Pedagogical Architecture: Development of Digital Fluency through M-Learning

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AIM OF RESEARCH

This paper deal with the construction of a pedagogical architecture to assist teachers and students in the development of digital fluency through mobile learning.
The smartphone appears in the first position as a means to access the internet (92%), followed by notebook (29%), and tablet (16%).

(TIC DOMICÍLIOS, 2019)
M-learning

Learning that can occur at any time and place with teacher's guidance and use of a mobile device.
"The role of ICT is to contribute to "decrease" this "pedagogical distance", ensuring forms of communication and interaction between "actors" involved in knowledge building process by distance education".

BEHAR ET AL [5]
### Digital Fluency Competence with Focus on M-Learning

#### Table 1

<table>
<thead>
<tr>
<th>Competency: Digital Fluency for m-learning</th>
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<tbody>
<tr>
<td>Knowledge (knowledge)</td>
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<tr>
<td>- Knowing how to use mobile devices and</td>
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<tr>
<td>applications for educational purposes;</td>
</tr>
<tr>
<td>- Knowing how to create applications</td>
</tr>
<tr>
<td>- Improving your own knowledge about</td>
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<tr>
<td>m-learning.</td>
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<tr>
<td>Skills (ability)</td>
</tr>
<tr>
<td>- Using mobile devices and apps</td>
</tr>
<tr>
<td>- Innovate and strategize using mobile</td>
</tr>
<tr>
<td>devices in the classroom</td>
</tr>
<tr>
<td>Attitudes (being)</td>
</tr>
<tr>
<td>- Being autonomous</td>
</tr>
<tr>
<td>- Being reflective</td>
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<tr>
<td>- Being a researcher</td>
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<tr>
<td>- Being proactive</td>
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Methodology

• An qualitative case study aproach;

• The case study made the implementation of a pedagogical architecture to distance education possible, with the aim to assist in the development of digital fluency through use of mobile devices and especific application.

• Target audience: 30 undergraduate students of various different courses from a Brazilian public university, aged 19 to 40 years;

• Data collection was performed in 2019/2, in a semi-presential, elective discipline.

• Were planned three proximate meetings and twelve at a distance.
The course was conducted in a distance-learning manner with its activities mediated through a virtual learning environment (VLE), in this case ROODA.

**Utilized Tools:**
- Participant observation;
- Questionnaire with open and closed questions.

**The data allowed the analysis of the PA according to the following categories:**
- organizational aspects;
- content aspects;
- technological aspects;
- methodological aspects;
- analysis of the application as to its usefulness and relevance in the discipline.
ANALYSIS AND RESULTS

After the implementation of the PA developed for a distance learning discipline focusing on the use of mobile devices in the classroom, we verified the necessary components to compose a CHA.
Pedagogical Architecture to assist in the development of digital fluency through M-learning.
DIGITAL FLUENCY
COMPETENCE WITH FOCUS ON M-LEARNING

Knowledge (C - knowledge) Know how to use MD and Apps for educational purposes; Know how to create Apps; Improve knowledge about m-learning;

Skills (H - ability) use MD and Apps; Innovate and create using MD in the classroom

Attitudes (A - being) autonomous; reflective; researcher; proactive; have an ethical stance;

Explore the possibilities of mobile technologies in education, instrumentalization, observation and analysis of current studies and research on this thematic

Goals

Organizational Aspects

Architecture Pedagogical

Digital fluency competence

Development

Elements that compose

Discipline
"The computer in Education"

Technological Aspects

Methodological Aspects

Content Aspects
ORGANIZATIONAL ASPECTS

Elements that compose

1. Digital fluency competence
2. Architecture Pedagogical
3. Organizational Aspects
4. Content Aspects
5. Methodological Aspects
6. Technological Aspects

Graduation students of several courses
Prerequisites
Know how to use mobile device

Target Audience
Discipline Actors
1 teacher
4 tutors
3 monitors

Modality
Time
45h
DE
**METHODOLOGICAL ASPECTS**

- **Discipline**
  - "The computer in Education"

- **Elements that compose**
  - Digital fluency competence
  - Organizational Aspects
  - Content Aspects

- **Technological Aspects**
  - Summative and Formative
  - Evaluation
  - Participation and involvement

- **Methodological Aspects**
  - Face-to-face meetings elective
  - Strategies
    - Use MD to create schedules
    - Availability of extra materials for consultation
    - Content discussions
    - Post impressions weekly
    - Post weekly activities

**Activity, Content and Doubts**
- about
FIGURE 1

Who we are

Lesson 1 - 30/08

Lesson 2 - 06/09

Lesson 3 - 13/09

FIGURE 2

Lesson 1 - 30/08

Initial presentation - In person

In this first moment the focus of the class is on:

* Meet students, teachers and tutors DE;

* Know the ROODA distance education platform and its functionalities;

* Complete personal data on ROODA and make the first interactions in the environment;

* Know the schedule of course activities.

DE activity:
The PA building may enable teachers with conditions for the creation of methods, means and procedures.

New forms of organization arise for the teaching and learning processes, giving support to the development of student knowledge.

Methodological and technological aspects do not just determine techniques, procedures and computer resources to be planned and implemented in class.
CONCLUSION

- It was presented a discussion about the concepts of a pedagogical architecture for distance education in order to provide opportunities for the development of a digital fluency competence for m-learning.

- It was necessary to plan and implement a PA to assist teachers and students to develop a digital fluency competence through the use of mobile devices.

- The elaboration of an architecture becomes relevant to guide and encourage teachers who wish to perform activities with MD in distance learning courses.
It is clear that the development of a digital fluency competence focused on m-learning is relevant, considering that among the features of mobile devices, one of the most used are apps;

An application can help in the organization and availability of materials according to ease of navigation, expanding the ways to access content, activities and information on the discipline through the use of mobile devices.
References


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