

## A2: Major Project Iteration 1-Week 2

# Royal Academy

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## Abstract

Short summary of the project and Outcome

## Background Research

References related work, Identifies a creative problem/  
opportunity

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## Discussion

## References





# Abstract

Royal Academy is a design-led online learning platform prototype that enhances the digital learning experience for language learners by transforming fragmented online classrooms into a clear, structured learning journey. The project focuses on the student learning flow, connecting lessons, discussions, and meetings into a seamless, pedagogically aligned sequence.

The MVP includes three core modules: Lessons, Discussion, and Online Meeting. Lessons follow a step-based flow—video, flashcards, quizzes, and reflection activities—supported by a lightweight admin upload tool that enables content to be added via JSON/CSV without requiring a full CMS. Discussion and Meeting modules extend learning beyond content delivery, allowing students to express ideas, engage with peers, and receive feedback from teachers.

Developed through a user-centered and iterative design process, Royal Academy demonstrates how clear information architecture, minimal interfaces, and well-designed micro-interactions can reduce cognitive load and create a more engaging and supportive digital learning environment.

# Scope of the project

This project develops a design-driven MVP of the Royal Academy Learning Platform, focusing on a complete end-to-end Student Learning Flow. The scope was refined following supervisor feedback to prioritise depth, usability, and coherence by demonstrating the full learning journey (video → flashcards → quiz → discussion → meeting). The MVP combines UX research, UI/UX design, and a functional prototype built with HTML/CSS/JS, Vue.js, Node.js, and MySQL.

## Deliverables

- End-to-end Student Learning Flow
- Lesson, Discussion, and Online Meeting modules
- Interactive players: video (with CCQs), flashcards, and quizzes
- Functional Node.js + MySQL backend
- Lightweight Admin Upload Tool (JSON/CSV)
- Usability testing and a final demo video

## Scope Focus

The prototype is developed exclusively for desktop to ensure a polished and coherent delivery. A full Admin interface and mobile layout are intentionally excluded from this phase.

# Background Research





# Learning Theory

## Community of Inquiry (Col) Framework

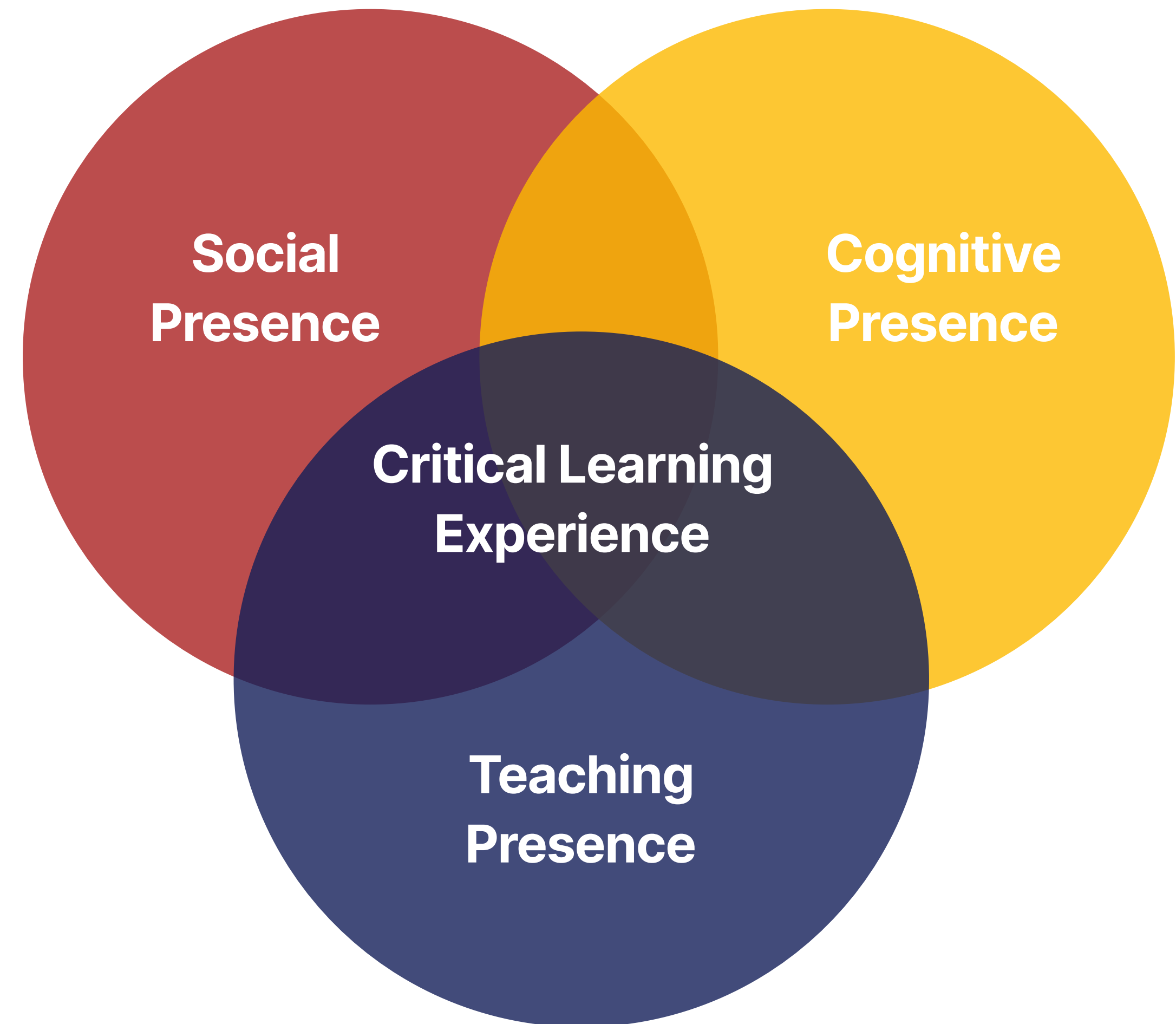
The Royal Academy LMS applies the Community of Inquiry (Col) framework (Garrison, Anderson & Archer, 2000) to ensure that online learning remains interactive, meaningful, and pedagogically grounded. Col emphasises the interplay between teaching presence, cognitive presence, and social presence.

Teaching presence is established through structured lesson sequencing, clear instructional videos, quizzes, and teacher-led guidance during online meetings.

Cognitive presence is supported through comprehension checks, quick quizzes, error-identification tasks, and peer discussions that help learners construct and refine meaning.

Social presence emerges through peer interaction in the Discussion module, collaborative dialogue during Online Meetings, and the use of badges that acknowledge participation and effort. These elements help reduce learner isolation and foster a sense of belonging.

By integrating all three presences, Royal Academy provides a coherent and engaging online learning environment rather than a fragmented multi-platform experience.



# Learning Theory

## Communicative Language Teaching (CLT)

Communicative Language Teaching (CLT) emphasizes interaction, meaning-focused communication, and learner output rather than passive content consumption (Richards & Rodgers, 2001). Effective digital language learning environments must therefore provide opportunities for students to express ideas, negotiate meaning, and use language for real purposes (Nunan, 1991; Littlewood, 2014).

Royal Academy applies CLT by embedding communication-oriented activities throughout the learning flow. The Discussion module allows students to articulate responses, exchange feedback, and engage with peers — supporting functional language use. The Online Meeting module recreates real-time interaction, enabling speaking practice, clarification requests, and spontaneous communication. Even within Lessons, elements such as CCQs, ICQs, and short reflective tasks reinforce communicative understanding rather than rote recall.

By integrating consistent opportunities for learner output, Royal Academy aligns with key CLT principles and supports communicative competence in an online setting.



# Learning Theory

## Bloom's Taxonomy Framework

Bloom's Taxonomy provides the cognitive structure for Royal Academy's learning flow. Following the Revised Bloom (Anderson & Krathwohl, 2001), the design does not move strictly upward through the hierarchy; instead, it uses a forward-backward cycle where learners revisit levels as they practise and receive feedback.

Remember → Understand:

Short video lessons and flashcards introduce essential vocabulary and meaning.

Apply → Analyze:

Quick quizzes, CCQs, and error-identification tasks guide learners through controlled practice and pattern recognition, aligning with Biggs' Constructive Alignment (1996).

Create + Evaluate:

In the Discussion module, students produce short written outputs and evaluate peers. This reflects Schmidt's Output Hypothesis (1990), which highlights the role of production in deep processing.

In Online Meetings, learners create spoken output and receive teacher feedback, mirroring Kolb's Experiential Learning Cycle (1984).

By cycling through Bloom's levels in this structured yet flexible way, Royal Academy supports deeper learning without increasing cognitive load.

**Create**

**Evaluate**

**Analyze**

**Apply**

**Understand**

**Remember**

# UX Research





# UX Research

## Fragmented Online Learning Environments

Many online learners juggle multiple disconnected tools (Zoom, chat apps, documents, LMS pages). This fragmented workflow increases split-attention and extraneous cognitive load, as learners must mentally integrate information across separate sources (Sweller, 1988; Chandler & Sweller, 1991).

Fragmentation also disrupts motivation and learning continuity. Research on mastery learning and constructive alignment highlights that unclear, poorly sequenced environments reduce persistence because students cannot see how tasks connect into a coherent pathway (Guskey, 2007; Guskey, 2010; Biggs, 1996).

From a language-learning perspective, scattered platforms limit opportunities for interaction and meaningful output—key factors in communicative competence and sustained engagement (Swain, 1995; Littlewood, 2012; Nunan, 1991; Richards & Rodgers, 2001).

Social presence also weakens when discussions, feedback, and meetings happen across separate channels, reducing learner motivation in online communities (Garrison, Anderson & Archer, 2000).

The Royal Academy platform addresses these challenges by centralising the entire lesson → discussion → meeting sequence into a single step-based interface, reducing cognitive strain and supporting a smoother, more coherent learning experience.

# UX Research

## Pain Points & Behavioural Insights

Unstructured learning interfaces increase extraneous cognitive load, making it harder for students to process new information (Sweller, 1988; Chandler & Sweller, 1991). When progress is not clearly visible, learners feel uncertain and less motivated—an issue addressed in mastery learning and constructive alignment frameworks, which emphasise clarity and structured sequencing (Guskey, 2007; Guskey, 2010; Biggs, 1996). Text-heavy platforms also reduce engagement, as language learning research shows students need varied input, interaction, and opportunities for meaningful output beyond reading alone (Swain, 1995; Littlewood, 2012; Nunan, 1991; Richards & Rodgers, 2001). Furthermore, insufficient interaction reduces social presence, a key factor for sustaining motivation in online learning communities (Garrison, Anderson & Archer, 2000).

# Project Question

How might a unified, step-based learning flow reduce cognitive overload and improve learner engagement in online language learning?



# Creative Practice



# Conceptual Development

# Conceptual Development

The project began as a prototype focused on two modules — Discussion and Online Meeting — developed across three versions. Initial testing showed that while these modules supported communication, they did not represent a complete learning experience.

Supervisor feedback highlighted the need for a full learning flow, ensuring that students receive input, practise, apply knowledge, and then interact. This led to the expansion toward an end-to-end flow connecting Lessons → Discussion → Meeting.

The shift strengthened the project's pedagogical grounding (Bloom's Taxonomy, CLT, Col) and created a more coherent, structured, and research-aligned digital learning experience.



# Learning Flow

Royal Academy's learning flow is informed by three complementary frameworks — Bloom's Taxonomy, Communicative Language Teaching (CLT), and the TESOL teaching cycle — because each framework addresses a different dimension of how students learn and use language. When combined, they create a comprehensive, research-based learning sequence that mirrors real ESL/EFL pedagogy.

- Bloom's Taxonomy defines the cognitive progression of learning  
(Remember → Understand → Apply → Analyze → Create → Evaluate)
- CLT (Communicative Language Teaching) explains how learners develop communicative competence  
(Input → Controlled Practice → Communicative Output → Feedback)
- The TESOL teaching cycle provides the practical instructional order commonly used in language classrooms  
(Presentation → Practice → Production → Feedback/Remediation)

By integrating these three perspectives, Royal Academy aligns cognitive development, communicative practice, and real teaching methodology into a single cohesive learning flow that supports vocabulary acquisition, guided practice, peer interaction, and live speaking performance.

# Learning Flow

| Flow Stage          | Purpose                                       | Bloom Level                             | CLT Stage                      | TESOL Cycle                      |
|---------------------|-----------------------------------------------|-----------------------------------------|--------------------------------|----------------------------------|
| Lesson (Self-study) | Build vocabulary + foundational comprehension | Remember → Understand → Apply → Analyze | Input → Controlled Practice    | Presentation → Practice          |
| Discussion (Async)  | Written communicative output + peer review    | Create → Evaluate                       | Communicative Output (Written) | Production (Written)             |
| Meeting (Live)      | Real-time speaking + teacher feedback         | Create → Evaluate                       | Communicative Output (Spoken)  | Production (Speaking) + Feedback |
| Remediation         | Personalized improvement cycle                | Reinforce Apply → Analyze               | Corrective Feedback            | Feedback → Remediation           |

# Learning Flow

## Phase 1 - Lesson ( Self Study)

Phase 1 develops vocabulary and foundational comprehension through a structured sequence based on Bloom's lower-order cognitive levels (Remember → Understand → Apply → Analyze).

The flow also aligns with CLT (Input → Controlled Practice) và TESOL's PPP model (Presentation → Practice). Each step uses short, focused digital activities to minimise cognitive load while supporting progressive skill development.



# Learning Flow

## Phase 1 - Lesson ( Self Study)

| Step       | Purpose              | Key Activities                                                                                                                                                              | Bloom Level | CLT Stage                | TESOL Cycle         |
|------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|---------------------|
| Remember   | Recognise vocabulary | Video, flashcards, recognition Quiz                                                                                                                                         | Remember    | Input                    | Presentation        |
| Understand | Meaning in context   | Context video, CCQs,context quiz                                                                                                                                            | Understand  | Controlled Input         | Practice            |
| Apply      | Guided production    | <ul style="list-style-type: none"><li>• Fill in the blank (select correct target word)</li><li>• Correct the mistake (guided editing of wrong form)</li></ul>               | Apply       | Controlled Practice      | Practice            |
| Analyze    | Error analysis       | <ul style="list-style-type: none"><li>• Compare two sentences and pick the better one</li><li>• Identify incorrect usage and explain briefly why (light analysis)</li></ul> | Analyze     | Meaning-focused Practice | Practice (advanced) |

# Learning Flow

## Phase 2 - Discussion (Asynchronous Communicative Output)

Phase 2 focuses on communicative written production and peer review. Learners first generate short written outputs using lesson vocabulary (Create), and then evaluate a peer's work (Evaluate). While Evaluate is a higher-order cognitive skill in Bloom's Taxonomy, pedagogical practice in CLT and TESOL places feedback after production. This Create → Evaluate sequence aligns with real communicative tasks, where learners must first produce language before they can analyse or critique it.

# Learning Flow

## Phase 2 - Discussion (Asynchronous Communicative Output)

| Step                     | Purpose                                                                   | Key Activities                                                      | Bloom Level | CLT Stage              | TESOL Cycle |
|--------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------|-------------|------------------------|-------------|
| Create (Written Output)  | Produce meaningful written language using target vocabulary               | Write 3 sentences on topic; use ≥2 target words; post to discussion | Create      | Communicative Output   | Production  |
| Evaluate (Peer Feedback) | Develop critical thinking and reinforce understanding through peer review | 1 positive, 1 reason, 1 suggestion                                  | Evaluate    | Interaction / Feedback | Feedback    |



# Learning Flow

## Phase 3 - Meeting (Asynchronous Communicative Output)

Phase 3 develops real-time speaking skills, which cannot be achieved through self-study or asynchronous discussion alone. While Phase 1–2 cover the cognitive stages of Bloom (Remember → Understand → Apply → Analyze → Create → Evaluate), speaking requires a different type of learning activity: authentic communication tasks. These tasks involve spontaneous interaction, clarification, turn-taking, and meaning negotiation — key components of Communicative Language Teaching (Long, 1996). During the live meeting, students produce spoken output (Create) and immediately receive teacher feedback (Evaluate), completing Kolb's experiential cycle of performance → reflection. This phase ensures that vocabulary learned digitally is transferred into actual communicative use, which is essential for language acquisition.

# Learning Flow

## Phase 3 - Meeting (Asynchronous Communicative Output)

| Step                        | Purpose                                                | Key Activities                                                       | Bloom Level | CLT Stage               | TESOL Cycle            |
|-----------------------------|--------------------------------------------------------|----------------------------------------------------------------------|-------------|-------------------------|------------------------|
| Create (Spoken)             | Produce spontaneous speech using target vocabulary     | 40–60s speaking task, teacher follow-up questions, breakout pairwork | Create      | Authentic Communication | Production             |
| Evaluate (Teacher Feedback) | Improve accuracy & fluency through corrective feedback | Live correction (pronunciation, word choice, grammar), feedback card | Evaluate    | Feedback                | Feedback / Remediation |

# Learning Flow

## Phase 4- Remediation (Asynchronous Communicative Output)

Phase 4 provides personalised remediation, where students receive short, targeted tasks based on their performance in the Meeting. This aligns with TESOL's Feedback–Remediation cycle and Mastery Learning principles, ensuring that learners address specific weaknesses (e.g., grammar, pronunciation, vocabulary) before progressing. The tasks are brief and focused to reinforce learning without adding cognitive overload. This phase closes the loop of learning by transforming feedback into measurable improvement.



# Learning Flow

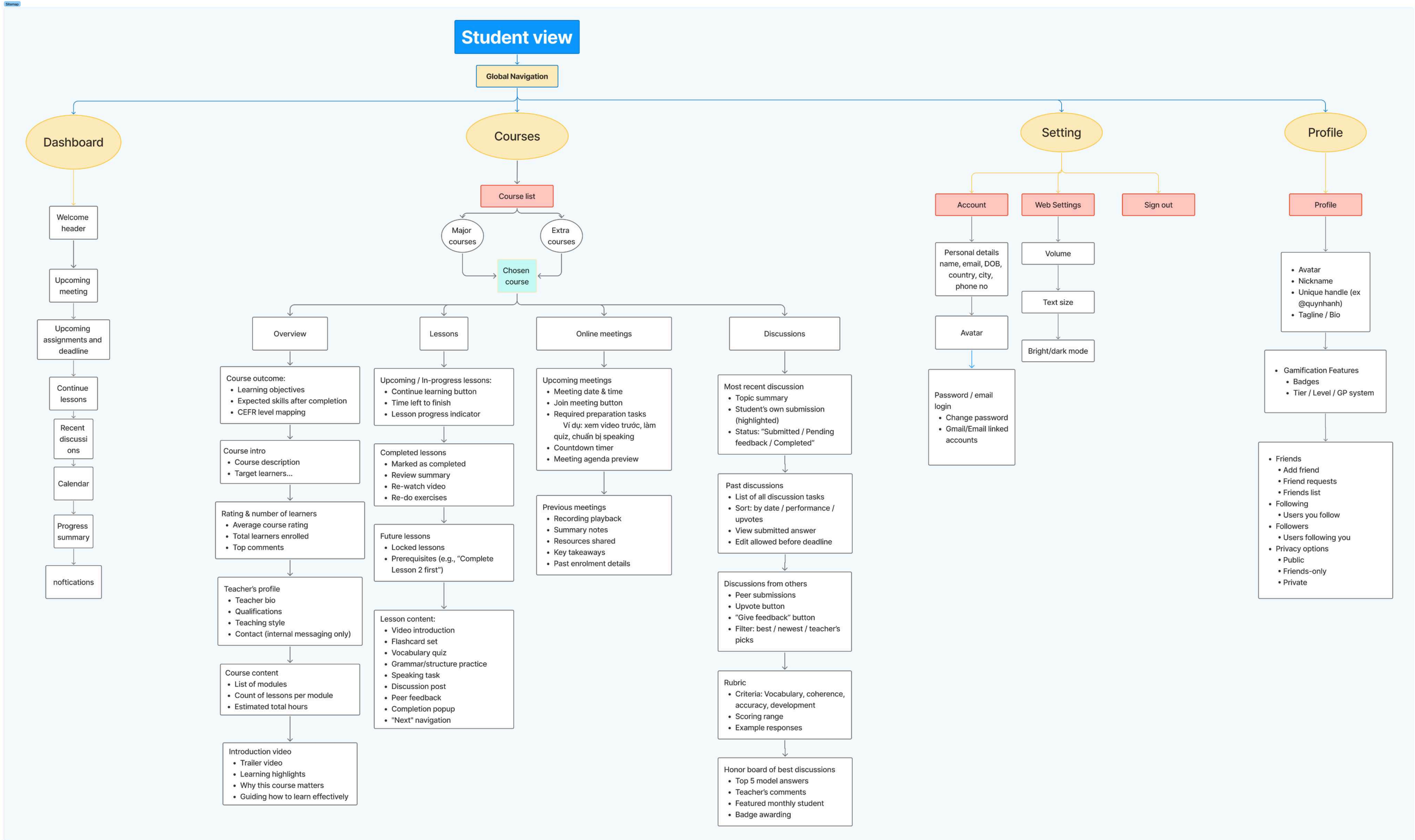
## Phase 4- Remediation (Asynchronous Communicative Output)

| Step              | Purpose                             | Key Activities                                                             | Bloom Level        | CLT Stage           | TESOL Cycle                   |
|-------------------|-------------------------------------|----------------------------------------------------------------------------|--------------------|---------------------|-------------------------------|
| Targeted Practice | Address specific learner weaknesses | Grammar quiz, vocabulary practice, pronunciation video, mini speaking task | Apply → Analyze    | Controlled Practice | Remediation                   |
| Improvement Check | Confirm progress before next lesson | System tracks completion, teacher checks improvement in next meeting       | Analyze → Evaluate | Feedback            | Review → Re-teach (if needed) |

# Design Development

# Design Development

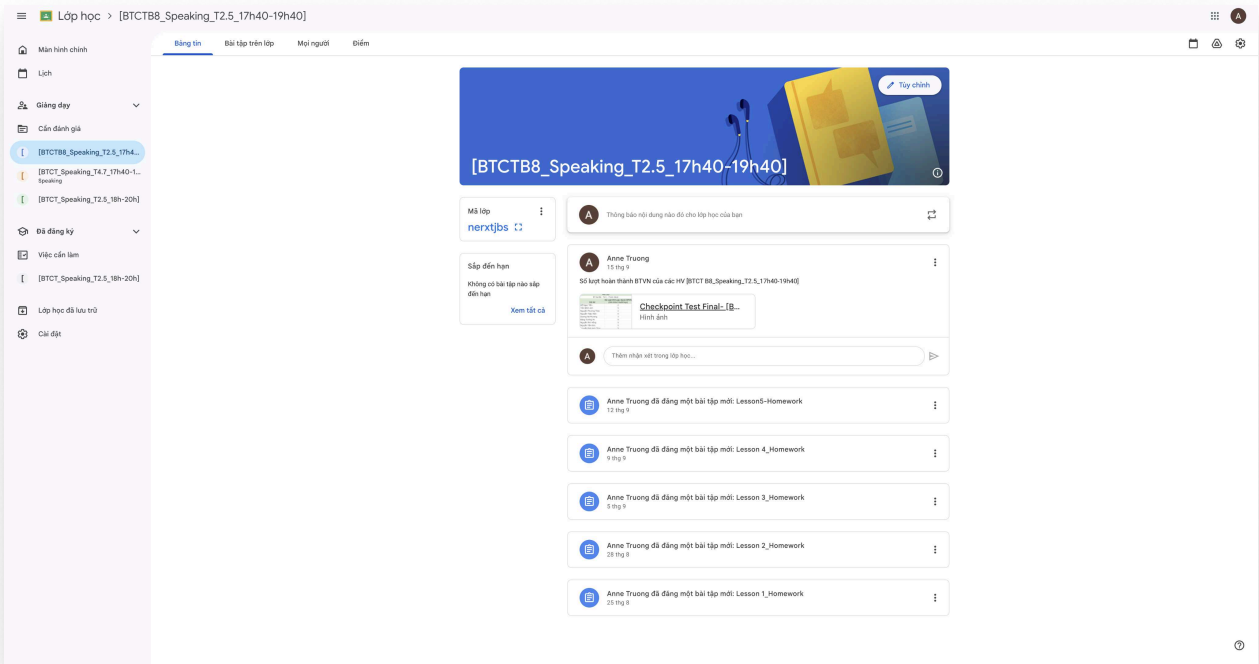
## Sitemap



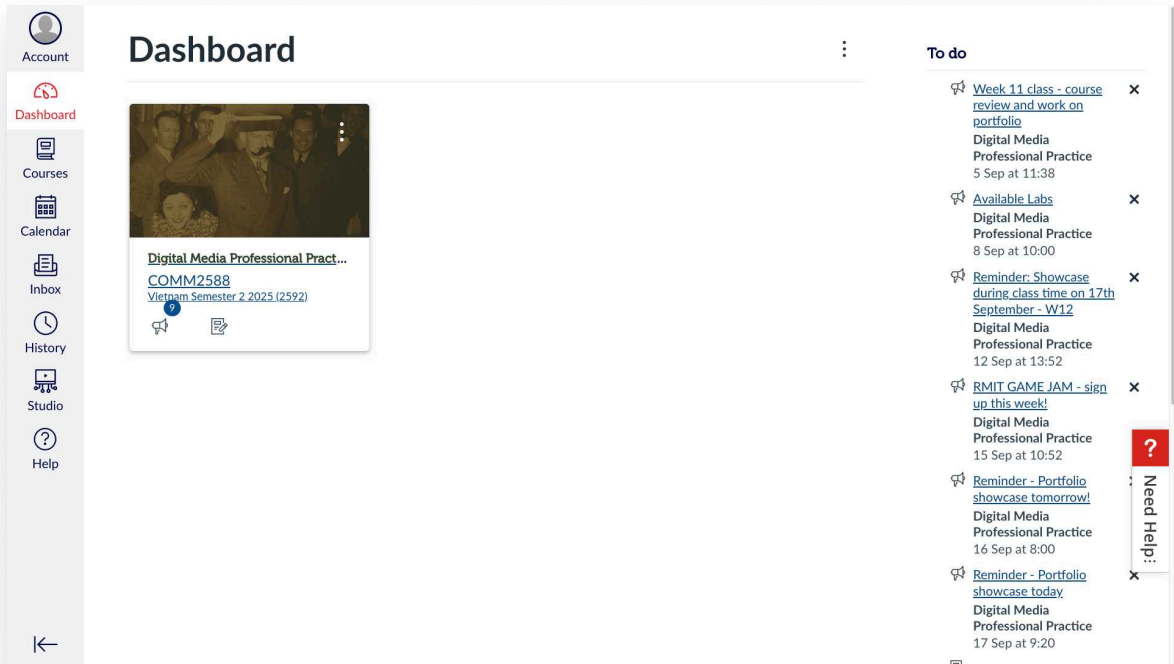


# Design Development

## Dashboard

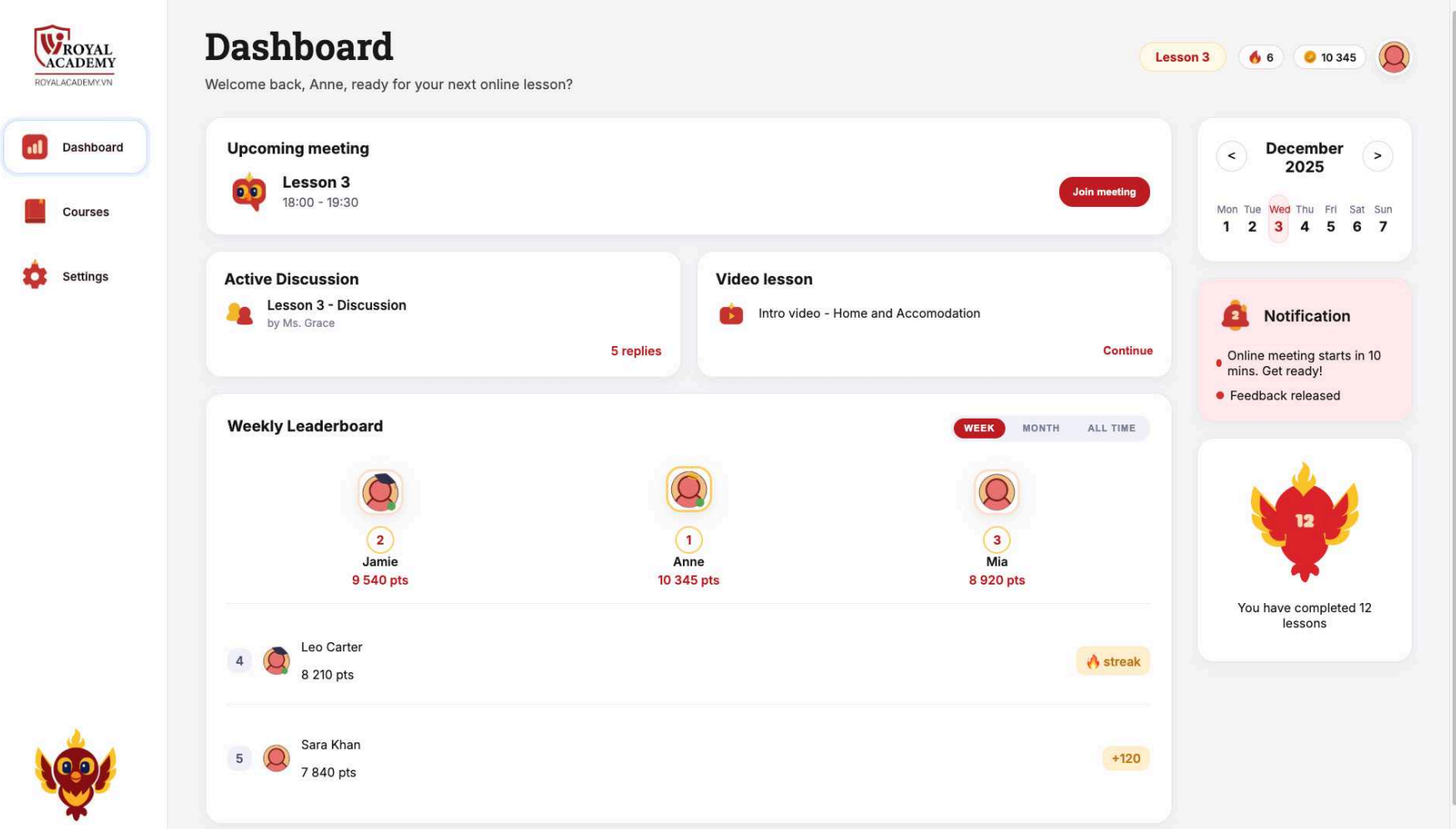


Google Classroom Dashboard



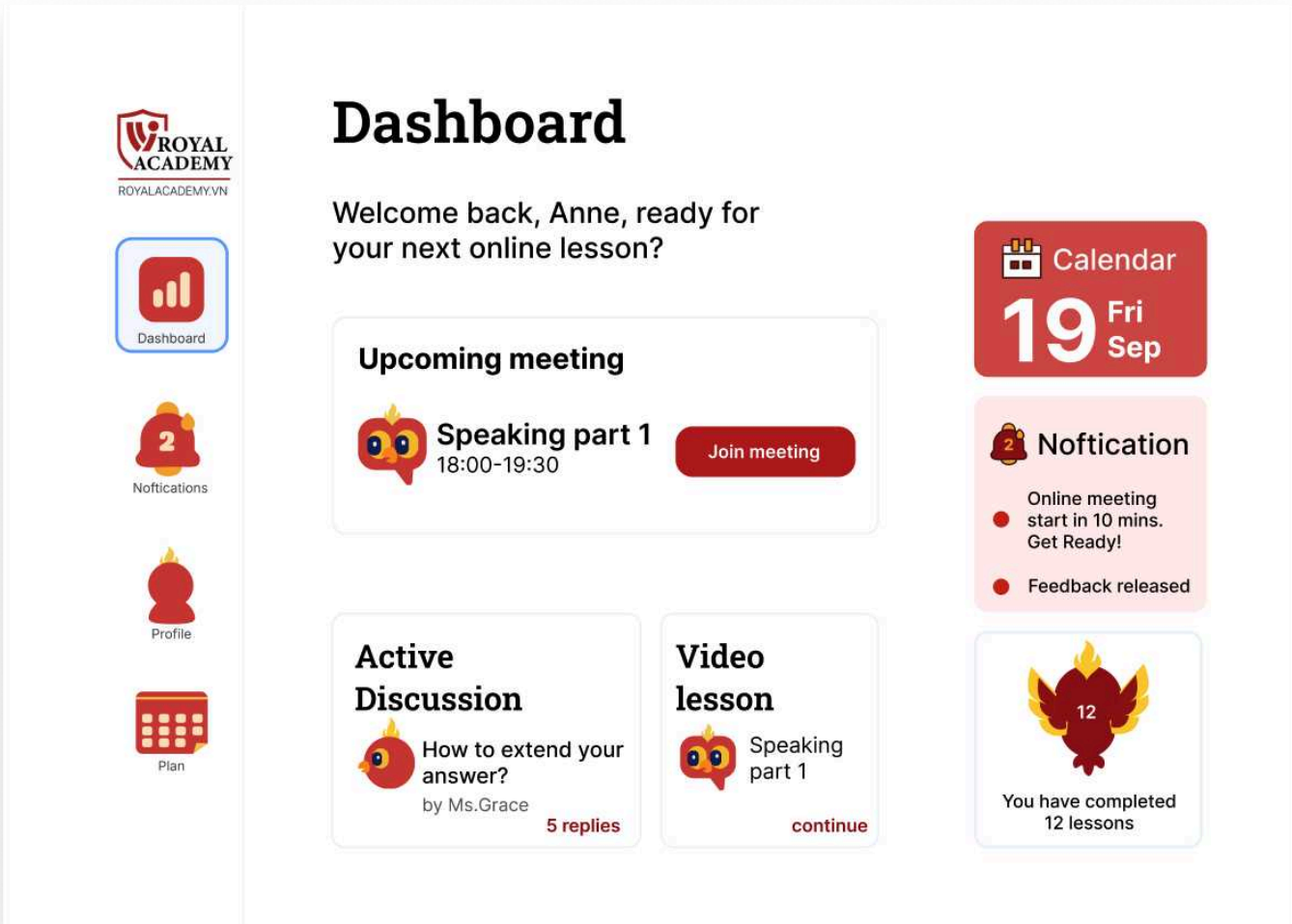
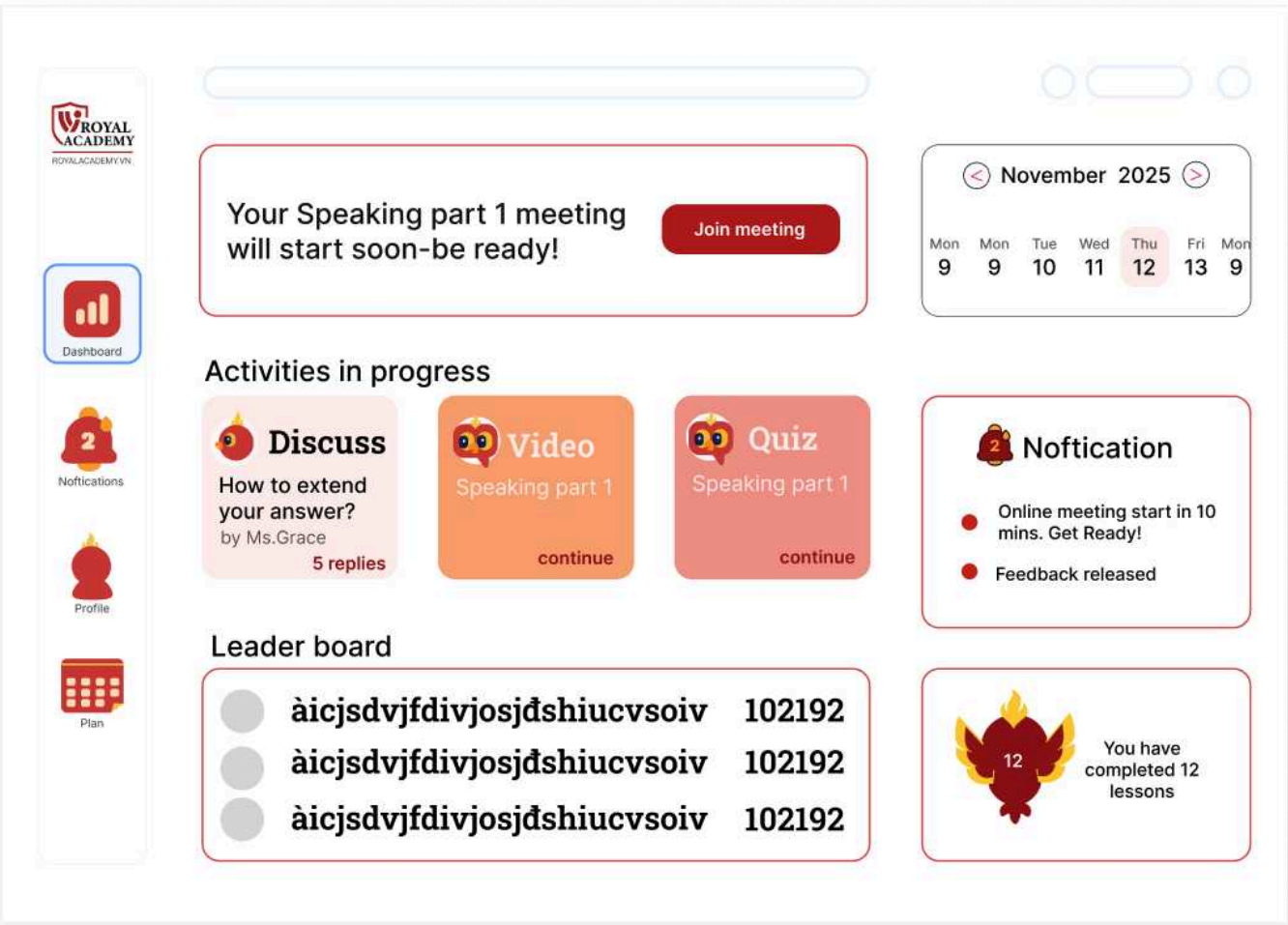
Canvas Dashboard

Google Classroom and Canvas spread essential learning information across different screens, which makes navigation slower and more fragmented. The Royal Academy dashboard puts everything in one place, making it clearer, easier to follow, and less cognitively demanding for learners.



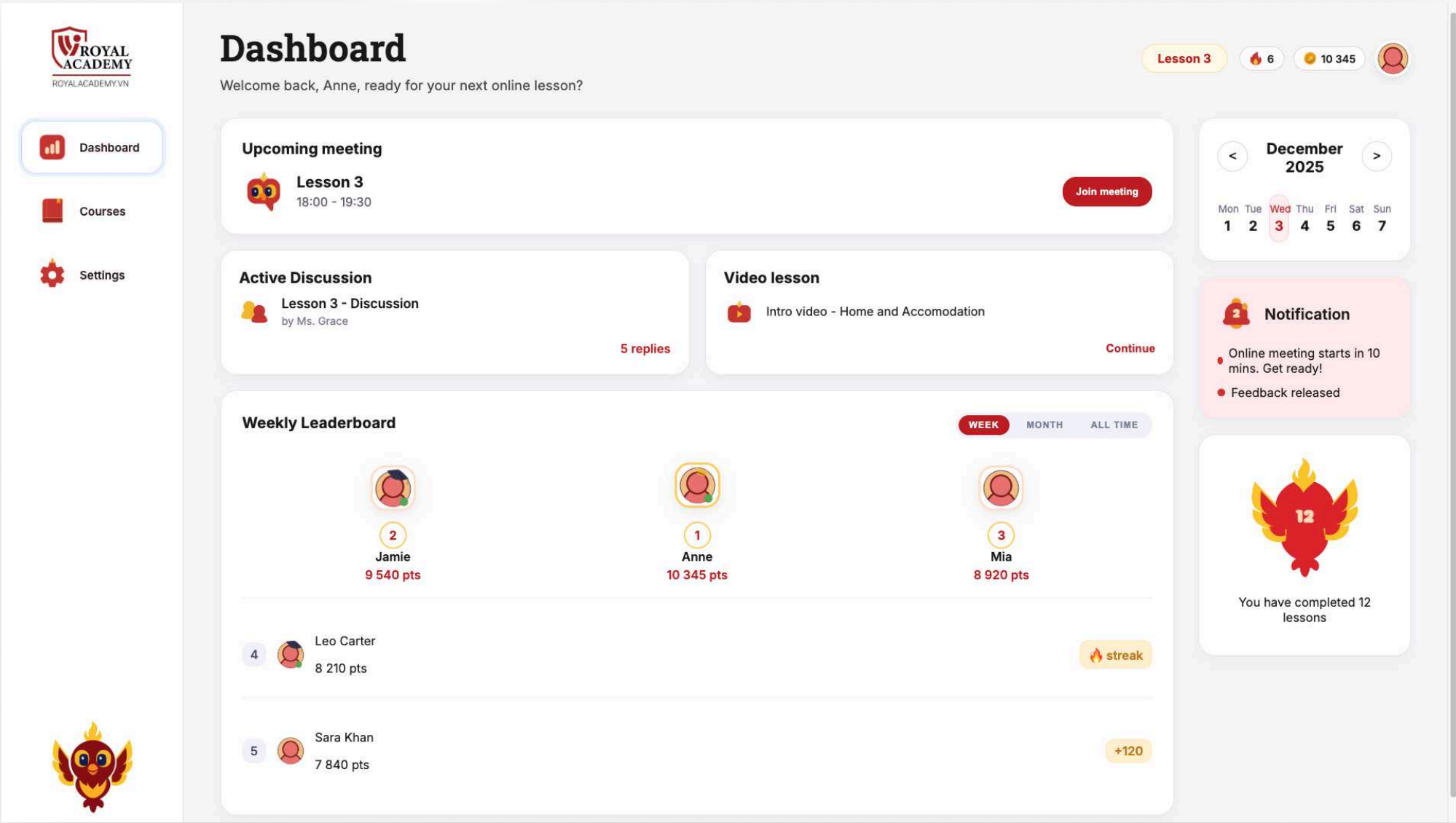
Royal Academy Dashboard





# Iteration

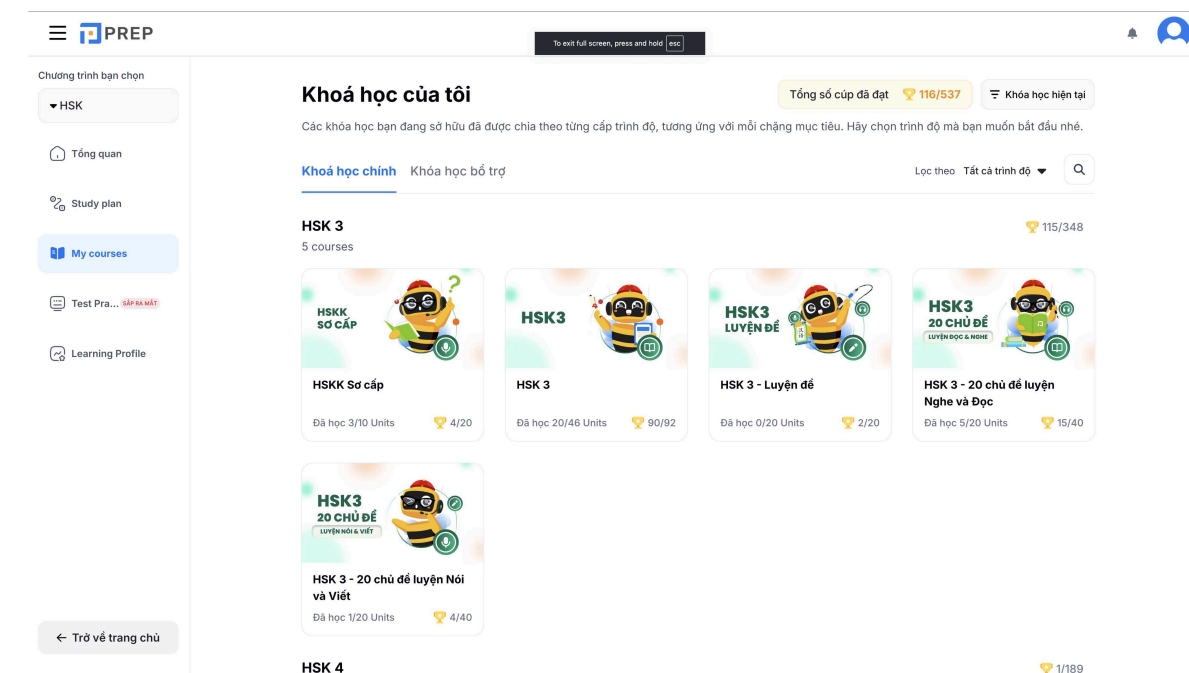
- Three high-fidelity dashboard iterations of the same concept
- Same content and components, different layout, spacing and visual emphasis
- Final version improves hierarchy, readability and brand consistency



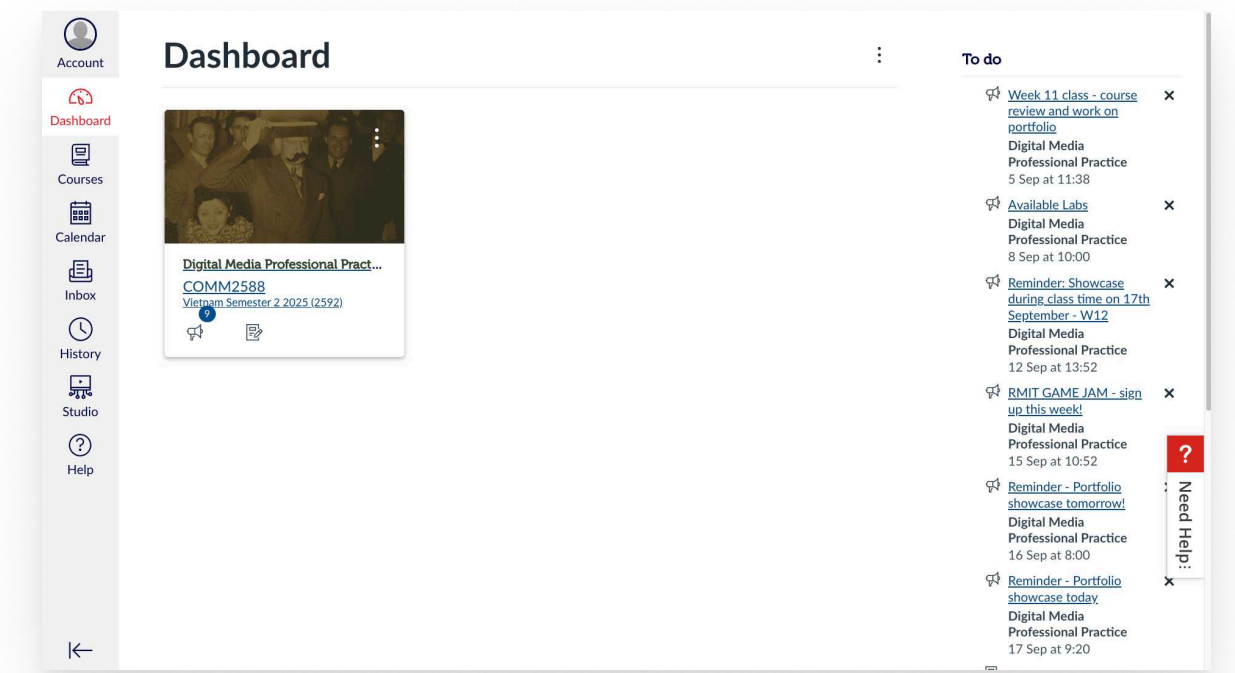
Final Version

# Design Development

# Course

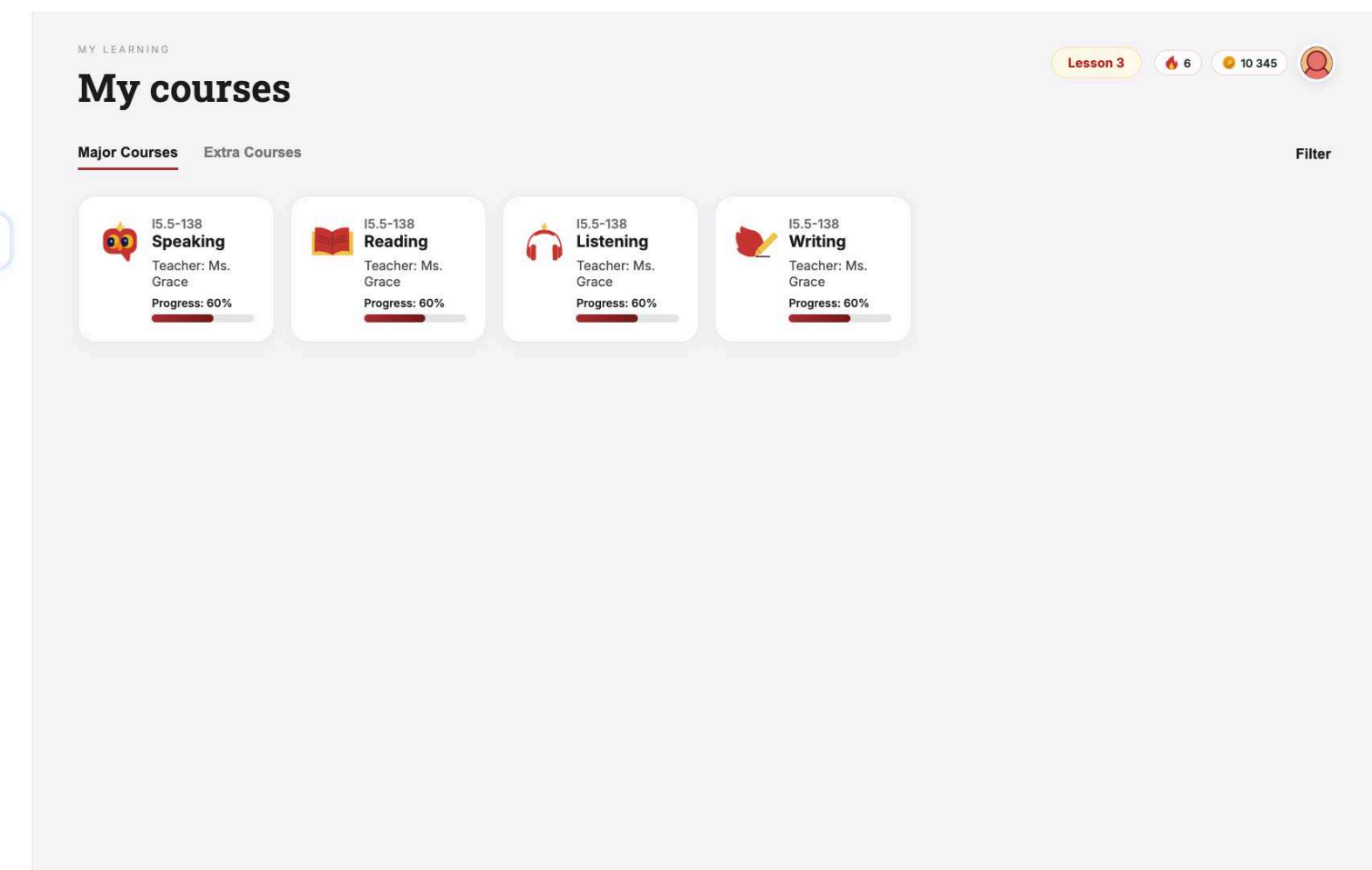


## Prep course



## Canvas Dashboard

The course layout is inspired by the way Canvas displays courses on its dashboard and the visual presentation of Prep courses. I kept the clear, card-based structure but refined it with a cleaner hierarchy and added a progress bar under each course to help learners track completion more easily.

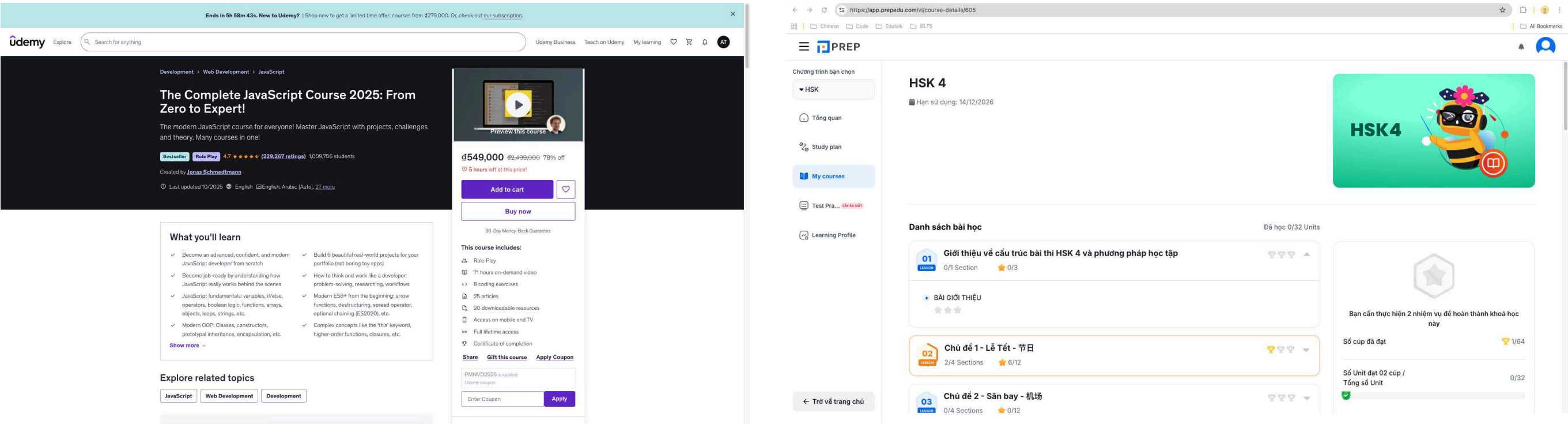


Current version



# Design Development

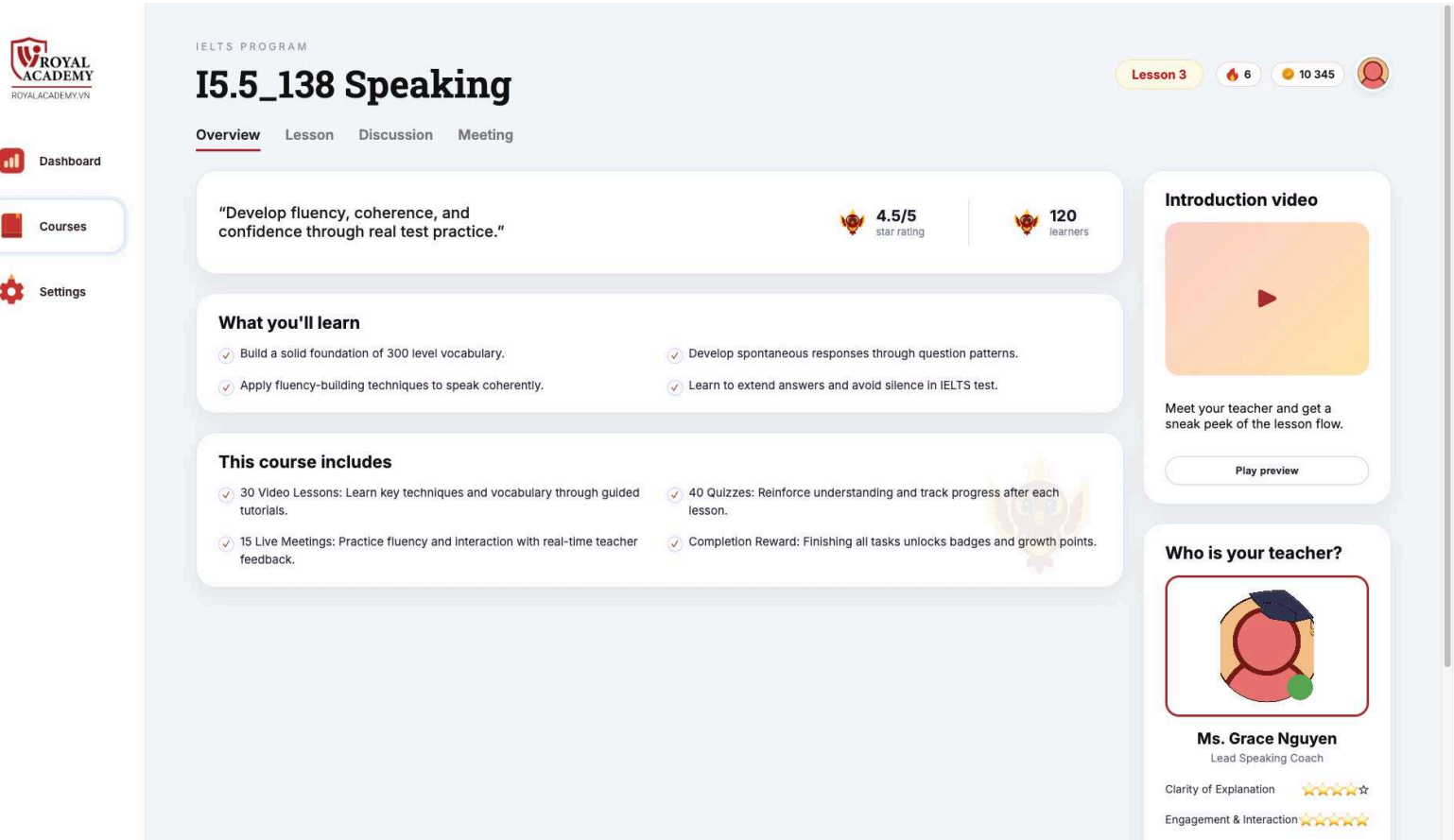
## Course -Overview



Udemy course overview

Prep course introduction

The course overview draws inspiration from both Prep and Udemy. Prep offers a simple introductory video, while Udemy provides clearer structure with sections like “What you’ll learn” and “This course includes.” Building on these ideas, I expanded the overview with learning outcomes, estimated completion time, and a brief teacher profile. Unlike Prep and Udemy—which do not feature instructor details due to the lack of live sessions—Royal Academy adds teacher qualifications and student feedback to support trust, connection, and preparation for the live meeting.

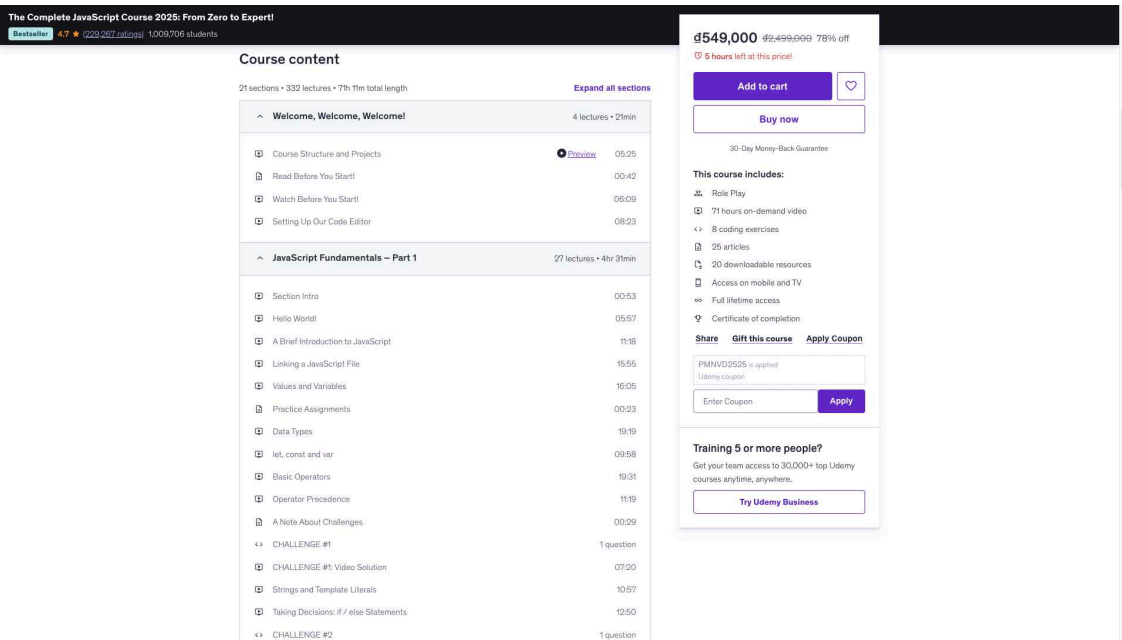


Royal Academy Course

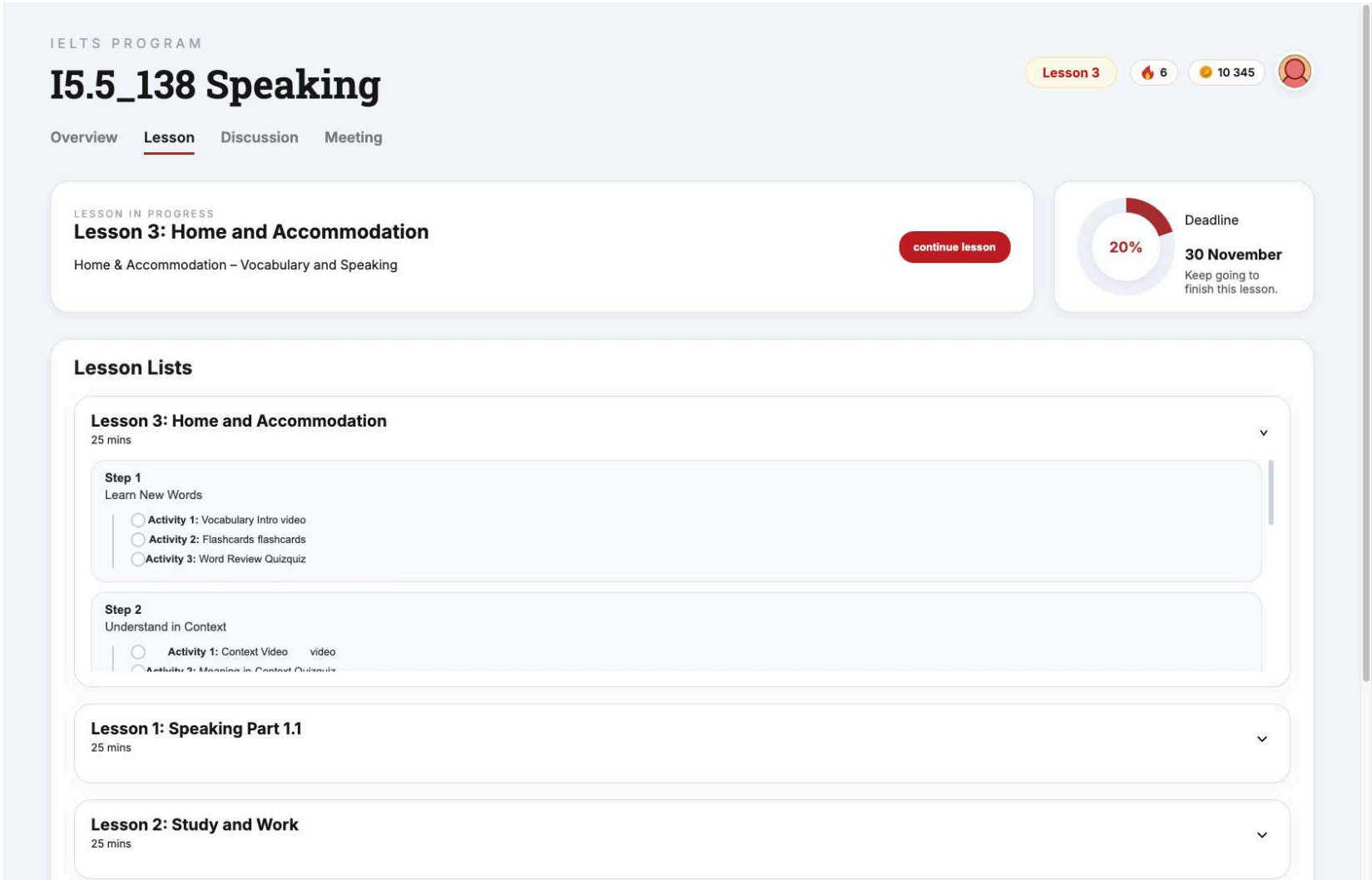
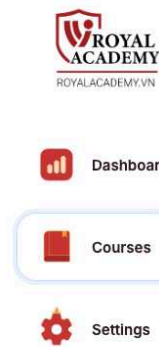
# Design Development

## Course -Lesson

The lesson list design was inspired by Udemy’s expandable module structure. Instead of showing only the main steps, each step now opens to reveal its activities in a tree-like layout, allowing learners to revisit individual videos or redo quizzes easily. A completion tick appears once an activity is finished, providing clear visual feedback. To further support the learning flow, I added a Continue Lesson button so learners can resume exactly where they left off, along with a progress chart and a completion deadline to help them track their pace and prepare effectively for the upcoming live meeting.



Udemy Course content



Royal Academy Course

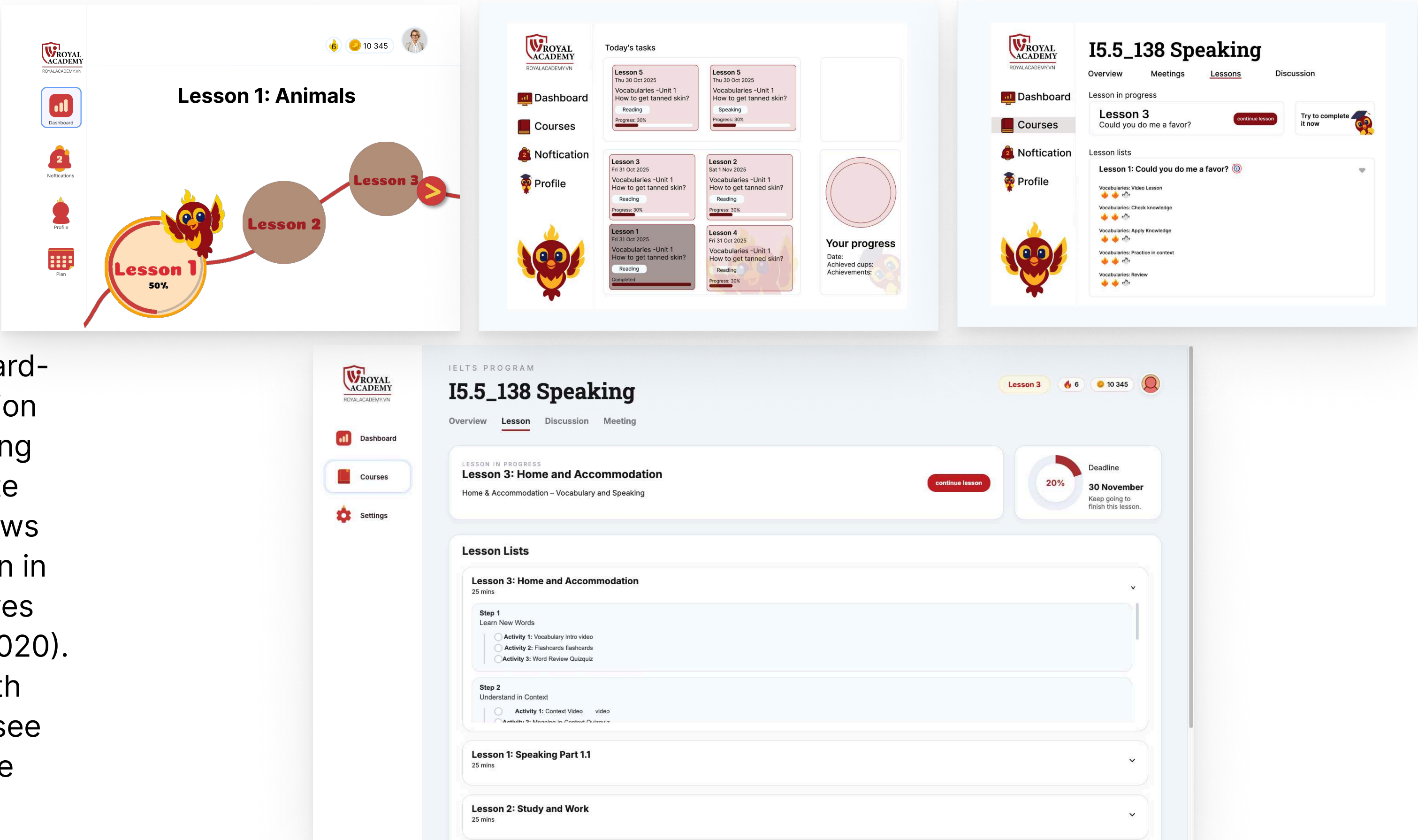


# Design Development

## Course -Lesson

### Iteration

I explored three approaches for the lesson structure: a card-based layout, a visual learning path, and a toggle/accordion list. The card layout and visual path were visually appealing but required extra clicks and did not provide an immediate overview of all activities. Research in learning design shows that reducing navigation steps and presenting information in a clear, linear sequence lowers cognitive load and improves task completion (Sweller, 2011; Nielsen Norman Group, 2020). For this reason, I selected the toggle list, which aligns with established LMS patterns and allows learners to quickly see the full learning flow—video, practice, and communicative tasks—at a glance. This design maximizes usability and supports efficient progress tracking.

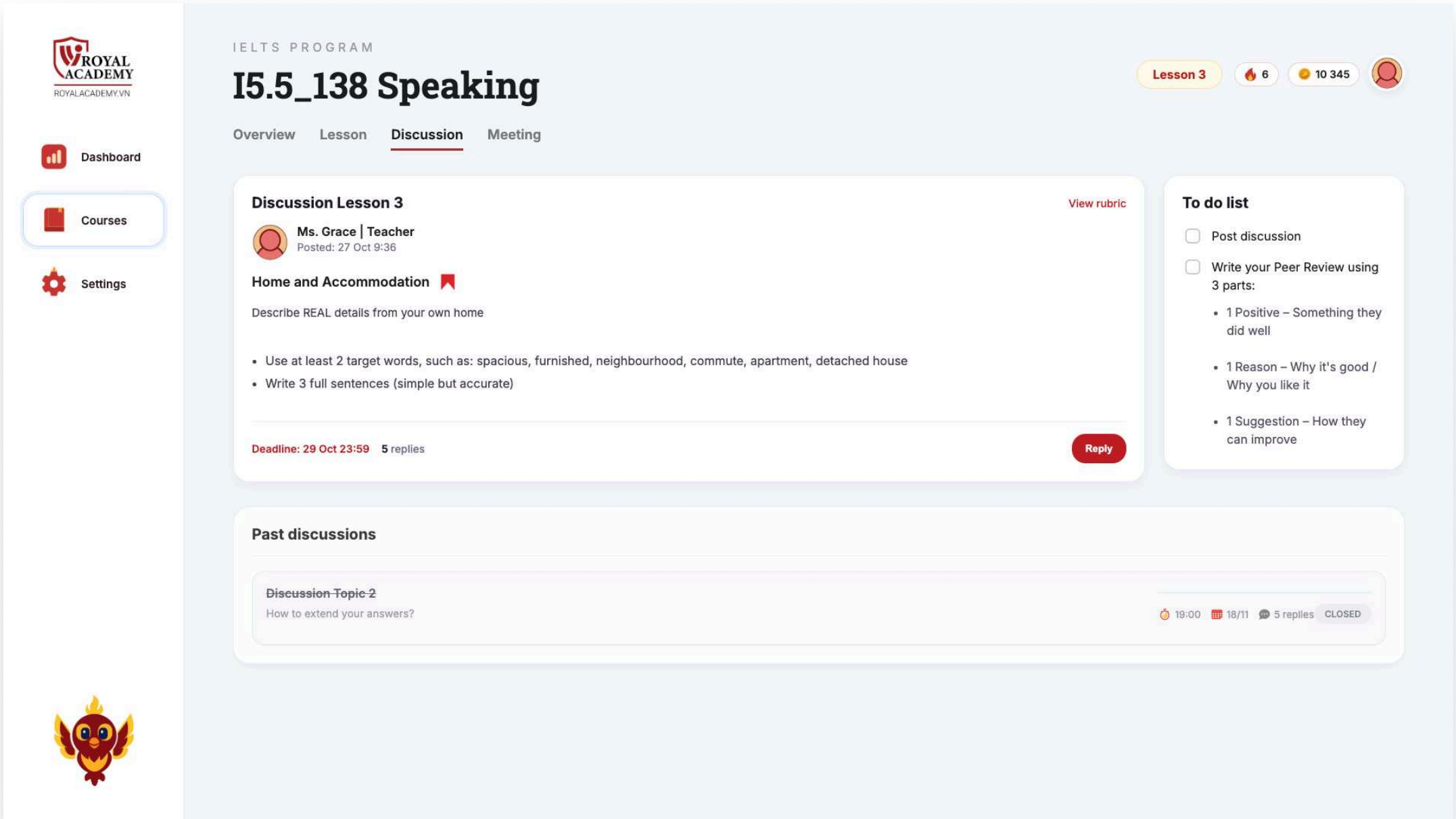


Current version

# Design Development

## Course -Discussion

The Discussion section consists of the recent discussion, a required to-do list learners must complete before the live meeting, and past discussions that show previous posts and timestamps. Unlike typical discussion forums that only support posting and commenting, Royal Academy integrates discussion tasks directly into each lesson, making them part of the mandatory learning flow. This is why the interface includes a structured checklist and progress markers. A future update will introduce an Honor Board to highlight outstanding learner submissions.



Royal Academy Discussion

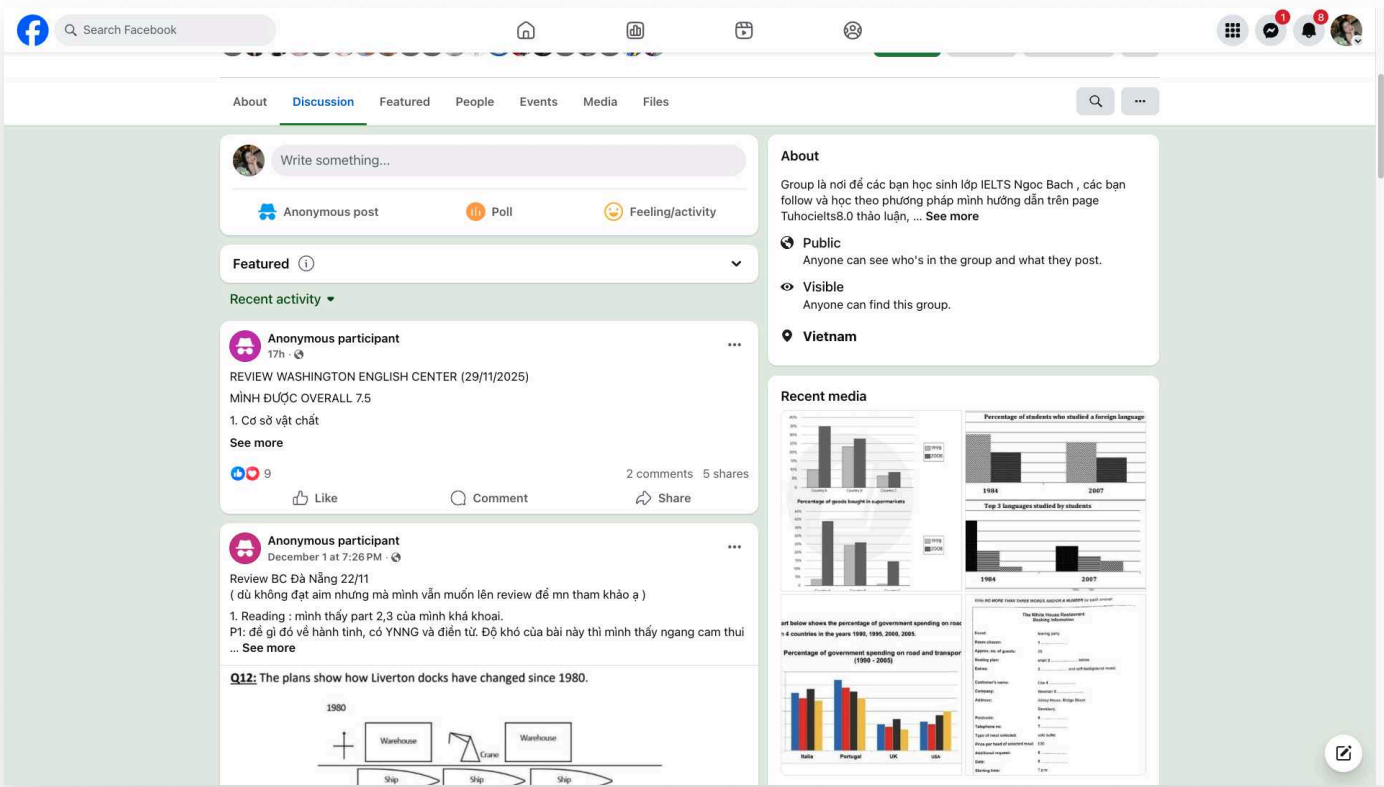


# Design Development

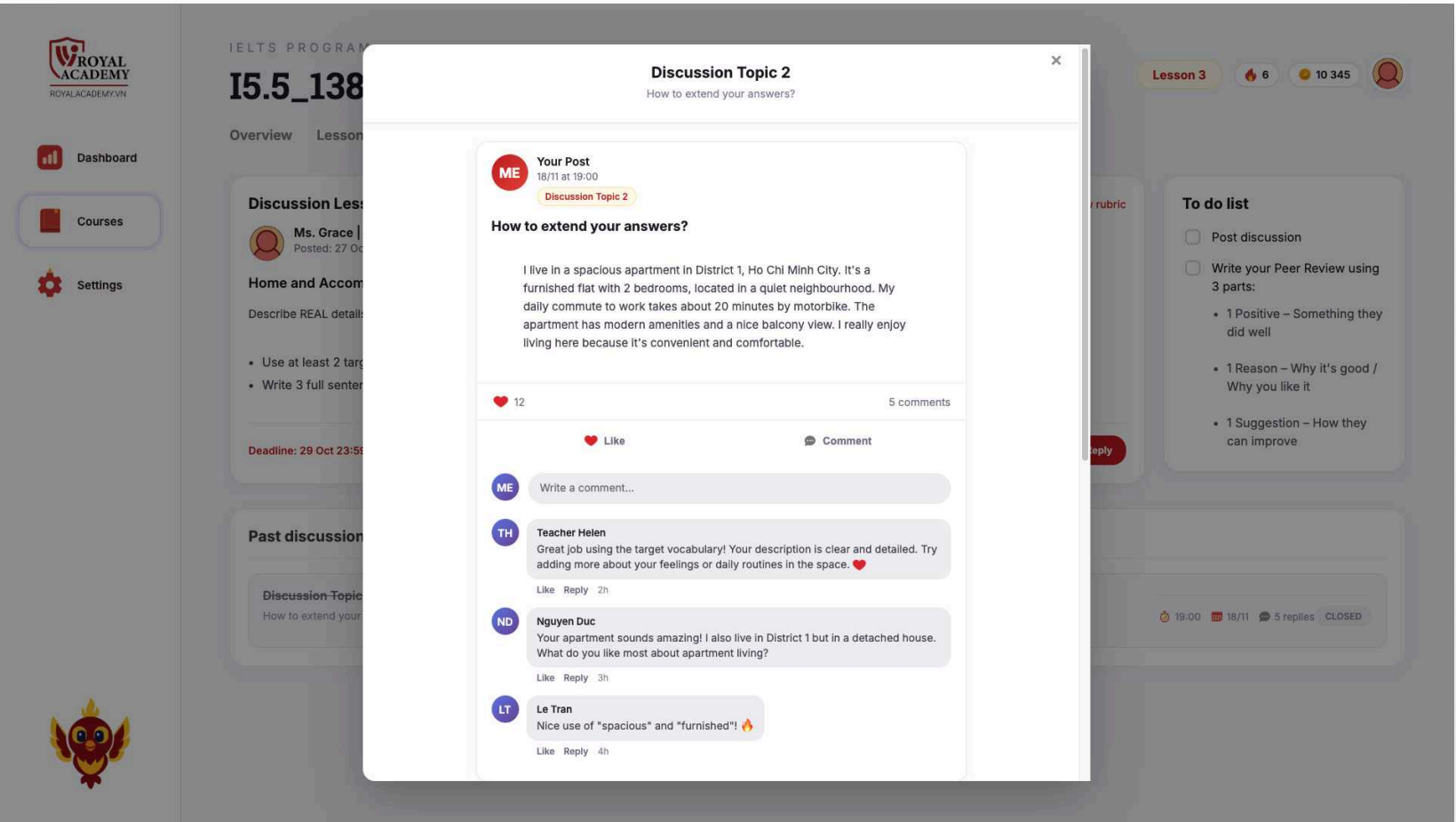
## Course -Discussion

### Discussion post

When learners open a specific discussion, the interface displays the full post, reactions, comments, and feedback in a familiar social-media style. This design is inspired by Facebook’s discussion layout, which presents posts in a clean vertical structure with clear interaction options such as like, react, and comment. Using this pattern allows learners to engage with peer submissions in a natural and intuitive way, since it mirrors a platform they already use daily. This familiarity reduces cognitive load, increases participation, and supports the communicative goals of the lesson.



Facebook Discussion



Royal Academy Discussion Post

# Design Development

## Course - Discussion

### Rubric

Royal Academy takes inspiration from Canvas’s clear assessment criteria but improves the experience by replacing the dense, table-based rubric with a clean, vertical card layout. This design is easier to read, includes colour coding, real examples, and tips—turning the rubric from a grading tool into a learning tool. It keeps Canvas’s structure but makes it more accessible and student-friendly.

Account

Dashboard

Courses

Calendar

Inbox

History

Studio

Help

Vietnam Semester 3 2023 (259...)

My Course

Home

Announcements

Syllabus

Modules

Assessment

Assignments

Assignment Support

Marks

Collaboration

People

Other

Student Surveys

Show Classic Course Navigation

| Week 6 – Convener II                                                                                                                                                      |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                |                                                                                                                                                                                                      |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Criteria                                                                                                                                                                  | Ratings                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                |                                                                                                                                                                                                      | Pts    |
| Project management PROGRESS: Learners will be assessed on the measure of evidence presented in terms of the progression towards their final outcome.                      | 40 to >32.0 pts HD<br>"Consistently strong implementation of all aspects of effective project management: Coherent project objectives, methodology, outcomes and contributions; Well identified resources; Excellent time management skills."          | 32 to >28.0 pts DI<br>"Consistent implementation of all aspects of effective project management: Coherent project objectives, methodology, outcomes and contributions; Well identified resources; good time management skills." | 28 to >24.0 pts CR<br>"Satisfactory implementation of all aspects of effective project management: Coherent project objectives, methodology, outcomes and contributions; an appropriate range of resources identified; satisfactory time management skills." | 24 to >20.0 pts PA<br>Implementation of the project is mostly coherent; some of the objectives may not be clear and methodology selected may not be fully relevant. Time may not have been managed effectively | 20 to >0 pts NN<br>Poorly managed project, no clear objectives and methodology, outcomes are missing or not clear. A limited amount of information from few sources. Lack of time management skills. | 40 pts |
| Problem solving PROACTIVITY: Learners will be assessed based on their ability to respond to actual and potential issues encountered in the design of their final outcome. | 30 to >24.0 pts HD<br>Extensive evidence of the ability to generate a range of solutions that are logical and relevant. Ability to select and justify the most appropriate solution and to analyse the limitations and implications of that selection. | 24 to >21.0 pts DI<br>Significant evidence of ability to create a range of possible solutions and to select the appropriate solution and to justify the reasons for that selection.                                             | 21 to >18.0 pts CR<br>Evidence of ability to create a limited range of possible solutions to select the appropriate solution and to justify the reasons for that selection                                                                                   | 18 to >15.0 pts PA<br>Evidence of ability to create a possible solution which may viable but limited in its scope                                                                                              | 15 to >0 pts NN<br>Little or no evidence of ability to engage with the problem; no appropriate solutions offered.                                                                                    | 30 pts |
| Aesthetic Achievement FORM: Learners will be                                                                                                                              | 30 to >24.0 pts HD<br>Strong evidence of authorial intent evident                                                                                                                                                                                      | 24 to >21.0 pts DI<br>Significant evidence that                                                                                                                                                                                 | 21 to >18.0 pts CR<br>Evidence of the formal                                                                                                                                                                                                                 | 18 to >15.0 pts PA<br>Evidence of some                                                                                                                                                                         | 15 to >0 pts NN<br>The formal requirements of the                                                                                                                                                    |        |

Assessment Rubric

Home & Accommodation · Speaking Task

Task Achievement0-4

Vocabulary0-4

Grammar0-4

Clarity & Detail0-4

Task

Vocabulary

Grammar

Clarity

Tips

Task Achievement: Did you answer the question directly, clearly, and with enough real details?

4EXCELLENT

- Fully answers the task with specific, real details
- Uses **≥2 target words naturally**
- Clear and complete sentences

"I live in a *spacious* apartment. It's fully *furnished* with modern appliances."

3GOOD

- Clear answer with relevant ideas
- Uses 1-2 target words but not very naturally
- Mostly correct simple sentences

Canvas Rubric

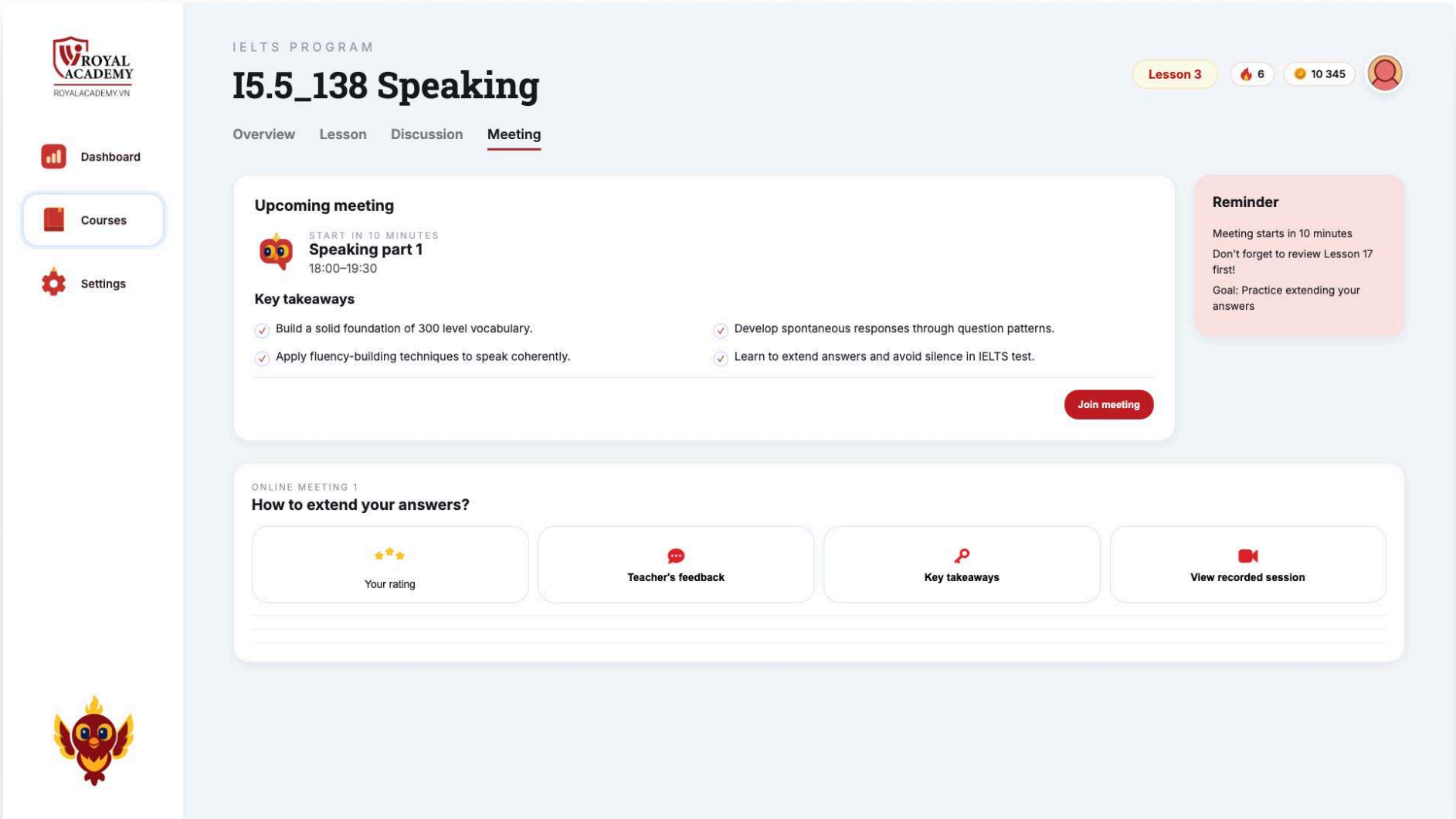
Royal Academy Rubric



# Design Development

## Course -Meeting

The Meeting section is divided into two parts: upcoming meetings and previous meetings. The upcoming meeting block shows the meeting date and time, along with a reminder checklist of required tasks learners must complete before joining the live session (such as watching the lesson video, completing the quiz, or posting their discussion). This ensures learners enter the meeting fully prepared. Below this, the previous meeting area provides full visibility of past live sessions, including student rating, teacher’s feedback, key takeaways, and the recorded session. Additional materials shared during the live class (slides, examples, worksheets) are readily accessible, and a timestamp log shows when each learner joined and participated. Together, this structure supports transparency, reflective learning, and continuous improvement across live sessions.



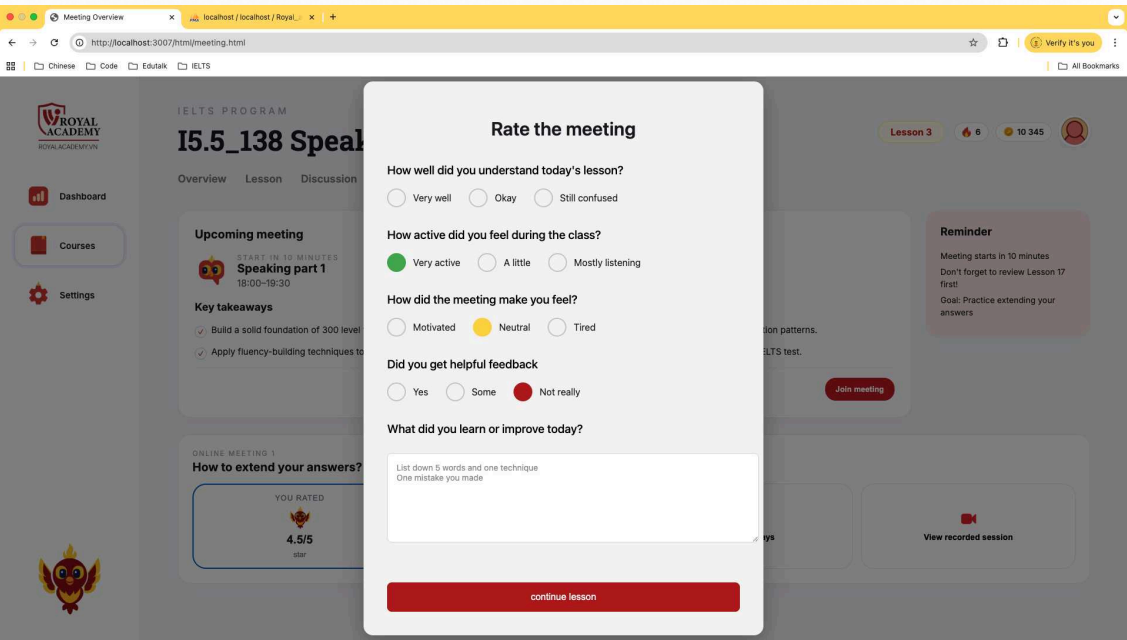
Royal Academy Meeting

# Design Development

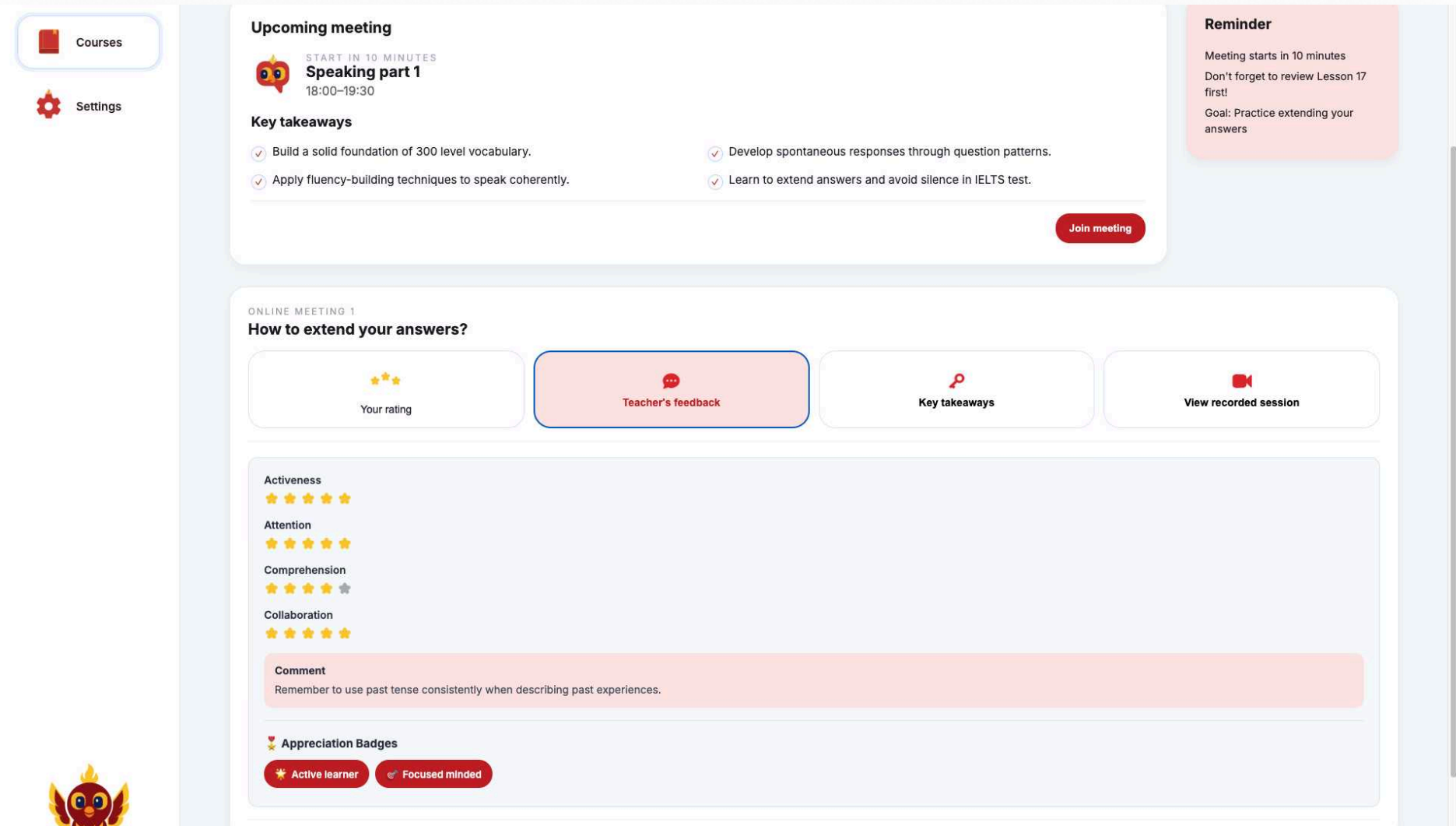
## Course -Meeting

### Past meeting

In the initial design, each element of the past meeting—rating, teacher feedback, key takeaways, materials, and the recorded session—opened in a separate popup. However, this approach felt visually cluttered and required multiple interactions to access related information. To create a cleaner and more consistent experience, I redesigned the section so that all past-meeting information appears within a single container, organized into toggle sections. Learners can expand only the parts they need, allowing the interface to remain compact, structured, and easy to navigate.



Past meeting- old verison

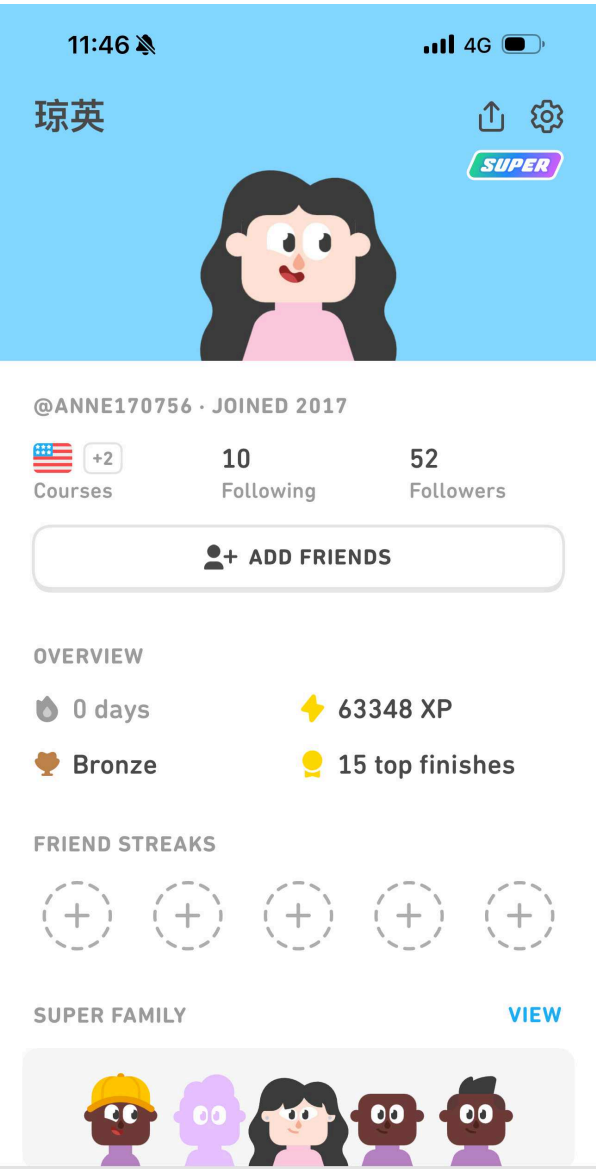


Past meeting- current verison

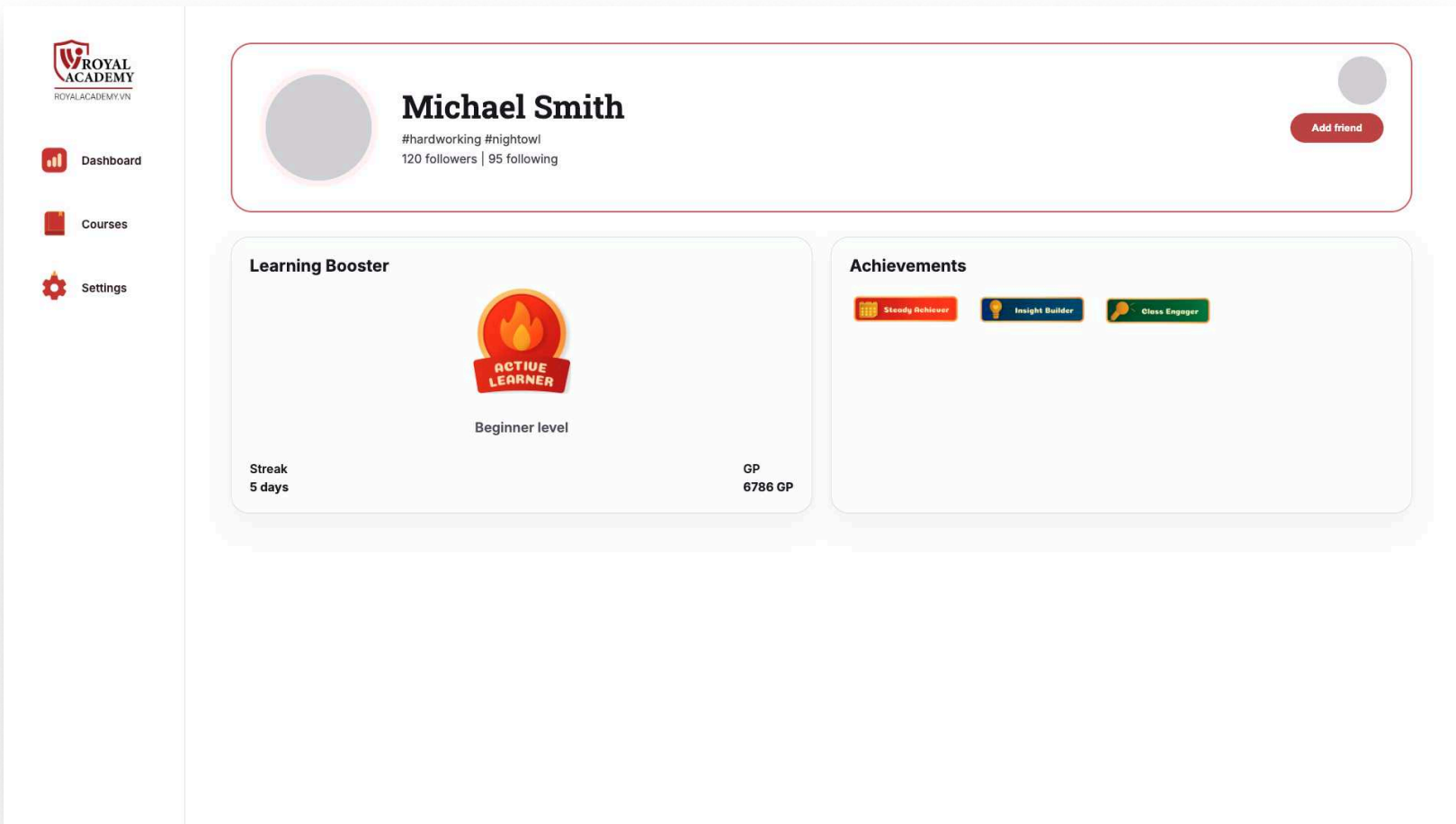
# Design Development

## Student-profile

The Profile page takes inspiration from Duolingo’s gamified learner identity, where motivational elements such as badges, XP, streak count, and tier level are displayed prominently. By adopting this familiar pattern, the profile becomes more than a static information page—it becomes a space that reinforces progress and encourages continued learning. The top section highlights the learner’s streak, achievements, and milestone badges, creating a sense of reward and identity within the platform. This approach taps into gamification principles to increase engagement and self-motivation, while still maintaining a clean, structured layout for readability.



Duolingo Profile



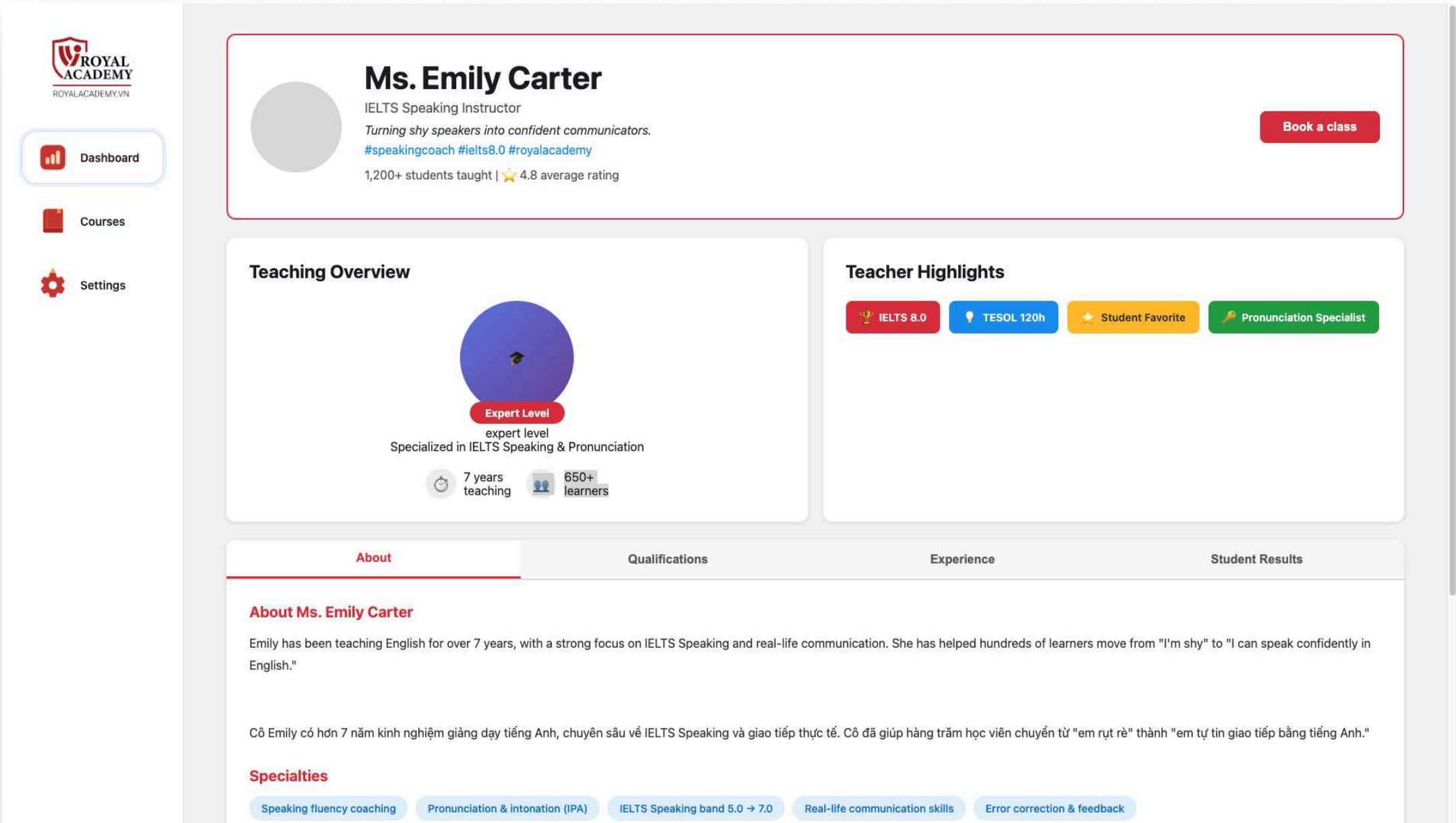
Royal Academy Profile



# Design Development

## Teacher-profile

In the initial design, each element of the past meeting—rating, teacher feedback, key takeaways, materials, and the recorded session—opened in a separate popup. However, this approach felt visually cluttered and required multiple interactions to access related information. To create a cleaner and more consistent experience, I redesigned the section so that all past-meeting information appears within a single container, organized into toggle sections. Learners can expand only the parts they need, allowing the interface to remain compact, structured, and easy to navigate.

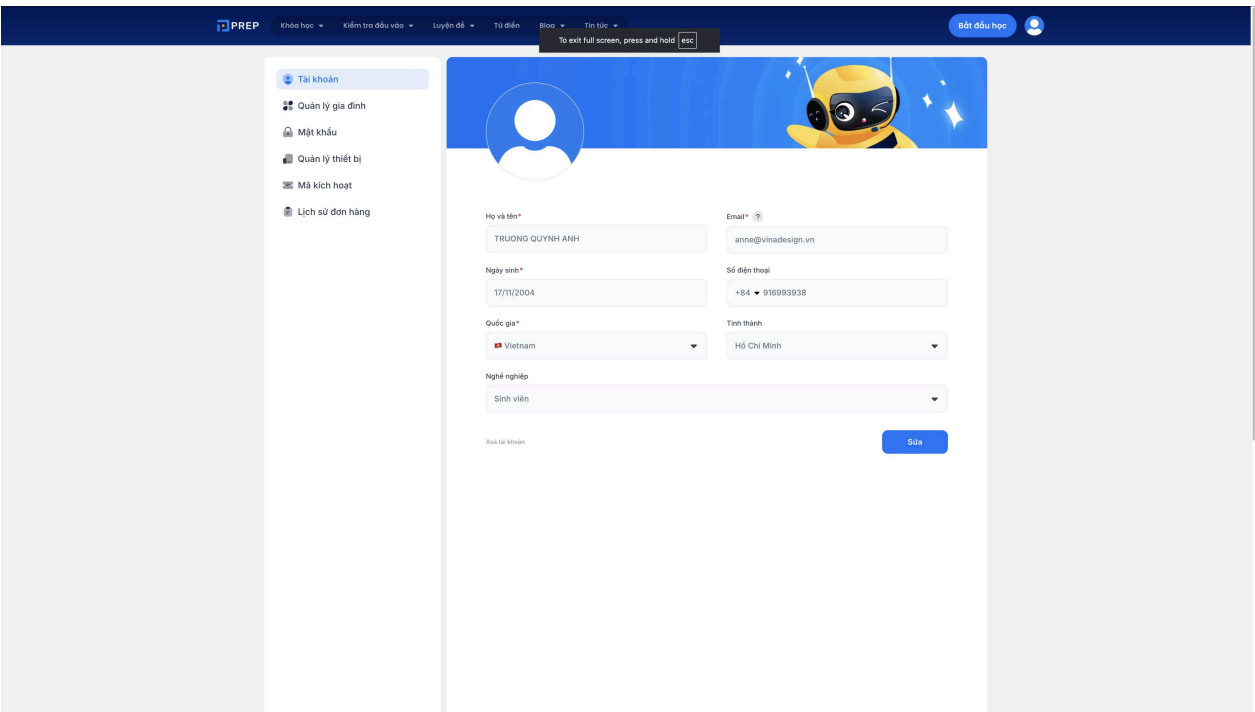


Royal Academy Teacher Profile

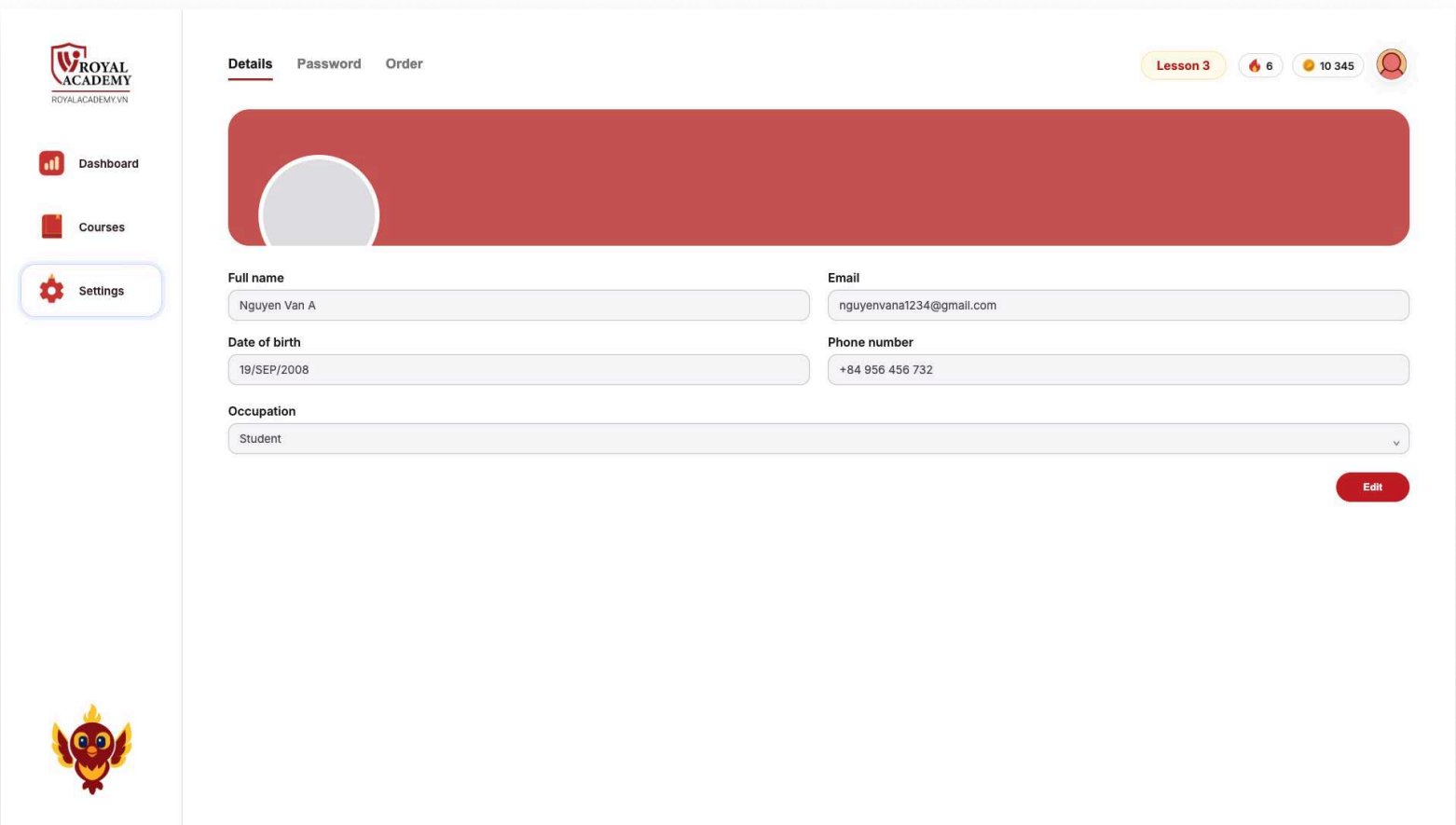
# Design Development

## Setting

The Settings interface follows a more traditional desktop-style structure, inspired by web applications such as Prep, where personal information, security options, and order history are cleanly separated into tabs. This tabbed layout allows learners to switch easily between Details, Password, and Order without overwhelming the screen. The design prioritizes clarity and control, enabling users to update personal information, manage login methods, and review their purchased courses efficiently. By mirroring familiar desktop settings interfaces, the design reduces cognitive load and ensures a consistent, practical user experience across the platform.



Prep Setting



Royal Academy Setting



# Design Development

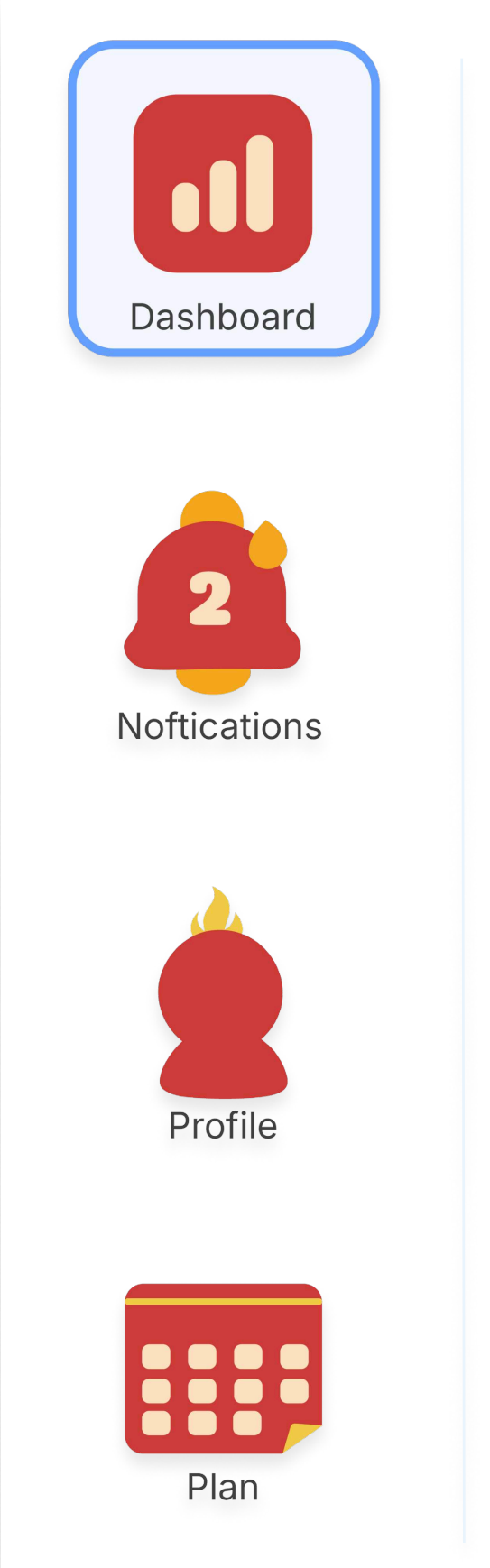
## Navigation Bar

I began with a simple, darker navigation bar, but it felt too formal and did not reflect the youthful, energetic tone of the Royal Academy brand. To make the platform feel more approachable for learners, I redesigned the colour palette and introduced playful, rounded icons that matched the mascot's visual language.

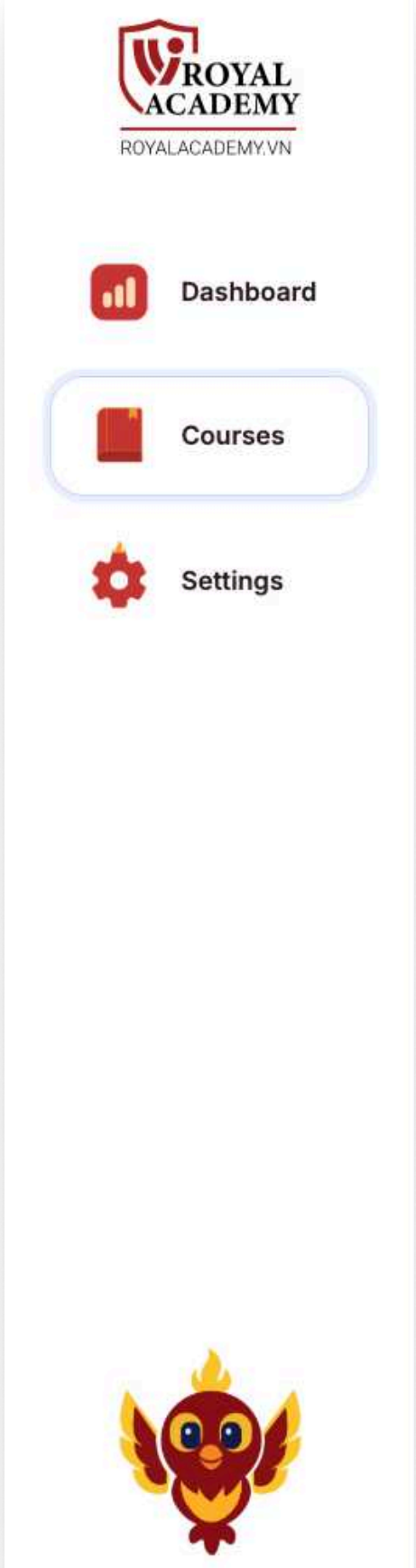
In the second version, I experimented with larger icons to strengthen visual hierarchy, but when placed in the desktop layout, they appeared oversized and visually overwhelming. Therefore, in the final version, I refined the scale, spacing, and active-state styling to achieve a cleaner balance. The result is a navigation bar that feels modern, friendly, and consistent across screen sizes.



version 1



version 2



new version

# Design Development

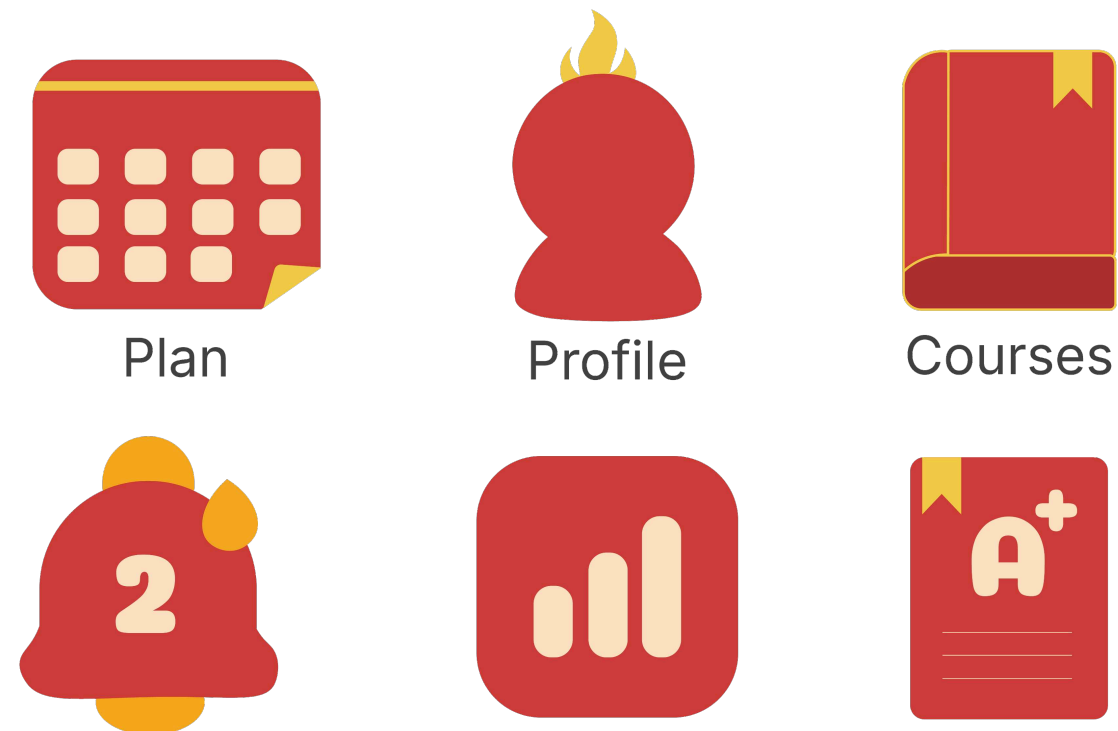
## Button + Icons

The icon set was redesigned to better align with the youthful, energetic identity of Royal Academy. I shifted from generic flat icons to custom, mascot-inspired illustrations with warm gradients, rounded shapes, and a consistent line weight. This visual language matches the brand’s mascot and creates a more playful, welcoming tone for learners.

As the design evolved, I refined the icons to improve clarity and recognisability, reducing unnecessary details and unifying proportions. The final set uses consistent colours, simplified silhouettes, and balanced spacing, making the icons more readable at smaller sizes and more cohesive across the navigation bar and dashboard.



old version



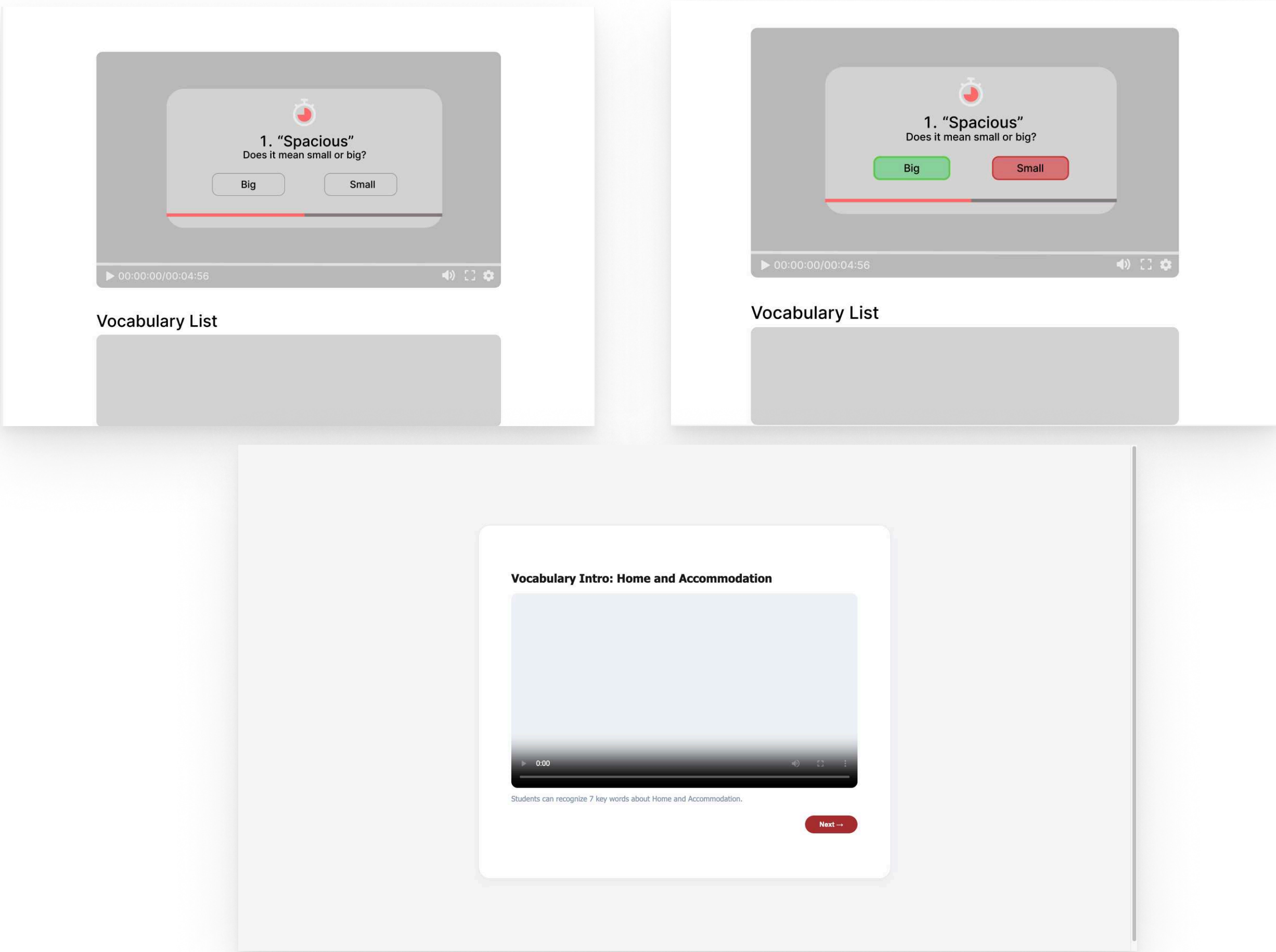
Notifications Dashboard Gradebook

new version



# Design Development

## Video Player

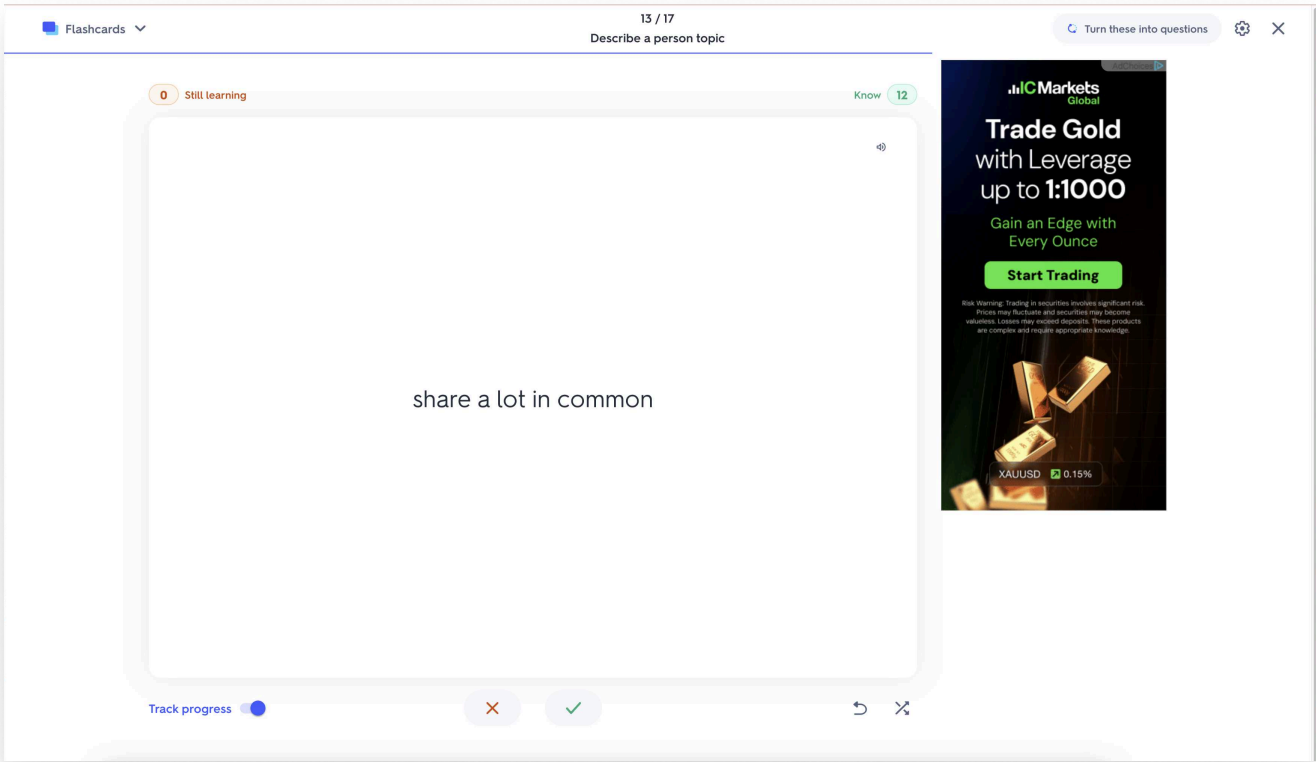


The video player was inspired by Prep’s interactive learning model, where inline CCQs appear during the video to ensure continuous engagement. Instead of allowing learners to passively watch the video, the system pauses at key moments to check understanding. If the learner answers incorrectly, the video rewinds to the relevant segment so they can review the content before moving on. This approach reinforces comprehension, prevents passive viewing, and makes the video lesson function more like an interactive learning activity rather than a passive resource.

Video player

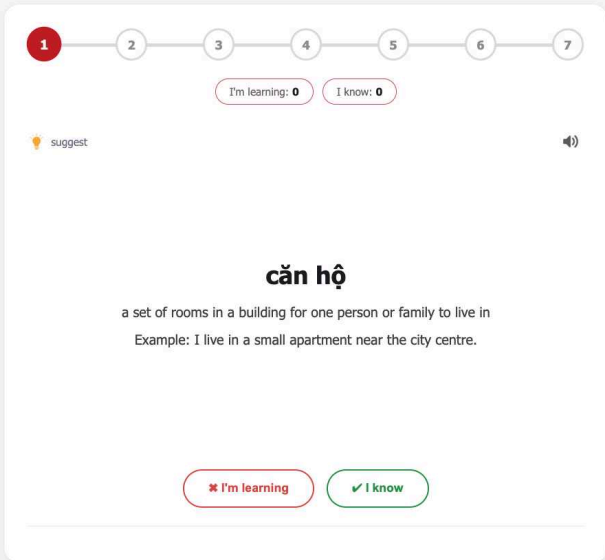
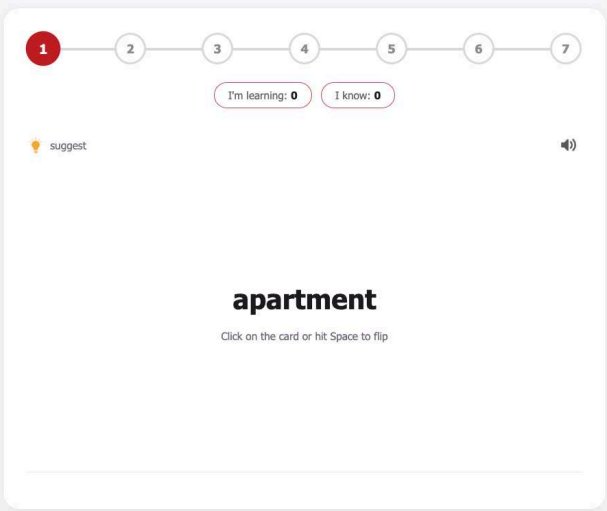
# Design Development

## Flashcard Player



Quizlet Flashcard

The flashcard player was inspired by Quizlet's familiar interaction pattern, where learners can flip cards by pressing space or tapping the card, with optional audio support for pronunciation. To improve learning continuity, I added a progress bar that tracks how many cards have been completed. This ensures learners always know where they are in the deck and encourages them to finish the full set.



Royal Academy Flashcard

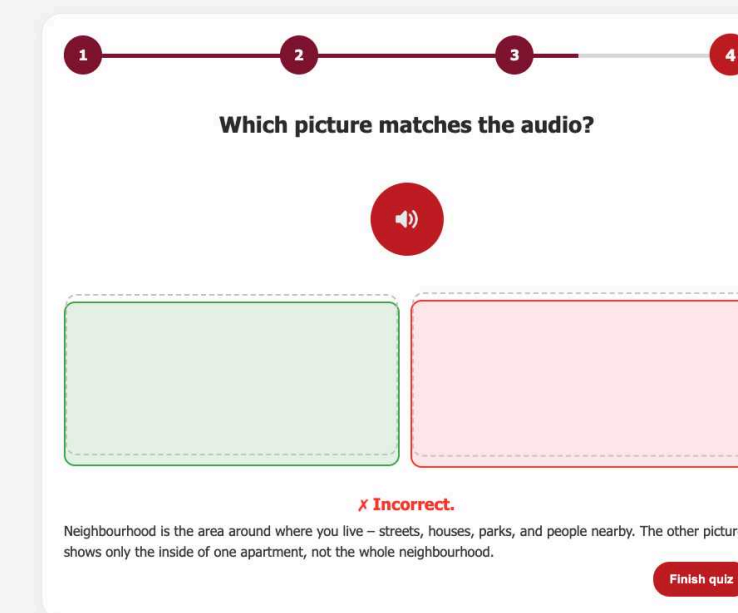
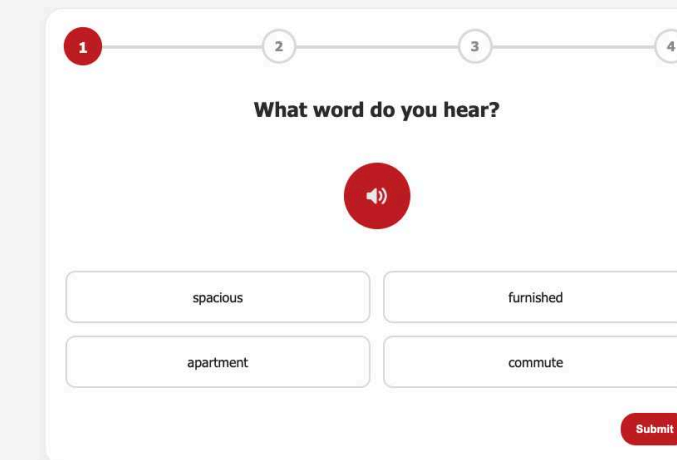
# Design Development

## Quiz Player

The quiz player was inspired by Busuu's interactive exercise system, where learners reinforce understanding through short, varied practice tasks. I designed multiple question types to support different cognitive processes, including:

- Multiple choice
- True/False
- Fill-in-the-blank
- Word selection
- Picture-word matching
- Audio-based questions
- Drag-and-drop ordering

To improve pacing and motivation, the quiz includes a progress bar that shows how many questions remain. Learners also receive instant feedback after each question, allowing them to identify mistakes, correct misunderstandings immediately, and strengthen long-term retention.



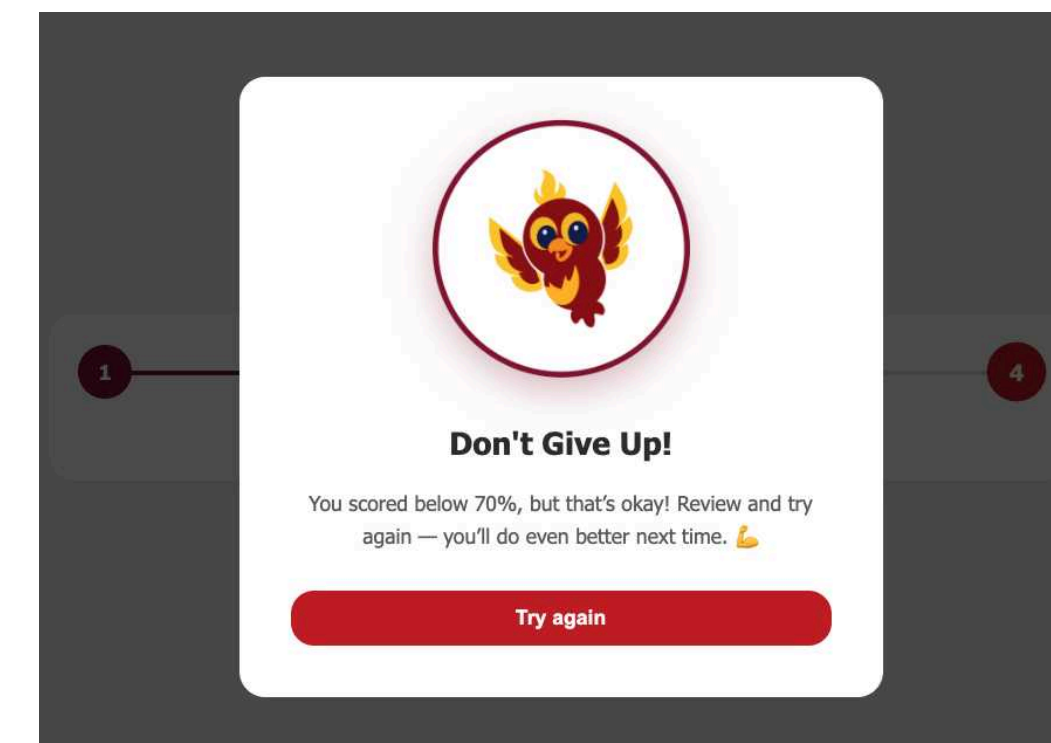
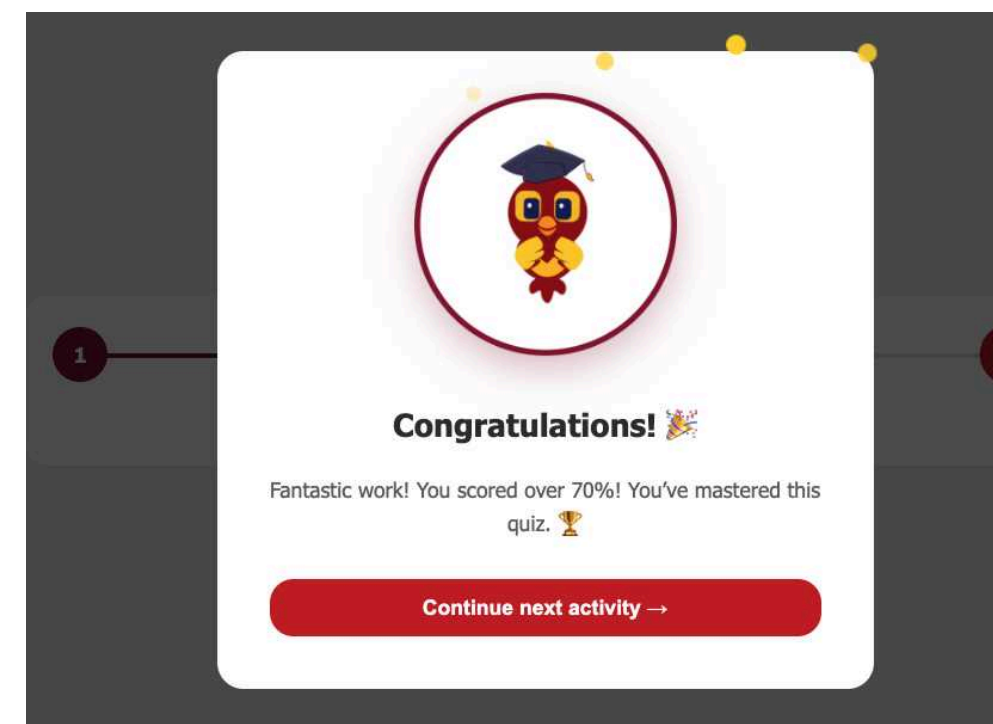
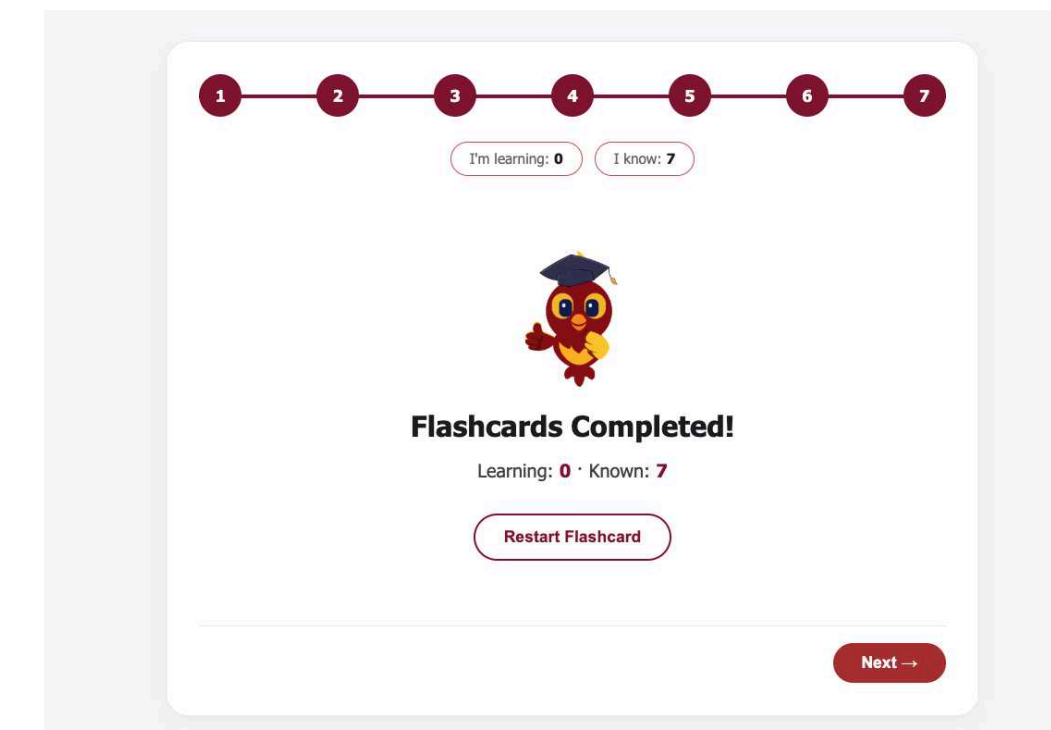
Quiz Player



# Design Development

## Result Display

The quiz shows two popups: “Try Again” for scores below 70%, and “Continue Learning” for scores above 70%. The 70% threshold is grounded in mastery-learning research (Bloom, 1968; Glaser, 1963; Guskey, 2007), which identifies 70–80% as the level where learners demonstrate functional mastery and readiness for the next task.





# Discussion



During my supervision meeting, we discussed the overall direction and scope of the project. Initially, I focused on developing three separate design versions and placed too much emphasis on the two standalone modules: Discussion and Online Meeting. My supervisor pointed out that this approach made the project fragmented and did not clearly demonstrate an integrated pedagogical structure. Instead of building isolated modules, my supervisor encouraged me to shift the focus toward designing a full end-to-end learning flow for a complete lesson. We also reviewed the purpose of each step within the lesson. The supervisor emphasised that every component—video, vocabulary, grammar input, quiz, discussion, peer feedback, and meeting—should operate as part of a coherent instructional sequence, rather than as disconnected features. This helped clarify that Discussion is not simply a comment section, but a structured step where learners post their production task, complete a To-Do checklist, and review peers' work. Similarly, the Online Meeting module should be contextualised as the consolidation stage of the learning journey, with previous meetings recorded, summarised, and organised for reflection instead of existing as an independent UI feature.

My supervisor further advised me to refine the visual language of progress markers. The original use of star icons unintentionally implied rating rather than completion. Based on this guidance, I replaced stars with checkmarks and a linear progress indicator, which communicates progress more accurately and aligns with common learning-platform conventions.

Overall, the supervision session helped me streamline the project, move away from module-based design, and re-focus the entire prototype around a clear, research-aligned learning flow. This shift strengthened the pedagogical logic of the platform and improved coherence across all UI decisions.

# Citation





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