EdTech

Pandora

Pandora is a new tool to refresh your curriculum! Pandora is designed to gamify any learning materials that are imported into it. The technology has two sides, the back-end, which teachers use for their interface and the front-end for students to see.

The back-end allows for teachers to generate games from a variety of topics including math problems, engineering situations or even story problems. Pandora uses AI methods to read text and generate small games such as: Tic-tac-toe, matching puzzles, new stories, or moving animations that can be interacted with, such as physics puzzles. The Pandora application generates not just the game, but also a leader board, other similar problems, and how-to-play instructions. By gamifying any learning material, Pandora enables more engagement and more fun in learning! It saves time by turning boring reading material into an engaging animation in just a click!

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Context of use: Education
Branch: EdTech

Humanity
How does the EdTech affect humanity?

How will this new technology affect Meaningful Contact in your institution?
Meaningful Contact was interpreted as an important and meaningful connection between students and teaching staff. The team discussed and found multiple points of consideration between meaningful contact and Pandora:

The tool encourages more meaningful contact
  because it helps lecturers and teachers share their curriculum in new ways to students.
  because it could contribute to students feeling of being included in the classroom in a new, more playful way.
  because it boosts teacher-student interaction in the class by moving away from reading and instead to interactivity.

The tool does not encourage more meaningful contact
  because the games may distract students from the learning process and become unguided by teaching staff.
  because the games actually separate teacher from students and therefore are unable to guide the learning process or form a more emotional connection with students.
  because the teachers are not prepared to have all learning material changed to games. Moreover, it is not clear how these games would influence didactic changes in the classroom, possibly overruling teacher autonomy.

How will this new technology affect Social Cohesion in your institution?
Social Cohesion was understood by the team as the social connections and trustworthiness that higher education institutions should promote amongst students and teaching staff. For Pandora, this means that the technology should not only enable more social cohesion, but should also be considered as a possible new way of bringing students and teachers together in a positive manner.

The tool encourages more social cohesion
  through creating a more playful environment with learning materials.
  because creativity and development are encouraged as this technology asks students to think differently about the curriculum and unfamiliar problems.
  it may relieve some social friction between students by mediating their interaction through games while still training a new topic.

The tool does not encourage more social cohesion
  because teachers may not be interacting with students more and cooperation becomes less prominent with these games.
  increased presence of mobile devices is leading to more disruption of

communication between students, and can reduce the feelings of empathy and trust.

because AI methods in educational technologies should be assessed and reviewed before being placed in new courses; AI methods are not going to solve social challenges in the classroom .

How will this new technology affect Well-Being in your institution?

Well-being was also part of the three focused points of humanity in the teams discussion. Well-being as a term was narrowed down by the team to respect the vulnerabilities of students and avoiding causing harm to them. Well-being means seeing the technologies we procure in education as having a consequence for everyone involved. Meaningful contact and social cohesion can both benefit the well-being of students as well, showing the correlation and complexity of public values for education.

The tool encourages well-being

By enabling students to learn more self-insight and self-sufficiency from being

able to view the curriculum in new ways.

The games and leader board may contribute to student confidence which can boost well-being.

Other students may be able to help with the curriculum and increase cooperation in course-work.

The tool may impact well-being negatively

If teachers are unable to interpret game outcomes to their learning goals, impacting educational impact.

If students feel that they always need to win a game in order to learn or be a part of the classroom experience.

If students and teachers feel monitored constantly by the system, privacy may also be threatened.

Now that you have thought hard about the impact of this educational technology (by filling out the questions above), what improvements would you like to make to the technology? List them below.

Our team concludes with mixed favour for the Pandora application. While weighing values has helped the discussion move along, the team feels that their answers are unstructured and need time to settle. Strong points were made after much reflection that adding this tool to the curriculum may not be necessary. Its clear that there is a need for more discussion about how these values are impacted by new technologies in education.

Autonomy
How does the EdTech affect autonomy?

How does the EdTech impact self-determination of students and pupils?
Pandora is a powerful tool that enables students and teachers to see curriculum differently. By gamifying the entire set of instructions and learning goals, the tool helps students think in critical and goal-oriented ways about their work.

Does the technology allow students to make their own decisions or are decisions made for the student?

Pandora will help guide decisions about the curriculum, but does not allow for new outcomes of the game unless a new game is designed. So decisions about curriculum and its development are made by Pandora, and the students need to play to the games' instruction.

Does the technology make students dependent? On the technology? Or on others?

Pandora may make students dependent on the learning goals designed by the game. Students should not feel dependent on Pandora to learn, but they will learn in ways that may be unique to Pandora. We hope that that is an alternative approach to teaching curriculum, not the only way.

Does the technology shape undesirable behavior? Is it addictive even? Is it easy to disconnect?

Pandora avoids 'dark patterns' and overstimulating young learners. Unfortunately, Pandora cannot limit screen time usage or triggered responses from notifications/chats. Pandora may generate games that learners find increasingly fun and hard to put down. Habits formed around Pandora and its games should be viewed by instructors and taught appropriate behaviors.

Do students need someone else to use the technology?
In what way does the technology empower students to make better decisions? Why?

Students will need instructor approval to see stats about their learning or generating new games. Pandora empowers learners by offering an alternative to the curriculum they are often forced to conform to. In this way, they can decide for themselves what is a better learning material or curriculum choice.

Technology Impact Cycle Tool

Pandora

How does the EdTech impact self-determination of teachers?

Does the technology allow teachers to make their own decisions or are decisions made for the teacher?

Pandora will generate games based on certain values set by an instructor. The instructor cannot generate certain types of games, but these may be added later on.

Does the technology make teachers dependent? On the technology? Or on others?

Instructors may become dependent on the ability to make games in such quick and easy ways! In this way, curriculum generated by Pandora could become a default. This could lead to increasing problems with intellectual property and curriculum building for the future.

Do teachers need someone else to use the technology?
In what way does the technology empower teachers to make better decisions? Why?

Teachers will need to use Pandora's own application in order to generate games and learning analytics. This tool can empower teachers by offering a new alternative or way of thinking about their current learning materials.

Do you believe that the restrictions in self-determination are in balance with the benefits for the educational process? Why?

Yes, because many platforms offer curriculum options and there is no one best way to learn (or learning material).

How does the EdTech impact the educational independence and freedom of the institution?

In what way does the technology determine the structure of the teaching?

Pandora offers an alternative to curriculum generated easily on the back-end. In this way, students may find this curriculum more appealing and interesting. This could lead to a whole revolution of gamifying education for the future.

In what way does the technology change the dynamic on campus and teacher student relationships?

Learners may become more engaged with learning material and be able to ignore bad instructors all together!

How is the distinctive character and/or convictions of the institution influenced?

Technology Impact Cycle Tool

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Pandora works hard to make sure our values match those of your institution.

Now that you have thought hard about the impact of this educational technology (by filling out the questions above), what improvements would you like to make to the technology? List them below.

The Pandora technology should be seen as an alternative, not the replacement of learning material. Going forward, Pandora should learn to dynamically work across multiple platforms, LMS's, and open-source applications. In this way, Pandora does not become a one-size fits all approach to gamification of curriculum.

Justice
How does the EdTech affect justice?

This category is only partial filled.

How does this new edtech tool impact Equal Treatment in your institution?
Is the tool going to inhibit students from seeing each other at the same level or eye-to-eye? Can the tool bring students to this similar level through different usages?

- Pandora's new 'scoreboard' feature allows students to keep up with each and know who is understanding the learning material best. This way, students know who to go to for help, and not just the instructor can be an expert!

Does the teachers social interactions with students become more restricted or narrowed? What social interactions need to be alleviated or loosened in order to enable equal treatment to all?

- Pandora as a tool does not see students as unequal learners. Games help bring learners together and to see how each other learn differently. In this way, learners can help each other in co-op functions and build coaching skills to make sure everyone wins!

Where does equal treatment currently need improvement?
Does the tool improve the understanding of equal treatment in your institution?

- Everyone wins with Pandora! Equal treatment means accessibility. We have built in functions that allow for both deaf and blind players to access our materials!

How does this tool impact the equal opportunity in the institution?
Is there a digital divide (CITE) within your own course of learners? Does this tool help alleviate that divide or make it larger?

- Pandora helps alleviate the digital divide by offering our application on mobile and laptop (Mac, windows, linux) platforms. There are easy ways to understand our games and their instructions.

When does this tool enable or enhance equal opportunity amongst the group of learners? Who benefits the least from this tool?

- Pandora may not be for everyone. Learners who have low attention spans,

do not like games, or find the games too hard may struggle. Learners will need access to internet for co-op functions and may find it hard to play certain games with insufficient graphics capabilities.

Does the new technology require stronger or more advanced hardware to function correctly or effectively?

Pandora's games may sometimes be graphics heavy. These settings can be changed, but less engagement to the game may occur.

How can this tool benefit the group that is most disadvantaged?

Pandora wants to help everyone learn better. By offering different curriculum and endless new ideas, Pandora can help those who cannot learn try something that is fresh and new!

Where does the tool fail to create more equality amongst learners?

Pandora may be more popular with energetic, often male, young learners who find these games to be more inviting to their interests.

How does this new tool impact inclusivity in your institution?
This question has not been answered yet.

Now that you have thought hard about the impact of this educational technology, what improvements would you like to make? List them below.
Pandora will insure that all accessibility is available and that our new platform design can offer games that everyone finds interesting or appealing!

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Impact

How will the EdTech make things better?

What is the challenge at hand? What problem (what 'pain') does this educational technology want to solve?

Many teachers struggle with the amount of curriculum they are expected to make every year. Pandora will help generate new curriculum based on the learning materials you have already made into new games and designs!

Can you indicate why you are sure that this educational technology is solving the right problem?

By relieving instructors of curriculum development time, Pandora will help them save time doing more of what they love, teaching.

How is this educational technology going to solve the problem?

Pandora solves old problems with new solutions. Based on many reports of gamification of education, games work. Learners will be more engaged with their work, but also spend more time learning and less time looking out the window.

What negative effects do you expect from this educational technology?

Pandora may increase sedentary behavior, screen time, stress, anxious movements, near-nearsightedness, twitching, gaming-compulsion, and competitive acts amongst learners.

Now that you have thought hard about the impact of this educational technology, what improvements would you like to make? List them below.

Pandora is working on a new way of getting learners to MOVE! With new augmented reality technologies, Pandora's games can now interact with the outside world by offering digital artifacts out in the playground, at home or even in your local street!