

# “Can I still earn a badge by the way?": Challenges and badges in an online course

TCC 2022



# Meet the research team



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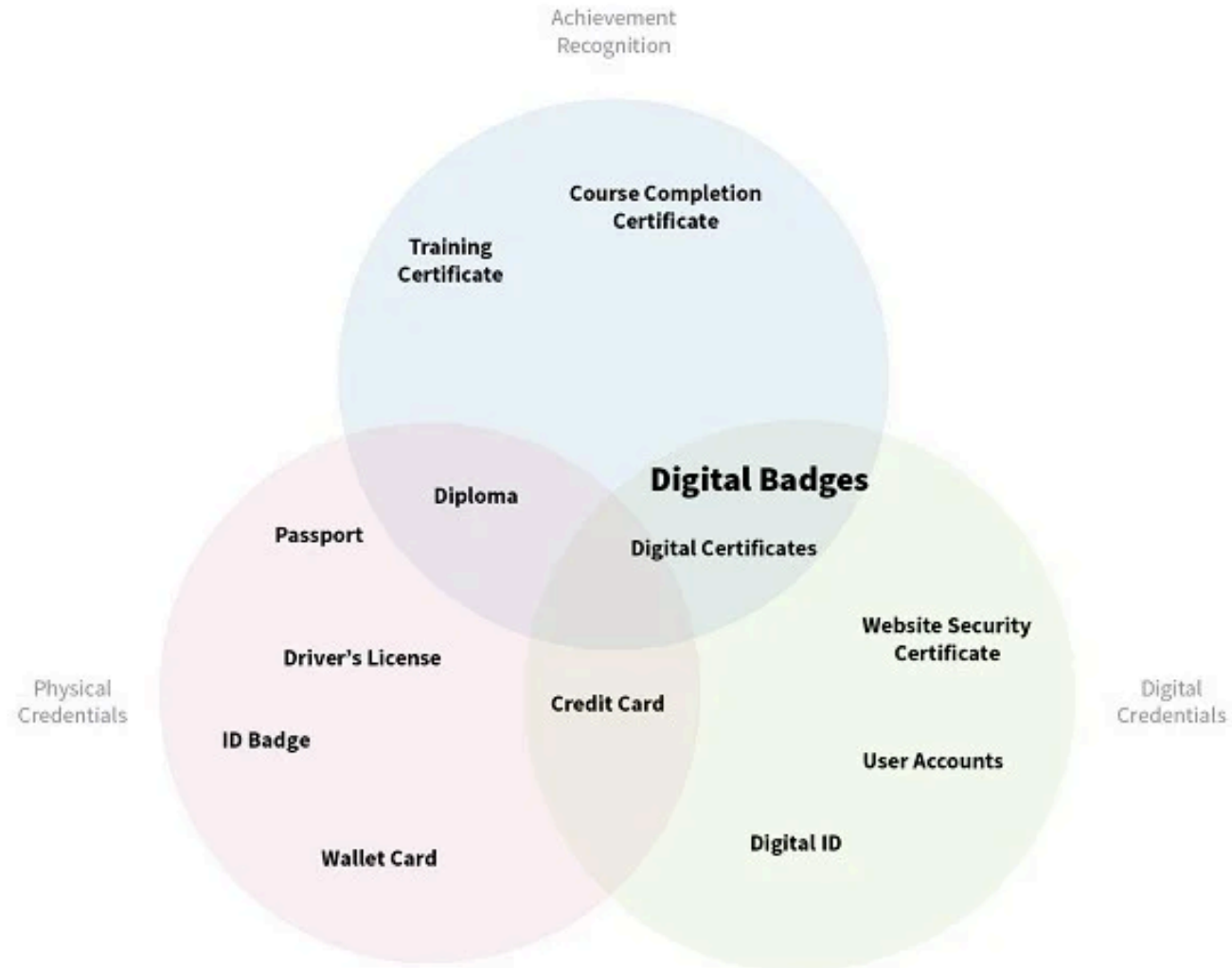
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# Overview

- What is a digital badge?
- How digital badges are integrated into courses?
- Research questions
- Method
- Results
- Discussion & Conclusions
- Q&A

# What's a digital badge?



[Credentiaing ecosystem, from A Comprehensive Guide to Digital Badges](#)

# How *digital badges* are integrated into courses?

- Digital badges can be integrated into formal courses as a form of motivational strategy that encourages students to engage in learning activities (Facey-Shaw et al., 2020; Pothier, 2021; Reid et al., 2015).
- This study shares student perceptions of digital badges in a graduate level online course and the role of challenges and badges in student motivation.

# Research questions

1. How was the challenge and badge system designed, developed, and implemented?
2. How did students engage in challenges and badges in the course?

# Method

- An online class consisting of an instructor, teaching assistant, and 26 students
- The challenges and badges were used previously on an ad hoc basis
- In this study, a badge system was designed and implemented
- IRB approved this study

# Method

- Data collection consisted of;
  - Design notes and documents
  - Communication between the instructor and teaching assistant
  - Course artifacts
  - Badge counts
  - Survey data
- Data analysis focused on;
  - Reconstructing the design and development process (RQ1)
  - Counting challenge and badge participation levels (RQ2)



# RESULTS

RQ1: How was the challenge and badge system designed, developed, and implemented?

# Results – Design and Development Process

- The design team included the lead course instructor, a designer, and a teaching assistant

## Conceptual tasks

- How the overall badging system would work
- What challenges to integrate into the system

## Technological tasks

- Designing digital badges
- Badge awarding process
- Badge tracking process

# Badge types and functions

- **Challenge:** Earned upon completion of a challenge
- **Easter egg:** Hidden in different course spaces
- **Level:** Levels of course activity (e.g., 10<sup>th</sup> tweet)
- **Peer awarded:** Peer nominations for contributions made to the course (e.g., community builder, networker, thought leader, tech helper)
- **Mega challenge:** Badges earned by completing 5 challenge badges



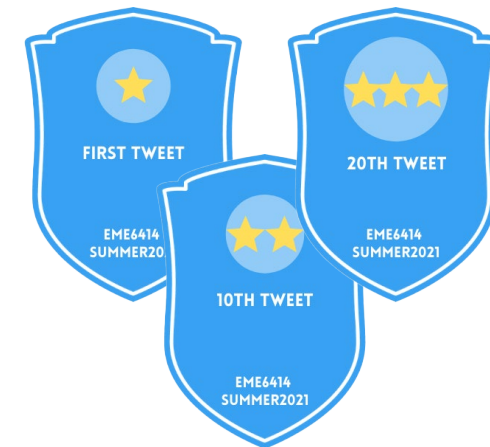
# Challenges

- For each challenge we;
  - identified a tool,
  - a skill to be developed and practiced,
  - and an outcome to be demonstrated
- The objective was to;
  - have students practice using tools and developing skills in ways that would both support peer interaction in the course space
  - and help students prepare for completion of graded course assignments.



# Badges

- Designing the actual badges was a technical task
- Each badge needed a name and a visual element
- The overall badge system needed visual coherence, and all badges of a particular type should look similar
- We developed visuals to promote each badge to the students
  - Canva.com's design tools
  - Instagram post template



# Badge awarding/tracking process

- A badge platform that would make it easy to track and award badges
- An option that was free
- Badgr.com
  - Included Canvas integration
  - Was not sufficiently flexible and complex for our needs
- Badgelist.com
  - No canvas integration
  - Had a free version and allowed a more flexible system for issuing and awarding badges
- We also maintained a separate tracking system in a spreadsheet

# Badge implementation

- 9 students were familiar, 16 were not familiar with the concept of badging
- Explained the course badging system via a webinar in Week 3 (recorded and shared on Canvas)
- The final badging system included 35 opportunities to earn badges across 12 weeks

| Badge type     | Unique Badges Offered | Badges Earned |
|----------------|-----------------------|---------------|
| Challenge      | 18                    | 91            |
| Easter egg     | 4                     | 12            |
| Level          | 9                     | 46            |
| Mega challenge | 4                     | 9             |
| Total          | 35                    | 158           |

# Badge implementation

- Steps that we followed for badge implementation;
  - Created a group in badgelist.com
  - Shared the group link with the learners from the course Canvas site
  - Students signed up for this group ~ entirely optional
  - 23 students signed up with badgelist
  - Issued challenges as the course progressed across 12 weeks
  - Students could submit evidence in badgelist.com if they wished to earn a badge
  - Awarded badges to the learners on badgelist.com
  - They would receive an email alert when a new badge was noted on their account



# RESULTS

RQ2: How did students engage in challenges and badges in the course?

# Challenges and badges participation

- Only five students did not engage in any of the challenges and as a result did not earn corresponding badges
- The rest of the students ( $N = 21$ ) earned 158 badges in total

| Badge type     | Unique Badges Offered | Badges Earned |
|----------------|-----------------------|---------------|
| Challenge      | 18                    | 91            |
| Easter egg     | 4                     | 12            |
| Level          | 9                     | 46            |
| Mega challenge | 4                     | 9             |
| Total          | 35                    | 158           |

# Challenges and badges participation

- Additionally, students received peer awarded badges
- There were four opportunities to nominate peers for badges during the course, and 9 students nominated peers to receive badges (with some students receiving the same badge on multiple occasions).

| Badge type        | People Nominated | Badges Earned |
|-------------------|------------------|---------------|
| Community builder | 7                | 12            |
| Networker         | 3                | 7             |
| Thought leader    | 5                | 8             |
| Tech helper       | 4                | 8             |
| Total             | 19               | 35            |

# Challenges and badges participation - Survey data

- Students who completed the survey at the end of the course ( $N = 7$ ) reported on their motivation to earn different types of badges.

| Badge types         | Not all motivated | Somewhat motivated | Very motivated | I was not aware of these badges |
|---------------------|-------------------|--------------------|----------------|---------------------------------|
| Challenge           | 0                 | 0                  | 7              | 0                               |
| Level               | 1                 | 5                  | 1              | 0                               |
| Peer awarded        | 0                 | 3                  | 4              | 0                               |
| Mega challenge      | 0                 | 3                  | 3              | 1                               |
| Easter egg (hidden) | 0                 | 1                  | 6              | 0                               |

# Discussion & Conclusion

- As indicated by Horstman et al. (2020), the badge design and development process helped research team reflect on course design as well as the overall learning experience.
- Conceptually, the challenges need to be compelling for students to complete them. In other words, students need to consider them a worthwhile use of effort.
- Technically, the system needs to be efficient and effective for both the instructional team and students to use.

# Discussion & Conclusion

- The badge system encouraged students to;
  - practice course related concepts and tools,
  - supported peer-to-peer interaction as students recognized each other's contributions to the overall learning experience by nominating peer awarded badges,
  - and facilitated student-initiated informal learning and personalized learning.
- We aim to examine badging system design and student perceptions in further iterations of the course and share what we learn from the research project.

# References

- Horstman, T., Tierney, G., & Tzou, C. (2020). Design principles for creating digital badges to support learning. *Information and Learning Sciences*, 121(11-12), 889-907. <https://doi.org/10.1108/ils-02-2020-0042>
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*Thank you!*