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Co-funded by the
Erasmus+ Programme
of the European Union



Gamifying Academic English Skills in Higher Education: Reading Academic English App (StratApp)

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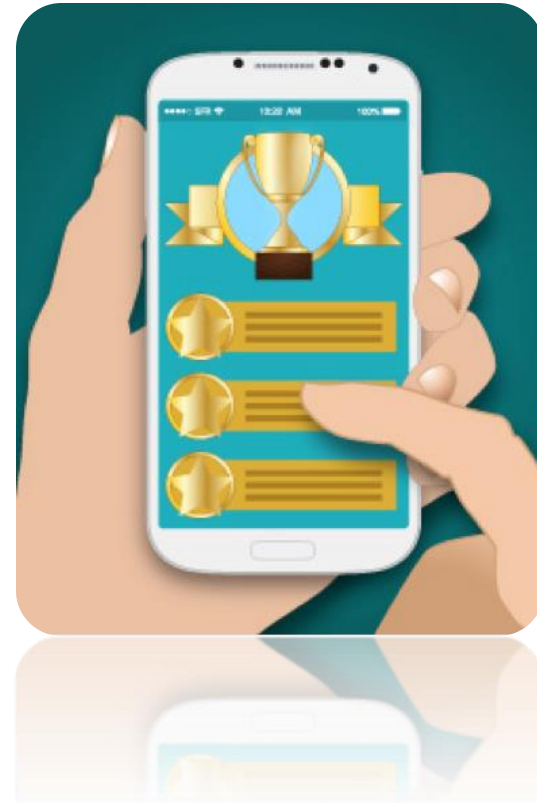
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Outline



- ❑ Background of the project
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- ❑ Collaborating institutions
- ❑ Description of the project
- ❑ Development of the App
- ❑ Initial advances of the project
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Background of the project



□ Why reading skills?

- Sts encounter difficulties when dealing with academic texts (Dhieb-Henia 2004, Hellekjær 2009, Nergis 2013)
- The First European Survey on Language Competences (2011, p.4) → the percentage of secondary students having achieved at least a B1 CEFR in general English reading is the following:
 - France 13%, Spain 24%, Poland 24%
- The minimum required level → **a B2 CEFR**
- In the European Framework for Content and Language Integrated Learning (CLIL) Teacher Education (2014) → communication in foreign languages is one of the **eight interdependent key competences** defined under lifelong learning
- Academic reading skills are a cross-sectional competence that enhances **linguistic competence in foreign and mother tongue.**



Aims of the Project



To improve the **English academic reading skills** of university students (to go from A1 and A2 to a B2 CEFR level), through a game-based app: StratApp that can be accessed through mobile technology or web



The App will combine the obvious **educational purpose** (improvement of academic skills) with **game-design elements and game principles**



The game will provide a **thematic scenario** that will act as a plot thread



Aims of the Project



It will be divided in **mini-games or missions**, each one designed at improving a specific aspect of academic reading skills as designed in the preliminary research



Completion of a certain number of missions or especially hard levels will be rewarded with **collectable badges**



Scenarios are organized by skills level, following the CEFR, starting with an A2-B1 level. Completing all scenarios will imply a **B2 reading academic competence**



Collaborating Institutions



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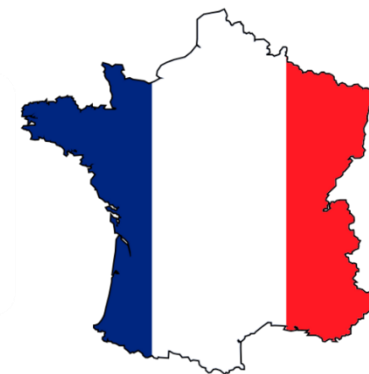
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Description of the Project



• IO1



Publication of reading skills and strategies

- An extensive review of the literature on the relevant areas.
- A study of the reading strategies actually used by students, by means of in-depth interviews and questionnaires (specifically designed for the purpose).
- An assessment of the pedagogical validity of the strategies.
- A detailed list of the strategies and skills that will be learnt by the students by means of the app developed within the project.



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Description of the Project



• IO2



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Pedagogical design of the App

- The Analysis stage is to identify the differences between the targeted user group and their contexts, and other learners and their context
- To analyze the differences at the level of learner, teacher, content, pedagogy (teaching, learning and testing models), ICT and infrastructure
- The Design stage is the most important part of the creation process. It consists of three substages: conceptualization, specification and prototyping.





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Description of the Project



- IO2  UNIVERSITAT ROVIRA I VIRGILI



- Conceptualization → a concept based on a deep analysis of subconscious learner goals (Colpaert 2010) in order for our app to create acceptance and willingness in the users' mind.
- Specification → the ontological description of the software architecture to be created, with special emphasis on the required linguistic-didactic functionalities.
- Prototyping → the proper App development.
- Based on the design (conceptualization and specifications reached through analysis) → creation of A2 to B2 materials for the app.



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Description of the Project



• IO3



Teachers' Manual and Online Guide Book

- Downloadable guide for users and creation of new materials.
- Support material for the future creation of new materials by teachers, developments or every one who wants to use the App will be created.
- Solutions for the activities will be compiled in the shape of a teacher's manual or online walkthrough.
- Instructions for the design of future activities will also be presented so in the future, instructors will be able to create more materials that might become part of the game App in posterior reviews.



Development of the App



- IO4



StratApp for Android and iOS

- The StratApp is going to be a mobile (and Web) App: m-learning game for mobile devices.
- The App will be usable in the following mobile platforms: iOS (iPhone, iPad) and Android (Android based smartphones and tablets with touchscreens).
- The App will be synchronized with the external Content Management System (CMS), which will be used to upload new games-lessons and update the already uploaded ones.



Development of the App



- IO4



StratApp for Android and iOS

Three basic assumptions will be taken into account:

- The app must be **motivating** (fun), in order to attract even those students who are not eager to learn.
- The app must provide the gamers with the opportunity to **improve their language skills**.
- The app should be **updatable**, letting the administrator add new levels or materials through a specific Content Management System based on the teachers' input.



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Development of the App



- IO4



StratApp for Android and iOS

The app will have the following characteristics:

- **Diverse**: It will include different types of games/activities, to improve the reading of academic texts (A2-B2 CEFR level).
- **Stratified**: when the users finish a given level, they go to the next one, get extra points and may compare their results with others.
- **Updatable**: the texts of the particular games are being edited by the external CMS which lets the project develop in the long-term perspective.





Development of the App



• IO5



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StratApp CMS and Database

- Allow both the data mining and the project partners **to edit and upload the e-learning contents** (questions, answers, descriptions), respectively, which will be automatically updated in the mobile app.

The CMS will have the following functions:

- **Adding and editing system users** - editors responsible for edition and upload m-learning contents.
- **Adding and editing the games** included in the App.
- The content uploaded into the platform through the CMS will consist of **texts, audio files, photos and films**.



Development of the App



• IO5



StratApp CMS and Database

- A database will be designed to **store information about the application usage by gamers** (e.g. the level each user is, how many attempts are made, how long is spent at screen or level, etc).
- **Synchronization and sending session data** from the webapp and the App to the database: (e.g. each time a user closes a session or when he moves to a different level or solving a special type of test, the webapp and the app will send the information to the database).
- With the use of data collected and processed, some mechanisms will be implemented in order to make **periodic reports** and obtain **ad-hoc information** from the database.



Initial Advances of the Project



List of reading strategies and skills

General skills & strategies:

- ❑ Scanning (specific info)
- ❑ Skimming (reading for gist)
- ❑ Word recognition & vocabulary development
- ❑ Syntactic parsing (Once the words are understood, the structure needs to be processed to access meaning)
- ❑ Recognising discourse organization/genre
- ❑ Reading strategies that support comprehension
- ❑ Fluency
- ❑ Critical reading
- ❑ Genre/discourse structure





Initial Advances of the Project



- ❑ **Texts to be used in the App**
- ❑ Overall topic: Educational Sciences
- ❑ A2/B1 - Texts not fully academic related to education topics, made more “academic-sounding” by means of a series of changes
- ❑ B2–Papers from academic journals, simplified to make them accessible to users, by means of a series of changes

- ❑ **Activities to include in the App**
- ❑ **Vocabulary:**
- ❑ According to Grabe (2009), for effective reading, a learner should know **95%** of the words in the text. Given the level of the potential users of the App, they will know the first 2000 words of West’s General Service List (1953)
- ❑ In the App the emphasis will be put on the Academic Word List (AWL) (Coxhead 2000)



Initial Advances of the Project



- ❑ Grouped into the AWL's sublists (starting with the most frequent words in each), different types of exercises will be created:
 - ❑ Multiple choice
 - ❑ Match 10 sentences with a blank space with 10 words
 - ❑ Gapfill
 - ❑ Exercises in which students first read a text and then do a gapfill
 - ❑ Exercises to help students guess the meaning of unknown words using affixes
- ❑ **Skimming:**

Students read text in a given time and then solve exercises.

 - ❑ T/F statements
 - ❑ Y/N questions
 - ❑ Multiple choice questions



Initial Advances of the Project



□ Scanning:

Students read text in a given time and then solve exercises.

- Write specific symbol or group of symbols

□ Recognize discourse structures (connectors, repetitions, synonyms, etc):

Students read text and then solve exercises.

- Highlight specific elements in text, starting with easy ones and increasing difficulty gradually
- Multiple choice questions
- Fill in a table, chart, graph, timeline, tree or similar graphic form
- Choose the order of sentences that would make a good outline of text
- Match main ideas and supporting information across two columns
- Reorganise scrambled paragraphs and sentences to make a good summary



Initial Advances of the Project



■ Recognize rhetorical patterns (comparison and contrast, cause and effect, chronological order, etc):

Students read text and then solve exercises.

- ❑ T/F statements
- ❑ Y/N questions
- ❑ Multiple choice questions
- ❑ Fill in a table, chart, graph, timeline, tree or similar graphic form

■ General comprehension of texts:

Students read text in a given time and then solve exercises.

- ❑ T/F statements
- ❑ Y/N questions
- ❑ Pronominal questions: *who, what, when, how, why, etc.*
- ❑ Multiple choice questions
- ❑ Sentence completion (exact copies of sentences in text; missing words; sentences not exactly as the ones in text, but talking about the same idea; missing words are not in text, so learners must use their vocabulary knowledge).



Initial Advances of the Project



❑ **Develop reading fluency (push sts to read faster than they would):**

Students do paced readings and then solve exercises. Especially good with 400-word texts.

- ❑ Students are imposed a given pace, e.g. 200 WPM. Text is divided into 100-word chunks. After 30 s, they move to next chunk (even if they haven't finished), etc. The score in comprehension should be 7 or 8 out of 10. App will log these results so that students can keep track of how they are doing.
- ❑ Students do timed readings and then solve exercises. Students take the time they need (which is logged). Texts of 500-1000 words.

Types of exercises:

- ❑ T/F statements
- ❑ Y/N questions
- ❑ Multiple choice questions



Final Remarks



Dissemination

- ❑ Online and offline dissemination activities
- ❑ Offline: Participation to university fairs, conferences, events, etc, printed materials (flyers, posters using QR codes to get more information about the App)
- ❑ Online: news & ads on university websites, occasional emailing, publication on university social networks (Twitter, Facebook)

- ❑ IO1 → completed and in the process of publication
- ❑ IO2 → design and material creation
→ questionnaire to find out learners' reading habits

- ❑ Project webpage to update provisional results under construction



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Thank
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