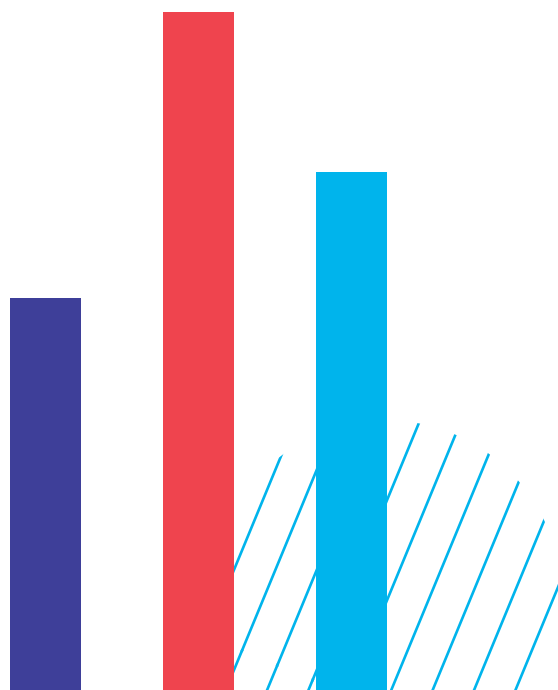
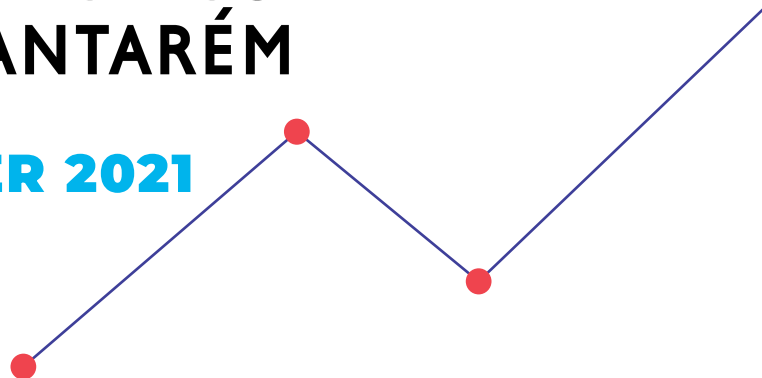
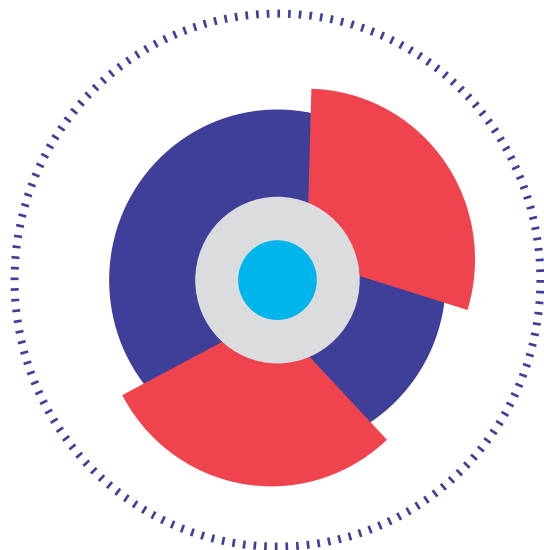


QUESTIONNAIRES REPORT

 **POLITÉCNICO
DE SANTARÉM**

OCTOBER 2021



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IPSantarém | Questionnaires' report

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Introduction

The Polytechnic Institute of Santarém (IPSantarém) was created in 1979 and is a public higher education institution. IPSantarém is committed to the qualification of the citizens through the creation, transmission and diffusion of professional knowledge, culture, science, technology, and arts. It has also a strong focus in applied research and experimental development. IPSantarém promotes international cooperation as well as international mobility of its staff, particularly in the European higher education space and in the community of Portuguese speaking countries. The IPSantarém is recognized as a pole of development and a reference in training, culture, and applied research in the region. Currently is constituted by the following schools: Agriculture; Education; Health; Sports; Management and Technology.

As a partner of the EduAPP project, IPSantarém applied four questionnaires to teachers, students, IT responsible and school leadership. The goal of the questionnaires is to gather data about the teachers, students, IT staff and school manager about the impact of COVID-19 pandemics in teaching and learning and identify possible suggestions to incorporate in the EduApp.

Participants

The next table presents the number of participants that answered the questionnaires.

Table 1. Number of participants for each type of questionnaire.

Type of questionnaire	Number of participants
<u>Teachers' questionnaire</u>	10
<u>Students' questionnaire</u>	36
<u>IT' responsible questionnaire</u>	2
<u>School manager' questionnaire</u>	1

Methodology

The questionnaires were applied from 21 september to 08 october 2022. The collected data were exported to a Microsoft Excel® worksheet for quantitative analysis. Data from closed questions were quantified using a relative frequency distribution and presented through graphs. Open-ended questions were categorized.

Results of teachers' questionnaire

Information about the classes and teachers

Approximately **70% of the teachers have from 25 to 30 students in their classes** and **50% of the teachers lecture from 5 to 6 classes per week.**

Experience with ICT for teaching

ICT is mainly taught as a separate subject or integrated in the teachers' subject because he/she choose to do so.

All teachers used computers and/or the internet for **preparing lessons, class teaching in front of/with students, communication with students and online learning.**

All teachers had **more than 6 years of experience using used computers and/or the internet at the institution.**

In the past few months, **60% of the teachers used computers and/or the internet in class more than 75% of all lessons and 30% used it from 51% to 75% of all lessons.**

During face-to-face classes, most the teachers answered that **them and the students use computers and/or internet.**

Most teacher answered they had **permanent access in classes to a computer or other equipment with internet access**, however, the school **has not provided the most part of them, and students, with a laptop.**

The students **are allowed to use their own devices for learning at school, such as laptops, tablet, and smartphone.**

Most teachers have not **undertaken formal professional development in the ICT areas** in the past two school years, however **7 teachers reported personal learning of ICT in their own time and 4 of them have participated in training provide by school staff.**

School shared vision about ICT use

80% of the teachers partly consider that they share the same vision about integrating ICT in teaching and learning with their colleagues, the school head, and other staff. 30% reported that they don't know if the institution has an ICT strategy.

ICT based activities and material used for teaching

The most reported activities using ICT are **search on the internet to prepare lessons (50%), use applications to prepare presentations for lessons (60%) and communicate online with students (50%). 90% of teachers reported that sometimes use ICT to provide feedback or assess students' learning.**

Most teachers **used materials searched online for educational purposes.**

Teachers considered that they **are confident in using ICT for several tasks, to a great extent.**

Learning activities with the target class

Most of the time **60% of the teachers present, demonstrate, and explain to the whole class and 60% of the teachers allow that students discuss ideas with other students and them.**

Teacher opinions and attitudes

80% of the teachers considered **ICT has a high impact in the collaborative work among students.** Approximately half of the teachers perceived a **moderate impact of ICT use on students, because the try harder in what they are learning, feel more autonomous in their learning and understand more easily what they learn.**

School attendance and organization in 2020-21 school year

The institution **organized courses and internships with physical attendance and hybrid/mixed classes in 2020-21.**

50% of the teachers taught from home when the institution was on online learning. 70% of the teachers reported that as many students attended online classes in comparison with physical classes.

Impact of COVID-19 pandemics on teachers' work

The school was closed for 20 weeks, in total, due to COVID-19 pandemics. All teachers were in contact with students during those weeks, mainly from Zoom, email and Moodle.

All teachers considered that the higher education system was not ready to go online due to online teaching in higher education being residual before the pandemic, absence of a planned strategy and equipment, lack of teacher training, and many students do not have their own equipment to follow online lessons.

50% of teachers considered that the institution was ready to go online due to the fact that there were already some online courses before the pandemic and some professors had previous experience in online teaching, the institution has a good e-learning team and the existence of many digital resources at the school. One teacher reported:

“I think my school was able to adapt to remote online teaching due to the teacher’s solid knowledge of pedagogy and, in many cases, a great use of technology. However, most of the teachers are not ready to design distance learning experiences effectively and consistently due to lack of training, especially regarding pedagogical aspects.

And other teacher stated that “My school was not prepared but we were already using LMS tools as a complement to face-to-face teaching which gave us some advantage to face the teaching/learning process during the COVID-19 pandemic.”

50% of teachers considered that they were ready to go online because, for example, invested a great deal in online training, had already developed resources to support students on online teaching. The teachers that answered they were not ready to go online give as examples the experience on online learning before the pandemic was not enough.

70% of teachers considered that students were not ready to go online because, for example, their experience on online learning before the pandemic was residual, they need social interaction, many had ICT issues. One teacher argued that “I believe that the students had all the necessary knowledge and tools for teaching/learning online but the psychological factor dominated the scenario which made them less motivated to learn.”

The next table presents the teachers perceptions about the advantages and disadvantages of online education.

Table 2. Teachers' perceptions about the advantages of online education)

Advantages and disadvantages of online education	Number of teachers
Advantages	
Better use of digital educational resources	3
Learning flexibility (Students can study anywhere and at any time)	5
More collaboration between teachers and students	2
Improves efficiency, attendance, and engagement.	4
More diversity of learning environments	2
Disadvantages	
Lack of rigour of students' evaluation	1
More difficult to engage students in online lessons than in face-to-face lessons	1

Emotional disadvantages (such as: the online environment is more exhausting and promotes a sense of isolation)	3
The online education is not appropriate to do practical activities (e.g. laboratorial activities)	2
Less personal interaction and difficulties in group work management	3
Distraction with other online resources	1
ICT access difficulties or inequal access to equipment	3

The next table presents the challenges teachers faced with the transition for online education.

Table 3. Challenges teachers faced with the transition for online education.

Challenges teachers faced with the transition for online education	Number of teachers
The transition from hands-on laboratorial activities to online teaching.	1
The physical absence of students	1
Time balance (e.g._ Balancing synchronous time required with asynchronous work proposals; No time to properly adjust the methodologies to online learning, namely to create more interactive classes).	3
Assessment (Formative assessment is easy but summative assessment always has fraud risks)	2
Adjusting personal life (e.g. Working non-stop, teaching or helping other colleagues)	2
Managing online classes	1

The teachers also reported that the **part of online teaching that was most difficult to them was evaluation and the dialogue with their peers. 70% had enough learning resources, but 86% mentioned they had insufficient online resources, namely evaluation tests (75%).**

70% Teachers considered that online education **had a both positive and negative impact in the institution.** The next table presents the positive and the negative impact perceived in the institution by teachers.

Table 4. Challenges teachers faced with the transition for online education.

Positive and negative impact perceived in the institution reported by teachers	Number of teachers
<i>Positive</i>	
Teachers developed their digital skills.	3
Everyone learned to be more resourceful and stepped outside of their comfort zone.	1
Teacher and students adapted quickly and there was no drop out of students during online teaching.	1
Better time management	1

New pedagogical awareness (e.g. Both teachers and students are more aware of the opportunities of online learning and gain some expertise; There are classes that continue to be essential in person, the relationship with students in person is facilitated, but the online allowed to verify that it also works for various activities and allows learning to be carried out.)	2
Negative	
Many teachers did not enjoy online teaching	1
This sudden change accentuated equipment inequalities and contributed students to isolation.	2
Little support from professionals specialized in ICT	1

Concerning the relation with the students during the COVID-19 pandemics 60% of the teachers considered that it changed. There were some negative comments about the fact that the lack of face-to-face sessions was prejudicial to construct a better relationship with the students. However, other teachers mentioned that “in many cases our communication became more frequent and productive” and “On the other hand, I was much more available, I did my best to make them feel accompanied in their learning, I worked in small groups, we meet regularly”.

The next table presents the features teachers missed most from the traditional teaching.

Table 5. Features teachers missed most from the traditional teaching.

Features teachers missed most from the traditional teaching	Number of teachers
Physical teaching spaces (e.g. lab spaces)	2
Social interaction (e.g. human contact; see facial expressions; Any part related to non-verbal communication)	6
Monitor students’ work	1
Working with physical materials	1

The next table presents what skills that teachers acquired from the during the pandemic.

Table 6. Skills that teachers acquired from the during the pandemic.

Skills that teachers acquired from the during the pandemic	Number of teachers
Pedagogical content knowledge (e.g. how to deliver online classes; Knowledge of more online resources and online teaching methodologies and dynamics; It was an opportunity to learn more about web tools but specially on how to integrate them in learning activities and how to design distance learning activities)	4
Domain of online platforms (such as Zoom, Teams)	2
Online assessment	1
Respect the students learning time	1

EduApp application

The next table summarizes the functionalities that teachers suggest should be present in the application, regarding design, user experience and usability.

Table 7. Functionalities that teachers suggest should be present in EduApp.

Functionalities that teachers suggest should be present in EduApp,	Number of teachers
<i>About design and user experience</i>	
Allow students' assessment	1
User friendly (simple navigation; Easy to use and useful for students to use academic activities; not requiring specific learning for its use.)	4
Interactivity	1
<i>About usability</i>	
Export data	1
Feedback mechanism	1
Quality OER	1
Merge administrative aspects with the and access to various educational tools and resources for academic use. E.g.:	
1 - Know how many and which students are enrolled in the course;	
2 - Have the contact of students;	2
3 - Being able to grade and students being able to consult the grades.	
4 - Have access to a report of the activities carried out by each student.	

Results of students' questionnaire

Access to infrastructure before the pandemic

Before the pandemic, **75% of the students had permanent access to a computer with internet access.**

97% of the students answered that the school has not provided them with a laptop for their own use. However, 17% mentioned that the school has provided them with a laptop for their own use.

The students mentioned the institution allowed the use of their personal devices, such as laptops (92%) and smartphones (67%).

94% of the students related they use material searched on the internet.

Learning activities

Most students have high confidence in, for example, the following tasks: using emails to communicate with other (75%), capture and edit digital photos, movies or other graphics (67%), edit text online containing internet link and images (75%), answering a questionnaire online

(83%), organize computer files in folders or subfolders (83%) and create a presentation with simple animation functions (72%).

Most students felt that ICT as an high impact on several features of their learning

School attendance an organization in the school year (2020-2021)

Most students attended face-to-face and online lessons during the pandemics. 75% considered that as many students attended face-to face classes after confinement, and 50% considered that as many students attended online classes, as before the pandemic.

Impact of the COVID-19 pandemic on the use of ICT in school

78% of the students reported they were in contact with the teachers, and 72% with their schoolmates, during the weeks of confinement. Zoom (53%) and Whatsapp (42%) were the channels more used to communicate with teachers and classmates.

The next table presents the students' perceptions about the advantages and disadvantages of online education.

Table 8. Students' perceptions about the advantages of online education)

Advantages and disadvantages of online education	Number of teachers
Advantages	
Avoid dislocations	7
Savings	9
More space to clarify doubts/answer questions	2
Improved quality of life (e.g. more free time)	8
Learning flexibility (Students can study anywhere and at anytime)	14
Possibility to review the class	2
More comfort /quietness	10
Easier to participate in class	3
ICT learning	2
Classes are more dynamic	2
Disadvantages	
Less focus and attention (easy distraction)	15
Tiredness (Screen fatigue)	7
Teachers have difficulty in engaging students	2
More workload	2
Less personal interaction / Sense of isolation	15
Difficulties in communication between teachers and students	7
ICT access difficulties or inequal access to equipment (e.g. sometimes the internet fails)	15

Reduced quality of life (e.g. less structure to the day)	2
Hinders the participation and the clarification of doubts	4

36% of the students considered that the educational system was ready to go online, and 26% considered it was ready to go only partly.

42% of the students considered that the institution was ready to go online, and 28% considered it was ready to go only partly.

39% of the students considered that the teachers were ready to go online, and 28% considered it were ready to go only partly.

69% of the students considered that the teachers were ready to go online, and 19% considered it were ready to go only partly.

75% of the students considered that they were affected by the pandemic.

69% of the students considered that the pandemics had a positive impact in the institution, and 42% considered it had a positive and a negative impact.

69% of the students considered that the relation with teachers and schoolmates did not change during the pandemic.

EduApp application

The next table summarizes the functionalities that students suggest should be present in the application, regarding design and user experience and usability.

Table 9. Functionalities that students suggest should be present in EduApp.

Functionalities that students suggest should be present in EduApp	Number of teachers
<i>Regarding design and user experience</i>	
Chat	2
Attractive design	3
User friendly (simple navigation; Easy to use and useful for students to use academic activities; not requiring specific learning for its use.)	11
Interactivity	1
Material to support classes	1
Social inclusion functions	1
A shared schedule	1
Translations	1
<i>Regarding usability</i>	
Forum to talk with students from other schools	2
Chat with teachers	2
A shared schedule	3

Access to books	2
Easy to access menu	2

Results of IT responsible questionnaire

Information about the classes and teachers

The IT are responsible for serving approximately **4000 students** and **200 teachers**. The **time allocate for working directly with students vary from (50 to 100%)** and the **time allocate for working directly with teachers vary from 30 to 50%**.

Experience with ICT for teaching

About ICT teaching in the institution is **both integrated in the subjects and taught as a separate subject**.

ICT access by teacher and students

About ICT access by teacher and students, **students are equipped with computers and/or internet** and both **teachers and students use computers and/or internet**.

Experience with ICT for teaching

All IT responsible used computers and/or the internet for **preparing lessons, class teaching in front of/with students, communication with students and online learning**.

Access to infrastructure

All IT responsible have **permanent access to desktop computer with internet access or laptop or tablet with internet access**. All IT responsible have **access on demand to interactive whiteboard, digital camera, computer laboratory, microphone, headphones, and camera**.

The IT responsible evaluate the **quality of the internet signal with 4** (from 1 to 5).

The institution **has not provided the IT staff and students with a laptop**. However, **students are allowed to use their personally devices for learning**.

School shared vision about ICT use

One IT answered that shares with their colleagues, the school head and other staff, the same vision about integrating ICT in teaching and learning at the institution, and the other IT answered that does not know.

ICT based activities and material used for teaching

IT answered that they every day, or almost every day, **use applications to prepare presentations for lessons, exercises and tasks for students and create digital materials for students**.

IT used materials that were searched on the internet, online material from established educational and material that is available in the school's computer network or database, when teaching with the aid of a computer and /or the internet:

Learning activities with the target class

Both IT answered that most of the time they present, demonstrate and explain to the hole class, and sometimes support and explain things to individual students, engage them in inquiry-based activities and allow students to discuss ideas with other students and them.

Impact of COVID-19 pandemics on IT work

Pandemic changed the IT regular job tasks because **increased teacher, students, and other staff training, as well as other regular tasks.**

Both IT answered that during the lockdown and the periods when education went online, they had **more work on helping teachers to create new learning content, helping students access learning materials. They also had to document herself to implement new applications in the school and they had to train teachers into using new applications and programs, such as Moodle, Teams and Zoom.**

Both IT considered teachers and students had a **positive attitude concerning online education during and after lockdown.**

The IT perceptions about the advantages online education are:

- Always available, anytime, anywhere.
- Gives the possibility to consult information when a doubt arises.
- Keep a record of what happened.

The IT perceptions about the disadvantages online education are:

- Distraction and dependence on technology;
- Impersonal; Increases the psychological distance between participants;
- It can exclude people due to the lack of digital literacy.

Both IT considered the **educational system was not ready to go online** because “there is still a need to prepare schools in terms of equipment, and to educate teachers and students about this new system” and “due to the Pandemic we were forced to move the entire system, based in face-to-face classes, to online and as with all changes, there are practices that can be improved and optimized, but I am sure that all parties involved did their best”.

Both IT considered their **institution was not ready to go online** because “need more multimedia equipment” and “staff, teachers and students need more time to learn how to use the tools correctly”.

The challenges that the IT reported about the change to online education were “the adaptation and availability of technology” and “Respond to all requests made regarding the use of equipment and software”.

Both IT considered that online education **had a positive impact in the institution**, although those challenges, because “the institution was able to respond to the challenge of online classes” and “made it more digital and therefore more up-to-date”.

EduApp application

The functionalities that the IT consider EduApp should have concerning its design and user experience are being **appealing**. About its usability, the EduApp should be **user friendly**.

Results of school manager’ questionnaire

Global characterization

The institution is in a **town** (with 61752 habitants) and has a **small number of vulnerable students** (10 to 10%).

School attendance and organization in the school year 2020-2021

The institution organized courses **with physical attendance** in 2020/21, with **hybrid/mixed classes**, and **with physical internships**. The **teachers taught from home** and there was a perception of **more students' attendance in online classes than in face-to face-classes**.

ICT use in COVID-19 pandemic

During COVID-19 pandemic, **there were not sufficient devices for being used to educational purposes** and **50 to 75% of equipment** was fully operational.

The institution has internet access through **optic fibre**. The ICT equipment of the institutions is maintained by the **institution own staff** and **external companies**.

During 2020-21, the institution had its **own website**, **school email addresses for all teachers and students (Outlook)**, a **local area network AN** and **wi-Fi**.

The institution has a **virtual learning environment (Moodle)** that can be accessed from outside the school by the students and teachers.

The institution has purchased the application *Exam.net* for online assessment.

Information about teachers using ICT

In the past two school years (2019-2021), **until 25% of teachers used their own space on school website or blog**, **created their own courses in virtual environments**, **used online platforms (Moodle)**, **asked students to use ICT in doing homework or classwork**, **were involved in b-learning/e-learning**.

In the past two school years (2019-2021), **the teachers have undertaken professional development in several themes**.

The institution **has an ICT coordinator**.

The institution capacity to provide ICT teaching and learning was to a **greater extent affected by an insufficient number of interactive boards, laptops/computers, computers out of date or in need of repair, lack of adequate teachers' skills, insufficient technical support for teachers, insufficient pedagogical support for teachers, lack of adequate content/material for teaching, lack of content in national language, difficulty to integrate ICT use into the curriculum, lack of pedagogical models how on to use ICT for learning, school time organization and school space organization**. The institution capacity to provide ICT teaching and learning was **somewhat affected insufficient number of computers and internet connected computers, pressure to prepare students for exams/tests and the fact that most teachers were not keen about the use of ICT in schools**.

The institution capacity to provide ICT teaching and learning was **not affected by insufficient internet bandwidth and speed, the parents' perception of the use of ICT, the perception about the benefits concerning the use of ICT on teaching**.

School strategy about how to use ICT in teaching and learning

The institution **has its own written statement specifically about the use of ICT for pedagogical purposes, a policy and actions to use ICT for teaching and learning in specific subjects and a specific policy or program to prepare students for responsible internet behaviour**.

The institution does not have **its own written statement about the use of ICT, regular discussion with teaching staff about ICT use for teaching purposes, a specific policy about using social networks for teaching and learning, a specific policy to promote cooperation and collaboration among teachers, scheduled time for teachers to meet to share, evaluate or develop instructional materials or approaches**.

Opinions about ICT use for educational purposes

The respondent **strongly agrees with all the uses of ICT at school for educational purposes.**

Opinions about ICT use for educational purposes

Teachers are the main responsible for determining course content, choosing teaching methods, deciding about teacher training and choosing learning resources, in the institution. The school management is responsible for procuring ICT infrastructure.

Impact of the COVID-19 pandemic on the use of ICT in school

During the COVID-19 pandemic, the **institution was closed for 20 weeks**. During those weeks, the institution **was in contact with the students and their families**, mainly through **Moodle**.

The advantages of online education are **more inclusion, digital transition, and access to more global information**. The disadvantages of online education are **lack of social interaction, inadequacy for applied and practical contents and the need for additional skills**.

The Portuguese higher education system **was not ready to go online** because the **teachers needed to have more training and preparation**.

The institution **was not ready to go online** because the **needed more infrastructures and digital equipment**. The perceived weakness with the change to online education was **the lack of time to prepare teachers and budget to invest in infrastructure and equipment**.

Online education had a positive impact on the institution because it **brought more technological transition and enabled teachers upgrade**.

Teachers' and students' feedback about the online education during the lockdown and afterwards, was collected. **Students pointed out the necessity of some teacher to have training in e-learning teaching. Teachers valued the possibilities that comes with the use of the new technologies.**

During the lockdown and the following months, what was, in your opinion, the most difficult tasks were to **organize the school activities (online, hybrid or with physical attendance), the development of educational resources and to organize practical activities**.

EduApp application

The functionalities that EduApp should have concerning its design and user experience are **interaction with all the academic community as one**. About its usability, the EduApp should allow **access to all academic and social life**.

Implications for EduApp application

The results of the questionnaires suggest that the EduApp should:

1. Have a **chat** functionality, to allow conversations between students, students-teachers and students with other school students;
2. Have an **attractive design**;
3. Be **user friendly** (allow a simple navigation; easy to use and useful for students to use academic activities; not requiring specific learning for its use; easy to access menu).
4. Allow **interactivity**, and not only present information for the user;
5. Should allow to **deposit materials to support classes**;
6. Have **social interaction** and **social inclusion** functions;
7. Have a **schedule** that the users could see and share;
8. Allow **students' assessment**;
9. Have an **export data** function;
10. Merge **administrative aspects with the and access to various educational tools and resources for academic use** (e.g. identify how many and which students are enrolled in the course; Have the students' contact; Being able to grade and students being able to consult the grades; Have access to a report of the activities carried out by each student;
11. Allow the **interaction with all the academic community as one** and **access to all academic and social life**.

The school manager suggest that the functionalities EduApp should have concerning its design and user experience are **interaction with all the academic community as one**. About its usability, the EduApp should allow **access to all academic and social life**.