Enhancing Learning Experiences: A Dynamic Approach to Interactive Web Environments

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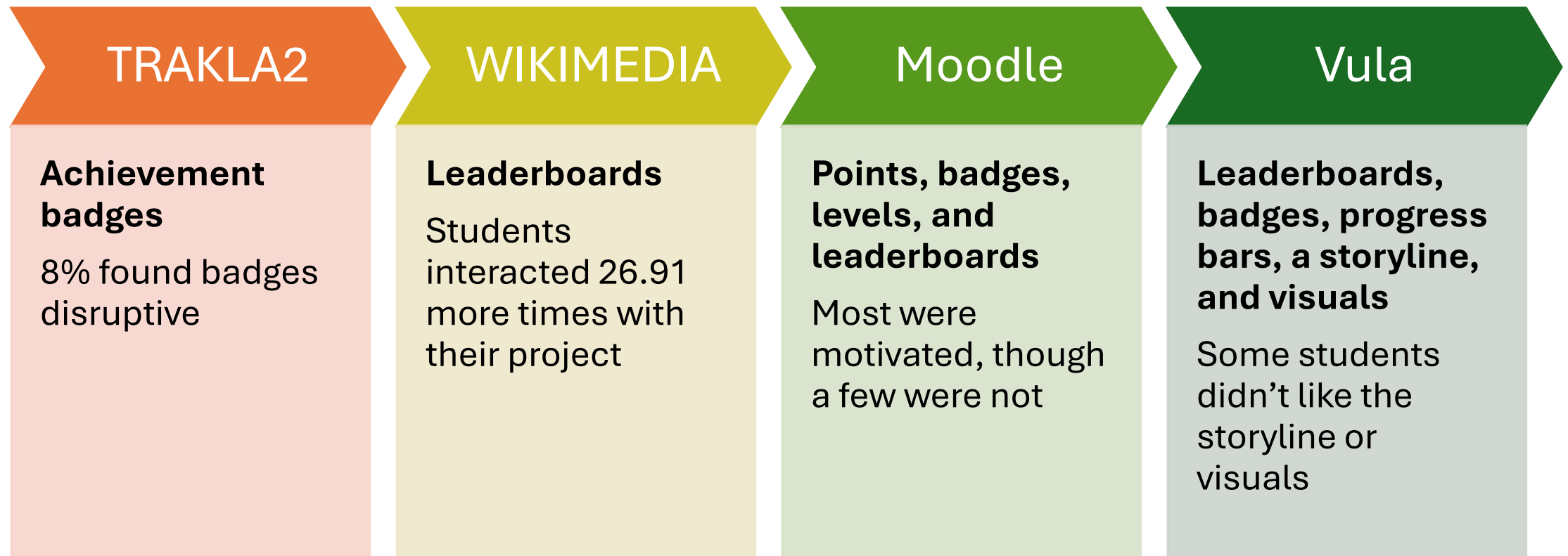
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I. Motivation and Description

- Most gamified learning platforms offer non-customizable experiences

- Gamification is effective in enhancing learning experiences

- Some students aren't enticed by game elements → customization is key

II. Other Gamified Educational Platforms

## TRAKLA2

Achievement badges

8% found badges disruptive

WIKIMEDIA

Leaderboards

Students interacted 26.91 more times with their project

Moodle

Points, badges, levels, and leaderboards

Most were motivated, though a few were not

Vula

Leaderboards, badges, progress bars, a storyline, and visuals

Some students didn't like the storyline or visuals
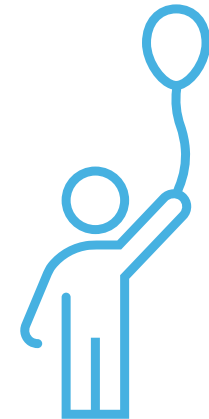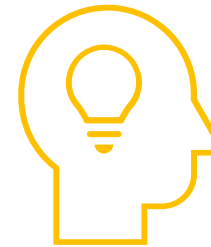
III. What is gamification?

- Software that draws inspiration from video games is referred to as *gamified*
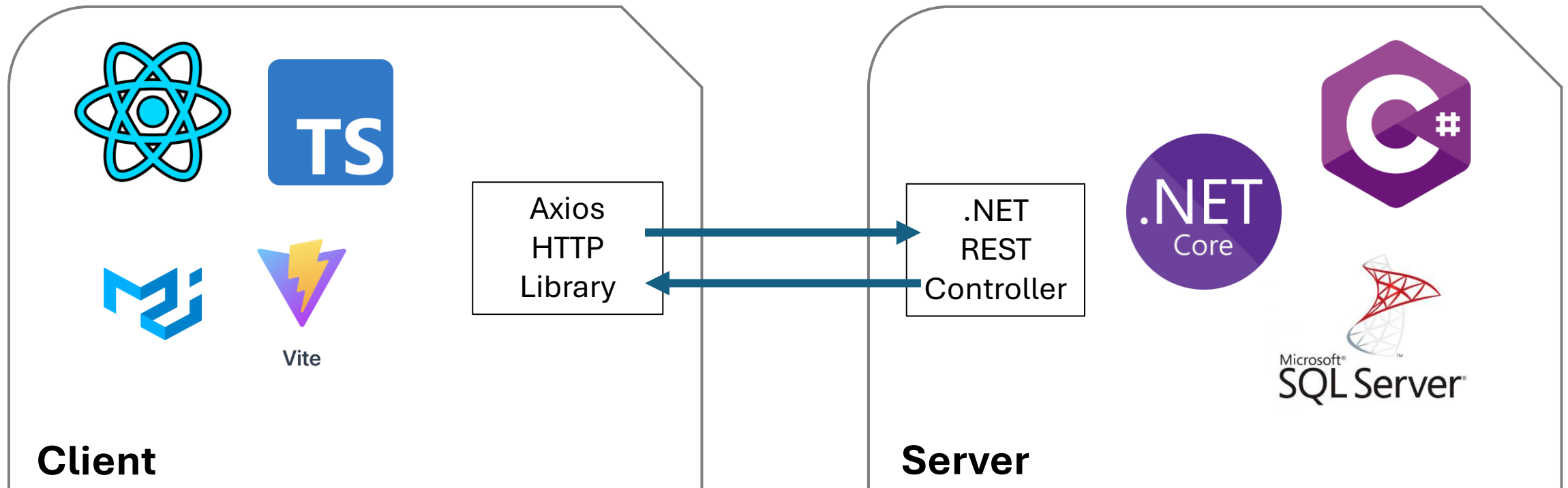- "*The use of game design elements in non-game contexts*" – S. Deterding et. al.
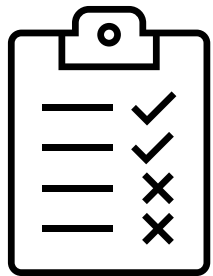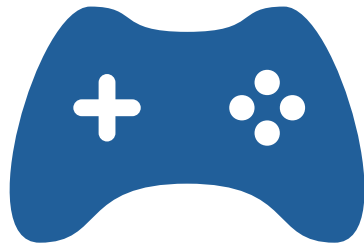
Tasks + Game elements = Motivation and fun

IV. Implementation

Gamification Features

- Students can customize their experience
- They can choose which gamification elements to enable/disable in the platform
- Can be changed any time without any restrictions

Page Settings

Experience Points

Levels

Badges

Progress Bars

Leaderboards

SAVE PAGE SETTINGS

Points, Levels, and Progress Bars

59%

You have completed **59%** of the course work.

Level 1   Level 2   Level 3   Level 4   Level 5

You have **1764 XP**. You need an additonal **186 XP** to reach **Level 4**.

Badges

Windmill Wizard
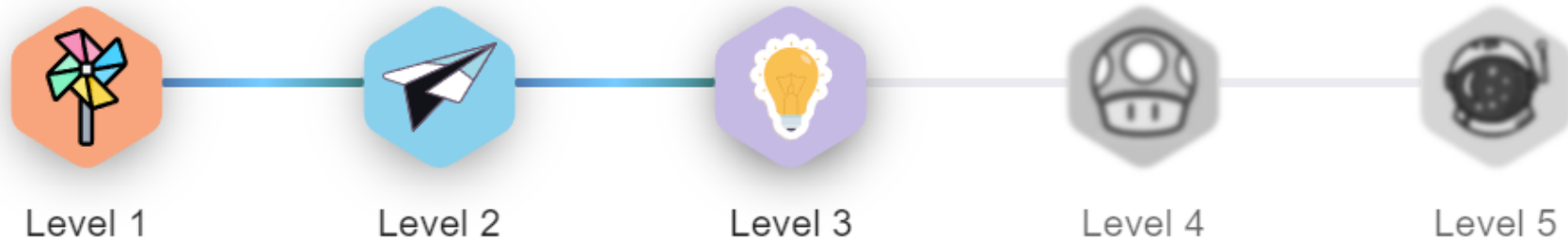
Embark on an epic journey of knowledge!
A gift for taking your first step.

Paper Plane Pilot

Fold your way to success!
Unlocked at 600XP.

Idea Illuminator

Brighten your path with brilliant insights!
Unlocked at 1200XP.

Level-Up Legend

Power up your knowledge!
Unlocked at 1950XP.

Galactic Guru

Rocket through learning milestones!
Unlocked at 2850XP.

Deadline Dominator

Tick-tock, beat the clock!
Unlocked after presenting 75% of assignments before the deadline.

Leaderboards

Dedrick_Okuneva
Points: 3000 XP
Level: 5

Adelia68
Points: 2703 XP
Level: 4

Lavern.Strosin
Points: 2631 XP
Level: 4

V. Demo

Recap Of The Features

Student features:

- Enroll to course
- View course data
- View assignments
- View grades
- Enable/disable game elements (points, badges, levels, leaderboards, and progress bars)

Common features:

- Register and log-in as teacher/student
- Update password
- Edit user profile
- Delete account

Teacher features:

- Add/update/delete courses
- Generate enrollment key
- Add/remove teacher to/from course
- Remove student from course
- Add/update/delete assignments
- Grade student assignments
- Export grades as CSV file
- Import grades from spreadsheet

VI. Preliminary Study

Feedback item	0	1	2	3	4
The interface of the gamified LMS seems user-friendly.	0%	0%	0%	67%	33%
The gamification features would motivate me to learn.	0%	0%	33%	67%	0%
The LMS would enhance my overall learning experience.	0%	0%	33%	67%	0%
I value the LMS's customization features.	0%	0%	0%	17%	83%
I would like the LMS to be used at my courses.	0%	0%	0%	33%	67%

VII. Conclusions, Limitations and Further Work

The aim of the gamified learning management system is to *enhance* learning experiences and student *engagement* through a user-centered approach.

Only a preliminary study was conducted.

Comprehensive evaluation in the future.