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ENHANCED LEARNING AND TEACHING IN INTERNATIONAL VIRTUAL ENVIRONMENTS

Engagement and communication tools

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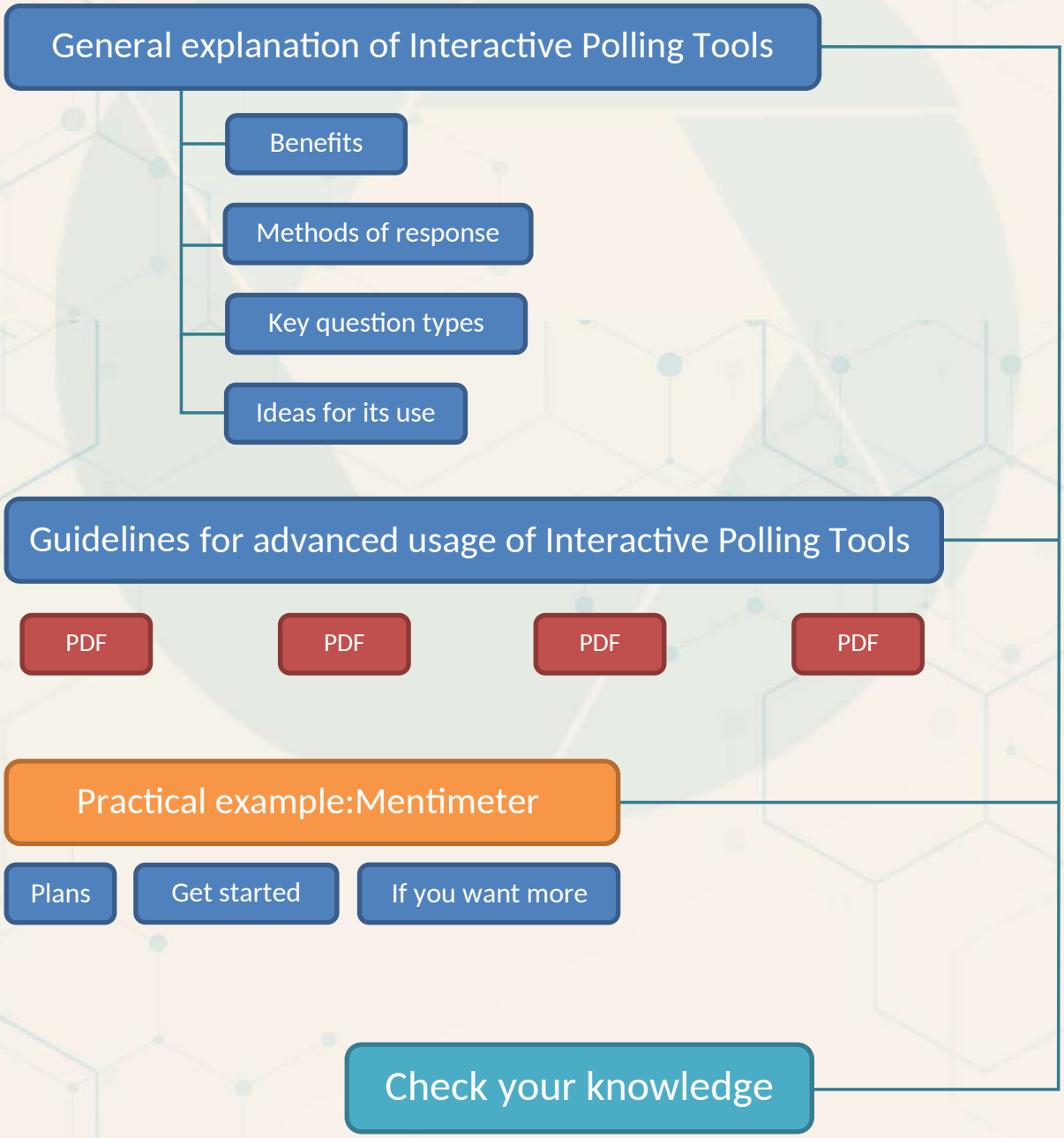
INTERACTIVE POLLING TOOLS



Interactive Polling Tools

I General explanation of Interactive Polling Tools

What are Interactive Polling Tools?

Polling technologies are an easy form of inviting and building greater interactivity into your teaching, through which you can pose questions or other tasks to students to which they can respond individually.

You can then use their responses to provide feedback and direct your teaching.

Traditionally they would have been popular in lectures with large cohorts but are also a useful way to keep people engaged and interested in remote teaching sessions.

If you are using live remote teaching sessions, bear in mind that not all students will be able to log in so you may also like to think about how you can make use of these tools or their benefits asynchronously.

Benefits of using polling

In-class polling can be a powerful and flexible tool for teaching and a great way of increasing student participation. It enables teachers to connect with any size cohort for a range of uses including:

1. improving student engagement
2. testing concepts prior to learning checks
3. collecting feedback on teaching delivery
4. formative and summative assessment
5. peer learning

Polling questions can take a number of different forms, for example, Multiple choice, Word clouds, and ordered rankings. The only “rule” for question design is that each question's structure and content reflect specific learning goals. Questions can even be designed without a “right” answer in order to encourage debate and discussion. In-class polling enables simple and easy one-to-many dialogue and can enhance students' active learning, participation, and improve learning outcomes, especially in large classes or classes taught in online or hybrid modes. In-class polling can be incorporated into lectures and online classes to increase student participation, which can have a strongly positive effect on learning outcomes when used as a part of an active learning strategy, whether it be a peer or cooperative learning, debates, or other activities. Polling activities can even increase attendance and class retention if connected to an assessment, for example, a participation grade of 10%.

Method of Response

Web – customised URL or QR code

App (iOS/Android)

SMS voting

Key Question types

Multiple Choice	Multiple Answer
Survey	True /False
Open-ended responses	Upvoting
Quiz	Jumble
Scales	Ranking

Ideas for its use

A form could be used for formative assessment, or it could be used to survey student opinion. Reports are created automatically and are very attractive and visual creating an excellent conversation starter. The reporting is very nice for staff including an average completion time, ideal for us to persuade students to undertake an activity. You can design quizzes that participants can see the results immediately after responding to the form or discuss the answers in the next session. This way it can be used in asynchronous teaching.

II Guidelines for advanced usage of Interactive Polling Tools

This part is explained through the four papers published in International Scientific Journals. Please, read the articles and try to give answers to the questions from the Journal papers.

Discussion Forum

The impact of audience response platform Mentimeter on the student and staff learning experience

Research suggests that active and discussion-driven dialog approaches to teaching are more effective than passive learning methods. One way to encourage more participatory learning is through the adoption of simple and freely available audience response systems which allow instant and inclusive staff-student dialogue during teaching sessions. Existing literature is largely limited to exploring the impact of basic approaches to audience participation, using handheld cards or simple 'clickers'. Limited research exists looking at the impact and best use of a new generation of online audience response systems which have significantly expanded functionality. This article explores the impact of one of the most agile platforms, Mentimeter. It outlines the impact on student satisfaction, enjoyment, voice and learning within small and large group settings across multiple disciplines drawing on 204 student survey responses. It also explores staff experiences and reflections on the key practical and pedagogical thinking required to optimize the use of this platform in higher education. The research responds to a need within the sector to react to rapid advances in teaching and learning technology, to provide evidence of impact for lecturers looking to improve student learning environments whilst being cognizant of the underlying pedagogy supportive of new pract *Read more*

1. *How do they use of Mentimeter impact students' teaching and learning experience acrossdisciplinary areas and types of teaching sessions?*
2. *How does Mentimeter impact staff experience and what key practical and pedagogical thinking is required to optimize the platform?*

The effect of Mentimeter and Kahoot applications on university students' e-learning

In the digital age, where technology is developing rapidly, there is a need for technology and game-based e-learning environments that students appreciate instead of traditional instruction. Interactive Web 2.0 tools can be utilized to develop e-learning environments. In this study, Kahoot and Mentimeter applications, interactive and game-based Web 2.0 tools, were used. The effect of Kahoot and Mentimeter applications on e-learning was investigated. This study was carried out at a state university in the Western Black Sea Region. It was carried out with prospective teachers studying in the Department of Primary School Education. This experimental study was conducted with 29 prospective teachers in the experimental group and 27 in the control group. Attitude Scale Against e-Learning was applied to prospective teachers before and after the application. Traditional methods were applied to the control group. Kahoot's evaluation feature and the word cloud feature of the Mentimeter program were used in the experimental group. *Read more*

1. *Does Web-based tool Kahoot and Mentimeter based instruction have an effect on the attitudes of prospective classroom teachers for e -learning?*
2. *How to use Kahoot and Mentimeter in the e -learning process?*

The Value of Interactive Polling and Intrinsic Motivation When Using English as a Medium of Instruction

Understanding how technology is used to foster active learning and why it is effective is important in advancing educational practices. The purpose of this study was to test adopting in-class interactive polling to engage college students' learning in their non-native language. After adopting interactive polling activities for six weeks, non-native speakers of English enrolled in a content-based class taught in English were invited to participate in a survey measuring the outcomes of the intervention. The results showed that students found it more comfortable responding to polls using their smartphones rather than verbally responding to questions in the classroom. Guided by self-determination theory, the results demonstrate that students who report high intrinsic motivation to participate in in-class polling exercises exhibit a more favorable attitude, find the class more engaging, feel they perform better on tests because of the polling exercise, and show higher level of perceived learning than those who reported low intrinsic motivation. The importance of facilitating sustainable student learning by using interactive technology to improve the quality of content-based learning and minimize the potential downside of using English as a medium of instruction is discussed. *Read more*

1. *How will students feel by responding to questions using their smartphones?*
2. *How Students with high intrinsic motivation engage in interactive polling will (a) find the activity less boring and (b) less distracting than those with low intrinsic motivation?*

The wear out effect of a game-based student response system

The Bring Your Own Device (BYOD) wave and advancement in technical infrastructures and in learning technology opens for new ways of teaching in the classroom. The teachers' laptops connected to a video projector, access to wireless network and the students' smartphones, tablets or laptops can be utilised to enhance the interaction between the teacher and students, as well as boost the students motivation, engagement and learning. The introduction of new learning technology in the classroom normally results
in immediate enthusiasm and excitement both from the teacher and the students. However, the immediate positive effects might fade when the new learning technology has become familiar to the teacher and the students. This paper shows the results from investigating the wear off effect of using the
game-based student response system Kahoot! in classroom teaching. More specifically, it compares the results from students using Kahoot! for the first time in a single motivational lecture vs. using Kahoot! in every lecture in a class for five months. The quasi-experiment focused on how the students' perception changed in relation to user-friendliness, engagement, motivation, classroom dynamics, concentration, and perceived learning. The results show a slight reduction in the students motivation and engagement, but the only statistically significant wear out effect found was related to classroom dynamics. At large, the game-based student response system managed to boost students' engagement, motivation and learning after using it repeatedly for five months. The core factor to keep the students attention after heavy repeated usage was found to be the competitive nature of Kahoot!. *Read more*

1. *How is the students' engagement affected by short -time vs. long-time usage of a game-based student response system in the classroom?*
2. *How is the students' perceived learning affected b y the short time vs. a long time of a game based student response system in the classroom?*

III Practical example of Mentimeter

Mentimeter is a software aimed for engaging audiences and eliminating awkward silences, which can be done by making presentations, interactive Polls, Quizzes, and Word Clouds.

When signing up, you will have to answer several questions, such as “What will you use Mentimeter for?” and “Are you a teacher or a student?”. Also, you will have to choose a plan. *Click here* to read more about the plans.

When it comes to creating a presentation, you can use templates or create your own branding.

The options every presentation offers are type, content, and customise.

In the type category, you can choose type of content you want to include:

1. Popular question types
    a. Multiple Choice – participants can choose one of the given answers, and there is no correct answer; to see how Multiple Choice questions are used, *watch this* video;
    b. Word Cloud – every participant can type their answers, which are visualised as a word cloud, making the repeating answers stand out; to see how a Word Cloud works, *watch this* video;
    c. Open Ended – every participant can type their answers, which are visualised as text cards;
    d. Scales – participants rate the statements they can read on the slide;
    e. Ranking – participants rank statements from 1 to n;
    f. Q&A – this time, participants are the ones which ask the questions, and the organisers have to answer; to see how to use Q&A, *watch this* video;
2. Quiz Competition
    a. Select Answer – this option includes a question and two to four offered answers, so the participants have to choose the correct one;
    b. Type Answer – participants have to type their answer, one answer is correct;
3. Content Slides – content that appears on your presentation's slide
    a. Heading;
    b. Paragraph;
    c. Bullets;
    d. Image;
    e. Video;
    f. Big text;
    g. Quote;
    h. Big number;
    i. Instructions – includes a QR code and regular code for joining the participants to join the presentation, so they can answer questions;
4. Advanced questions
    a. 100 points – used for prioritising statements, by giving them points, with total of 100 points that can be shared among the statements;
    b. 2 x 2 Grid – also used for prioritising statements, but in a form of a coordinate system; to see an example of how to use 2 x 2 Grid, take a *look at this* video;
    c. Quick Form – used for making surveys, but the results are given in a separate table; to see how Quick Form works, *watch this* video;
    d. Who will win? – participants can vote which participant will win the competition;
    e. Pin on Image – used for putting a pin on an image, e.g. it can be used for pinning some cities on a map.

The content category, you can easily rearrange the content of your slide. Also, you can choose the layout for showing the results – bars, donut, pie, and dots. Some extra options which you can include are showing correct answer(s), showing results in percentage, and letting participants choose multiple options. You can divide the presentation in segments as well.

In the last tab, the customise category, you are given more options to make your presentation more beautiful. You can close voting, hide instructions bar, hide results, and change the layout.

To watch a simple tutorial on how to get started with Mentimeter, *click here.* In case you want a more in-depth tutorial, *click here.*

If you want to integrate presentations from Powerpoint or Google Slides, *watch this* video and you will learn how to do that.

IV Interactive Polling tools- Assessment

Check your knowledge

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