate in lessons at a distance, if necessary. Learners are also more involved.

Junior achievement – project

Methodology – Junior achievement – project	
Class/Course	Entrepreneurship
Students' age/level	18 – 19 years
Unit title	Junior achievement – project
Author	Katja Emeršič
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Entrepreneurship is a specific subject where students need to be active and there is very little lecturing. It is crucial for students to develop their competences, by actively participate in the process of learning, so they can - Develop competencies working in groups. - Develop digital competences. - Develop innovative thinking. The lesson is designed in a way for students to think about new functions to known product - they are innovative. ARS allow class to see the results of group work and can comment on it.
Methodology tags	Lecture, groupwork, discussion
Significance	Students are part of the junior achievement project. In this project they develop their own business. Nowadays, it is crucial that they realize that they must be innovative in their business. The lesson helps them to think innovatively.
Assessment	Formatively

Methodology - Junior achievement – project

Classroom physical organization	Classroom, mobile phones (one per group)
Number of students	Ideally up to 25 students, they work in 5 groups. It is possible also that you have more groups.
Included activities with duration and rationale/motivation	1. Motivation (10 min) – introduction to the unit topic. With the students we brainstorm about entrepreneurship. Then we repeat the definition of entrepreneurship. 2. Theoretical development (15 min) – presentation about what successful entrepreneurs have in common - which characteristics. Talking about innovations, when we can say that something is a innovation. Presenting how many Slovenian companies are innovative. 3. Practical examples (15 min) – we divide the students into groups. Then each group gets one product (notebook, thermos, chair, cup, cap…). Their job is to add new functions to this product - they are innovative. They then write down new aspects (using Alti). The other students see what the new functions are. The teacher debates with each group, as well as individual groups with each other. 4. Conclusion (5min) – Talking about how we can use everyday things and turn them into something new.
Links to additional unit materials	https://www.gov.si/teme/inovativnost-v-podjetjih/
Alternative activities	They also work in groups, but they answer on sheet. Then they report in groups, but it's not ideal because the others can't see the answers.
Why is this unit selected?	Because it is an additional guideline for the junior achievement project, because now the students are starting to imagine what products they will make.
Can the described methodology be applied to other topics or courses? Which?	In all topics where we are interested in the student's opinion, or we want to encourage teamwork.

Market Research

Methodology – Market Research	
Class/Course	Entrepreneurship
Students' age/level	17 – 18 years
Unit title	Market research
Author	Katja Emeršič
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The lesson is the first part of 135 minutes long lesson. It starts with brainstorming on what market research is and develops the importance of market research when developing entrepreneurial idea. The lesson is concentrated around students, which - Actively participate in conversations - Developing competencies working in groups - Developing digital competences.
Methodology tags	Lecture, discussion
Significance	In the coming hours, students will make their market research for their business plan. For further work, it is necessary for them to understand why it is necessary to do market research. They must also distinguish between primary and secondary data, so it is vital for their further success so it is important for them to master these concepts.
Assessment	Test Formatively

Methodology – Market Research	
Classroom physical organization	Classroom, mobile phones
Number of students	Ideally up to 30 students.
Included activities with duration and rationale/motivation	1. Motivation (10 min) – introduction to the unit topic. First students brainstorm words on topic market research (alti). We discuss about the words – why have they chosen a certain word. Then we repeat the definition of market research. 2. Practical examples (15 min) – Then we are talking about primary and secondary data. Example for a question is: Which data is more useful in market research? The students discuss about the primary data and secondary. Then the teacher explains why is the primary data better. The next question could be: Why it makes sense to do market research? The students write their ideas. Then we discus. 3. Conclusion (5min) – We talk about that why they have to do market research and how are they going to make it.
Alternative activities	They could write their thoughts on paper and present. But as a teacher I could not see in such a short time what are thinkg all the students and how much they know.
Why is this unit selected?	Students must understand what market research means and why they need to do it as part of their project. If they do not understand the theoretical part, it will be more difficult for them to do the practical part.
Can the described methodology be applied to other topics or courses? Which?	In all topics where we want to increase discussion.
What is innovative in the described approach?	Students develop their social competences and critical thinking. The lesson is more interesting for the students.

Transport

Methodology – Transport	
Class/Course	Economic geography
Students' age/level	Secondary school with 15 – 18 years old students This topic is done at 2nd, so students are 16-17 years old.
Unit title	Transport
Author	Maja Vičič Krabonja
Duration	90 minutes
Unit and methodology summary (up to 150 words)	Transport is important geographic, economic and environmental topic. The substantive goal of the lesson is to understand the relationships between those three aspects. This unit empowers students to think and discuss on the appropriateness of different modes of traffic form different views. Working with authentic examples from their lives enables the learners to connect with the topic. Presenting their answers in live mode enables teachers to correct their errors and false presumptions while students are felling safe to answer questions in a secure environment, which allows them to change their mind (repeated votes) after conducting discussions with reasonable arguments. Collaboration is also important for developing their social skills. Students help each other in small groups.
Methodology tags	Audience response system (ARS), lecture, quiz, shared documents
Significance	Transport seems like an easy topic for students, since everybody is using it and students are already familiar with it from primary school. So they take it lightly. In order to understand economic and environmental aspect of the traffic as an element of geographical landscape it is important to intertwine various factors and their interactions. This lesson is therefore important since it builds the foundation for further exploring and enables students to discuss the appropriateness of use different modes of traffic without fear of making errors. In this way students avoid false presumptions and simplifications.

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Methodology – Transport

Assessment	Formatively with the final individual task where student get peer to peer and teachers' feedback
Classroom physical organization	Group work with access to computers or mobile devices
Number of students	It is not limited, so usually up to 30, so there are not too many groups or number of participants in one group.
Included activities with duration and rationale/motivation	1. Motivation (15 min) – association game. Student write different means of transport into AudIT (mode Messages, unlimited answers per user, shown as Tag cloud). Teacher moderates the discussion on emerging word cloud. 2. Theoretical development (40 min): Based on the results of association game teacher introduces the theme. – Answers form AudIT are redirected to https://tobloef.com/text2mindmap/ where we create the mind map of modes of transport. Students are describing characteristics of different modes of transport, their advantages and disadvantages, landscape impact. – Teacher is orally giving different everyday examples of transport of various goods. In AudIT (mode Votes), students are voting for the most appropriate mode of transport (air, water, railways, road, pipelines, micro-mobility…). In each case they are discussing results, justifying their decisions… After each discussion voting is repeated, and results discussed again. Students are asking questions; teacher provides additional explanation if needed. Teachers' examples to discuss are (students can add their own: Transporting wheat from Poland to Germany Transporting vaccines form USA to Kongo Transporting flowers from Kenya to Netherlands Transporting orchids form Dobrovnik to Wienna Transporting cars form South Korea to France Transporting crude oil form Libija to Croatia … 3. Digg deeper. (15 min) Students are working in groups. They should answer the questions together: Which criteria have they used previous task? The findings are to be written in AudIT (mode Votes) by each group. Teacher is leading a discussion on importance of each criterion and what have we missed. Students create a summary in their notebooks. 4. Knowledge and understanding assessment (20 min) Students think on what are they ordering online (or think on one item they buy a lot in the store) and try do describe how was it brought to the store and then their home and what was the impact of that transport on environment. They present their findings, students and the teacher is giving feedback.

Methodology – Transport

Alternative activities	Alternative tool can be used, like Mentimeter or Polleverywhere or even only discussing, but I believe it would be not be so effective.
Why is this unit selected?	Transport seems like an easy topic for students and they take it lightly. They are usually not interested to think deeper on the effect of different modes of transportation on environment. Since we are in the secondary school of economics it is also very important to understand modes of transport from the economic point of view. If we just discuss those aspects it is a discussion limited to only a few of students, but in this way, they are many more engaged.
Can the described methodology be applied to other topics or courses? Which?	I think yes, everywhere where collaboration of students is desired and needed or where they have to decide on previous knowledge that we had not check yet and they are not sure in.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact with the teacher, each other and the content. The use of ICT is supporting the teaching and the learning process. Lessons can be done live face to face or via a videoconferencing tool. It creates learning opportunities for students to practice and to develop their social competences and critical thinking.

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Totalitarian Regimes of the 20th Century

Methodology – Totalitarian Regimes of the 20th Century	
Class/Course	History (Vocational Education)
Students' age/level	15 years old
Unit title	Totalitarian Regimes of the 20th Century
Author	Jerneja Breznik
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The goal of this lesson is to learn the causes which led to the rise of the totalitarian regimes of the twentieth century in Europe. With the use of Audit application, we encourage students to actively participate. The aim of using the application is to activate the learner's prior knowledge on the topic. When we get to know the characteristics of both democratic and totalitarian regimes, the learners try to come up with more examples from history and apply gained knowledge to the examples from history (from abstract to concrete). When assessing their prior knowledge on the topic, the students work individually, and try to find as many associations to democracy as possible. After we analyze the learner's prior knowledge we establish the main differences between totalitarian regimes and democratic regimes. One of the main aims of the lesson is also to analyze the causes that led to autocratic and totalitarian regimes, and whether we can predict and prevent such patterns in the future.
Methodology tags	Individual work, group work, group discussions, mind maps
Significance	The topic is significant in the sense of students' development of critical thinking. When the learners are able to recognize some features of totalitarian regimes, they will be more aware of the current or future political and social patterns that may lead to the establishment of such undemocratic regimes (learning for democracy and democratic values). It might be difficult for the learners to understand that totalitarian patterns might also emerge in nominally democratic regimes. The learners might be confused by the fact that some totalitarian regimes were established via elections.

Methodology – Totalitarian Regimes of the 20th Century

Assessment	Formatively, summatively, service learning projects
Classroom physical organization	The lesson is taught in the classroom. Before the lesson, we organize the seating area, so it is appropriate for group work.
Number of students	30 students
Included activities with duration and rationale/motivation	1. Motivation (5 min) – Introduction to the unit topic: The teacher shows a video about everyday life in Nazi Germany. The learners try to guess the country and time. The teacher then introduces the topic and points out that it is not necessarily easy to recognize a totalitarian regime. 2. Activation of the learners' prior knowledge on the topic (10 minutes): With the help of ARS, the learners write associations on the clue word democracy 3. Theoretical development (15 min) – In groups, the learners (with the help of historical sources), try to come up with the main features of totalitarian regimes. Groups report. We write the solutions on the whiteboard, the learners get the handouts, and fill out the chart. 4. Practical examples (15 min) – The learners do the handout tasks. We check the answers. In groups, the learners try to come up with the causes for totalitarian practices in the past and present. For their homework, they need to find an example of modern totalitarian regimes. They need to analyze their features on the basis of theory.
Alternative activities	In case of technical issues and inability to use the application, we will write our answers to the whiteboard
Why is this unit selected?	It is of crucial importance that the students understand that democratic values and democracy in politics is not self-evident. They learners should understand that democratic values were not given but fought for. Moreover, it is important to raise the learners' awareness of democratic values.

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Can the described methodology be applied to other topics or courses? Which?	The methodology used is applicable to many other school subject (Sociology, foreign languages, Economic History, Economy).
What is innovative in the described approach?	-the use of application -activation of learners' prior knowledge, acquisition of new knowledge on the basis of what they already know about the topic -critical thinking-debates

DEMOKRACIJA

Razmisli: Katere so značilnosti demokracije? Katere so zate
najpomembnejše demokratične vrednote? Zakaj?

Slovenian historic lands during Middle Ages

Methodology – Slovenian historic lands during Middle Ages	
Class/Course	History
Students' age/level	14-15
Unit title	Slovenian historic lands during Middle Ages
Author	Darjan Lorenčič
Duration	45 minutes
Unit and methodology summary (up to 150 words)	In order to understand Slovenian history during medieval times, Students need to know how Slovenian historic lands developed after Carantania lost its inner independence. At the end of the lesson, Students will be able to explain the reasons for the creation of Slovenian historic lands in the Middle Ages and understand why and how their historic development differed from each other. Application will be used in the beginning of a lesson for easier and more active introduction of a new topic for a students and then little bit later to sustain their focus and motivation.
Methodology tags	Groupwork, audience response system, classical lecture, discussion
Significance	It's absolutely crucial for students to understand a formation of Slovenian historic lands as the whole history and identity of Slovenians revolve around historic lands all uptil 1918 and even beyond, until today. This lesson is therefore important since it builds foundation for further understanding of Slovenian, European history and thus how Austrian empire has been formed. Nonetheless for students, formation and development of Slovenian historic lands can be very confusing, so using tag cloud with application can be very useful insight what kind of associations Students have when they think of Slovenian historic lands.
Assessment	Formatively during the unit and summative after the unit.

Methodology – Slovenian historic lands during Middle Ages

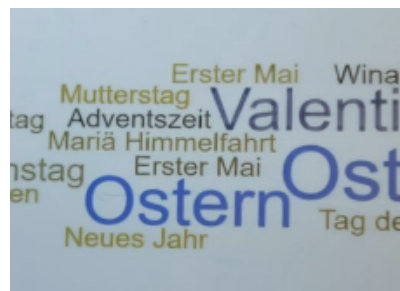|	
Classroom physical organization	Group work with access to computers or mobile devices.
Number of students	Not limited.
Included activities with duration and rationale/motivation	1. Motivation (15 min) – association game. Student are asked for associations when they hear Middle Ages. They need use their mobile phones or computers to write associations into AudIT (mode Messages, two answers per user, shown as Tag cloud). Then we do the same with Slovenian historic lands. 2. Theoretical development (35 min) – we build a lesson upon results on AudiT and I explain formation of historic lands. After that 3. Analysis of results (10 min) – we look at the results of the issues that are aimed at them and discuss them. We also make a plan on which topics we would like at class meetings next time.
Alternative activities	We could use another tool as Plickers, Mentimeter or method like Brainstorming but I strongly believe it would be not be so effective.
Why is this unit selected?	AudiT is a great tool to obtain information and feedback from Students, therefore I use it quite often. It's also useful for spontaneous tag cloud or feedback, since you can set a room up in a matter of seconds. I chose it for this unit because I wanted to make sure what they think first when they are engaged with Slovenian historic lands. With AudiT tag cloud for example you can easily point out mistakes and you can correct them with the right answers.
Can the described methodology be applied to other topics or courses? Which?	Most definitely, since it's easy to use, both for Students and for a teacher. It's very useful in retrieving quick feedback from Students.
What is innovative in the described approach?	As a teacher, you can quickly point out any potential mistake that Students make and correct them immediately during an activity. It also helps Students to develop social skills through interacting with fellow Students and a teacher.

Public holidays

Methodology - Public holidays	
Class/Course	History
Students' age/level	16 years, second year of high school A2
Unit title	Public holidays
Author	Manica Medved
Duration	45 minutes
Unit and methodology summary (up to 150 words)	In this lesson, students learn about public holidays and the vocabulary related to them. First they identify which words they already know, and then they compare their results. Afterwards, they look for translations of words they don't know yet, with using a dictionary.
Methodology tags	Audience response sistem, group work.
Significance	This is a general topic used in day-to-day situations and conversation. If students do not learn new vocabulary about public holidays, they will have problems in describing them. It is important to highlight the specifics of certain public holidays - especially those they are not familiar with in their own country.
Assessment	I will supervise the students formatively - I will observe their progress and give them feedback.
Classroom physical organization	Lessons will be designed so that students work in groups.
Number of students	4-20

Methodology – Public holidays

Included activities with duration and rationale/motivation	1. Motivation (5 min.) – I draw lines on the board – one for each letter – and students try to find the question they were looking for behind them (Hangman) W E L C H E F E I E R T A G E K E N N S T D U?? I open the ALTII app, students scan the code and write down at least 5 public holidays. 2. Theoretical part (15 min.) – I divide students into 4 groups. Each group gets a text about a public holiday (Christmas, Easter, New Year's Eve, St. Martin's Day). Students read the text and prepare a small report (unknown words, short description of the public holiday). Then new groups are formed, consisting of one person from each group. Now everyone reports about their own holiday and all the others take notes. 3. Practical examples (20 min.) – Then again new groups are formed, consisting of one person from each group. Each person reports about his or her holiday and the others take notes. 4. Conclusion (5 min.) – Students use their smartphones to find out what public holidays are celebrated in America, Russia, Japan, India, China, etc.
Alternative activities	If technology doesn't work, I suggest that students write the public holidays on the board and sort them by date.
Why is this unit selected?	It was the next unit in the book.
Can the described methodology be applied to other topics or courses? Which?	Yes. All.
What is innovative in the described approach?	The students work alone and show us their own results.

Social Sciences

The development of the Slovenian lands in the medieval ages

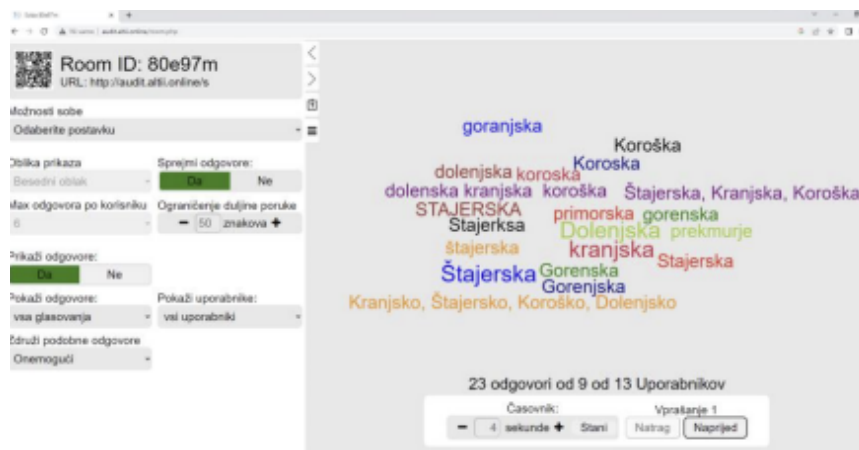| Methodology – The development of the Slovenian lands in the medieval ages	
Class/Course	History
Students' age/level	Secondary school with 15 – 18 years old students This topic is done at 2nd year, so students are 16-17 years old.
Unit title	The development of the Slovenian lands in the medieval ages
Author	Boris Krabonja
Duration	45 minutes
Unit and methodology summary (up to 150 words)	It is a lesson of repetition and strengthening knowledge, in which ARS is used to allow students to express knowledge. Students check their knowledge and teacher can see what needs to be explain further.
Methodology tags	Audience response sistem, using textbook, discussion, working in pairs.
Significance	Since this is an important topic in national history it is very important for students do get a clear understanding of basic concepts and terms, specially they are not used in everyday language a lot. This is why it is essential to use ARS, to get a clear picture of students' knowledge and misunderstandings. Results, that are visible on the board are: - an excellent point for discussion among students when working in pairs or small groups in order to find correct and wrong answers - and also allows teacher to correct get a clear view on students' knowledge and an opportunity for corrections and additional explanation.
Assessment	Formatively through the answers on ARS
Classroom physical organization	- individual access to mobile devices (or computers) - also it should allow students to work in pairs

Methodology – The development of the Slovenian lands in the medieval ages

Number of students	Ideally up to 30
Included activities with duration and rationale/motivation	1. Motivation (10 min) – Teacher leads the discussion on Styria capital and explain again (if needed) not to confuse todays Štajerska with historical land. Students are getting blind maps of historical lands and have to write their names and capitals in the map. Teacher supervises individual work and gives real-time feedback. 2. Knowledge and understanding assessment (30 minutes) – Using ARS students are answering questions: – Name Slovenian historical lands – Explain terms like regional prince, regional estates, – Why are the counts of Celje important? – Name important man and women form the house of Celje After each questions student in pairs discuss the answers on the board and search for correct one and comment on mistakes. If they need, they use textbooks. After that teacher is leading a discussion on how and why some answers are wrong. 3. Conclusion (5 minutes): Teachers summarize the importance of Slovenian lands in the medieval ages
Alternative activities	Questions can be put orally to student (to write answers on paper) and teacher is choosing which students will answer and explain. It can be done, but not all the students will be in the same position and teacher will not have so good and instant overview on students knowledge and understanding.
Why is this unit selected?	I have used exactly the same questions using PPT, but this way lesson is much more efficient. Since it is very important to get rid of every misconception before summative assessment, I find this way of doing it very efficient.
Can the described methodology be applied to other topics or courses? Which?	I think yes, always when teacher needs to see what have students learn and how they understand the topic.

Methodology – The development of the Slovenian lands in the medieval ages

What is innovative in the described approach?	Activities are designed in the way that enables students to interact with teacher, each other, and content. The use of ICT is supporting the teaching and learning process. Lesson can be done live or via videoconferencing tool. It creates learning opportunities for student, to practice and develop their digital and social competences.

Language & literature

Methodology – Housing	
Class/Course	English language
Students' age/level	l Secondary school with 15 – 16 years old students English as third foreign language
Unit title	Housing
Author	Alen Gomilšek
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Living conditions and various ways to furnish the living space are always practical ways for students to develop new language skills and expand their vocabulary.
Methodology tags	Audience response system (ARS), lecture, PowerPoint presentation
Significance	Students are encouraged to communicate on the topic of housing.
Assessment	Formatively, students get feedback, group work
Classroom physical organization	- individually - presentation - work with mobile devices
Number of students	Up to 30

Active Learning through improved interactivity – ALTII

Language & literature

Methodology – Housing	
Included activities with duration and rationale/motivation	1. Introductory theoretical part, motivation (5 min) – The teacher asks students where they come from and probes the students on the topic of "Houses". The students respond and together the classroom forms a little group discussion. 2. Preparation (5 min) – Students are instructed to use their mobile devices and to watch a PowerPoint presentation. They are given additional instructions if they feel lost. 3. PP presentation (25 min) – Students actively participate in the PowerPoint presentation by individually deciding answers on their personal preferences. They express their personal thoughts and with the use of ICT and the online page altii.online give answers on the topic of interior, furniture, housing options and layout. 4. Conclusion (10 min) – The classroom examines the given answer after each question, the students express their thought and discuss between each other the reasons behind their chosen answers.
Alternative activities	If students do not have access to the internet or mobile devices the teacher asks them to write down the answer in their notebooks.
Why is this unit selected?	Global markets and open end to end task which do not depend on a person to experience work from an office offer jobs that can be done anytime in any location. Therefore, it is beneficial for future cosmopolitans to express their desires where and how they would like to live and how the process of a more comfortable housing environment can help them finishing given task at work.
Can the described methodology be applied to other topics or courses? Which?	Of course. If the students are taught an open mindedness to specific challenges.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact with teacher, each other and the content itself. The use of ICT is supporting the teaching and the learning process. Learners create a reflection based on their evaluated answers and teacher feedback.

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Essay preparation

Methodology – Essay preparation	
Class/Course	Slovenian language and literature
Students' age/level	17 years old; 3 rd year
Unit title	Essay preparation (writing a concept for an interpretive essay)
Author	Alenka Bratuša
Duration	2 x 45 minutes
Unit and methodology summary (up to 150 words)	The students read Oscar Wilde's play Salome for home reading and presented it part by part in the previous lessons. During these two hours, they prepare to write an interpretive essay, which is a special type of essay, as it requires a more detailed analysis of the selected passage. Used methods are work in pairs, discussion of answers and deciding on the most appropriate solution among the given answers
Methodology tags	-reading and analyzing the text - audience response system - student-centered learning - work in pairs - learning by doing approach
Significance	Writing an essay is always a challenging task for students, and in the 3rd year they write a special type of essay for the first time – an interpretive essay that requires an even more precise understanding of the entire work and the selected passage they are thinking about. To give them a sense of how they should come up with an essay concept, I broke down the instructions and went through the individual essay requirements with them.
Assessment	Formatively, Each pair of students has to write an answer in a notebook and then post it on AUDIT

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Methodology – Essay preparation	
Classroom physical organization	Each pair of students must have their own mobile device. Projector, laptop and internet connection must be available for teacher.
Number of students	28 students (could be more or less)
Included activities with duration and rationale/motivation	We read a passage from the play (Wilde: Saloma) and the students first summarize it. I tell them that we will create an essay concept and compare the answers to find the best solution. (10 minutes) 1. Work in pairs (80 minutes) Students in pairs answer questions which are given on the screen. I give the students the individual requirements of the interpretive essay, and they first compose answers in pairs, which they then enter in AUDIT. After reviewing the answers, I ask the students to decide which answer they think is the most appropriate (they vote again in the AUDIT system). We analyze the chosen answer and discuss it. This is how they answer and then make a decision also with the following instructions.
Alternative activities	As alternative students write essay questions (every part for itself) and we read some of them (and comment them – good and bad sides).
Why is this unit selected?	Students write school essays poorly because they often do not follow the instructions or do not understand them correctly. Therefore, it is important that they are able to analyze the instructions well and that they are aware that they must implement all the requirements in the instructions sufficiently precisely. That's why we often create a concept for an essay together with the students, which this time I divided into individual steps so that they could enter their findings in AUDIT in pairs and then evaluate them together.
Can the described methodology be applied to other topics or courses? Which?	Yes, the method could also be used in other literature topics, where different views of students would be checked, e.g. understanding a poem, a read passage, evaluating a literary figure or his behavior...
What is innovative in the described approach?	The use of technology supports the teaching and learning process, it provides instant feedback for student and teacher. Not just some students but all can participate with their solutions and answers.

Inventions

Methodology – Inventions	
Class/Course	German language
Students' age/level	Secondary school with 17 years old students German as a second foreign language, 4th year of study, A2
Unit title	Inventions
Author	Mojca Šumandl
Duration	90 minutes
Unit and methodology summary (up to 150 words)	The unit objectives are: -learn vocabulary on inventions, products, production process - be able to form the Passive Präsens and Präteritum - be able to describe the production process of a product - be able to evaluate my classmate's text, learn from it and point out any mistakes I have noticed I used all methods: listening, reading and writing comprehension.
Methodology tags	Audience response system - classical lecture - PowerPoint presentation - work in pairs - discussion
Significance	Students are encouraged to communicate on the topic of inventions and be able to form the Passive Präsens and Präteritum.
Assessment	Formatively (students get feedback, work in pairs), summatively

Methodology – Inventions	
Classroom physical organization	Individually, presentation, work with mobile devices, grouped in pairs
Number of students	15 - 20
Included activities with duration and rationale/motivation	1. Motivation (10 min) In the Audit app, they use their prior knowledge to write different word cloud inventions that they find relevant. They then answer an open-ended question about why they think this invention is important. Lastly, they rank the importance of certain inventions for humanity. 2. Theoretical development (30 min) Meet new challengers and challenges in the Wordwall app. They use their background knowledge to identify different inventors and inventions. Through listening comprehension, they learn about the production process of Haribo products. Students watch a video in Edpuzzle and answer questions on the fly. In the textbook, they solve vocabulary tasks, as well as Partizip II, making Haribo sweets and about the company itself. 3. Practical examples (40 min) I explain the importance of using the Passive in German and explain the rules and examples of the Passive using a PPT presentation. Then, using their phones, they watch the video with the tasks Omas bester Kartoffelsalat on the iSLCOLLECTIVE website in pairs and solve the tasks in the smartcard. Students consolidate their new vocabulary with the Padlet app, where they write their favourite recipe in Passiv form. Once the prescriptions are written, they correct each other's prescriptions as necessary and give feedback. 4. Conclusion (10 min) Once the vocabulary is consolidated, students take a quiz on the Kahoot app. They also need to be able to relate their newly acquired knowledge to the grammatical structures and vocabulary they already know.
Alternative activities	If students do not have access to the internet or mobile devices the teacher asks them to write down the answer in their notebooks. Instead of using ALTII tool, I could have prepared the same questions with Power point presentation, or simply write it on table to create a mind map on the board.

Methodology – Inventions

Why is this unit selected?	This unit was chosen because it was next on the curriculum. Vocabulary on the topic of challenges, products, production process is a good introduction to the explanation of the trpnik, as it is very common in German, especially when describing various procedures, instructions, etc.
Can the described methodology be applied to other topics or courses? Which?	Of course. All ICT applications can be used for all topics.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact with teacher, each other and the content itself. The use of ICT is supporting the teaching and the learning process. Learners create a reflection based on their evaluated answers and teacher feedback.

Methodology – Art	
Class/Course	German language
Students' age/level	2nd year, high school, 16 years old
Unit title	Art
Author	Manica Medved
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The title of the chapter is Art. Students learn about different art styles. They give their opinions about particular art styles, watch a video and answer the questions with using the Quizlet-live app. The learning methods used: Enumeration, discussion, explanation, group work, use of an application.
Methodology tags	Audience response system Classical lecture Interactive app
Significance	Art is an important subject for everyone. It is important to be tolerant with different styles of art, so it is necessary that the students have the opportunity to openly express their own opinion on this topic. The students learn to deal more openly with art styles - here graffiti.
Assessment	Formatively Students have the opportunity to learn from and with each other. They get feedback from the teacher to be able to include also his opinion on the subject as well.

Methodology –Art	
Classroom physical organization	Each student must have his own mobile device. Projector, laptop and internet connection must be available for teacher and students. 4 student's desks are together– for teamwork
Number of students	From 10 to 30 students
Included activities with duration and rationale/motivation	1. Motivation: Hangman + collecting words (10 min): – Teacher draws 14 lines on the blackboard – students call letters to the class, if a letter is correct, the teacher writes it in the correct position, if it is incorrect, the teacher draws an island, etc. until the word KUNSTLIEBHABER is guessed on the blackboard. As next, they collect words/phrases they can think of on the board.

2. Watch video + create flashcards (30 min): – Students watch the video. They log on to Quizlet.com and create 10 flash cards related to the video. They also use the dictionary to translate unknown words. Before they share the page with each other, I check the spelling.

3. Learning success check with a quiz (5 min): – The teacher checks the learning success with the app Kahoot. The students compete against each other. The top three can choose whose flashcards they work on as homework. Students may write down new words in their exercise books. |
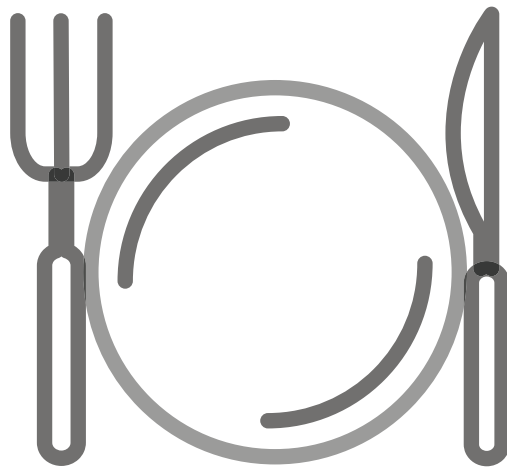| Alternative activities | As an alternative, I suggest they create their own quiz about art by picking a video on YouTube. |
Why is this unit selected?	For me, it's important that students enjoy learning, so I always look for topics and learning methods that appeal to students. When you have fun with learning, you retain what you learn. They should be able to experiment on their own, compete fairly and have the opportunity to decide for themselves what they want to learn.
Can the described methodology be applied to other topics or courses? Which?	I absolutely believe that you can use this method everywhere.
What is innovative in the described approach?	That the students themselves have the opportunity to create tasks for other students.

Food

Methodology – Food	
Class/Course	German language
Students' age/level	1st year; 15 years old
Unit title	Food (Lebensmittel)
Author	Marko Grobler
Duration	90 minutes
Unit and methodology summary (up to 150 words)	Panorama Kursbuch A1: Kaffee oder lieber Schokolade? In this unit students learn vocabulary related to Food Student-centered learning; game- based learning
Methodology tags	Student-centered learning, audience response system, game based learning, social interaction between students
Significance	Students review and practice vocabulary from the previous lessons an learn new vocabulary with Quizlet. Students can learn by their own pace. They can use Quizlet also at home, if they don't manage to learn all the new vocabulary during 90 minutes
Assessment	Formatively Since Quizlet is a self-study tool every students goes through all the study stages in Quizlet (flashcards, learn, write, spell, test, match, gravity) Students take control of their own learning and use the tools to improve. To facilitate this process, information is provided about how students are using Quizlet in the Class progress feature. So the teacher can monitor their work. In- class activity: after the self-study stage 2-3 quick and fun formative assessments are given to the students (checkpoint) this created by the in-class live feature of Quizlet. 2-3 rounds of classic Quizlet live are played (individual or in random groups)

Methodology –Food	
Classroom physical organization	Tablets, computers or smartphones with internet connection are needed; Projector, laptop and internet connection must be available for teacher. Standard position of student's desks.
Number of students	Up to 30 students
Included activities with duration and rationale/motivation	1. Motivation (5 min) – the teacher gives the students the invitation link to Quizlet and introduces the 5 different study modes and 3 activities of Quizlet

2. Self-studying (60 min) Students connect to Quizlet and start learning the vocabulary by going through the five study modes (flashcards, learn, write, spell, test) and the two activities (match and gravity) Teacher can use Class Progress to see students' study activity and best scores. While Quizlet isn't intended to be an assessment tool, the teacher can inform his instruction by viewing class data that shows him which terms are missed most often.

3. Checkpoint! (10 min): two or three times during class the teacher conducts a fun, formative assessment to see what students have mastered so far and what needs more focus. 4. Classic Quizlet live (10 min)- after the self-study stage students are challenged by the classroom game Quizlet live. They play it in team mode and individual mode. Lesson closure (5 min) – short discussion, students share the experience they made with Quizlet.. |
| Alternative activities | Since the students have learned some of the vocabulary related to Food at the previous lesson, the teacher can start the lesson with a Quizlet checkpoint activity to see how many words the students already know as well as to motivate them for learning knew vocabulary. |
| Why is this unit selected? | Learning new vocabulary itself is boring. By using Quizlet the students are more motivated for learning. The different study modes and activities are for the students more interesting as learning from the book The in-class game Quizlet Live helps also students review information while working together in teams. |

Methodology –Food	
Can the described methodology be applied to other topics or courses? Which?	Yes, of course it can be applied to other topics and courses. – I think it is best suited for learning new vocabulary
What is innovative in the described approach?	I think, student-centered approach makes interactivity more simplified. Because teacher is not fully engaged in lecturing, he has time to monitor student work and focus on interaction – 1-on1 or ARS, where he seeks response of all students.

Imperfect tense

Methodology – Imperfect tense	
Class/Course	Second grade Latin
Students' age/level	From 16 – 17
Unit title	Imperfect tense
Author	Martina Ješovnik
Duration	90 minutes
Unit and methodology summary (up to 150 words)	We describe past and unfinished act in imperfect tense, therefore students need to realize difference between finished and unfinished act first in their mother tongue so they can apply the knowledge on foreign language. Therefore, we play a game in the beginning where we sit in a circle and teacher says one sentence and then every student needs to say a sentence of their own not knowing what et the key for forming it. Teacher then confirm or rejects their sentence. Main goal of dynamic is to realize that the ''correct'' sentences were those, where the act of the verb was unfinished. Then the teacher runs ALTII and invites students to answer question about Imperfect tense, and before that tells them that this game was connected with this topic.
Methodology tags	Groupwork, frontal lecture, ALTII tool
Significance	If students don't learn this topic, they will have difficulties in translating Latin texts and acknowledging tense forms within others. Since in Slovene we don't have special tense for expressing sentences of that kind, it is difficult for students to comprehend it at first because there is no instant connection with mother tongue. Students can also be confused because there are similarities between Latin and English but one has to be quite advanced in knowing both languages to comprehend them otherwise negligence could lead to false deductions.

Methodology –Imperfect tense	
Assessment	What is assessed before/during/after the unit and how? - formatively – summatively – service learning projects
Classroom physical organization	Classroom where at the back there are chairs arranged in circle.
Number of students	Current number between 15 - 20 students showed itself to be optimal, because this dynamic should not take more than 15 min of whole 45 min class.
Included activities with duration and rationale/motivation	10 min – instructions fot the game and playing the game 5 min – introduction to ALTII QR code and responding to questions 10 min – deduction rules for forming the correct forms of verb in imperfect tense 10 min – translation of simple sentences with use of imperfect tense 10 min – examining and correcting translations
Alternative activities	Instead of using ALTII tool, I could have prepared the same questions with Power point or Prezi presentation, or simply write it on table to create a mind map on the board.
Why is this unit selected?	Students usually translate in the past tense even though they haven't actually learned it yet. When we learn first of past tenses it is crucial to see the individual form written differently to acknowledge the difference and deduce that they cannot translate two differently written word as the same.
Can the described methodology be applied to other topics or courses? Which?	Yes, it can be, specially to topics from Latin literature, where teacher can ask questions about the topic at the end of the class to see how much do students know about the topic and this can helps him to prepare quality class for next time.

Ancient mythology- 12 Olympian deities

Methodology – Ancient mythology	
Class/Course	Latin language (optional class)
Students' age/level	1st year; 15-16 years old
Unit title	Ancient mythology- 12 Olympian deities
Author	Martina Ješovnik
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Recognizing ancient deities namely by their representations in ancient art reproductions, descriptions and origin stories. With frontal teaching method students received basic knowledge which is now expanded and refreshed through AUDIT quiz.
Methodology tags	-frontal teaching method - passive response system through web quiz - individual learning by reading - group work
Significance	Greek mythology as the basis for later Roman mythology is ground topic for recognizing and understanding other references in literature, art, poetry, political speeches and movements, cultural events, astronomy and more within the ancient time frame as well as later times. In every day life there remains a lot of company names which includes reminiscences of Olympian and other gods and mythological beings. Therefore, is inevitable for students in obtaining general knowledge to know basic origin story and both Greek and Roman names of ancient most important gods.
Assessment	Students first get a task to read summary about the topic and solve task in their books, then they discuss answers in comparison with their small group of 3. Lastly, they compete among each other within the whole class through AUDIT quiz, where the teacher gives correct answers and comments on false answers.

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Methodology –Ancient mythology	
Classroom physical organization	For this task, classroom can be arranged as usual, all students have to see on the blackboard where AUDIT is presented, for small group interaction the work with closest neighbors. Equipment required is also a smart phone.
Number of students	27; if there is bigger group larger classroom with perhaps two screens is considered.
Included activities with duration and rationale/motivation	ENTRANCE MOTIVATION (5 MIN): Teachers greets students and gives instruction in Latin with translation following after they've tried to understand spoken language by themselves. TOPIC 1 (10 MIN) Students read in their books pages about Greek-Roman pantheon and solve tasks. ACTIVITY 1: (10 MIN) Students check correctness of their answers in small group of 3. ACTIVITY 2: (20 MIN) Teachers starts AUDIT and students get room ID so they can enter the quiz. This is the place where main topic is presented and tested therefore after every question teacher checkes if all students understood the answer not only those on the top. CLOSURE Teachers wishes students farewell in Latin.
Alternative activities	Since described activity requires computer, working network and AUDIT web page, there must be alternative prepared if anything goes wrong. In the worst-case scenario, teacher prepares question in small papers and adjust competition with creation groups in which disciples compete. If there are troubles only with AUDIT or network, teachers still could have pictures and maybe short films on Power point or so.
Why is this unit selected?	Students like to learn about topic which are already known to them to some extent. Therefore is wise to use their interest and expand and deepen their knowledge.
Can the described methodology be applied to other topics or courses? Which?	This methodology could be used in all cultural topics of the Latin class as well as some linguistic.

Language & literature

Methodology –Ancient mythology

What is innovative in the described approach?	In larger classroom there is always a challenge how to convince and motivate all students to participate since there are many factors for their non-participation. AUDIT motivates all of them, since they play individually and they don't have to expose themselves, specially in combined classes, where social atmosphere is slightly different then in primary classes. Teacher can receive answers from all the students not only brightest and loudest ones and those in real time, which is for him more informative, because he can evaluate their current knowledge.

STUDENTS ANSWERING **AUDIT** QUIZ

Homer: The Iliad

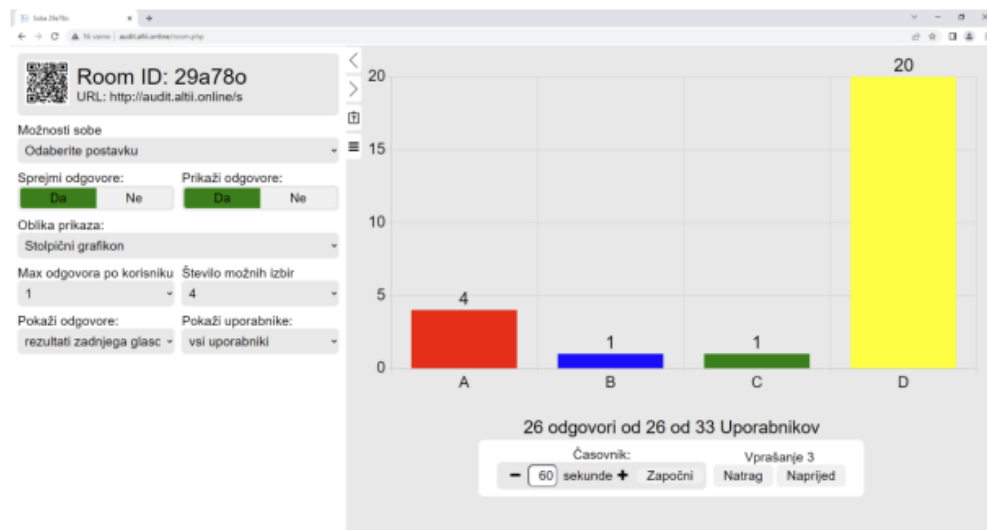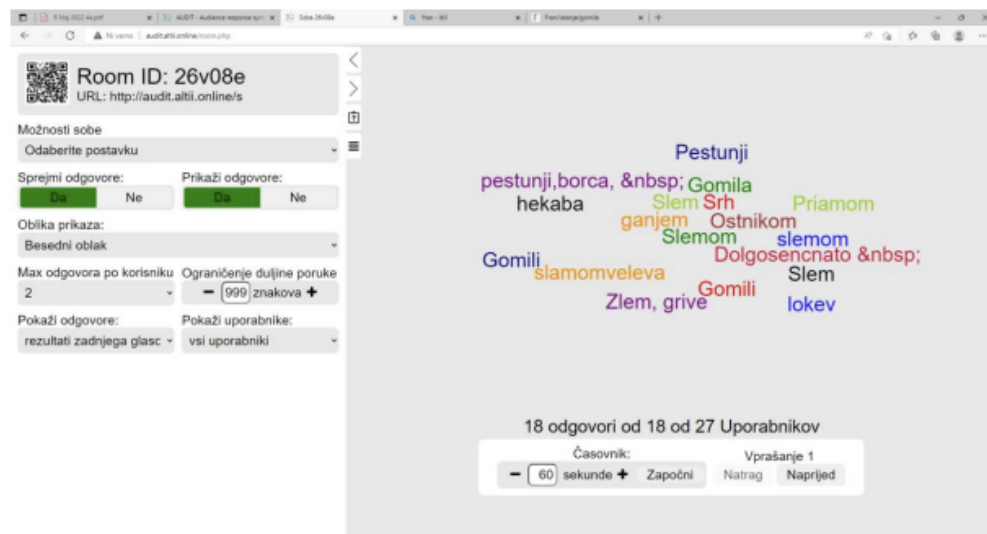| Methodology – Homer: The Iliad	
Class/Course	Slovene
Students' age/level	Secondary school with 15–18 years old students This topic is done in the first year, so students are 15–16 years old.
Unit title	Homer: The Iliad
Author	Marjetka Vidovič
Duration	90 minutes
Unit and methodology summary (up to 150 words)	The literature of Ancient Greece is an important part of the history of European history and culture. In reading and interpreting the work, students learn to recognise, analyse, and define the literary and interpretative elements of literary theory and history. They develop an awareness of the significance of Classical literature for the development of European literary traditions and culture as well as its importance today
Methodology tags	-audience response system – classical lecture – discussion
Significance	Epics are challenging for students because they are composed in verse, with numerous stylistic devices and unfamiliar vocabulary which hampers understanding.
Assessment	Formatively using the AUDIT tool
Classroom physical organization	Classroom; students need mobile devices and access to internet.
Number of students	Between 20 to 30 students.

	Methodology –Homer: The Illiad
Included activities with duration and rationale/motivation	1. Motivation (10 min) – Using the Kahoot quiz, the students recall the contents of the Trojan myth. 2. Theoretical development (10 min) – I present the characters, key to the understanding of The Iliad, and situate the assigned excerpt in the story. The students become acquainted with concepts such as: epic, epic style, Homeric simile. 3. Reading (15 min) – I read the assigned excerpt from The Iliad. While reading, the students underline unfamiliar words which they enter into the Audit application (tag cloud). I explain the unfamiliar words. 4. Group work (25 min) – In groups of four, the students reread the excerpt, taking turns. They then discuss the contents with the help of the provided questions. 5. Dig deeper (20 min) – The students stylistically analyse the work. Using the quiz, I examine their knowledge of stylistic devices. The students use the Audit tool. 6. Knowledge assessment (10 min) – Using the quiz, I check their knowledge of the idioms used in Greek myth. They demonstrate their understanding of the idioms by choosing the correct option in the Audit tool. If necessary, I provide additional explanations.
Alternative activities	In case the students have no Internet access or do not own a telephone, they can write answers on paper or in a notebook.
Why is this unit selected?	Students experience difficulties understanding the Greek epic The Iliad because it is composed in verse. It includes numerous archaic words (particularly in Anton Sovre's standard translation, the only complete translation available), along with word-order inversions and other stylistic devices. Consequently students fail to comprehend the verses and lose interest in reading. It is important to explain unfamiliar words, which is easiest using the AUDIT tool, since it allows students to write such words down anonymously without having to expose themselves in front of the entire class
Can the described methodology be applied to other topics or courses? Which?	The described methodology could be used for the treatment of any kind of work, particularly when looking for quick feedback from students.

Language & literature

What is innovative in the described approach?	Using ICT can be a boon to the teacher as it allows quick feedback to assess the knowledge of the students, allowing one to adapt in the moment as well as plan further activities.

Entry of unfamiliar words

Shakespeare: Hamlet

Methodology – Shakespeare: Hamlet	
Class/Course	Slovenian language and literature
Students' age/level	15 years old; 1st year
Unit title	Knowledge testing before school essay – Shakespeare: Hamlet
Author	Martina Slankovič
Duration	20 minutes
Unit and methodology summary (up to 150 words)	- individual form of work (after motivation and quick frontal part of the lesson and before conclusion) in the classroom or at home (parallel lesson) - experiential learning - learning through answering the questions in ARS with immediate teacher's feedback
Methodology tags	Distance learning and classical lecture, independent/individual work, audience response system: MS Teams, first testing of AUDIT tool, problem based learning, student-centered learning, game based learning, learning by doing approach
Significance	In a flood of information – gained in class with group and independent work – the learner must identify what is and what is not important for successful writing a school essay. The most important is self-esteem originating from knowledge – 2 lessons before writing an essay. A quiz-like short questions in ARS tool is beloved way for testing students' knowledge. They find out that they need to learn if they want to be successful (problem-oriented learning).
Assessment	Formatively (with AUDIT) – During class, students are solving given short tasks in real time (answering questions) They are also connected in MS Teams because of distance learning. Teacher is monitoring their responses and debates after each question is answered (asking questions with AUDIT tool, giving clues in real time). Summatively (with MS Forms)

Methodology –Shakespeare: Hamlet	
Classroom physical organization	Computers/laptops/tablets or phones and internet connection are needed. In case of distance learning, personal computer/laptop/tablet or phone and internet access for MS Teams are needed (cameras are desirable).
Number of students	26 (no limits – if someone is missing the class, he can do task alone at home – the assignment is open until the day of assessment)
Included activities with duration and rationale/motivation	- motivation and explanation before individual work (15 min) After motivating and consolidating knowledge through play (frontal lessons) the teacher starts asking questions with AUDIT tool. Students are writing answers. Then teacher moderate short debate about answers. The teacher indicates that students "compete in knowledge before assessment". - individual work (15 min) Students are solving the same quiz, individual in MS Forms. They can see how they progressed. Because this task is not group based, after uploaded solution, response by the teacher is needed (the problem is auto-graded task: if student mark only one answer instead of two or more the system detects it as an incorrectly solved task and gives student zero points).
Why is this unit selected?	I selected this unit because students are not enthusiastic about classical consolidation of knowledge. It is also the truth that students remember the most when they think with their heads. After a completely reworked learning topic it is important that students show their knowledge in an interesting and competitive way. The quiz provides immediate feedback (points scored) and subsequent detailed teacher information. It is also possible to easily track learning and progress of students work in real time and make instant responses if needed (for example if someone has less than half points – it is a big alarm for student and me).
Can the described methodology be applied to other topics or courses? Which?	Of course. This way of teaching is useful when student must determine the state of knowledge. Filled out quizzes allow teacher and students to easily access and get quick feedback. It is useful for every topic, it must be just sensibly prepared and executed.
What is innovative in the described approach?	Student-centered approach makes interactivity more simplified. Teacher is not fully engaged in lecturing, he has time to monitor student work and focus on interaction to give quality feedback.

Capitalization of Proper Names (orthography)

Methodology – Orthography	
Class/Course	Slovenian language and literature
Students' age/level	Secondary school with 15–18 years old students This topic is done in the second year with 16–17 year old students.
Unit title	Capitalization of Proper Names (orthography)
Author	Marjetka Vidovič
Duration	90 minutes
Unit and methodology summary (up to 150 words)	Orthography rules related to capitalization are important and relevant. Initially, it is sensible to evaluate existing knowledge of the types of proper names. Students have to be able to tell apart economical and non-economical toponyms to properly use upper or lower case letters. The chief goal is that students learn how to use and justify the orthography rules for the capitalization of proper names, which we will achieve with the aid of explanations, discussions and creativity.
Methodology tags	Audience response system, classical lecture, interactive quiz
Significance	It is important to follow orthographic rules as they help students in their text composition as well as formal written communication. Students often think they know how to capitalize words, but then they stumble on difficulties, particularly when it comes to proper names. They have difficulties writing multiple-word proper nouns, especially toponyms. They get confused writing down non-initial words in proper noun toponyms because they find it difficult to distinguish economical and non-economical toponyms. They must make use of their geographical knowledge.
Assessment	Formatively using AUDIIT tool Summative using the final Kahoot quiz

Methodology – Orthography	
Classroom physical organization	Classroom; students need their mobile devices and access to the internet.
Number of students	Between 20 to 30 students. Ideally they should be even-numbered, so they can quiz each other in pairs.
Included activities with duration and rationale/motivation	1. Motivation (10 min) – students use the interactive H5P5 tool to find seven words related to proper names. Afterwards, they use the AUDIT tool to answer multiple questions, determining the type of proper names found in words or phrases. For the final question in the AUDIT tool students write down the orthographically correct names of the places KRANJSKA GORA and ČRNA GORA. Based on this, the teacher introduces the topic.

2. Theoretical development (25 min) – using the prepared materials (presentation, textbook) the teacher in a guided discussion with students, repeats, reinforces, and fleshes out the divisions of types of proper names. The teacher explains the capitalization of multiple-word proper names, using the examples from the introductory motivation (Kranjska Gora and Črna gora).

3. Individual work (20 min) – students individually solve exercises in their workbooks, applying their theoretical knowledge in practice.

4. Practical examples (20 min) – students work in pairs. Each student uses the Slovene orthographic reference, Slovenski pravopis (making use of the dictionary section and the rules section) to pick 5 words which they write down in all capitals. Working in pairs, they exchange post-it cards containing the written words, which they then have to write down in cursive, using proper capitalization. Afterwards they exchange cards, correcting possible errors. Each has to justify the use of capitals in his or her examples.

5. Knowledge assessment (15 min) – Kahoot quiz for students. Students solve more difficult orthography quiz exercises. |
| Alternative activities | If there are difficulties students can use either their notebooks to write down the answers to show their solutions to the teachers or they use the whiteboard. |

Why is this unit selected?	Students sometimes show common errors with writing exercises and the use of the capital letters. Often they forget to capitalize words and even more often they use of it does not carry proper significance for students. The problem arises by not knowing the names of locations and therefore the students make poor choices capitalizing composite words.
Can the described methodology be applied to other topics or courses? Which?	The described methodology can be used in most grammatical topics ex. use of conjunctions. They have to do a lot of practice with exercises that accelerate the process of critical thinking in everyday situations.
What is innovative in the described approach?	The topics are organized in such manner that students can experience a better teacher/student or student/student interaction. Immediate feedback offers students an insight to avoid mistakes which greatly relieves their continuous activities.

Za katero vrsto lastnega imena gre v besedni zvezi
Goriška brda?

A – ime bitja

B – zemljepisno lastno ime

C – stvarno lastno ime

Za katero vrsto lastnega imena gre v besedni zvezi
Ljubljanski maraton?

A – ime bitja

B – zemljepisno lastno ime

C – stvarno lastno ime

Active Learning through improved interactivity – ALTII

Language & literature

Natural sciences

Natural sciences

The nervous system – introduction

Methodology – The nervous system – introduction	
Class/Course	Biology
Students' age/level	Secondary school with 15 – 18 years old students This topic is done in year 12, so students are 16 years old.
Unit title	The nervous system – introduction
Author	Alenka Pokeržnik
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The nervous system includes the brain, spinal cord, and a complex network of nerves. This system sends messages back and forth between the brain and the body. In this introductory lesson, students will learn about the importance of the nervous system to homeostasis and determine the importance of homeostasis for the normal functioning of the body. They will learn about the structure and function of a neuron and a synapse. In this way, they will learn about two ways of communication in the nervous system – the transfer of a stimulus across the neuron's membrane in the form of an electrical potential and a chemical impulse in the synapse.
Methodology tags	Audience response system, classical lecture, discussion
Significance	The concept of the functioning of the nervous system is more difficult for students to understand, as they have to connect knowledge from several areas. To further understand the functioning of the nervous system, understanding the functioning at the cellular level is very important.
Assessment	Formatively Summatively

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## Methodology – The nervous system - introduction

Classroom physical organization	Theater, each student has his own mobile device.
Number of students	15
Included activities with duration and rationale/motivation	1. Motivation (10 min): I show the results of the laboratory blood test to the students. A discussion about the importance of such tests and what the numbers on the test mean. We talk about the importance of reference values. We find that the body must function within certain limits. 2. Theoretical development (25 min) – With the help of tables and videos, I explain the structure and function of the nerve cell to the students. Concepts that students learn are: homeostasis, neuron, membrane electric potential, synapse, neurotransmitter. 3. Assessment of learning (10 min) – I check students' understanding with a quiz. Some example questions: 1. Write three concepts you learned today. 2. What is a nerve cell called? 3. How does the stimulus travel along the neuron? 4. Which concept do you think you haven't mastered?
Alternative activities	In case the students have no access to the internet or own a telephone, they can write answers on paper or notebook.
Why is this unit selected?	Understanding the functioning of the nervous system at the cellular level is important to further understanding the functioning of the nervous system. That is why it is important to check students' understanding at the end of the lesson. It is important that I see the whole picture, the answers of all students. By writing students' answers in a notebook, it is difficult for me to check all the answers and it is more difficult to recognize their misconceptions.
Can the described methodology be applied to other topics or courses? Which?	Of course, it is possible to use the method elsewhere, I especially find it suitable for lessons where we want quick feedback and analysis of results.

Natural sciences

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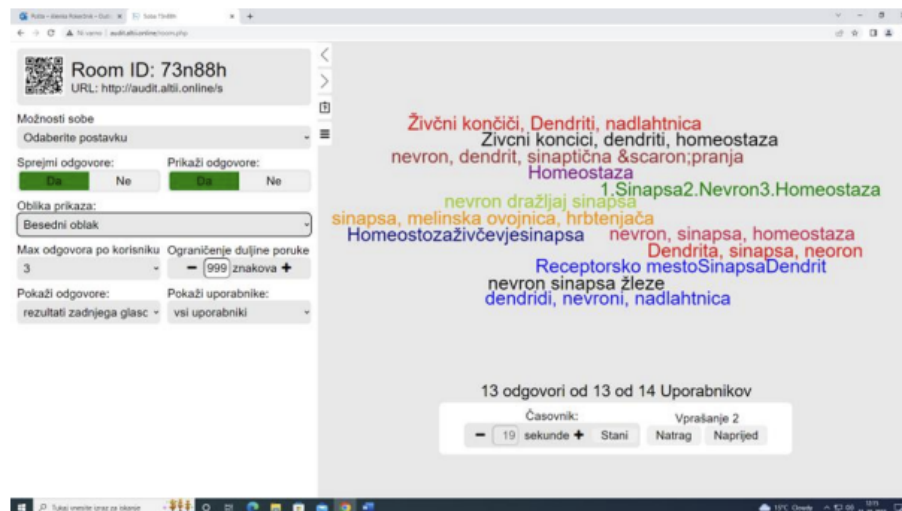Co-funded by the Erasmus+ Programme of the European Union

What is innovative in the described approach?	The use of ICT in classrooms is a support for the teacher. The importance of using AudIT is primarily in the speed of response itself.

An example of a image on whiteboard:
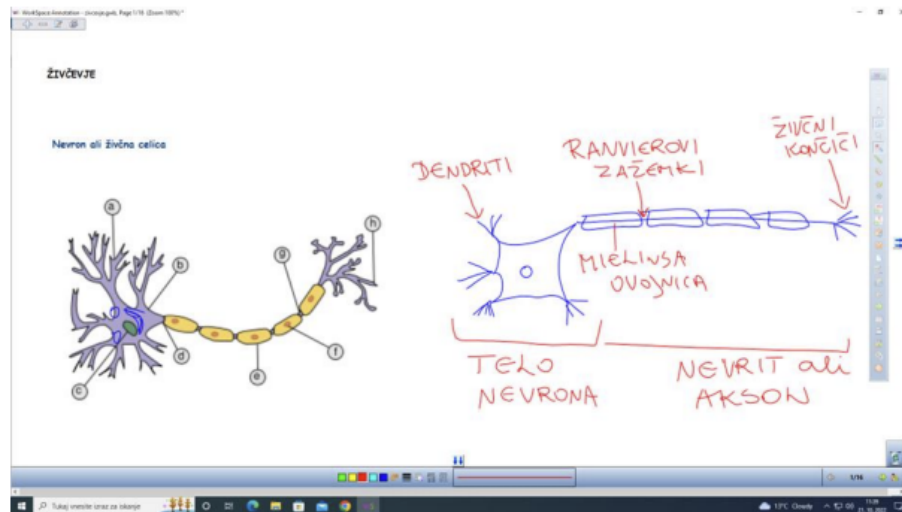
Q1: Write three concepts you learned today.

Climate. Carbon dioxide emissions

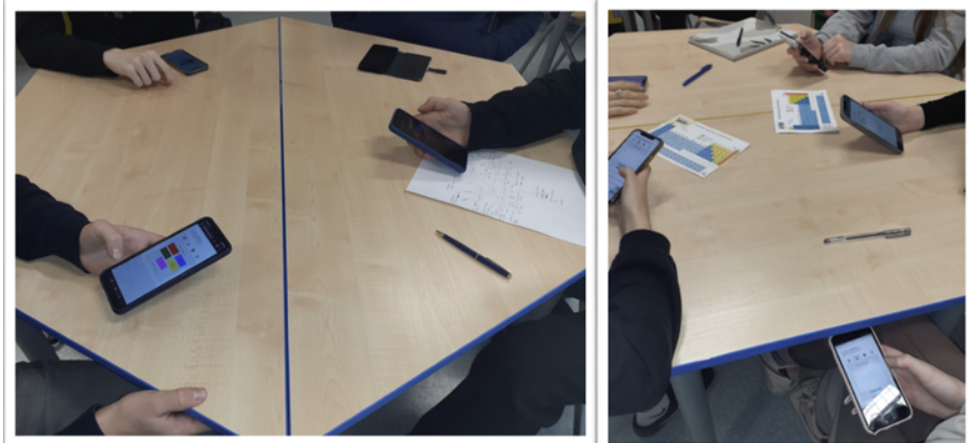| Methodology – Climate. Carbon dioxide emissions	
Class/Course	Science. Chemistry
Students' age/level	1st year students , who are at least 15 years of age. Learners who have completed middle school and are in vocational training.
Unit title	Climate. Carbon dioxide emissions
Author	Anne Krull
Duration	90 minutes
Unit and methodology summary (up to 150 words)	In class, we will discuss topics: climate, temperature, greenhouse gases. and chemical composition and generation of greenhouse gases. The card game "Climate School" is played in class. During the game, the cards are placed next to each other in a row on the so-called emission line. The aim is to rank the maps from low to high on the basis of emissions. The estimations of climatic impacts are based on calculations by researchers at Chalmers University of Technology. After the game, there will be a class discussion. The discussion shows how much different daily activities affect the climate and climate change issues. Each group will come up with one task using the cards.
Methodology tags	An interactive lecture, group work with questions, discussions, card game
Significance	Our different daily activities affect the climate. The climate is most affected by greenhouse gases. The main gases responsible for the greenhouse effect include carbon dioxide, methane, nitrous oxide, and water vapor (which all occur naturally), and fluorinated gases (which are synthetic). Greenhouse gases are causing global warming on Earth. Therefore, it is very important that students understand the importance of the topic and understand that each activity has an impact and how everyone can reduce their greenhouse gas emissions.
Assessment	Students work in groups. Learners are not directly assessed. The work of the lesson is formally evaluated. The purpose of the discussion at the beginning of the lesson is to find out the students' prior knowledge and attitudes.

Methodology – Climate. Carbon dioxide emissions

Classroom physical organization	The lesson can take place in the classroom or outdoors To facilitate group discussions, it is recommended to arrange the tables in the classroom so that 4-6 students can work together.
Number of students	Due to the size of the classroom, a maximum of 25 students are allowed to join in any given session. if the number of students is less than 4-6, the session will not occur
Included activities with duration and rationale/motivation	1. Introduction. (5 min) Greetings. General introduction to the topic. Explanations of how the topic is related to the curriculum. 2. Find out students' attitudes in the discussion. (10 min) Learners express their views on climate change 3. Interactive lesson about Greenhouse gases. (15 min) 4. A little relaxation break. (2 min) Students do stretching exercises. 5. A short instruction of the game (5 min). 6. Playing card game (25 min) 7. A class discussion about the game: "What did you already know? What was the hardest to understand?" "What do you want to know?" (10 min) 8. Each group creates one task based on the cards (7 min) 9. Students solve each other's tasks. (4 min) 10. Feedback and summary of the lesson. (7 min) Each student answers the question: "What is something new you learned today?" To give feedback to the teacher you can use e.g. AudIT tool. After the answer is written, students can also add an extra comment, below their submitted answers. 11. Have a good time and see you next time!
Alternative activities	If the school does not have the game cards, then the teacher can make their own online game or the students make their own games and then play each other's games. In the case of online learning, content can also be created in the Moodle environment. Discussions would then take place through the BBB in breakout rooms.

Natural sciences

Methodology – Climate. Carbon dioxide emissions

Why is this unit selected?	Climate issues are very topical today. It is important that students understand that they themselves can influence the environment in which we live through.
Can the described methodology be applied to other topics or courses? Which?	I have used lessons with a similar structure to conduct different theoretical lessons. I have different sets of cards and basically I have used a similar lesson structure in the case of this Moodle allows for an interactive type of lecture where learners can answer and ask questions by using their smartphones and using H5P it is possible to create online games. The lesson must be divided into different activities and during the 90 minutes there must be one relaxation break that is about 2-3 minutes.
What is innovative in the described approach?	The use of various online tools (Quizizz, Canva, Mentimeter, Moodle) allows those, who for some reason cannot be in the classroom, to take an active part in the class. Students can participate in the online class. With such an approach students have the opportunity to participate in lessons at a distance, if necessary. Learners are also more involved.

Polymers. Introduction to polymers

Methodology – Polymers. Introduction to polymers	
Class/Course	Science. Chemistry
Students' age/level	2nd year students , who are at least 16 years old. Learners who have completed middle school and are in vocational training.
Unit title	Polymers. Introduction to polymers
Author	Anne Krull
Duration	90 minutes
Unit and methodology summary (up to 150 words)	Polymers are one of the sub-topics of Materials. The aim of this lesson is to explain the basic concepts (monomer, polymer, index, coefficient, polymerization, polycondensation) and to find common answers to the questions: How are polymers defined? What are the types of polymers? How are polymers classified? How are polymers obtained? How are polymers used in day-to-day life? Students receive answers to these questions through active discussion and elaboration from various study materials.
Methodology tags	An interactive lecture, group work with questions, discussions, idea map, online game
Significance	We are exposed to various polymers on a daily basis. There are too many polymers that people use in their daily lives to even list them - let alone introduce them. Materials science is a rapidly evolving field of science in the field of modern physics, chemistry and engineering, the practical goal of which is to develop new polymers for various fields. Today's young person with a vocational education must be aware of the polymers he or she is exposed to in his or her line of work.
Assessment	The subject of polymers will be covered in three sessions(3x 90 minutes). Students will work in groups. Learners are not directly assessed. The work of the lesson is evaluated formally. The purpose of the questionnaire, that is completed at the beginning of the lesson, is to find out the students' prior knowledge.

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Methodology – Polymers. Introduction to polymers	
Classroom physical organization	The lesson can take place in a class where all students can use a Chromebook with an internet connection. The teacher must be able to use a data projector. To facilitate group discussions, it is desirable to arrange the tables so that 3-4 students can work together. By combining the features of Moodle and Zoom, BBB or Google Meet, the topic can be treated as a completely web-based or hybrid learning lesson.
Number of students	Due to the size of the classroom, a maximum of 40 students are allowed to join any given session. If the number of students is less than 6-8, the session will not occur.
Included activities with duration and rationale/motivation	1. Introduction. (5 min) Greetings. 2. Find out prior knowledge using Quizizz. (10 min) Learners complete the questionnaire according to their existing knowledge. 3. A short summary of the game (13 min). Firstly, the students discuss in groups "What do they already know? What was the hardest to understand?" "What do they want to know?" and then discuss all the classes. 4. Theoretical development I part (15 min) - Theoretical development using presentation or Moodle. Interactive lecture, conversation on the topics: How are polymers defined? What are the types of polymers? How are polymers classified? How are polymers obtained? 5. A little relaxation break. (2 min) Learners do stretching exercises and rest their eyes. 6. Theoretical development I part (10 min) - Showing polymers examples in classroom 7. While in groups students will make a Poster on "Polymers in profession" (e.g. construction) (using paper or website e.g. Canva) (20 min) 8. The students will introduce their posters to others. Discuss how polymers are used in everyday life (10 min). 9. Feedback and summary of the lesson. (5 min) 10. Have a good time and see you next time!

Methodology – Polymers. Introduction to polymers
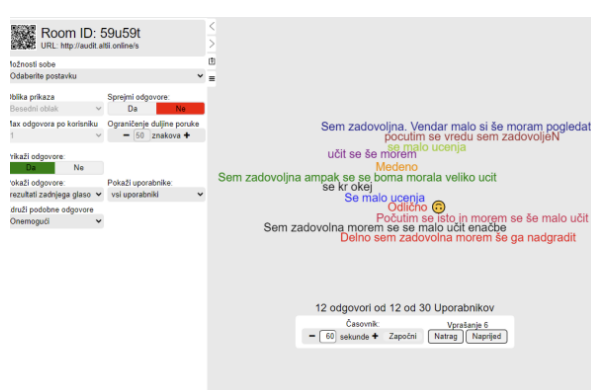
Alternative activities	If the school does not have Chromebooks then the teacher could use the BYOD method. If a school does not have a good enough Wifi connection, the lesson can take place in any classroom or outside, by using "Old School" methods (paper and pencil). Prior knowledge could also be tested by doing a nongraded test, where the teacher afterwards tells the answers. If it is not possible to Show polymer examples in school, then the teachers can show pictures of them on the internet.
Why is this unit selected?	Students have bad results in Chemistry. It is important that students understand the materials to which they are exposed to in everyday life and in their future work.
Can the described methodology be applied to other topics or courses? Which?	I have used lessons with a similar structure to conduct different theoretical lessons. Moodle allows for an interactive type of lecture where learners can answer and ask questions by using their smartphones. Idea cards help students focus on themes and on their ideas. Everything that is crucial to the topic, can be found in one place. The teacher can see the answers of each student. The lesson must be divided into different activities and during the 90 minutes there must be one relaxation break for 2-3 minutes.
What is innovative in the described approach?	The use of various online tools (Quizizz, Canva, Mentimeter, Moodle) allows those, who for some reason cannot be in the classroom, to take an active part in the class. Students can participate in the online class. With such an approach students have the opportunity to participate in lessons at a distance, if necessary. Learners are also more involved.

Symbolic notation and the plural of matter

Methodology – Symbolic notation and the plural of matter	
Class/Course	Science. Chemistry
Students' age/level	Secondary school with 15 – 18 years old students This topic is done in year 1, so students are 15-16 years old.
Unit title	Symbolic notation and the plural of matter
Author	Andreja Rajh
Duration	45 minutes
Unit and methodology summary (up to 150 words)	We ended this period with a substantive part, where we dealt with symbolic notation and the plural of matter. The students were given a knowledge test for their homework. My purpose is to test their actual knowledge. For this purpose, I prepared a short knowledge test that covers basic tasks that were also included in the knowledge test, which the students had to solve at home. Before conducting the lesson, I conducted a verification analysis (2 hours). The students had 20 minutes to solve a short knowledge test. To avoid copying, I prepared 2 groups for checking. After 20 minutes, I tested their actual knowledge with a quiz.
Methodology tags	Independent work, interview, explanation
Significance	Knowing the symbols for quantities and their units is crucial in this chapter in chemistry. Knowledge of mathematics (equations with a single fraction) is also required, which is quite weak among first-year students. Students also have a lot of problems with writing down potentials when using a calculator.
Assessment	After checking and analyzing the homework, students write a test.
Classroom physical organization	Students get a knowledge test (2 groups). They need a calculator and eventually a mobile phone.
Number of students	23 students in class

Natural sciences

Methodology – Symbolic notation and the plural of matter

Included activities with duration and rationale/motivation	1. Motivation (5 min) – talk about homework 2. Theoretical development (20 min) – solving knowledge test 3. Practical examples (10 min) solving the quiz 4. Conclusion (10 min) interview about the success of the tasks solved
Alternative activities	In this case, no alternative activities were necessary because I prepared the student to test his knowledge in written form. If one of them did not have a mobile phone, he could check the correctness of the solutions directly on the worksheet.
Why is this unit selected?	I chose AUDIT because, in this case, I very quickly came to the realization of how much the students actually know, where the shortcomings are, and what still needs to be explained. The work was made easier in the sense that I did not have to review the solved tasks for all the students. Students who were not successful are not personally exposed.
Can the described methodology be applied to other topics or courses? Which?	Of course, wherever we want to anonymously subvert the knowledge of students.
What is innovative in the described approach?	Not only AUDIT, but also the use of other ICT is helpful to the teacher and enriches the lessons for the students. The advantage of AUDIT is in fast feedback.

Cyber Security

Methodology – Cyber Security	
Class/Course	Cyber Security
Students' age/level	Office workers 3rd year (vocational education). Students aged 16+ who have completed basic education level.
Unit title	Overview of the most common attacking and hacking methods involving both theory and practical assignments
Author	Kätlin Kask-Adamson
Duration	90 minutes
Unit and methodology summary (up to 150 words)	In this learning activity students will learn about the fundamentals of attacking and hacking methods and how to distinguish them. The lesson is divided into 4 steps: activating video, warm-up task about the password security (if not handled in the past units) and data breach, open discussion and mind-mapping their results after the discussion and a short lecture about most common hacking techniques. In the lecture there are activating tasks (profiling a hacker, identifying hacking situations, discussions, mind-mapping) and in the end a self test on what they learned in the unit which provides an insight for the teacher how much was understood in the learning (test at Quizizz.com).
Methodology tags	Interactive lecture, individual work with questions, discussion, online game, mind mapping
Significance	The topic is directly related to their work. This lesson is an introduction to a larger topic: How to avoid any cyber threats both in the workplace and in everyday life. The topic is also important to office workers since their work is largely related to computers and different kinds of documents, sensitive data and websites.
Assessment	As this was an introductory lesson, there was no direct assessment. It means that the teacher doesn't grade the students but at the end of the lesson they can take a self assessment test to reflect on what they learned during the 90 minutes and what needs to be repeated.

Natural Siences

Methodology – Cyber Security

Classroom physical organization	The lesson should take place in a computer class where all students can use a computer with an internet connection. If a school has good Wifi connection, the lesson can take place in any classroom, in which case students will use their smartphones, laptops or tablets. The teacher must be able to use a data projector. To facilitate group discussions, it is desirable to arrange the tables so that 3-4 students can work together. By combining the features of Google Slides, Mentimeter and Zoom, Teams or Google Meet, the topic can be treated as a completely webbased or hybrid learning lesson. (Hybrid learning means that some learners are in the classroom and some participate in the lesson online.)
Number of students	In order to have more different experiences in the class and to be able to create a discussion, there could be minimal at least 6-8 students. For a larger number of learners, the class can be divided into smaller groups for discussion.
Included activities with duration and rationale/motivation	Part 1 We start with an activating video that shows how total strangers may know more about us than we might ever expect and how over-sharing and carelessness can backfire. The teacher then asks 2 questions from the audience: 1. What is the main message of the video? 2. Do you overshare on the internet? The answers will be submitted using the AudIT tool. (7 mins) Part 2 Then we can do a warm-up task by letting students control, if and to what extent their email(s) account(s) have been in a data breach. Students can use two different websites 1. https://howsecureismypassword.net/ 2. https://haveibeenpwned.com/ The first website is for a student to control how secure is a password they have selected for signing into their email account, social media platforms or other websites they use. The second website for students to control if their email or phone is in a data breach. The teacher then asks 1 question from the audience: 1. Is your current password secure according to the website? IMPORTANT! If the students have handled password security part in previous curriculum computer training lessons unit then the teacher can skip part 2 and and start immediately with part 3. (10 mins)

Natural Siences

Included activities with duration and rationale/motivation

Part 3 Slide presentation. What is hacking and who is a hacker. Teacher led open discussion about if and how have students been hacked previously: 1. How do you understand hacking? What is it? 2. Have you been hacked or attacked before? If yes, then how? 3. Why do you think hacking happened? What was the result? 4. What security measures do you use to make your accounts and computer safe? (example: 2-stage authentication, password generators (Lastpass) ect. Optional extra (5th) question 5. Have you been in the role of a hacker? Would you like to specify what did you hack and how it ended?
The results are collected into a mind map so that the trainer and other students can see the conclusion of discussion and reflect.

The students can reflect their results based on the mind map with teacher led questions such as: 1. What is the most common reason for a person being hacked? 2. What are the most common security measures for avoiding hacking in our group? The The answers will be submitted using the AudIT tool. (45 mins)

IMPORTANT! Teacher has to be aware that on the second slide where the question "What are the characteristics of a hacker" a Mentimeter openended question poll is provided and it is usually valid for 2 days. So before the class the teacher has to make a new Mentimeter link that is valid.

Part 4 Lecture . Slides 4-14 that include both lecture and activities. Main topics are different types of hackers, Social engineering, Phishing and simple steps how to avoid being hacked. Those topics are covered in the presentation. We start by defining what is ethical hacking and what is criminal hacking by watching a video and then answering to 4 questions on an individual sheet, slide 4). After that we focus on different types of hackers and what is zero day (slides 5-9). On slide 10 students will have to define what sort of hacking is described in the assignment (white, black or grey hat). Students will write their opinion on the same sheet that they used on slide 4. Then the students share their thoughts in the class (based on volunteering). The teacher will sum up the results and lecture based on the results students provided. (15 min)

Part 5 Lecture slide 15. The students can now take a Quizizz test (presented in the presentation as a QR-code) and the teacher can see how well the students remember the topics covered and how they manage to answer the questions provided. (13 min)

Methodology – Cyber Security

Alternative activities	The theoretical part (slide presentation) can also be handled without a presentation, asking students questions and discussing their answers together. It would be good if the teacher has paper material with basic concepts. In this case,it is possible to share it with the learners. For making a mind map the students can use paper and pencil. Also the hacking methods (black, grey, white) test can be taken on paper.
Why is this unit selected?	It is important that before acquiring a more in-depth understanding of the subject of cyber security, learners acquire basic concepts and also the teacher can assess during this lesson how much the students have previous knowledge
Can the described methodology be applied to other topics or courses? Which?	I have used lessons with a similar structure to conduct different theoretical lessons combining theory with little tasks to help students register the theory a bit easier... . The quizizz test helps students reflect their lesson and show them what is still somewhat weak. This lesson can be applied in basically every topic that is new for the students as it combines theory with practice.
What is innovative in the described approach?	The use of various online tools (Quizizz, QR-code, Mindomo mind mapping) allows those who can't be in the classroom to take part in the class to some extent.I think that with such an approach, students have the opportunity to participate in lessons at a distance

☑ 1. Multiple-choice   ⏱ 1 minute   ⊘ 1 point

You get an e-mail from an international health organization themed "Coronavirus (2019-nCov) Safety Measures". When yo try to open the document in the attachment, the computer tells you to "Enable Content" to open the document. What do you do?

○ You should definetly open the document, because it contains important information.

○ You should open it because Word documents usually do not contain malware.

○ You should delete the e-mail and forget about the situation.

○ You should report this letter to the authority or your IT provider.

☑ 2. Multiple-choice   ⏱ 30 seconds   ⊘ 1 point

What is your smartphone's screen lock?

○ I draw a pattern on the screen.

○ I use biometry (face recognizion, finger print) or PIN code that is longer than 4 digits.

○ I don't use screen lock.

○ I insert a 4-digit PIN code.

Ms Excel – Consolidation of knowledge

Methodology – Ms Excel – Consolidation of knowledge	
Class/Course	Informatics
Students' age/level	15 years old; 1st year
Unit title	Ms Excel – Consolidation of knowledge
Author	Mirko Dukić
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Basics in Ms Excel spreadsheets. Consolidation of knowledge. Students answer short open questions (in AUDIT), solve short quiz in LMS Moodle and solve tasks using Excel. They are able to instantly present parts of their solutions or questions to others (via Audit ARS) and discuss about their approach or correcting possible errors.
Methodology tags	Problem-based learning - Student-centered learning - LMS Moodle - audience response system - Learning by doing approach - MS Excel - Real time consolidation of knowledge
Significance	Real time consolidation of knowledge is important. Using ARS, we can activate several or sometimes even all students. If students can show and discuss their solutions in real time, they can improve faster and better.
Assessment	Formatively – during class, students are solving small problems/tasks in Excell (given in LMS Moodle or/and via ARS Audit). Summatively – students have to upload their final solutions of given task in LMS Moodle until end of class. Teacher's response is expected until next class meeting.

Natural Siences

Methodology – Ms Excel - Consolidation of knowledge

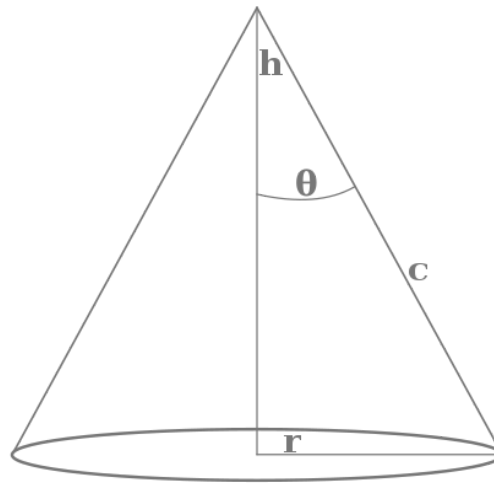|	
Classroom physical organization	Computers with internet access. In case of distance learning, internet access and cameras for MS Teams
Number of students	16 (number of computers in classroom)
Included activities with duration and rationale/motivation	1. Motivation (10 min) – (10 min) introduction to the unit topic. Students solve short summative quiz in LMS Moodle (prior knowledge testing) 2. Learning activities (Consolidation of knowledge) (30 min): - Students solve the tasks in Excel given to them in the online classroom LMS Moodle (there they upload solutions). - Teacher monitors their work and, if necessary, helps with an explanation or demonstration. - Several times during class, teacher "ask" short open question with ARS AUDIT in order to get students response and see their understanding. - Students are encouraged to ask questions if needed or write them down in ARS for all to see and discuss. 3. Assessment and lesson closure (5 min) - students solve the same summative quiz in LMS Moodle again (To see how they progressed.)
Alternative activities	In case of technical issues, students can write their partial solutions in notebook (functions or answers on open questions) and write their questions and answers directly on whiteboard or on stickers.
Why is this unit selected?	I chose this topic to test effectiveness of using open type of questions (with ARS) during consolidation of knowledge in strict topic like Excel.
Can the described methodology be applied to other topics or courses? Which?	Described methodology can be used anywhere, where we want to engage more or ever all students in instant response using technology.
What is innovative in the described approach?	Real time interaction between students and teacher using ARS

Active Learning through improved interactivity – ALTII

Natural Siences

Methodology – Cones	
Class/Course	Mathematics the third year of gymnasium
Students' age/level	Students aged 17-18
Unit title	Cones
Author	Darinka Žižek Vesna Dukarič Leskovar Sonja Perko
Duration	90 minutes
Unit and methodology summary (up to 150 words)	The student: - knows the definitions of 2nd order curves - knows the equations of circles, ellipses, hyperbolas and parabolas - can draw 2nd order curves in the coordinate system - recognizes cones and can write their equations from the drawn curves - compares and uses the analytical and geometric definition of a cone - interprets a circle as a special case of an ellipse - analyze the equation and graphically represent circles and ellipses in the central and displaced positions - analyze the equation and graphically represent hyperboles and parabolas in the vertex position - develops the ability of abstract and logical thinking - is accustomed to active involvement in the conversation - develops the ability of observation, logical reasoning and generalization - refers to mathematical terminology and symbolism - knows how to use inductive methods (observation, search for properties, generalization) - increases the quality and sustainability of acquired knowledge - develops digital competencies
Methodology tags	Presentation of tasks using OneNote, individual work, audience response system, discussion, solve tasks with OneNote

Methodology – Cones	
Significance	If the student does not recognize the equations of cones, it confuses them due to similarity to other equations. The student has difficulty recognizing graphs of functions and curves and writing down their regulations.
Assessment	Formative Written exams
Classroom physical organization	Frontal with access to a PC or mobile device Individual settings with the use of OneNote
Number of students	Up to 30
Included activities with duration and rationale/motivation	1. Motivation (5 min) While giving instructions for work the teacher encourages students to individually solve tasks for their own knowledge testing.

2. Theoretical development (3 min) The teacher presents the work of today's lesson to the students.

3. Individual and frontal work (70 min) - We repeat and consolidate our knowledge of cones with the help of prepared records of selected tasks in OneNote. With the ALTII app, students answer questions written in OneNote. The teacher quickly checks the understanding of the cone definition and so he gets feedback Together the class analyzes the correct answers with other students. The teacher comments on possible mistakes and lead students to the correct answers by talking and solving tasks. Students take notes, solve required tasks and check the correctness of procedures, participate in discussions with the professor and between each other so they can correct any mistakes.

4. Conclusion (12 min) – The class makes a summary of the lesson to find out what we need to pay special attention to. |
| Alternative activities | Answers can be shown with colored post it notes |
| Why is this unit selected? | The students have difficulties recognizing graphs of functions and their curves therefore writing down their rules. |

Methodology – Cones

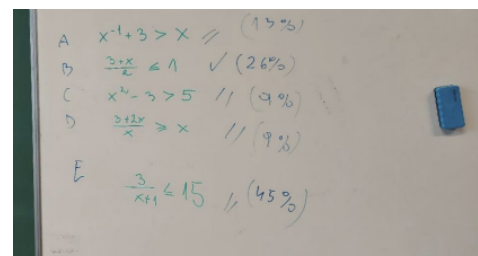|	
Can the described methodology be applied to other topics or courses? Which?	Yes, wherever it is helpful to get instant feedback on understanding mathematical concepts.
What is innovative in the described approach?	The activities allow students to collaborate with the teacher, as the teacher and the student receive immediate feedback. This allows the teacher to react immediately and correct knowledge gaps.

Systems of linear inequations

Methodology – Systems of linear inequations	
Class/Course	Math
Students' age/level	15 years old; 1st year
Unit title	Systems of linear inequations
Author	Mojca Tomšič
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The unit is about linear inequations. Students already master linear inequalities, methods of solving these equations, and sets of solutions to these equations. Used methods: - working with quiz app – AUDIT - frontal lecture - method of explanation and conversation - discussion of correct and wrong answers
Methodology tags	Individual work, audience response system, quizzes, practicing, quiz app AUDIT
Significance	Learning methods, understanding definitions, development of critical thinking
Assessment	Formative: Every student has to answer a question via a mobile device. Students and the teacher are getting instant feedback on understanding the topic.
Classroom physical organization	-mobile device for student and internet connection - projector, computer and internet connection must be available for the teacher - standard position of student's desks

Natural Siences

Methodology – Systems of linear inequations

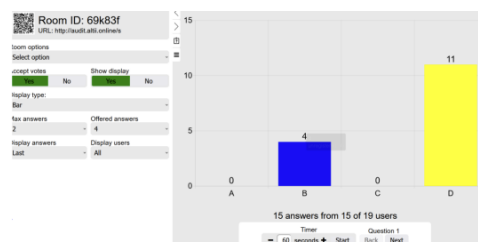|	
Number of students	All students in the classroom - 23
Included activities with duration and rationale/motivation	1. Motivation (10 min) – (5 min) repetition of the definition of linear inequality and procedures for solving linear inequality – (5 min) Students answering the question about linear inequation in AUDIT (choosing correctly from the above inequalities) 2. Learning new content (30 min): – recognition of systems of linear inequalities – strategies of solving problems (based on already known procedures) – graphic presentation of solutions 3. Repetition of what has been learned (5 min)
Why is this unit selected?	I selected this unit because I wanted to check whether students understand the concept of linear inequation and the procedures for solving them. This is important for understanding new content below. I also wanted to motivate them in this way
Can the described methodology be applied to other topics or courses? Which?	This method is very good for short tests of knowledge before acquiring new content and repeating the content already discussed, as motivation.
What is innovative in the described approach?	The lesson is organized in a way that allows the teacher and students to easily collaborate with each other. They can share content, communicate and get instant feedback, when needed or asked.

Polynomials

Methodology – Polynomials	
Class/Course	Mathemathics
Students' age/level	17-18 years
Unit title	Polynomials
Author	Sonja Perko
Duration	20 minutes
Unit and methodology summary (up to 150 words)	Students: -know the definition and features of a polynomial, -can calculate with polynomials, -know and use the basic theorem on division of polynomials, -develop the ability of abstract and logical thinking, -actively participate in conversations, -develop the ability of observation, logical reasoning and generalization, -learn mathematical terminology and symbolism, -know how to use inductive methods (observation, finding properties, generalization), -increase the quality of acquired knowledge, - develop digital competences.
Methodology tags	Presentation of tasks using OneNote, ARS, individual work, discussion, solving tasks with the help of OneNote
Significance	Basic concepts about polynomials are important for the continuation of the learning material - drawing graphs of polynomials.
Assessment	Formative assessment Written test after every unit
Classroom physical organization	Individual work using computer or mobile devices Frontal work when using Onenote document

Methodology – Polynomials

Number of students	16
Included activities with duration and rationale/motivation	1. Motivation (5 min): When giving the instructions for work, I encouraged students to solve tasks individually to check their pre-existing knowledge. 2. Lesson's topic announcement (3 min): I presented the lesson's topic to the students. 3. Individual and frontal work (32 min) : We revised and consolidated knowledge about polynomials with the help of prepared records of selected tasks in OneNote. With the ALTII application, students answered written questions in OneNote. With the help of ALTII, I quickly checked my knowledge of polynomials and got feedback on it. Together, we analyzed the answers. I commented on potential mistakes and led them to correct answers through interviews and solving tasks. Students took notes, solved required tasks and checked the correctness of procedures. They participated in teacher-student discussion and corrected their mistakes. We continued with the learning material, where we used repeated concepts. 4. Conclusion (5 min): we made a summarized the topic and found out what needs further attention
Why is this unit selected?	In order to continue with new topics about polynomials, the student must know the basic concepts of polynomials.
Can the described methodology be applied to other topics or courses? Which?	Yes, wherever it is useful to get instant feedback on your understanding of mathematical concepts.
What is innovative in the described approach?	The activities allow students to collaborate with the teacher, as the teacher and student receive immediate feedback. This enables the teacher to react immediately and correct potential mistakes in students' knowledge.

$$p(x) = (2x - 3) + (x^2 + 3x + 4)$$
$$q(x) = (2x - 3) - (x^2 + 3x + 4)$$
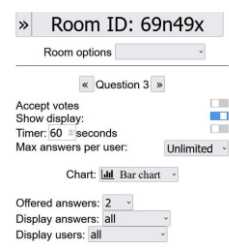$$r(x) = (2x - 3) \cdot (x^2 + 3x + 4)$$
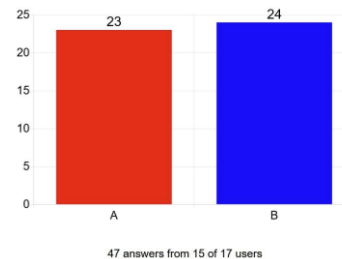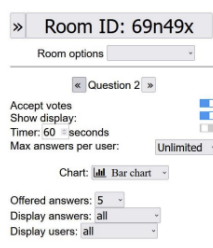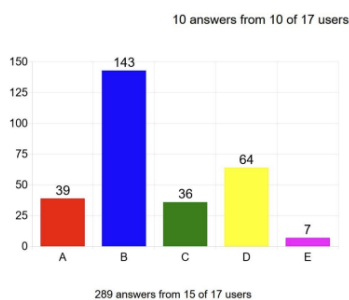$$s(x) = \frac{2x-3}{x^2+3x+4}$$

Assessing knowledge about magnetism

Methodology – Assessing knowledge about magnetism	
Class/Course	Physics The third year of gymnasium
Students' age/level	17-18 years
Unit title	Assessing knowledge about magnetism
Author	Jakob Murko
Duration	45 minutes
Unit and methodology summary (up to 150 words)	This unit is the end of topic Magnetism, which covers magnetic properties, reasons for magnetic force, magnetic field around wire, magnetic field in solenoid, magnetic force on moving charged particle and motion of particles in magnetic field. This unit assesses all topics of magnetism and prepares students for exam.
Methodology tags	Questions, audience response system (AUDIT), discussion, assessment of knowledge, understanding
Significance	students get better feeling how well they understand the topic. students get often confused what is the direction of magnetic flux density, magnetic force and electric current and this activity helps them to better understand those concepts.
Assessment	Formatively: Each student has to answer the questions to get immediate response
Classroom physical organization	Classroom with any combination of tables
Number of students	From 10 to 30 students.

Methodology – Assessing knowledge about magnetism

Included activities with duration and rationale/motivation	1. Introduction (3 min) The teacher presents the work of today's lesson to the students. 2. Individual and frontal work (35 min) - We repeat and consolidate our knowledge of magnetism with the help of prepared questions of selected topics. With the ALTII app, students answer questions posted in PowerPoint presentation. The teacher quickly checks the understanding of the magnetism definition and so he gets feedback. Together the class analyzes the correct answers with other students. The teacher comments on possible mistakes and lead students to the correct answers by talking and solving tasks. Students take notes, answer the questions and check the correctness of procedures, participate in discussions with the professor and between each other so they can correct any mistakes. 3. Conclusion (7 min) – The class makes a summary of the lesson to find out what we need to pay special attention to, before the exam.
Why is this unit selected?	Assessing of knowledge before exams is crucial part of learning process. Only with clear information about state of knowledge students can focus on learning specific topics effectively.
Can the described methodology be applied to other topics or courses? Which?	Of course. This method can be used everywhere, where teacher would like to assess knowledge of students.
What is innovative in the described approach?	Approach is innovative because teacher and students can get real information about gaps in knowledge of a students. Therefore, teacher and students can improve learning (teaching) on topics which need most attention.

Natural Siences

Units of measurement

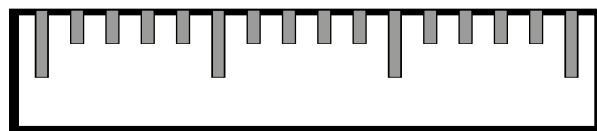| Methodology – Units of measurement	
Class/Course	Science. Physics
Students' age/level	1st year students , who are at least 15 years of age. Learners who have completed middle school and are in vocational training.
Unit title	Units of measurement
Author	Anne Krull
Duration	90 minutes
Unit and methodology summary (up to 150 words)	The lesson is an introduction to a larger topic: "Measuring". The lesson is divided into 3 steps: individual warm-up task with online game, group working and discussion. In class, we will discuss topics: measuring, Physical quantity, units of measurement, symbols, measuring instruments.
Methodology tags	Online game, group work with questions, discussions
Significance	Measuring helps us to compare unknown quantities with the known quantities and helps us make quantitative statements like how big, how long and/or how fast things are. We use different unit systems in everyday life. Physics is crucial to know what measurement is being used otherwise without it units may have multiple possible meanings. In their future work, students will have to measure, for example, the height of the wall, calculate the amount of material needed, and major errors may occur if the individual at hand does not know the correct unit of measurement that is needed.
Assessment	Students work in groups. Learners are not directly assessed. The work of the lesson is formally evaluated. The purpose of the game at the beginning of the lesson is to find out the students' prior knowledge of the topic. The purpose of the group works and discussions are to prepare them for the next lessons and practice work.
Classroom physical organization	The lesson can take place in a class where all students can use a Chromebook with an internet connection. To facilitate group discussions, it is recommended to arrange the tables in the classroom so that 3-4 students can work together

Number of students	Due to the size of the classroom, a maximum of 25 students are allowed to join in any given session. if the number of students is less than 6, the session will not occur.
Included activities with duration and rationale/motivation	1. Introduction. (5 min) Greetings. General introduction to the topic. Explanations of how the topic is related to the curriculum. 2. Find out prior knowledge using Quizizz. (15 min) Learners complete the questionnaire according to their existing knowledge. Before filling it out, I will explain that it gives us background material on how to proceed with the topic. Learners complete the questionnaire. 3. A short summary of the game. Analyze the answers (10 min). 4. A little relaxation break. (2 min) Sharing students to groups. 5. A short instruction of the group work (5 min). 6. A group work. Every student chooses from a group of 2-3 units they want to know better and together they will find out what the physical size's symbol is and how to measure it. Students will make a presentation afterwards (16 min). 7. The students will introduce their work to the others (14 min). 8. Discuss "Where and when they can use this particular unit (20 min) 9. Feedback and summary of the lesson. (3 min) Each student answers the question: "What is something new you learned today?" The answers could be collected to Wordcloud. To give feedback to the teacher you can use e.g. AudIT tool. After the answer is written, students can also add an extra comment, below their submitted answers. 10. Have an enjoyable time and we look forward to seeing you next time
Why is this unit selected?	In our department there is a very important role for measuring and calculating. Students usually don't know the differences of the units, they don't know how to get the correct unit and write down the results correctly.

Natural Siences

Methodology – Units of measurement

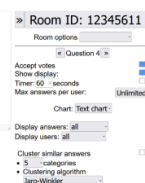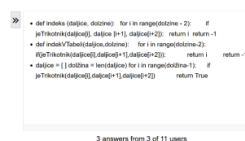|	
Can the described methodology be applied to other topics or courses? Which?	I have used lessons with a similar structure to conduct 3 different steps – first, students work on their own, then group work and finally discussion. The lesson must be divided into different activities and during the 90 minutes. There must be one relaxation break that is about 2–3 minutes.
What is innovative in the described approach?	The use of various online tools (Educaplay, Moodle) allows those, who for some reason cannot be in the classroom, to take an active part in the class. Moodle allows for an interactive type of lecture where learners can answer and ask questions by using their smartphones. Students can participate in the online class. Learners are also more involved.

Programming (in Python); Consolidation of knowledge

Methodology – Phyton	
Class/Course	Informatics
Students' age/level	1st year; 15 years old
Unit title	Programming (in Python); Consolidation of knowledge
Author	Mirko Dukić
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Programming (in Python); Consolidation of knowledge; Students writes short programs based on given authentic problems and then discusses with others about their solutions. They are able to instantly present parts of their solutions or questions to others (via Audit ARS) and discuss in group about their approach, correcting possible errors, finding better ways …
Methodology tags	Computational Thinking, algorithms, pattern recognition, programming in Python, problem-based learning, student-centered learning, MS teams, LMS Moodle - audience response system, learning by doing approach
Significance	Consolidation of knowledge is important. Students should be able to show their solutions and discuss about them instantly in order to improve their programming skills.
Assessment	Formatively – during class, students are solving given short but authentic problems (on computer or paper) – writing short programs in Python. Teacher is monitoring their work and motivating students to send their solutions/questions/dilemmas/parts of algorithm on ARS (now testing in Audit ARS). Then we discuss about it in real time.

Summatively – students have to upload their final solutions (programs) in LMS Moodle after class. Teacher's response is expected until next class meeting. And student's if needed. |

Natural Siences

Erasmus+

AGENCY FOR MOBILITY AND EU PROGRAMMES

Co-funded by the Erasmus+ Programme of the European Union

Methodology – Phyton

Classroom physical organization	Computers with internet access. In case of distance learning, internet access and cameras for MS Teams.
Number of students	16 (number of computers in classroom)
Included activities with duration and rationale/motivation	1. Preparation and motivation (5 min) - introduction to the unit topic. 2. Consolidation of knowledge (35 min) - Students have to write short program based on given authentic problem (5-7 min/ assignment). During the assignment students are motivated to send their solutions/questions/dilemmas/parts of algorithm on ARS (now testing in Audit ARS). - Teacher is monitoring their work and interact one-on-one if/when needed. - (at least 5 min) After given time teacher opens discussion about sent solutions and/or questions with students. Students in group ask questions, solve each other's mistakes in code, discuss different approaches ... - We repeat process with new assignment. We try to solve three assignments in one class. Sometimes problem proves to be interesting and duration of discussion extends. 3. Lesson closure (5 min) – students have to upload their final solutions (programs in Python) in LMS Moodle. Teacher's response is expected until next class meeting. And student's if needed.
Why is this unit selected?	During consolidation of knowledge, it is proven effective, when students can discuss in group about their programs, finding errors, better approaches ...
Can the described methodology be applied to other topics or courses? Which?	Anywhere, where we expect instant response from students or we want to engage more students to ask questions.
What is innovative in the described approach?	When using ARS, more students can interact with teacher in real time.

Natural Siences

Criteria of economic development

Methodology – Criteria of economic development	
Class/Course	Geography
Students' age/level	Secondary school with 15 – 18 years old students This topic is done at 2nd year, so students are 16-17 years old.
Unit title	Criteria of economic development
Author	Maja Vičič Krabonja
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Unit is the starting point to the new topic. It is designed in the way to encourage students to think about different criteria we are using when talking about developed and underdeveloped even developing countries. ARS is used to allow students to express their thoughts on the topic and maps (and other data) to allow them to explore for themselves or in small groups
Methodology tags	audience response system, lecture, discussion
Significance	Since this is a starting point for new topic it is very important for students do get a clear understanding of basic concepts and terms. They are using these terms a lot but not understand them correctly. This is why it is essential to use ARS, to get a clear picture of students' pre-knowledge and views (they are sometimes shy to make them public or they are not confident in the validity of their answers). Results, that are visible on the board are also an excellent point for discussion.
Assessment	Formatively through the answers on ARS

Natural Siences

Methodology – Criteria of economic development

Classroom physical organization	Individual access to mobile devices (or computers) – also it should be easy to change its layout for group discussion
Number of students	Ideally up to 32, so there are not to many group or number of participants in one group can be up to 2-3.
Included activities with duration and rationale/motivation	1. Motivation (15 min) – Using ARS students are answering questions: - List 7 countries that you consider to be developed* - List 7 countries that you think are underdeveloped - How would you place Slovenia? - Name at least 3 criteria that you used in your thinking? ** Teacher is leading discussion on topic using students' answers and leads students to thinking on what base did they make their decisions, why some countries are on both lists... 2. Theoretical development (15 min): • Teacher checks prior knowledge and understanding of BDP and BNP – student should know this terms form Economy subject. • Teacher explains what Social Progress Index is. • Using ARS students are writing ideas, what criteria should be included in SPI. Teacher explains what Human Development Index is and how it is constructed. 3. Knowledge and understanding assessment (15 min) Students in pairs or small groups compare two world maps: • GDP per capita https://ourworldindata.org/grapher/gdp-percapita-worldbank and • Human Development Index https://worldpopulationreview.com/country-rankings/hdi-bycountry Each group writes 3 similarities and 3 differences between the two maps. While working they can also write questions for teacher or students in other groups using ARS – questions are displayed on the board. Using ARS each group writes 3 differences they found and try to explain why are some countries better of (or worse) at GDP map in comparison to HDI map. Teacher is leading the discussion. 4. Homework Student do their own research using web page https://hdr.undp.org/data-center/human-development-index#/indicies/HDI where they compare 3 countries on their HDI. The task is to explain why there are differences between selected countries. What causes the differences? This will be the starting point for next lesson on the impact of environmental factors on economic development.

Methodology – Criteria of economic development

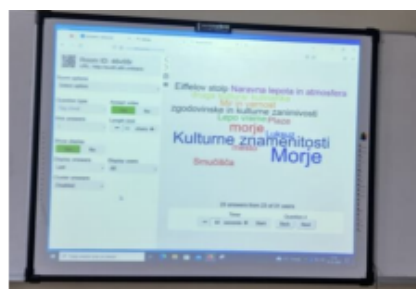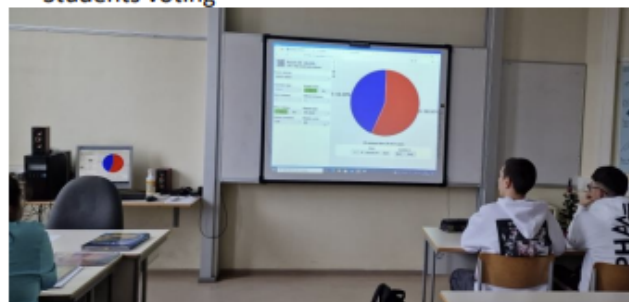|	
Links to additional unit materials	PPT presentation: https://sesmbmy.sharepoint.com/:p:/g/personal/maja_vicic_sesmb_si/EVmyQcLMpj9Lo2I6dAqdwfwBgpXoKykItGfHcl5uN9dzkw?e=c4Fo Xa *Picture of word cloud – students answers ** Students answers on naming criteria that they used.
Alternative activities	Questions can be put orally to student (to write answers on paper) and teacher is choosing which students will answer and explain. It can be done, but not all the students will be in the same position.
Why is this unit selected?	I have used exactly the same questions using PPT, but this way lesson is much more efficient. Since it is very important to get rid of every misconception at the start of new theme, I find this way of doing it very efficient.
Can the described methodology be applied to other topics or courses? Which?	I think yes, always when teacher is interested in the preknowledge, thinking and different point of view of students.
What is innovative in the described approach? (In accordance with the Priorities and Topics from the project application)	Activities are designed in the way that enables students to interact with teacher, each other, and content. The use of ICT is supporting the teaching and learning process. Lesson can be done live or via videoconferencing tool. It creates learning opportunities for student, to practice and develop their digital and social competences.

Tourism Factors

Methodology – Tourism Factors	
Class/Course	Geography
Students' age/level	Secondary school with 15 – 18 years old students This topic is done at 2nd year, so students are 16-17 years old.
Unit title	Tourism factors
Author	Maja Vičič Krabonja
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The unit is about geographical factor of tourism as economic sector. Students are having a feeling that they know a lot on the topic (because of their experiences) but they are looking at it from the tourist point of view and not as a geographer or economist. ARS is used for teacher to see students' understandings of the topic.
Methodology tags	Audience response system (ARS), lecture, discussion
Significance	This unit is very hard for students to understand multiple factors that are important for developing opportunities for tourism as an economic sector. Tourism is very much influenced by the natural- and sociogeographical elements geographical landscape and it is important for students to understand there is never just one isolated factor. It is important to understand this, because in further lessons we are also going to discuss the influence of tourism to the environment.
Assessment	Formatively, through the answers on ARS

Natural Siences

Methodology – Tourism Factors	
Classroom physical organization	Individual access to mobile devices (or computers)
Number of students	Ideally up to 30 students.
Included activities with duration and rationale/motivation	1. Checking previous knowledge (5 min): students use ARS and write what the tourism is (we have talk about it last week). Teacher corrects answers and add additional explanation if needed. 2. Motivation (10 min) – Using ARS students are answering questions: - Name the dream destination, you would like to visit (no time and money restriction)* - Why would you like to go there? (Word cloud) - Write down at least 5 factors that attract you to a tourist destination. (Word cloud) Teacher is using algorithm to group students answers and lead the discussion to identify groups of geographical factors of tourism. 3. Theoretical development (25 min): Teacher explains (using maps and picture) natural geographical and socio-geographical factors that are important for developing tourism in certain regia. During lecture students are using ARS for a. writing examples of tourist destination, that were developed on the base of specific geographical factors b. or vice versa, teacher give the example of tourist destination and students are writing geographical factors that influenced the growth of tourism in regia. 4. Knowledge and understanding assessment (5 min): Teacher is showing pictures of different tourist destinations and students are choosing correct answers - voting (using ARS)** which natural geographical and socio-geographical factors influenced on developing tourism in certain regia. Teacher is leading a discussion on correct and wrong answers and provides additional explanation if needed
Links to additional unit materials	PPT presentation: https://sesmbmy.sharepoint.com/:p:/r/personal/maja_vicic_sesmb_si/_layouts/15/Doc.aspx?sourcedoc=%7B00E0C701-F39E-4741-8C2CB08B2BA93FB3%7D&file=Turizem.pptx&action=edit&mobileredirect=true *Picture of word cloud – students answers

Methodology – Tourism Factors

Alternative activities	Questions can be put orally to student (to write answers on paper) and teacher is choosing which students will answer and explain. It can be done, but not all the students will be in the same position.
Why is this unit selected?	I have used exactly the same questions using PPT, but this way lesson is much more efficient. Since it is very important for teacher so see to what extent students are understanding the topic, I find this way of doing it very efficient.
Can the described methodology be applied to other topics or courses? Which?	I think yes, always when teacher needs a clear feedback from students to assess their knowledge and understanding before moving on with more difficult topics.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact with teacher, and vice versa. The use of ICT is supporting the teaching and learning process. Lesson can be done live or via videoconferencing tool.

** Students voting

Natural Siences

Personal Development

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The importance of friendship

Methodology – The importance of friendship	
Class/Course	Class meeting
Students' age/level	17 – 18 years old
Unit title	The importance of friendship
Author	Vesna Dukarić Leskovar
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Each class at the school has a class meeting once a week, where students discuss current issues with the class and work on the personal relationships between them. This time we talk about how important it is to have a friend, what are the qualities of a true friend and in which situations is very important to have a friend by your side. We tried to find concrete situations when we turn to a friend.
Methodology tags	Audience response system (ARS), lecture, discussion
Significance	Students often have difficulties in public exposure and they have an easier time expressing what bothers them if they can say it anonymously.
Assessment	I wanted students to reflect on their positive qualities. As their classroom teacher, I learned from their responses what problems my students faced during this period.
Classroom physical organization	Each student has his own mobile device computer and smart board
Number of students	10

Personal Development

Methodology – The importance of friendship

Included activities with duration and rationale/motivation	Motivation (5 min): We talked about the importance of friendship. Theoretical development (10 min): With the help of powerpoint presentations, I present to students the general positive characteristics of the person. We talk about the importance of good relationships whit friends in the classroom and in real life. Survey (10 min) I introduce the AudIT tool to the students. I explain to them that their answers will be anonymous and I ask them for honesty in their answers. I ask the students four different questions obout the importance of friendship. Whit the ALTII app students answer written questions at a Power Point presentation. Analysis of results (5 min): Then we look at their answers, comment on them, dicsuss the problems they solve whith their friends and I can choose new topics from their conclusions for the next time.
Alternative activities	In case the students have no access to internet or own a telephone, they can write answers on paper.
Why is this unit selected?	Because it is an important part of their personal development, because students can unreservedly expose their views and problems.
Can the described methodology be applied to other topics or courses? Which?	Yes, where we want students to respond honestly, where we want to get their responses quickly.
What is innovative in the described approach?	The app is easy to use and responds very quickly, we get instant feedback that we can take advantage of in the next stages of learning.

ALTII

1. VPRAŠANJE:

Razmisli in odgovori na vprašanje:

koliko prijateljev imaš?

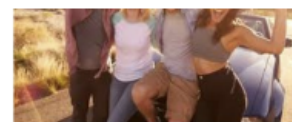| A	B	C	D	E
0	1	2	3	4 ali več

ALTII

2. VPRAŠANJE:

Razmisli in odgovori na vprašanje:

Katere so zate najpomembnejše lastno...

Je iskren,   dober poslušalec, humorist,   kritičen, zna potolažiti,   sočuten,

Room ID: 76z03l
URL: http://audit.altii.online/s

Možnosti sobe

Odaberite postavku

Sprejmi odgovore: Prikaži odgovore:
Da   Ne   Da   Ne

Oblika prikaza:

Prikaz sporočil

Max odgovora po orisniku
4

Ograničenje duljine poruke
− 999 znakova +

Pokaži odgovore:
vsa glasovanja

Pokaži uporabnike:
vsi uporabniki

Združi podobne odgovore
10 kategorije

Način prikaza
Odgovori

> • G1 - Ne obsoja
• G2 - Iskrenost
sočuten
zaupanja vreden
pozitiven
nasmejan
• G3 - Iskren
Humorist
Pozitiven
Zaupanja vreden
Zanesljiv

8 odgovori od 8 od 22 Uporabnikov

Časovnik: Vprašanje 2
− 60 sekunde +   Započni   Natrag   Naprijed

ALTII

3. VPRAŠANJE:

Razmisli in izberi tvojo najpomembnejšo lastnost, ki prispeva k temu, da si ti dober prijatelj nekomu?

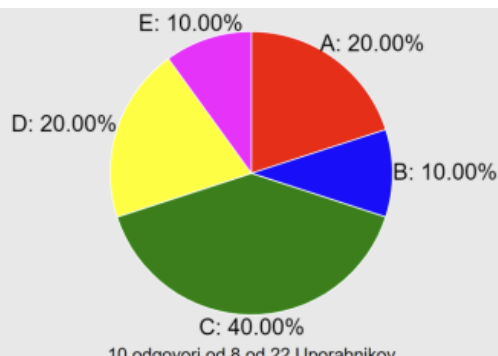| A	B	C	D	E
Sem sočuten	Sem dober poslušalec	Sem zaupanja vreden	Imam smisel za humor	Sem iskren

Room ID: 76z03l
URL: http://audit.altii.online/s

Možnosti sobe

Odaberite postavku

Sprejmi odgovore: Prikaži odgovore:
Da   Ne   Da   Ne

Oblika prikaza:

Tortni grafikon

Max odgovora po korisniku
2

Število možnih izbir
5

Pokaži odgovore:
vsa glasovanja

Pokaži uporabnike:
vsi uporabniki

E: 10.00%   A: 20.00%

D: 20.00%

B: 10.00%

C: 40.00%

10 odgovori od 8 od 22 Uporabnikov

Časovnik: Vprašanje 3
− 60 sekunde +   Započni   Natrag   Naprijed

Personal Development

Atmosphere in the classroom

Methodology – Atmosphere in the classroom	
Class/Course	Class meeting
Students' age/level	Secondary school with 15 – 18 years old students This topic is done in year 1, so students are 15-16 years old.
Unit title	Atmosphere in the classroom
Author	Alenka Pokeržnik
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Each class at the school has a class meeting once a week, where students discuss current issues with the class and work on the interpersonal relationships between them. This time, I tried to figure out the current class dynamics, to identify the eventual problems of the students. With the help of results, the teacher detects the general atmosphere in the classroom and relations between students. I also wanted to be able to find out what problems the students have so that we can find solutions together.
Methodology tags	Audience response system (ARS), lecture, discussion
Significance	Students often have difficulties sharing themselves in public and they have an easier time expressing what bothers them if they can say it anonymously.
Assessment	Summatively: the results of the survey were primarily aimed at the teacher to gain an insight into the atmosphere in the classroom, the analysis of the survey is done by the teacher themselves and the results as such are not intended for students.
Classroom physical organization	Theater, each student has his own mobile device.
Number of students	27 students in class

Methodology – Atmosphere in the classroom	
Included activities with duration and rationale/motivation	Motivation (5 min): Talk on the general well-being of students Theoretical development (10 min): With the help of a PowerPoint presentation that I present to the students, they communicate the general norms of communication and how communication affects their relationships. We talk about the importance of good relationships in the classroom. Survey (20 min) I introduce the AudIT tool to the students. I explain to them that their answers will be anonymous and I ask them for honesty in their answers. I ask the students five different questions. The questions relate to wellbeing and acceptance in the classroom, what they like in school, what they would change. For questions where students expose their problems and write what bothers them in school and class, I don't publicly show their answers. These answers are intended for me, to use them to plan further work in the classroom. Analysis of results (10 min): We look at the results of the issues that are aimed at them and discuss them. We also make a plan on which topics we would like at class meetings next time.
Alternative activities	In case the students have no access to internet or own a mobile phone, they can write answers on paper (although this is very time- consuming for teacher – reading all of the answers and calculating the statistics).
Why is this unit selected?	I chose AudIT for this class meeting because it enabled the information to be retrieved quickly. It is very good that the information in this case is anonymous and the teacher quickly gets a basic statistical analysis on a case-by-case basis. On some questions, I showed the answers of all the students to the class, but not on more delicate ones.
Can the described methodology be applied to other topics or courses? Which?	Of course, it is possible to use the method elsewhere, I especially find it suitable for lessons where we want quick feedback and analysis of results.
What is innovative in the described approach?	The use of ICT in classrooms is a support for the teacher. The importance of using AudIT is primarily in the speed of response itself.

- Survey results

Methodology – I'm learning. But...	
Class/Course	Class meeting
Students' age/level	1 st year of gymnasium; 15 years old
Unit title	I'm learning. But... Why I don't remember anything?
Author	Martina Slankovič
Duration	45 minutes
Unit and methodology summary (up to 150 words)	The theme of the lesson is learning: how to be successful. In the previous lessons teacher and students spoke about study types and the meaning of working habits. Students get to know what is the best way to learn, which is the easiest way to learn and how can they teach themself to learn. Teacher is going to employ a variety of research methods: explanation method, interview method, demonstration method, problem solving method ...
Methodology tags	Audience response system (ARS), lecture, discussion, demonstration
Significance	This topic is at the beginning of secondary education the most important topic. Students are lost, if they don't hear as soon as possible what means to work hard, they are going to have a lot of problems. Students don't have work habits, they are addicted to technology, they don't know how to start learning ... But they want to be successful, so they need help. Students are confused by the flood of information, so they need concrete guidance.
Assessment	Formatively Every student has to answer question via mobile device at the beginning of the lesson. Students and teacher are getting instant feedback. Those present get an immediate insight into the issue.
Classroom physical organization	Each student must have his own mobile device. Projector, laptop and internet connection must be available for teacher. Standard position of student's desks.

Personal Development

Methodology – I'm learning. But...

Number of students	There is no limit – the whole class.
Included activities with duration and rationale/motivation	1. Motivation: Answer the questions (5 minutes) Students answer the questions (PowerPoint). Each student answer on his own. Questions: How many hours per day do you spend for studying? Do you study in the presence of technology (phone, computer ...)? Do you plan your study time? (time frame, breaks, rewards) How many hours of sleep do you get? (per night, average) My current biggest fear is... In class, I would like to talk about... 2. Interpretation (10 minutes) The last question is followed by a common interpretation of the answers. 3. Discussion about How to study? (30 minutes) Teacher presents 23 tips and tricks for successful study. Teacher shows few examples of great work. Students respond, share their experiences.
Alternative activities	As alternative teacher can show video of different study methods.
Why is this unit selected?	It is very difficult for students to understand the meaning of hard work. Secondary school is quite different of primary school, they must find a way to remember topics quick and quality. With questions students understand what they are doing wrong and with instant response they get ideas how to work in the future
Can the described methodology be applied to other topics or courses? Which?	The essence of the lessons is the active participation of the students, so yes. I use it also in mother tongue lessons. This method is useful because it can check many things: basic understanding, relevance of work...
What is innovative in the described approach?	The use of technology is supporting the teaching and learning process, it provides instant feedback for student and teacher

Personal Development

Active Learning through improved interactivity – ALTII

Personal Development

Methodology – Activities in the optional part of the P.E.	
Class/Course	Physical education (P.E.)
Students' age/level	Secondary school/15 – 19 years old students
Unit title	Activities in the optional part of the P.E.
Author	Tanja Raj
Duration	45 minutes
Unit and methodology summary (up to 150 words)	Physical activity is essential for health and well-being. It improves respiratory, cardiovascular and mental health. The main goal is to develop and improve movement skills. During this lesson, the professor and students dobijo informacijo katere aktivnosti si dijaki želijo pri prostem delu ur ŠVZ. Students use the ICT tools to find information about the heartbeat and According to the curriculum, 105 hours of vocational training are prescribed, which consist of compulsory and optional work. Students can choose an activity for 30% of the hours in the first two years, and for 70% of the hours in the last two years. The content that we evaluate is a mandatory part. These are athletics, volleyball, gymnastics, general conditioning and basketball. Optional subjects include yoga, aerobics, dance, fitness, frisbee, hockey, handball, table tennis, soccer, hiking and badminton. For easier and better organization and greater student satisfaction, I conducted a survey among the students using the AudIT questionnaire. I wanted feedback on the mandatory content (what they like and don't like about ŠVZ), how physically active they are in their free time, and which activities they would choose for free choice, optional part of the P. E.
Methodology tags	Audience response system (ARS), lecture, discussion, shared document

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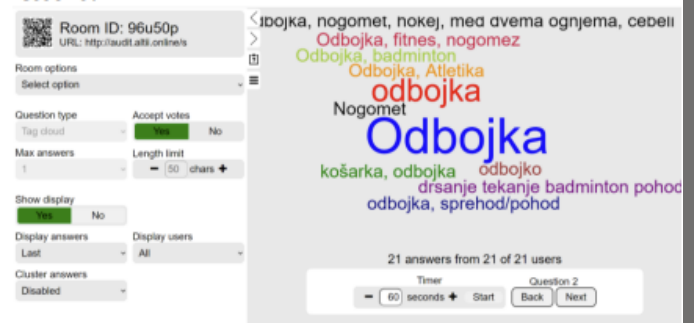| Methodology – Activities in the optional part of the P.E.	
Significance	Staying active is one of the best ways to keep our bodies healthy. Physical activity can help you feel better, look better and live better. It is important that students are aware of the benefits of exercise and its positive effects. The aim is for them to incorporate physical activity into their daily routine. There are a number of students who are not formally enrolled in a physical education class, but work out at home, go running or to the gym. It is important to develop their movement skills, including strength, speed, endurance, agility, coordination, precision and balance. Only then will the students be able to exercise effectively. The focus of this lesson is on the free choise, optional part of the P. E.
Assessment	Formative assesment - each student makes a proposal for a free choice of activities
Number of students	Up to 22
Included activities with duration and rationale/motivatio n	Introduction (10 minutes). In the introduction part, students learn about the contents of compulsory work and optional work, what we develop with which activity, what we influence. Using the AudIT application, they answer questions of different types (votes, tag cloud and plain text). Getting there: (20 min) Teacher discuss with students, about the importance of physical activity and what are they gaining with the specific activity they like and have suggested for Activities in the optional part of the P. E. Students' activity (10 min) Students are creating plan what activities should day be involved at to achieve balanced and healthy life style. Wrapping up (5 minutes): Students write their New Year resolution on the theme of physical activity using ARS.
Alternative activities	Activity could also be done by pan and paper, but it would take longer

Why is this unit selected?	With the help of the application and this survey, teacher gets immediate feedback about their choice of free time activities at P. E. Students have access to all kinds of exercises on the internet. They are often unable to judge whether the exercises are suitable for them, or they do them in an inappropriate way. They are often not aware of the consequences of choosing the wrong exercise program. The teacher's role is to help them choose the right training, correct their technical mistakes and explain the purpose of each exercise. Students form homogeneous groups based on their personal progress goals. Within these groups, they help and motivate each other. With the AudIT tool application, the teacher can monitor the students' work and give them immediate feedback.
Can the described methodology be applied to other topics or courses? Which?	In my opinion, yes – especially in areas where collaboration of students is desired and needed.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact with teacher, each other, and content. The use of ICT is supporting the teaching and learning process. Shared documents enable students to cooperate in real time, teacher can monitor and give instant feedback. Lesson can be done live or via videoconferencing tool. It crates learning opportunities for student, to practice and develop their digital and social competences.

How often are you physically active?
- A. Regularly
- B. occasionally
- C. rarely or never

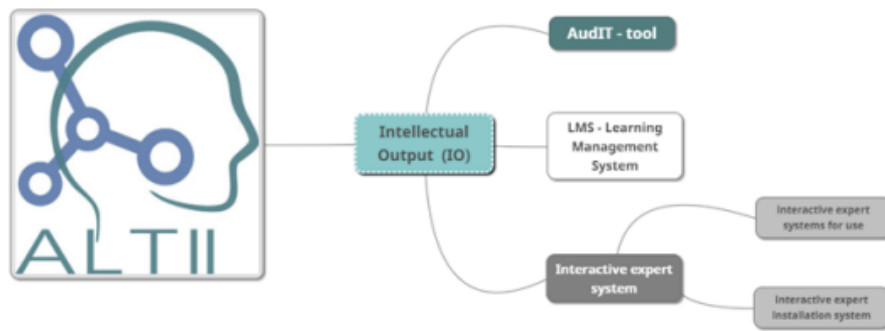**Which activity would you choose as a free choice for your PE lessons?**

Personal Development

Methodology – Basic physical training – (BPT), circuit training	
Class/Course	Physical education (P.E.)
Students' age/level	Secondary school/15 – 19 years old students
Unit title	Basic physical training – (BPT), circuit training
Author	Tanja Raj
Duration	90 minutes
Unit and methodology summary (up to 150 words)	Physical activity is very important for health and well-being. It improves respiratory, cardiovascular and mental health. The aim of the lesson is the development of movement skills (physical power and stamina), to learn about the meaning of heart frequency (HF) and also to find exercises to improve the motoric functions. In the lesson students and the teacher with the use of ICT get feedback how to analyze HF, they learn the right body area of heart rate range or HF which they measure. With the info the students count HF after different exercises, they make collective groups on their results and together they create new improved ways for specific kinesthetic exercises. The students use ICT and the teacher's feedback to further find better exercises which they also appropriate for home use. In the lesson they develop digital competencies, social skills and feedback that is send into a joint document for the teacher to further evaluate, help to guide and foster student progress.
Methodology tags	Audience response system (ARS), lecture, shared document
Significance	Staying active is one of the best ways to keep our bodies healthy. Physical activity can help you feel better, look better and live better. Students who are not actively pursuing sport learn that although they individually train can study the HF and thus get better results in physical readiness so that they moderate the intensity various exercises. The can apply different numbers of repetitions in circuit training which then furthers the development of stamina in basic muscle groups.

Methodology – Basic physical training – (BPT), circuit training

Assessment	Formative assesment - students get feedback
Number of students	Up to 22
Included activities with duration and rationale/motivatio n	1. Introductory theoretical part, motivation (15 min) - In a joint document, students write what movement means to them and what movement has a positive effect on. Students sign up for the online classroom and browse the e-textbook. The teacher explains the meaning of the heartbeat, the students use mobile phones in the e-textbook to find a way to measure the heartbeat and determine the areas of the heartbeat. The teacher explains the meaning of the CAP, lists the motor skills and basic methods of exercise. 2. Warm-up and preparation of the gym (25 min) - 5 min run, stretch exercises, the athletic ABC 3. Circuit exercise (3 x 12 min) - students are divided into pairs, each counting the repetitions of certain tasks, which they submit to the teacher in a joint document, measure their heart rate and transmits the number of beats per minute. After the first and second rounds, students group up in pairs with a similar number of repetitions. 4. Playing with a ball and finding tasks (3x12 min) Students are divided into 3 groups to play with a ball. 2 groups are playing, the third is looking online for suitable tasks to improve the CAP. After agreeing on the suitability with the professor, they submit exercises for each task in a joint document. 5. Conclusion (8 min) - cleaning the gym, stretching exercises and conversation
Alternative activities	If students do not have access to the internet or mobile devices the teacher manually enters the number of repetitions for each exercise in the table. A summary of each group can be presented orally to the other students (and the teacher).

Methodology – Basic physical training – (BPT), circuit training

Why is this unit selected?	In the flood of online exercises, it is difficult find and choose the right one, but above all they often perform them incorrectly or the technique is imperfect. Many times they do not know the consequences or purpose of the exercises. Therefore, the teacher is here to help with the selection, the correct execution technique and to explain the purpose of the exercise. Students come together in homogeneous groups – according to their ability and desire to progress, they help and encourage each other. Shared documents also allow teachers to monitor their work and provide immediate feedback.
Can the described methodology be applied to other topics or courses? Which?	I think yes, everywhere where collaboration of students is desired and needed.
What is innovative in the described approach?	Activities are designed in the way that enables students to interact with teacher, each other and the content itself. The use of ICT is supporting the teaching and the learning process. Shared documents enable students to cooperate in real time, teacher can monitor and give instant feedback. Lesson can be done live or via a videoconferencing tool. It crates learning opportunities for students to practice and develop their digital and social competences.

Personal Development

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