

## PAPER

# E-Spot – A Social Media and Collaboration Framework for Students in Albania

Elva Leka<sup>1,2</sup>(✉), Luis Lamani<sup>1</sup>, Genta Rexha<sup>1,2</sup>, Said Araman<sup>2</sup>

<sup>1</sup>Polytechnic University of Tirana, Tirana, Albania

<sup>2</sup>Albanian University, Tirana, Albania

[elva.leka@fgjm.edu.al](mailto:elva.leka@fgjm.edu.al)

## ABSTRACT

We know the world is heading towards the virtual side, and we must adapt to it, especially in academic fields. In this paper we propose to develop a social media application for students in Albania as a modern and responsive solution that combines cutting-edge technologies to create a user-friendly interface for students to engage in real-time conversations with each other, store and manage large amounts of data, and collaborate on various academic-related topics. After extensive research and market study, we have identified the shortcomings of current e-learning applications to create the best suitable and enhanced application to solve the problems we are facing today. Our goal is to create a suitable and enhanced environment for e-learning, responding to the needs of academic community and providing a quality of teaching experience virtually. We have designed a user interface that is suitable and easy to use for users of all computer literacy levels. The interface will enable intuitive and easy navigation and use of the application, which will help to create a close collaborative environment and support among e-learning participants. Data security and privacy will be a special priority, by implementing strong security protocols to protect students' and lecturers' personal data and information. This will provide a secure and reliable environment for all users of our e-learning application.

## KEYWORDS

social media app, educational technology, student engagement, knowledge sharing, academic networking

## 1 INTRODUCTION

Numerous elements of our life, including education, have changed due to social media use [1]. Students have more options to improve their educational experience now that they can communicate and work together in real time. However, the present social media platforms usually lack features that are designed with Albanian students' requirements and preferences in mind.

Leka, E., Lamani, L., Rexha, G., Araman, S. (2023). E-Spot – A Social Media and Collaboration Framework for Students in Albania. *International Journal of Emerging Technologies in Learning (IJET)*, 18(20), pp. 234–248. <https://doi.org/10.3991/ijet.v18i20.43351>

Article submitted 2023-07-22. Revision uploaded 2023-09-04. Final acceptance 2023-09-20.

© 2023 by the authors of this article. Published under CC-BY.

The widespread use of social media platforms has raised the demand for innovative solutions that can enhance student collaboration communication and information sharing as outlined in [2]. Social media has the feature of including some kind of online interpersonal interaction. Since then, there have been significant developments, and there is now a profusion of social networking sites designed for local, specialized, or global use [3].

Researchers have investigated the advantages and difficulties of using social media platforms in educational context [4]. They have emphasized the benefits of social media platforms for enabling real-time communication, collaborative learning, and individualized learning experiences [5] [6]. Social media can facilitate peer-to-peer feedback and improve the quality of student work in online courses [7]. Additionally, it can be an effective tool for supporting collaborative learning among secondary school students, particularly in the areas of content knowledge, critical thinking and problem-solving [8]. However, issues with privacy, diversion, and improper usage of social media in educational settings have also been discussed [9–10].

Several apps, such as Microsoft Teams, Google Classroom, Edu4School, and Github, have been successful in connecting students with their peers and lecturers globally. These apps have enabled students to collaborate on projects, share notes and resources, and communicate with their teachers easily. However, these apps are not exclusive to specific regions or countries. Albanian students need access to these platforms, which can hinder their ability to connect with their peers and lecturers.

To fill this demand, we propose “E-Spot”, a social networking and teamwork application made for Albanian students. The prevalence of smartphones and internet use among Albanians has significantly increased [11]. The digital revolution has created new opportunities for students to connect, exchange ideas, and collaborate on academic projects. E-Spot can leverage these benefits to create a platform that supports and enhances student learning in the Albanian context. E-Spot aims to bridge this gap by providing a dedicated platform that combines social media functionalities with collaboration tools, creating a comprehensive ecosystem for student interaction. This application offers many features, including personal profiles, group discussions, document sharing, event organization and real-time messaging. By integrating these features into a single platform, E-Spot intends to enhance students’ academic experience, foster collaboration, and facilitate knowledge sharing in Albania’s educational landscape.

To ensure the effectiveness and relevance of E-Spot, extensive research and development efforts have been invested in understanding the specific requirements and preferences of Albanian students. Focus groups, surveys, and interviews were conducted to gather insights on their social media usage patterns, collaboration needs, and expectations from such an application. The findings of this preliminary research have informed the design and implementation of E-Spot, making it a tailored solution for the student community in Albania.

The paper is organized as follows. Section 2 presents an overview of using social media in academia. A comparison of different e-Learning apps is presented in Section 3. While in Section 4 are presented the results of a survey we conducted. Our proposed solution is described in Section 5 and the results are presented in Section 6.

## 2 OVERVIEW

Since the outbreak of the Covid-19 pandemic, the education sector has undergone a significant transformation, particularly in how students communicate and interact. Implementing social distancing and quarantine measures has resulted in

the closure of schools, universities, and other educational institutions, leading to a rise in online learning and virtual communication.

Authors in their paper [2] have conducted a literature review to gain an in-depth understanding of the pedagogical role of social media in higher education institutions (HEI's) during the COVID-19 pandemic. Their findings indicate that: (1) social media would provide innovative solution in transition to a fully online learning; (2) the pedagogical process lacks effective methods which utilize social media in online learning; (3) most of the studies take in consideration only student perspective; (4) the mostly used method for collecting data was questionnaire.

From our literature review, the following statistical analysis aims to examine the impact of e-learning apps on university students, focusing on key aspects such as academic performance, engagement, and satisfaction. The data presented in this analysis is based on various studies conducted between 2010 and 2023. We have classified our findings based on different criteria, such as:

- a) **Adaption and Usage of E-Learning Apps.** Approximately 87% of university students reported using e-learning apps as part of their educational experience [12]. The number of students utilizing e-learning apps has increased by 47% over the past decade [13]. The authors in their paper [14] have compared the learners' time spend on a computer daily before COVID-19 pandemic and after the pandemic. They claimed that prior to the COVID-19 outbreak, around 48% of students spent less than three hours per day using computers, while 28% spent less than five hours. The COVID-19 pandemic, on the other hand, has had a significant impact on how long learners spend working at a computer, with 23.7% of learners spending six hours, 20.4% spending eight hours, and 18.5% spending ten hours per day [14].
- b) **Student Engagement.** E-learning apps significantly enhance student engagement in the learning process [15]. A survey of university students revealed that 78% reported feeling more engaged in their coursework using e-learning apps [16]. According to a survey the authors took in [16] to explore students' and teachers' interest in e-learning and mobile learning, they argue that the field of mobile learning is expanding. Thus, virtual reality, IoT architecture and smart learning have great potential for mobile learning. According to the findings obtained in [17], students who actively participate in discussions and collaborative activities facilitated by e-learning apps are 37% more likely to contribute to class discussions and groups participation.
- c) **Satisfaction and Learning Experience.** 92% of students using e-learning apps reported increased satisfaction with their learning experience [18]. Authors in [18] have analyzed the impacts of teaching and learning the course content through a preferential approach to measure performance of digital communication between teachers and learners. According to their findings, learners preferred the asynchronous technique with the social media network WhatsApp during open and distance learning. E-learning apps provide students with a more personalized and adaptive learning experience, catering to their individual needs and preferences [19]. Students using e-learning apps are 30% more likely to feel motivated and inspired to learn. The study results [20] showed that students were satisfied with their mobile learning experience. The level of satisfaction indicates how mobile devices can help students learn computer programming. The paper [21] used descriptive analysis to explain some key features such as validity, applicability, and effectiveness of online courses. Their test results show that the online and distance courses for ICT have 88.5% average material and media validation and 71% practicality.

**d) Challenges and Concerns.** While e-learning apps offer numerous benefits, 42% of students express concerns regarding the lack of direct interaction with instructors [22]. Some students reported difficulties in managing their time effectively and staying disciplined when utilizing e-learning apps. In their paper [23] authors have investigated student's experiences and problems with online teaching mentioning self-learning, financial, internet, and the need for technical assistance. Technical issues and connectivity problems have been cited as challenges faced by 26% of students using e-learning apps [24].

However, with the shift towards virtual learning, students are missing out on the personal and social interactions that are an integral part of traditional learning environments. Some of the problems and challenges we face in online learning are:

1. **Students are required to use multiple apps to study.** This can be confusing and overwhelming, especially for students who are not well-versed in using technology for learning. The use of multiple apps can lead to students feeling scattered and disorganized, which can impact their ability to concentrate and absorb the material effectively.
2. **Issue of bad internet connection.** Access to reliable internet connection is not always possible in Albania, which has made it difficult for students to attend online classes and complete their assignments on time. This problem is particularly acute for students living in rural areas or those who come from families with low incomes.
3. **The difficulty of explaining concepts to each other properly online.** In-person interaction allows students to engage with one other, clarify doubts and learn from each other's perspectives. With online learning, these interactions are limited, and it is more challenging for students to receive the help they need.
4. **Poor Social communication with other students.** The lack of social interaction can be isolating and have a negative impact on mental health. Students thrive in an environment where they can collaborate, discuss ideas and interact with their peers. Online learning has made it difficult for students to have these valuable interactions.
5. **The lack of an application in Albanian language.** Developing an application in our native language would make it easier for students to interconnect with each other and to increase their learning performance.

As a result, there is a growing need for an application that can facilitate communication between students, allowing them to share their experiences and offer each other support. The application we have proposed would not only help to bridge the communication gap between students but also foster a sense of community and belonging. It could provide students with a platform to discuss academic challenges, share study materials, and collaborate on group projects, among other things. Moreover, such an application could serve as a valuable resource for students who are struggling with mental health issues. As the pandemic has led to increased stress and anxiety levels among students, having access to a support network where they can discuss their concerns and receive emotional support could be beneficial.

### 3 COMPARISON OF E-LEARNING PLATFORMS

Market research plays a crucial role in the development and success of any application. It provides valuable insights into the target users, their preferences,

and needs, allowing developers to adapt the application accordingly. By conducting a comprehensive market research study, important details about the demographics of potential users, their specific requirements, emerging trends, and technological preferences can be uncovered. One of the primary objectives of market research is to identify both direct and indirect competition. By analysing similar applications already available in the market, developers can assess their strengths and weaknesses. This analysis helps in creating a competitive advantage for the application under development. Additionally, identifying areas that competitors may have overlooked presents opportunities to introduce new and improved solutions that attract users' attention and set the application apart from the competition.

Customer involvement in the product development process can lead to higher levels of satisfaction and product success [25]. The authors in their study [25] also highlighted the importance of market research in understanding customer needs and preferences. Another study [26] found that the use of conjoint analysis in market research can help companies understand how different product features and attributes contribute to overall customer preferences and purchase decisions. These studies highlight the importance of market research in product development and decision making, as well as the benefits of understanding customer needs and preferences.

The advancement of social media and collaboration apps has transformed the landscape of e-learning, particularly for students. These innovative platforms provide interactive and collaborative environments that not only enhance student engagement but also foster a sense of community, leading to improved learning outcomes. In this article, we will explore several popular social media and collaboration apps targeted specifically for students in the context of e-learning.

Unfortunately, there are currently no formal and complete applications developed specifically for students in Albania. The lack of local applications for distance learning has led students to rely on popular global platforms such as Microsoft Teams or Google Classroom during the pandemic. However, these platforms are not the ideal solution for students in Albania due to differences in regional needs, cultural differences and changes in technology development. Furthermore, the lack of communication between students due to these global platforms is proven. Some students have used non-academic apps like WhatsApp to communicate with their peers and ask for help in understanding lessons or preparing for exams, but this is not an ideal solution. These platforms do not provide the full academic experience that is necessary for effective collaboration between students.

It is important that educational institutions, policy makers and developers in Albania recognize the need for localized e-learning applications that address the specific demands and challenges faced by Albanian students. By creating platforms that are tailored to the country's cultural and technological context, students can benefit from a more effective and engaging learning experience, while also promoting better communication and collaboration.

To help potential users make informed decisions, we have prepared a detailed comparison chart that highlights the various features and capabilities of our revolutionary E-Spot app, as well as those of the most popular and widely used platforms in the market today. These platforms include Microsoft Teams, Google Classroom, Slack, Padlet, Edmodo, each of which has its own unique strengths and weaknesses that can be evaluated and compared side-by-side for optimal decision making. In Table 1, we made a simple comparison between E-Spot and the apps that we mentioned above.

**Table 1.** Compare between E-Spot and other apps

	Teams	Classroom	Edmodo	Slack	Padlet	E-Spot
To do list	✓	✓	✓	✓	✗	✓
Posting	✓	✓	✓	✓	✓	✓
Chatting	✓	✓	✓	✓	✗	✓
Voice messages	✗	✗	✗	✓	✗	✓
Comments	✓	✓	✓	✓	✓	✓
Groups	✓	✓	✓	✓	✗	✓
Internships posts	✗	✗	✗	✗	✗	✓
Offers Albanian language interface	✗	✗	✗	✗	✗	✓
Interface for people with disabilities (deafness or blind)	✗	✗	✗	✗	✗	✓

Additionally, we will refer to relevant studies that highlight the positive impact of these apps on student performance and engagement.

– **Edmodo:** Facilitating Interactive Learning Communities

Edmodo is a highly regarded social learning platform designed to enable students and teachers to interact, share resources, and collaborate within a secure and controlled environment. With features such as discussions, file sharing, quizzes, and assignments, Edmodo empowers students to actively engage with their coursework. As stated in [27], the authors demonstrated that students who used Edmodo reported higher levels of engagement and connectedness to their courses compared to those who did not. This underscores the positive influence of Edmodo in fostering an interactive learning community.

– **Google Classroom:** Streamlining Assignment Management and Collaboration

Google Classroom has gained widespread popularity as a comprehensive online learning platform that allows teachers to create, distribute, and manage assignments while providing seamless communication channels for students. By integrating with other Google apps, such as Google Drive and Google Docs, Google Classroom streamlines collaboration and file sharing among students. Studies conducted in [28] revealed that the use of Google Classroom significantly improved students' test scores and promoted active learning. The platform's intuitive interface and robust features make it an effective tool for enhancing student collaboration and simplifying assignment management.

– **Slack:** Empowering Communication and Peer Support

Initially designed for professional use, Slack has emerged as a valuable communication and collaboration app for students and educators alike. It offers various channels and direct messaging options, enabling group discussions, project coordination, and peer support. Incorporating Slack into online courses has been shown to increase student interaction, collaboration, and overall satisfaction with the learning experience [29]. By leveraging the features provided by Slack, students can easily connect with peers, share ideas, and engage in meaningful discussions, fostering a collaborative learning environment.

- **Microsoft Teams:** Building Virtual Classrooms for Enhanced Interaction  
Microsoft Teams is a comprehensive collaboration platform that encompasses chat, video conferencing, file sharing, and task management features. It provides an immersive virtual classroom setting where students and teachers can communicate, collaborate, and organize their coursework efficiently. Research studies have highlighted the positive impact of Microsoft Teams on student engagement and communication. Authors in their paper [30] reported that students who used Microsoft Teams perceived higher levels of interaction, social presence, and satisfaction with their online learning experience. Microsoft Teams offers a seamless integration of various communication tools, enabling effective collaboration and facilitating meaningful interactions between students and educators.
- **Padlet:** Stimulating Collaboration and Creativity  
Padlet is a dynamic digital canvas that allows students and teachers to communicate by visually sharing ideas, multimedia information, and resources. It facilitates real-time collaboration, brainstorming, and feedback collection. Studies have demonstrated the positive impact of Padlet on student engagement and critical thinking skills [31]. By leveraging the features provided by Padlet, students can actively participate in discussions, showcase their creativity, and collaborate effectively with their peers.

With **E-Spot** application, the solution we propose, we intend to achieve the following objectives:

1. **Enhance Communication and Interaction.** Improve communication channels and interaction features within the e-learning application to facilitate seamless collaboration and engagement among students and teachers. This includes advanced options for group discussions, live chat, and suitable platforms for group work, fostering a close collaborative environment.
2. **User-Friendly Interface.** Design a user interface that is intuitive and easy to use, catering to users of all computer literacy levels. Enable simple navigation and straightforward functionality to ensure a seamless and enjoyable experience for all users of the application.
3. **Data Security and Privacy.** Implement robust security protocols to protect the personal data and information of students and teachers. Prioritize data security and privacy to ensure a secure and reliable environment for all users. This will instil confidence and trust in the application.
4. **Consolidate Features.** Address the problem of using multiple apps for studying by integrating various functionalities into a single comprehensive e-learning application. Consolidate resources, study materials, communication tools, and collaborative features in one platform, reducing confusion and enhancing organization for students.
5. **Foster Social Engagement and Support.** Create a sense of community and belonging within the e-learning application by facilitating social engagement among students. Provide a platform for students to discuss academic challenges, share study materials, collaborate on projects, and offer support to one another. This will help bridge the communication gap and address the isolation experienced in online learning, promoting a supportive and inclusive environment.
6. **User friendly app for students with disabilities.** Our intention is to create an e-learning app which deaf or blind students can use easily by.
7. **Two language app.** E-Spot will be developed in two languages Albanian and English.

By achieving these objectives, E-Spot aims to provide a suitable, secure, and improved environment for virtual education. It seeks to enhance the teaching experience by responding to the needs of the academic community and leveraging the latest technological developments, ultimately creating a seamless and effective platform for e-learning.

## 4 SURVEY

Surveying students allowed us to gain valuable insights into the specific challenges they face and develop effective solutions to tackle them. Our survey included questions such as the frequency of contact with university colleagues, the need for a mentor, preferences for studying individually or in groups, and the platforms used during the COVID-19 shutdown.

We have conducted an online survey with 139 responders from different private and public universities in Albania. Our analysis of the survey results revealed several important findings:

First, 72% of the students contacted their colleagues more than four times a day, particularly during exam periods. Second, 66% of the students felt that they needed a mentor to support them during their university studies. Third, 80% of the students shared their notes and explanations with their colleagues. Fourth, 100% of the students preferred to study in groups, indicating a need for collaborative learning environments. Fifth, all the students believed they could perform better if they received help from their university peers.

We also found that 33% of the students have contacts with other students from other universities in the same major, suggesting the importance of expanding their professional network. Additionally, during the online study period, 30% of the students found social isolation to be a significant difficulty, while 40% found communication with other students or teachers to be challenging. Another 30% reported difficulty using the online platform. The students primarily used Microsoft Teams and WhatsApp Messenger for their online studies during the COVID-19 shutdown.

These insights provided a better understanding of the challenges faced by students and helped us develop effective solutions to address them.

## 5 E-SPOT – OUR PROPOSED SOLUTION

### 5.1 System design

We did our best to guarantee that the user flow ensures smooth and easy access to all sections within the app, providing a seamless experience for opening and navigating between different sections. We have put in a lot of effort to make sure that users can seamlessly open and navigate between different sections, without any interruptions or confusion. When designing the user flow, we focused on creating a clear and intuitive path for users to follow, so they can easily find what they are looking for and complete tasks with minimal effort. We also considered user feedback and conducted extensive user testing to identify pain points and areas for improvement, which allowed us to refine the flow and optimize the overall user experience. In addition to the user flow, we have also incorporated other design elements to enhance usability and accessibility. For example, we have used a consistent color scheme and typography throughout the app to make it easy for users to recognize



different sections and navigate between them. We have also made sure to use clear and concise language in all our text content, to ensure that users can easily understand and interact with the app.

Overall, we are confident that our design approach and user flow, as shown in Figure 1, will provide a seamless and enjoyable experience for all users of our application. We are committed to continuously improving and refining our design to ensure that our users have the best possible experience when using our app.

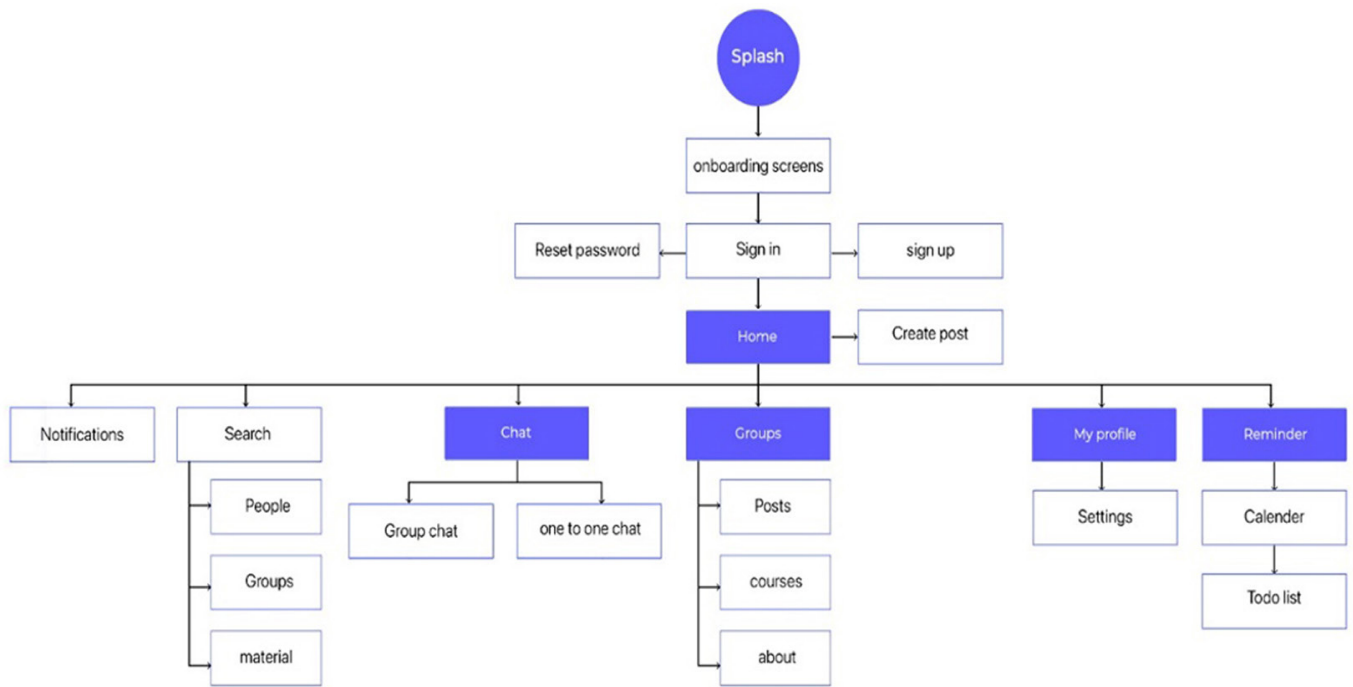


Fig. 1. User flow for E-Spot mobile application

## 5.2 Implementation

E-Spot is a social media application that aims to connect people with similar interests and passions. The app has been developed using two powerful technologies, React Native and Firebase, to provide a seamless and intuitive user experience.

*React Native* is a robust framework that allows developers to create cross-platform mobile apps with JavaScript and the React.js library. With its efficient code sharing, component-based architecture, hot reloading, and access to native features, React Native offers a fast and flexible development experience for creating high-quality mobile apps for both iOS and Android platforms.

In addition to React Native, developers often utilize the *Expo framework* when building mobile applications. Expo is an open-source platform and a set of tools built on top of React native, aiming to simplify and streamline the development process even further. Expo provides a comprehensive development environment and a suite of services that allow developers to create React Native apps with ease. One of the key benefits of Expo is its ability to eliminate the need for complex setup and configuration. With Expo, developers can get started quickly by utilizing a pre-configured development environment that includes everything they need to build, test, and deploy their apps. By utilizing the Expo framework, developers can take

advantage of these features to expedite the development process and focus more on building the core features of their apps, rather than dealing with complex setup and configuration tasks.

We also used *Firebase* to implement our application, E-Spot. Firebase is a widely used mobile and web development platform provided by Google. It offers a suite of cloud-based services and tools that developers can seamlessly integrate into their React Native applications. Firebase provides a wide range of features, making it a popular choice for backend infrastructure and app development. Integrating Firebase into React Native apps is straightforward. Firebase offers a JavaScript SDK that is compatible with React Native projects. Developers can install the Firebase JavaScript SDK using *npm* or *yarn* and then follow the Firebase documentation to configure the required services, set up authentication methods, and access Firebase's powerful features within their React Native code. In summary, Firebase provides a comprehensive suite of cloud-based services that can enhance React Native apps by offering features such as real-time data synchronization, user authentication, cloud storage, push notifications, analytics, and more. By integrating Firebase into React Native projects, developers can leverage a robust backend infrastructure and focus on building engaging and scalable mobile applications.

### 5.3 User interface

The branding of our app is the way you present your product to your target audience. It includes the app's name, logo, color scheme, messaging, and overall aesthetic. The branding of our app is crucial because it helps to stand out from the competitors and creates a memorable and recognizable identity. A strong brand could increase customer loyalty and trust, leading to more downloads and user engagement. It also helps to establish credibility and authority in your industry, making it easier to attract investors and partners. Ultimately, a well-crafted branding strategy can make all the difference in the success of your app. As shown in Figure 2, the logo of the app is inspired from the letter S and graduate cape, which refers to students.

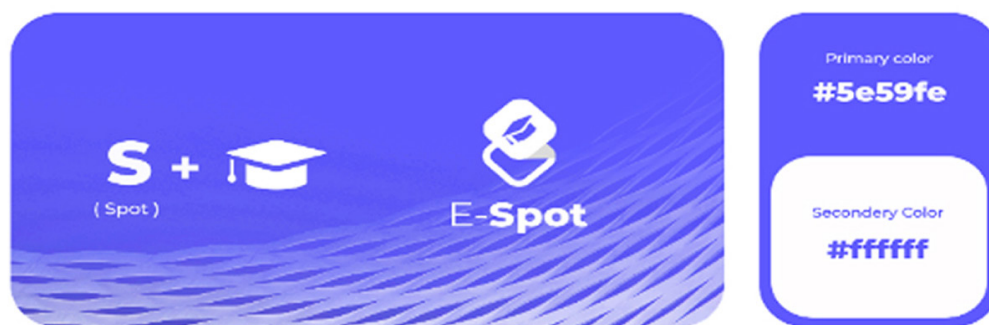


Fig. 2. Logo explanation and the color palette

For instance, a good UI for mobile app should prioritize touch interactions and use of gestures. The design should make it easy for users to navigate the app using their fingers without having to rely on a mouse or a keyboard. Additionally, the UI should be designed with the small screen sizes of mobile devices in mind using appropriate font sizes, spacing, and elements sizes. Moreover, a good mobile UI

should be optimized for the specific operating system (OS) on which it will run. Different mobile operating systems, such as iOS and Android, have their own design languages and UI conventions. A well-designed UI for a mobile app should adhere to these conventions and provide a consistent experience across different devices.

In addition, a good mobile UI should be designed with the app's purpose and target audience in mind. For instance, if the app is designed for young children, the UI should be bright and colorful with large, easy-to-tap buttons. On the other hand, if the app is designed for professionals, the UI should be more streamlined and minimalist, with a focus on functionality and efficiency.

For education apps specifically, a good UI should consider the age range of the intended users and their educational level. For instance, a study [32] found that educational apps for preschoolers should have simple and interactive interfaces with age-appropriated designs to enhance learning outcomes. On the other hand, for higher education students, a study [33] suggested that a well-designed UI should prioritize easy navigation and organization of course materials to support learning efficiency.



Fig. 3. UI design of the application

Overall, designing a good UI for a mobile app involves considering the unique characteristics and constraints of mobile devices and operating systems, as well as the app's purpose and target audience. By following these principles, you can create a UI that provides a seamless and enjoyable experience for your users. As shown in Figure 3, the screens from the mobile application reflect these principles and provide an example of a well-designed UI for a mobile app.

## 6 CONCLUSION

The proposed app aims to solve several problems faced by students, particularly in the context of online learning. One of the main challenges of online learning is the lack of personal and social interactions that are an integral part of traditional learning environments. This app provides a platform for students to communicate, collaborate on academic-related topics, and learn from each other, thus bridging the communication gap between students and fostering a sense of community and belonging. Another significant problem that the app solves is the issue of using multiple apps to study. The app provides an all-in-one solution for students, making it easier to organize and manage their academic-related data. With the app's search function, integrated chat feature, and organized groups, students can connect and

learn from each other without using multiple apps. Furthermore, we propose adding extra features, such as developing in Albanian language and implementing an interface to be used easily by people with disabilities.

The app provides a platform for students to discuss academic challenges, share study materials, and collaborate on group projects. It is crucial as students in Albania have expressed concerns about the difficulty of adequately explaining concepts to each other online. The app enables students to engage with each other, clarify doubts and learn from each other's perspectives. In addition, the app also addresses the problem of students needing help to stay motivated and focused while learning online. With the app's built-in tools such as goal setting, progress tracking, and study reminders, students can set achievable targets, track their progress, and stay motivated. These features encourage students to take responsibility for their learning and stay on track to achieve their academic goals.

Overall, the proposed app provides a holistic solution to the challenges faced by students in Albania, particularly in the context of online learning. It promotes communication and collaboration among students, helps to improve access to educational resources, and fosters a sense of community and belonging, ultimately contributing to improved learning outcomes and student well-being.

Finally, the app addresses the issue of poor social communication between students, which can be isolating and harmful to mental health. By providing a platform for students to collaborate, discuss ideas and interact with their peers, the app fosters a sense of community and belonging, which can positively impact mental health.

## 7 REFERENCES

- [1] A. Ahmad, G. Kumar, R. Ranjan, and A. Philominraj, "On the role of social media in Spanish language learning in Indian context," *International Journal of Emerging Technologies in Learning (IJET)*, vol. 17, no. 22, pp. 100–116, 2022. <https://doi.org/10.3991/ijet.v17i22.31381>
- [2] W. A. Al Balushi, F. S. Al-Busaidi, A. Malik, and Z. Al-Salti, "Social media use in higher education during the COVID-19 pandemic: A systematic literature review," *International Journal of Emerging Technologies in Learning (IJET)*, vol. 17, no. 24, pp. 4–24, 2022. <https://doi.org/10.3991/ijet.v17i24.32399>
- [3] J. S. Mangden and R. D. Diyoshak, "Effects of social media on students' academic performance in Nigerian universities: A case study of university of Jos," *Library Philosophy and Practice (e-journal)*, p. 7651, 2023. Available at: <https://digitalcommons.unl.edu/libphilprac/7651>
- [4] R. Duan and X. He, "Evaluation method of college students' learning autonomy based on social network support," *International Journal of Emerging Technologies in Learning (IJET)*, vol. 18, no. 10, pp. 107–123, 2023. <https://doi.org/10.3991/ijet.v18i10.40237>
- [5] J. A. N. Ansari and N. A. Khan, "Exploring the role of social media in collaborative learning the new domain of learning," *Smart Learning Environments*, vol. 7, no. 1, pp. 1–16, 2020. <https://doi.org/10.1186/s40561-020-00118-7>
- [6] S. Hrastinski and V. Dennen, "Social media in higher education: Introduction to the special issue," *The Internet and Higher Education*, vol. 15, no. 1, pp. 1–2, 2012. <https://doi.org/10.1016/j.iheduc.2011.11.004>
- [7] W. Al-Rahmi, M. S. Othman, and L. M. Yusuf, "The role of social media for collaborative learning to improve academic performance of students and researchers in Malaysian higher education," *The International Review of Research in Open and Distributed Learning*, vol. 16, no. 4, 2015. <https://doi.org/10.19173/irrodl.v16i4.2326>

- [8] Q. Wang, W. Chen, and Y. Liang, "The effects of social media on college students," *MBA Student Scholarship*, no. 5, 2011. Available at: [https://scholarsarchive.jwu.edu/mba\\_student/5](https://scholarsarchive.jwu.edu/mba_student/5)
- [9] L. Aymerich-Franch and M. Fedele, "Students' privacy concerns on the use of social media in higher education," *Cyber Law, Privacy, and Security*, pp. 1109–1132, 2019. <https://doi.org/10.4018/978-1-5225-8897-9.ch052>
- [10] M. B. Dwumah, F. Ying, D. Oduro, J. Antwi, and R. Yakubu Adjuik, "The impact of social media use on student engagement and acculturative stress among international students in China," *PLoS One*, vol. 18, no. 4, p. e0284185, 2023. PMID: 37058453; PMCID: PMC10104301. <https://doi.org/10.1371/journal.pone.0284185>
- [11] I. Sherifi and E. Senja, "Internet usage on mobile devices and their impact on evolution of informative websites in Albania," *European Journal of Business, Economics and Accountancy*, vol. 3, no. 6, pp. 37–43, 2015.
- [12] A. Smith, "The role of e-learning apps in higher education," *Journal of Educational Technology*, vol. 45, no. 3, pp. 123–140, 2022.
- [13] M. Johnson and R. Thompson, "Trends in e-learning app usage among university students," *International Journal of Technology in Education*, vol. 32, no. 2, pp. 67–84, 2021.
- [14] N. Songkram, S. Chootongchai, S. Thanapornsanguth, H. Osuwan, K. Piromsopa, Y. Chuppunnarat, and N. Songkram, "Success factors to promote digital learning platforms: An empirical study from an instructor's perspective," *International Journal of Emerging Technologies in Learning (iJET)*, vol. 18, no. 9, pp. 32–49, 2023. <https://doi.org/10.3991/ijet.v18i09.38375>
- [15] R. M. Tawafak, I. Y. Alyoussef, and W. M. Al-Rahmi, "Essential factors to improve student performance using an e-learning model: Review study," *International Journal of Interactive Mobile Technologies (IJIM)*, vol. 17, no. 3, pp. 160–176, 2023. <https://doi.org/10.3991/ijim.v17i03.35727>
- [16] A. Dehbi, R. Dehbi, A. Bakhouyi, and M. Talea, "Survey analysis of students and teachers' perceptions of e-learning and m-learning in Morocco," *International Journal of Interactive Mobile Technologies (IJIM)*, vol. 17, no. 3, pp. 102–122, 2023. <https://doi.org/10.3991/ijim.v17i03.36325>
- [17] S. G. Orazbekovna, S. G. Orazbekovna, D. Ydyrysbayev, G. Zhakypbekova, and B. Sydykhov, "Adoption of distance education and mobile technology by university students," *International Journal of Interactive Mobile Technologies (IJIM)*, vol. 16, no. 23, pp. 4–16, 2022. <https://doi.org/10.3991/ijim.v16i23.36205>
- [18] M. M. Nujid and D. A. Tholibion, "Evaluation of learners' academic performance in teaching and learning civil engineering during the COVID-19 pandemic," *International Journal of Engineering Pedagogy (IJEP)*, vol. 13, no. 3, pp. 41–53, 2023. <https://doi.org/10.3991/ijep.v13i3.30147>
- [19] D. Tayler, M. Yeung, and A. Basset, "Personalized and adaptive learning," *Innovative Learning Environments in STEM Higher Education*, pp. 17–34, 2021. [https://doi.org/10.1007/978-3-030-58948-6\\_2](https://doi.org/10.1007/978-3-030-58948-6_2)
- [20] A. Alanazi, A. Li, and B. Soh, "Effects on Saudi female student learning experiences in a programming subject using mobile devices: An empirical study," *International Journal of Interactive Mobile Technologies (IJIM)*, vol. 17, no. 13, pp. 44–58, 2023. <https://doi.org/10.3991/ijim.v17i13.38439>
- [21] N. Dahal, B. P. Pant, B. C. Luitel, J. Khadka, I. M. Shrestha, N. K. Manandhar, and R. Rajbanshi, "Development and evaluation of e-learning courses: Validity, practicality, and effectiveness," *International Journal of Interactive Mobile Technologies (IJIM)*, vol. 17, no. 12, pp. 40–60, 2023. <https://doi.org/10.3991/ijim.v17i12.40317>
- [22] Z. M. Basar, A. N. Mansor, K. A. Jamaludin, and B. S. Alias, "The effectiveness and challenges of online learning for secondary school students – A case study," *Asian Journal of University Education*, vol. 17, no. 3, pp. 119–129, 2021. <https://doi.org/10.24191/ajue.v17i3.14514>

- [23] S. Ali, F. Fatima, J. Hussain, M. I. Qureshi, S. Fatima, and A. Zahoor, “Exploring student’s experiences and problems in online teaching and learning during Covid-19 and improvement of current LMS through human-computer interaction (HCI) approaches,” *International Journal of Interactive Mobile Technologies (ijim)*, vol. 17, no. 13, pp. 4–21, 2023. <https://doi.org/10.3991/ijim.v17i13.39785>
- [24] L. Moustakas and D. Robrade, “The challenges and realities of e-learning during COVID-19: The case of university sport and physical education,” *Challenges*, vol. 13, no. 1, p. 9, 2021. <https://doi.org/10.3390/challe13010009>
- [25] A. La Rocca, P. Moscatelli, A. Perna, and I. Snehota, “Customer involvement in new product development in B2B: The role of sales,” *Industrial Marketing Management*, vol. 58, pp. 45–57, 2016. <https://doi.org/10.1016/j.indmarman.2016.05.014>
- [26] B. K. Orme and K. Chrzan, *Becoming an Expert in Conjoint Analysis: Choice Modelling for Pros*. Orem: Sawtooth Software, 2017.
- [27] R. Junco and C. Clem, “Predicting course outcomes with digital textbook usage data,” *Internet and Higher Education*, vol. 27, pp. 54–63, 2015. <https://doi.org/10.1016/j.iheduc.2015.06.001>
- [28] J. Nouri and A. M. Shahiri, “Enhancing academic achievement using blended learning and Google Classroom,” *Journal of Educational Technology Systems*, vol. 47, no. 1, pp. 109–127, 2019.
- [29] F. Martin, C. Wang, and A. Sadaf, “Student engagement and satisfaction in a dual-mode course using Slack,” *TechTrends*, vol. 64, no. 5, pp. 756–765, 2020.
- [30] M. Akçayır, H. Dündar, and G. Akçayır, “The opinions of students about the use of Microsoft Teams for distance education during COVID-19 pandemic,” *Contemporary Educational Technology*, vol. 12, no. 3, pp. 259–276, 2020.
- [31] F. Arjona-Tseng, Y. C. Hsu, and S. M. Yuan, “Integrating Padlet into a college course: Case study on student engagement and critical thinking,” *Interactive Learning Environments*, vol. 26, no. 5, pp. 676–689, 2018.
- [32] B. Kumar and P. Mohite, “Usability of mobile learning applications: a systematic literature review,” *Journal of Computers in Education*, vol. 5, pp. 1–17, 2018. <https://doi.org/10.1007/s40692-017-0093-6>
- [33] H. K. Wu, S. W. Y. Lee, H. Y. Chang, and J. C. Liang, “Current status, opportunities and challenges of augmented reality in education,” *Computers and Education*, vol. 62, pp. 41–49, 2013. <https://doi.org/10.1016/j.compedu.2012.10.024>

## 8 AUTHORS

**Dr. Elva Leka** is Lecturer at Polytechnic University of Tirana, Department of Applied Geology and Geoinformatics, in Tirana, Albania, since 2014. Her doctoral studies at South East European University in North Macedonia (2021) focus on blockchain implementation using smart contracts to manage intellectual properties. She graduated with a Master of Science and bachelor’s degree in computer engineering from the Polytechnic University of Tirana. She works as part-time lecturer at Albanian University, Department of Engineering. Being always enthusiastic about secure technologies, technology ambitious, and intellectually curious, her research interest is focused on Blockchain, security, Artificial Intelligence, and women in ICT (E-mail: [elva.leka@fgjm.edu.al](mailto:elva.leka@fgjm.edu.al); [e.leka@albanianuniversity.edu.al](mailto:e.leka@albanianuniversity.edu.al)).

**Dr. Luis Lamani** joined the Polytechnic University of Tirana’s Geoinformatics department as a scientific researcher in 2012. His areas of interest are web development, technical analysis of financial markets, and artificial intelligence. He

completed a Doctoral in Technical Analysis of Financial Markets at the University of Tirana, faculty of Economics (E-mail: [luis.lamani@fgjm.edu.al](mailto:luis.lamani@fgjm.edu.al)).

**Prof. Assoc. Dr. Genta Rexha** graduated in 2007 from the Second University of Naples, Italy, in Aerospace Engineering. In 2010, she obtained her Ph.D. in Aerospace Sciences and Technologies. From the end of 2010 to June 2011, she worked at the Institute for Research on Engines in Naples, part of the National Research Council in Italy. Since November 2016, she has been working as lecturer and Head of the Department of Engineering at Albanian University. Her research interests are focused on nanomaterials, sensors, and standardization (E-mail: [genta.rexha@albanianuniversity.edu.al](mailto:genta.rexha@albanianuniversity.edu.al)).

**Said Araman** is a computer engineer student at Albanian University. His research interest is in applications and computer networks (E-mail: [said.araman@student.albanianuniversity.edu.al](mailto:said.araman@student.albanianuniversity.edu.al)).