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ARTICLE

# Design and Implementation of an Online Training Course on Moodle Using the ADDIE Model: Focus on Communication Tools

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## ABSTRACT

This article presents a case study on the design and implementation of an online training course hosted on the Moodle platform, structured according to the ADDIE instructional design model (Analysis, Design, Development, and Implementation). The course was developed for second-year Master's students in Digital Communication Strategies and aimed to strengthen their professional competencies through the integration of digital learning environments. A particular focus was placed on the use of online communication tools to enhance learner interaction, engagement, and collaboration. Four tools were employed wiki, forum, videoconferencing, and chat each serving distinct pedagogical functions and supporting either synchronous or asynchronous interaction. The design process followed an iterative approach, incorporating continuous adjustments based on feedback from course designers and early users. This case study emphasizes the central role of communication in shaping the quality of online learning and illustrates how the ADDIE model can guide the creation of interactive, accessible, and learner-centered training programs. The present article reports on the design and implementation phases, while the evaluation phase focusing on student participation, satisfaction, and pedagogical impact will be conducted and presented in a subsequent publication. The study contributes to the growing literature on

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Small Private Online Courses (SPOCs), Moodle-based training, and instructional design by offering practical insights into the application of the ADDIE model in professional higher education contexts.
***Keywords:*** Online Communication Tools; E-Learning; Pedagogical Design; ADDIE Model; Moodle Platform

# 1. Introduction

The digitization of higher education has profoundly reshaped both learning processes and interactions between educational stakeholders. One of the most notable developments is the integration of online communication tools, which contribute to rethinking learning dynamics. These tools, whether synchronous (videoconferencing, chat) or asynchronous (forum, wiki), offer complementary modalities that support both real-time interaction and delayed reflection. Their thoughtful use today represents a strategic lever for fostering engagement, collaboration, and personalization in e-learning environments. In this context, designing effective, interactive, and learner-centered online courses has become a major challenge for academic institutions [1, 2]. One of the key success factors in such training lies in the thoughtful integration of online communication tools, which enable meaningful pedagogical and social interaction. These tools are generally classified into two broad categories: synchronous tools (e.g., videoconferencing, chat), which allow real-time exchanges, and asynchronous tools (e.g., forums, wikis), which provide more flexibility and support delayed engagement [3, 4].

Research has shown that combining synchronous and asynchronous modalities fosters student motivation, interaction, collaboration, and individual reflection in online learning environments [5]. These dimensions are especially important in professionally oriented training programs, where the development of transversal skills, particularly communication skills, is a crucial factor for employability.

This article presents a case study focused on the design and implementation of a digital training course titled "Professional Communication and Project Management", developed for second year Master's students in Digital Communication Strategies at Abdelmalek Essaâdi University. The course was hosted on the Moodle platform in frensh and developed according to the ADDIE instructional design model, with the aim of enhancing students' professional skills through a blended approach that incorporates digital tools, contextualized learning scenarios, and formative interactions.

According to the training specifications, the "Professional Communication" component of the course consists of three units (SPOCs): (1) Making a Success of Your CV, (2) Writing a Cover Letter, and (3) Succeeding in a Job Interview. Each unit addresses a key stage in the job application process and integrates specific communication tools to foster student engagement and skill development.

However, in this article, we focus exclusively on the first unit (SPOC 1 – "Making a Success of Your CV"), which serves as a representative example of the pedagogical strategy adopted. This unit integrates four key communication tools: forum, chat, wiki, and videoconferencing, to support active learning, collaborative work, and the development of professional writing skills in an online environment.

# 2. Theoretical Framework

## 2.1. Online Communication

Online communication encompasses a wide array of methods for people to connect and interact through digital platforms [6, 7]. These methods have significantly reshaped the way individuals maintain relationships [8, 9]. Conduct business, and participate in educational activities [2, 10, 11]. Computer-mediated communication (CMC) broadly refers to various forms of human interaction facilitated by networked computers. This type of communication may occur synchronously, such as through live video conferencing, or asynchronously, as in the case of email [10].

The growing prevalence of online communication has sparked numerous studies on its impact on social connectedness, interpersonal dynamics and individual well-being. Despite its many advantages, online communication also raises concerns regarding privacy, trust, and the risk of social isolation.

Social media platforms such as Facebook, Twitter, and Instagram have become central channels for sharing personal updates, images, and participating in conversations

with broad and varied audiences[11]. Their global user base, which spans billions of individuals, highlights their importance in contemporary modes of communication. Beyond social networks, online communication comprises multiple formats, including email, instant messaging, video conferencing, and online discussion spaces. Email continues to be a widely used tool for both personal and professional exchanges, with billions of messages circulated each day worldwide[12].

Applications like WhatsApp and Slack have further improved communication speed and ease, eliminating many geographical limitations. Platforms like Zoom and Microsoft Teams, especially during the COVID-19 pandemic, became essential tools for virtual collaboration and remote interactions.

At its core, online communication involves a dynamic exchange of messages, where a sender encodes information through symbols or language that the receiver then interprets to derive meaning[13].

This mode of communication has broadened access to information, enabling individuals to follow global developments in real-time. It has also helped maintain social ties across time zones and distances. Nonetheless, challenges such as online harassment, the spread of misinformation, and data privacy issues remain pressing and call for proactive solutions.

Online communication can generally be categorized into synchronous and asynchronous tools. These two types serve critical roles in both academic and professional contexts. Synchronous tools support real-time interaction, promoting immediate feedback and collaboration. Asynchronous tools, on the other hand, allow users to engage at their own pace, offering greater flexibility and accessibility.

According to research by Khalil and M. Ebner, synchronous tools outperform asynchronous ones in building collaborative learning skills during group tasks in online settings, demonstrating the value of real-time engagement. Meanwhile, tools like email, discussion boards, and podcasts classified as asynchronous are also widely used in online learning, with varying degrees of learner satisfaction depending on the tool applied[5]. Further investigation by Hernández-Lara examined the use of instant messaging and forums in e-learning, analyzing how communication styles influence interaction and learning effectiveness. Although platforms supporting real-time communication remain popular for immediate engagement, asynchronous tools are essential for fostering reflection and deeper knowledge sharing. The combined use of both types of tools within online learning environments has been shown to improve student involvement and overall learning outcomes.

## 2.2. Small Private Online Courses (SPOC)

SPOCs (Small Private Online Courses) offer a targeted alternative to large-scale online learning formats by maintaining limited enrollment and encouraging more personalized interaction. Unlike MOOCs, SPOCs create opportunities for meaningful engagement between participants and instructors within a smaller, more focused learning community[14]. This structure allows for more direct and individualized feedback, promoting deeper cognitive processing and understanding beyond superficial learning[15].

SPOCs have been successfully implemented in various disciplines, including language instruction, healthcare education, and general academic contexts. For instance, incorporating SPOCs into flipped classroom models such as in neuroscience courses has been shown to foster active learning across diverse educational settings[16]. The benefits of SPOCs are numerous: they enhance student engagement by enabling closer interaction between learners and educators, allow for timely and personalized feedback, help identify students needing support early on, and foster greater learner autonomy.

Furthermore, the integration of video content in SPOCs has been linked to increased learner interest and engagement, as video usage can help gauge and predict learners' content preferences. In blended learning environments, particularly in medical ethics, SPOCs have effectively supported the integration of online and face-to-face components[17]. Additional advantages include greater personalization, improved communication, and streamlined access to learning materials. By offering customized learning experiences tailored to specific educational needs, SPOCs effectively bridge the gap between conventional education and open online platforms[18]. With their smaller cohorts and collaborative nature, SPOCs represent a refined evolution of MOOCs, highlighting their pedagogical value and fostering active student participation across a wide range of fields.

### 2.3. ADDIE Model

The ADDIE model is a structured instructional design framework consisting of five sequential phases: Analysis, Design, Development, Implementation, and Evaluation [19]. Often described as a "family of models" due to shared foundational principles, the ADDIE model does not have a single original author or a universally accepted definition, despite its widespread use across various fields [20]. This model has been applied in diverse practical contexts. For instance, it has been used to create continuing online training programs for nurses in Taiwan [21]. Develop Android-based educational applications aimed at enhancing student motivation, and design constructivist learning modules in food chemistry within higher education [22].

Overall, the ADDIE model serves as a fundamental tool in instructional design, providing a systematic five-stage process that helps designers thoroughly analyze, create, implement, and refine effective educational interventions.

The ADDIE model is a commonly applied instructional design framework consisting of five distinct phases, each fulfilling a particular function.

- **Analysis:** This initial phase focuses on identifying learners' needs, defining educational goals, and recognizing any limitations related to the project.
- **Design:** In this stage, instructional designers create a comprehensive plan that addresses the needs and objectives identified during the analysis.
- **Development:** Based on the design plan, the actual instructional materials and resources are produced.
- **Implementation:** This phase involves delivering and integrating the developed materials into a real learning environment.
- **Evaluation:** The final stage assesses the effectiveness of the instructional materials by measuring outcomes against the predetermined learning objectives.

The ADDIE model is widely adopted because it offers a systematic and organized framework for creating effective educational programs. Its strengths lie in the ability to tailor learning experiences to specific learner requirements, maintain consistency throughout course development, promote collaboration among designers and stakeholders, and support ongoing evaluation to enhance instructional quality.

As a foundational tool in instructional design, the ADDIE model's clear structure facilitates customization, ensures uniformity, encourages teamwork, and fosters continuous improvement in educational program development.

### 2.4. Critical Synthesis

In summary, previous studies have highlighted the importance of online communication tools for interaction, the potential of SPOCs to support active learning, and the relevance of the ADDIE model as a systematic framework for instructional design. However, most of these contributions remain descriptive and focus on single dimensions, such as tool functionality or course structure. Few works critically examine how the integration of communication tools within a SPOC, designed through the ADDIE model, can impact learner outcomes in professional training contexts. The present study addresses this gap by reporting on the design and implementation of a Moodle-based SPOC in professional communication, emphasizing the pedagogical value of combining synchronous and asynchronous tools within a structured instructional framework.

## 3. Methods

The methodology used to design an online training course on professional communication, targeted at second-year master's students specializing in digital communication strategy, is presented. The course was developed following the ADDIE model (Analysis, Design, Development, Implementation, Evaluation), with a particular focus on integrating communication tools such as forums, wikis, chat, and videoconferencing to facilitate interaction among participants. The SPOC (Small Private Online Course) concept was employed, and the Moodle platform was used to host the training. This article details the design of three units centered on professional communication.

It should be noted that the present paper reports only on the design and implementation phases of the ADDIE model. The evaluation phase, which will constitute the final stage of the model, has not yet been conducted. For this future stage, data collection will focus on both quantitative and qualitative dimensions, including participation rates, learner satisfaction surveys, and thematic analysis of student feedback. These data will be analyzed through a mixed-methods approach, combining descriptive statistics with content anal-

ysis, in order to assess the pedagogical effectiveness of the communication tools integrated into the SPOC.

## 3.1. Analysis

- During the analysis phase, a detailed specification document was developed to define the training objectives, learner needs, and project constraints.
- Specific training goals were established, focusing on enhancing the professional communication skills required for successful completion of the course module.

### 3.1.1. Requirements Specification

The requirements specification is a key document in the design of a training program. It defines the general guidelines, educational objectives, target audience, training organization, as well as the technical and human resources involved.

### 3.1.2. Name of the Training

Distance learning course on the topic of professional communication and project management.

In this article, the training focuses solely on professional communication, excluding project management.

### 3.1.3. Target Audience

Second-year Master's students in Digital Communication Strategies at the Faculty of Letters and Human Sciences of Tetouan.

### 3.1.4. Training Modalities

- Remote learning
- Free of charge
- Private course with registration required
- Theoretical component accompanied by practical activities

### 3.1.5. General Objectives of the Professional Communication Training

- Master professional writing skills.
- Effectively present one's professional background.

### 3.1.6. Training Structure (in SPOCs)

Professional Communication:

- Unit 1 – Making a success of your CV: 3 weeks
- Unit 2 – Cover Letter: 2 weeks
- Unit 3 – Acing Your Job Interview: 3 weeks

### 3.1.7. Access Requirements

- Have a computer, tablet, or smartphone
- Possess basic digital skills:
  Ability to open and navigate the platform
  Access resources and submit activities

### 3.1.8. Communication Tools Used on Moodle

- Forum (asynchronous exchange)
- Wiki (collaborative writing)
- Videoconference (synchronous interactions)
- Chat (real-time quick exchange)

### 3.1.9. Provided Educational Resources

- Explanatory videos
- Reading materials
- Downloadable support sheets

### 3.1.10. Type of Tutoring

### Technical Skills Required for the Trainer

- Start a computer
- Open the online resource in a web browser
- Use the necessary platform features for learners

### Technical Skills Required for the Learner

- Access the online platform through a web browser
- Log in to the platform
- Navigate through the SPOCs with simple clicks

### 3.1.11. Expected Benefits

- Structured organization of the training offer
- Support for students' professional integration

### 3.1.12. Copyright of the SPOCs

The content of this training is licensed under CC BY-NC-ND (**Figure 1**).



**Figure 1.** CC BY-NC-ND 4.0 license.

### 3.1.13. Integration into the Platform

The platform selected to host and deliver the SPOCs is **Moodle**, due to its flexibility, wide range of pedagogical

features, and compatibility with the instructional design of our training program.

## 3.2. Design

During the Design phase, several key pedagogical choices were made to structure and enhance the online training course. A range of communication tools such as online forums, wikis, chat features, and videoconferencing were selected to foster interaction, collaboration, and learner engagement.

The course content was carefully organized to address the core aspects of professional communication, including written, verbal, and non-verbal communication, as well as interpersonal and intercultural skills.

A detailed instructional scenario was developed to sequence learning activities across the SPOCs (Small Private Online Courses). This scenario outlines the weekly progression of modules, integrating theoretical resources with interactive tasks, collaborative work, and formative assessments to ensure a coherent and engaging learning path.

The SPOC format was chosen for its ability to provide a more personalized and interactive learning experience, tailored to the specific needs and pace of the learners.

Finally, the Moodle platform was selected to host the training due to its user-friendliness, advanced pedagogical features, and its capacity to support a rich and flexible learning environment.

### 3.2.1. General Structure of the Training Program

This training program is specifically designed for Master's students enrolled in a professional track, particularly those in the *Digital Communication Strategies* program. It aims to prepare them for a successful transition into the professional world by strengthening key employability skills.

While the broader curriculum includes both professional communication and project management, this article focuses exclusively on the professional communication component. The training emphasizes written and oral communication techniques essential for navigating professional contexts and enhancing career readiness.

### 3.2.2. Component: Professional Communication

This first component focuses on the pre-employment phase, guiding students in the preparation of key documents and situations related to the recruitment process. It is organized into three SPOCs, each broken down into targeted instructional sequences:

#### Unit 1: Making a Success of Your CV

This unit addresses different types of CVs, essential sections, and common mistakes to avoid.

#### Unit 2: Writing a Cover Letter

Sequences cover identifying recruiters' expectations, developing persuasive arguments, structuring the message, and tailoring content to specific professional sectors.

#### Unit 3: Succeeding in a Job Interview

This unit focuses on oral presentation skills, frequently asked questions, professional demeanor, stress management, and mock interviews conducted via videoconferencing.

These three SPOCs incorporate four online communication tools, each selected according to its functional role:

- **Forum:** for asynchronous discussion around resources and instructions.
- **Chat:** for quick, real-time interactions.
- **Wiki:** for collaborative content creation.
- **Video Conferencing:** for live interactive sessions and role-playing activities.

### 3.2.3. Pedagogical Design

The pedagogical design of the training program is based on the principles of the ADDIE model, with a particular emphasis on the Design phase, which aims to translate the needs identified during the Analysis stage into a coherent instructional framework. This phase enabled the definition of specific learning objectives for each SPOC, the selection of appropriate communication tools, and the development of a progressive and interactive learning scenario (refer **Tables 1** and **2**). Each unit is structured around a pedagogical scenario that includes:

- Clearly defined learning objectives;
- Differentiated activities that promote cognitive, social, and emotional learner engagement;
- A variety of instructional resources (explanatory videos, reference documents, downloadable support materials);
- Opportunities for both synchronous and asynchronous interaction (videoconferencing, forums, chats, wikis).

**Table 1.** Teaching scenario: Unit 1 (SPOC 1).

| **General Information** | | |
|---|---|---|
| **Title of Unit** | | Making a success of your CV |
| **Place in the program** | | First SPOC in the first category |
| **Target audience** | | Second-year Master's students in Digital Communication Strategy |
| **Domain** | | Written communication |
| **Language** | | French |
| **Duration of situation** | | 3 Weeks |
| **Number of sessions** | | 4 sessions + evaluation |
| **Designer of the SPOC** | | Ouariach Fatima Zahra |
| **Objectives and skills** | | |
| Objectives | Training objective | Mastering professional writing |
| | Specific objective | How to write a CV |
| | Intermediate objectives | -Defining a CV<br>-Knowing the basics of a CV<br>-Distinguishing the different parts of a CV<br>-What to avoid<br>-Writing a CV |
| Skills | Disciplinary competence | Communicate orally and in writing in a professional context |
| | Cross-disciplinary skills | -Exploit information<br>-Exercise critical judgment<br>-Use information and communication technologies<br>-The course module<br>-Cooperate<br>-Communicate appropriately |

**Table 2.** Details information about the scenario Unit 1 (SPOC 1).

| | **Detailed Information** | |
|---|---|---|
| Description | Written communication generally occupies an important place in the world of work, and is one of the most widely used means of communication within companies. It takes a variety of forms, notably the CV and covering letter. Conveying a clear, concise message is essential for any candidate wishing to obtain the position he or she is seeking. Conversely, clumsy expression can lead to misunderstandings, waste time and complicate access to employment. Aimed at Master's students, this SPOC aims to develop their skills in professional written communication.<br>As future communicators, they will learn how to design an effective CV, a real tool for promoting their skills. Applying for a job is a strategic act of communication between candidate and employer. This SPOC offers a concrete example of how to build a CV capable of capturing the attention of recruiters. | |
| Activities | Situation | Introduction video |
| | Designed for Master's students, this SPOC aims to support them in writing an effective CV that meets the expectations of the professional world. The CV is a structured document that presents one's academic and/or professional background as well as acquired skills. It highlights the candidate's strengths in relation to the targeted position.<br>The main objective is to help students stand out in order to secure an interview or an initial meeting with a recruiter.<br>We carried out a diagnostic evaluation to assess the learners' actual level. | |
| | Problem situation | Video |
| | Conceptualization | Structuring your CV |
| | How to Get Noticed?<br>The CV is the first impression a candidate gives of themselves it serves as a true personal brand. It therefore deserves special attention, as its main purpose is to capture the recruiter's interest and lead to an interview. It is essential to take the time to prepare it with precision and care.<br>Structuring the CV Content<br>Equally important is the ability to organize the CV into clearly identifiable sections. Each part (education, work experience, skills, etc.) should be structured logically and highlight the most relevant elements for the targeted position.<br>Communication tool used :<br>Discussion forum: serves as a collaborative space where learners can interact around the theme of 'Making a success of your CV', exchanging experiences, asking questions and sharing useful resources. | |
| | Objectivation | Things to avoid |

**Table 2.** *Cont.*

| | Detailed Information | |
|---|---|---|
| Activities | What to avoid when preparing a CV so as not to lose the job through a simple mistake.<br>Communication tools used :<br>An interactive video conference dedicated to the theme of 'Succeeding with your CV' will enable learners to benefit from live practical advice, ask questions and obtain personalized feedback.<br>The wiki is a collaborative space where learners work together to complete tasks assigned by teachers, encouraging the exchange of ideas and the co-construction of knowledge.<br>Chat provides a space for real-time exchanges, enabling learners to collaborate, discuss and confront their points of view on the subject under study. | |
| | Transfer | Writing a CV |
| | Formative assessment: The aim is to measure the appropriation of the knowledge acquired through the various activities in the module, by mobilizing it in the writing of a successful CV.<br>Activity - Workshop: Final drafting of a personalized CV, integrating the elements seen in the SPOC. Individualized feedback may be provided to reinforce what has been learned. | |
| Modality | All training involves teaching methods that determine the nature of the learning situations proposed by the trainer. These methods are designed to promote the acquisition of knowledge, know-how and interpersonal skills in line with the objectives of the training sequence.<br>-Modalities centered on the implementation of speech: distance learning<br>Action-based methods: demonstration, discovery. | |
| Pedagogical model<br>Teaching strategies | Connectivism, Cognitivism, Socioconstructivism<br>-The independent study | |
| Type of resource | Pedagogy | -Explanatory MP4 videos<br>Signage: Use text, images, animations and symbols to highlight important information. |
| | Support | PDF resources |
| | Interaction | Questions, debate on a forum |
| Didactic and techno-pedagogical tools | MOODLE platform | |
| Type of grouping | Individual + with other SPOCers | |
| Prerequisite | -Basic knowledge of Microsoft Word<br>-Average level of French | |

The principles of active, collaborative, and learner-centered learning guided the design of the instructional sequences. Each SPOC is structured to alternate between individual discovery phases, peer collaboration periods, and formative assessment and feedback sessions. A problem-based learning approach supported by contextualized scenarios and case studies was prioritized in order to foster the development of transferable skills applicable to real-world professional contexts.

The learning scenarios also incorporate the key stages of the learning process (situation, conceptualization, objectivation, and transfer) (as shown in **Figure 2**) in accordance with the model proposed by Khaldi et al [23]. This structure allows for a logical progression of learning, promoting long-term knowledge retention and the ability to apply knowledge in professional settings.

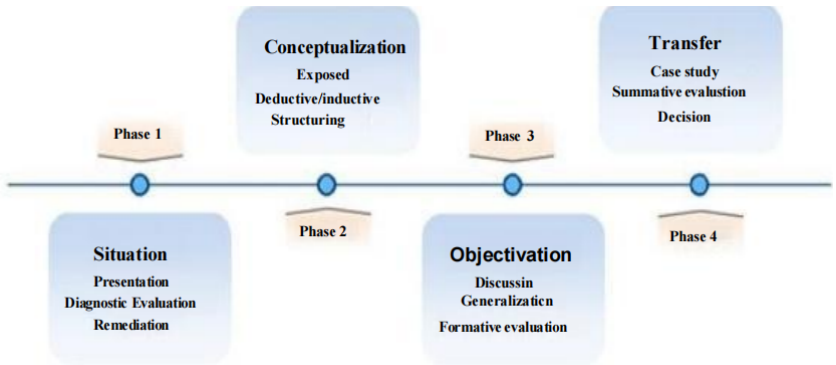



**Figure 2.** Example of the life cycle of a pedagogical scenario for a learning situation [23].

### 3.3. Development

During the development phase of the professional communication training program, various software tools were employed to design interactive and engaging content. These tools played a key role in enhancing the quality and appeal of the learning materials:

Animaker (**Figure 3**) was utilized to produce animated videos that illustrate key concepts and real-life scenarios in professional communication. These animations were crafted to engage learners and make the subject matter more approachable and visually appealing.




**Figure 3.** Animaker Logo.

Adobe Premiere Pro (**Figure 4**)served as the primary tool for video editing. It allowed for the refinement of Animaker videos and the integration of additional visual and audio components, ensuring high-quality production for an enhanced learning experience.




**Figure 4.** Adobe Premiere Pro Logo.

Adobe Illustrator (**Figure 5**) was used to design custom visuals such as infographics, icons, and other graphic elements. These visuals supported the textual and audio content by offering clear, attractive, and informative aids to help convey complex ideas more effectively.




**Figure 5.** Adobe Illustrator Logo.

### 3.4. Implementation

This phase consists of giving learners access to the designed training device. In the case of face-to-face training, this means reserving a room, sending out invitations, organizing the logistics of the day, etc. In the case of distance learning, it's more a question of deployment, putting the course on line, launching it or managing access to the platform. Once the training course had been developed, it was implemented on the Moodle platform, access to which was restricted to Master's students. Training sessions were organized to explain to participants how to use the platform and communication tools, and to answer any questions or concerns they might have.

### 3.5. Evaluation

In the current evaluation phase, participants have not yet undergone assessment. At this point, the training has only recently been integrated into the online platform, and the specific components of the final evaluation are still in development. As a result, no evaluation outcomes are available yet, since participants must first complete the assessments and their performance must be analyzed to generate meaningful results.

## 4. Results

The effectiveness of the online training program should be documented through screenshots taken directly from the Moodle platform hosting the course. This visual documentation will include detailed captures of various course elements, such as the user interface, modules, learning resources, and communication tools (forums, wikis, chats, video conferencing), as well as interactive activities.

These screenshots will reflect the structure and content of the course as experienced by participants and will serve as visual support during the evaluation process. They will help illustrate key observations and conclusions. Careful selection of relevant and representative screens will ensure a comprehensive overview of the learning environment provided by the Moodle-based Professional Communication training.

### The Different Pages of Our SPOC

**Figure 6** illustrates the main interface of the online learning platform *Comm'Pulse*. It shows the homepage,

which displays the list of available courses. In this example, two training modules are presented: *Professional Communication* and *Project Management*. Each course is represented by a descriptive card containing an image, a title, a brief summary, and a button allowing users to access the course. On the left-hand side, a navigation menu provides access to various sections such as the dashboard, evaluations, notifications, and the user profile. This clear and well-organized interface allows intuitive navigation and easy access to educational content.

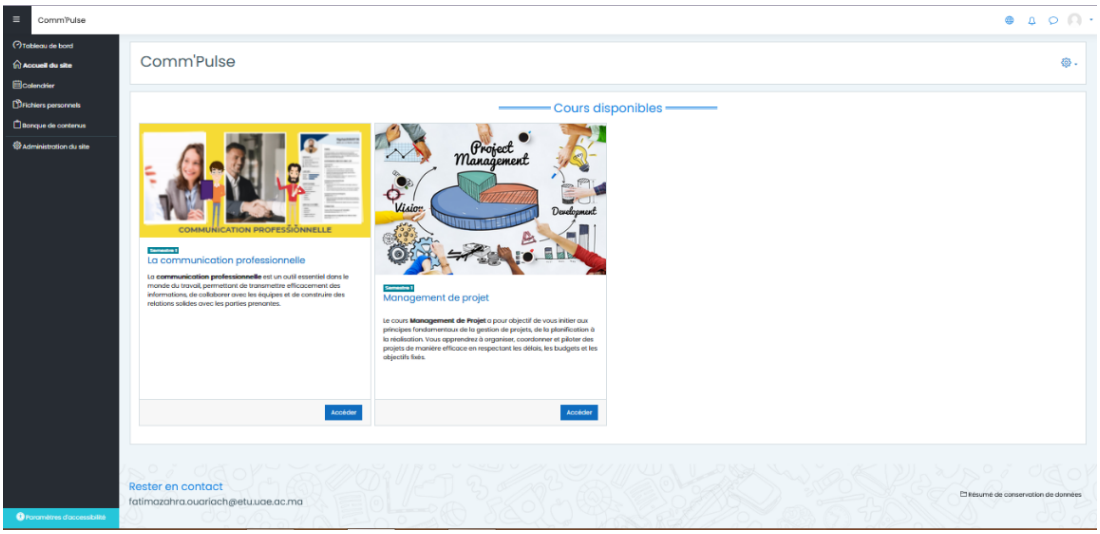



**Figure 6.** Our Training Program.

**Figure 7** presents the interface of the *Professional Communication* course within the Comm'Pulse online learning platform. The page displays the course title, objectives, and multimedia learning materials. The main objectives of this module are to help learners master professional writing (such as résumés and cover letters) and to effectively present their professional background and skills during job interviews. In the central section, a video titled "General Introduction" is provided to guide learners through the course content. On the left-hand side, a vertical navigation menu allows access to other sections of the platform, such as available courses, dashboard, assessments, and user profile. The overall layout is clear and structured, supporting a smooth and interactive learning experience.

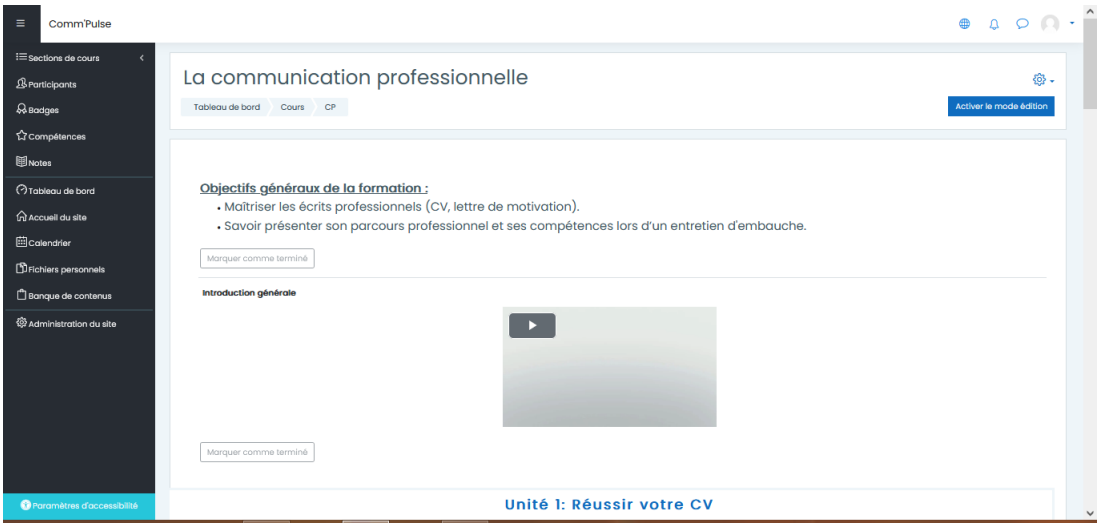



**Figure 7.** Professional communication training.

**Figure 8** illustrates the detailed structure of Unit 1: Succeed in Your CV within the Professional Communication course on the Comm'Pulse learning platform. The page presents a list of learning activities and resources arranged sequentially, including documents, quizzes, videos, and assignments. Each activity is identified by an icon and a title that guides the learner through the process of creating an effective résumé. The unit covers various steps, such as understanding the components of a CV, writing professional content, and applying formatting techniques. On the left side, a navigation menu provides access to other modules, assessments, and user tools. The interface design is simple and organized, which facilitates user engagement and independent learning.




**Figure 8.** Example of Unit 1 (Making a success of your CV).

**Figure 9** presents the Wiki section of the Professional Communication course on the Comm'Pulse learning platform, specifically within Unit 1: Succeed in Your CV. The wiki tool allows learners to create and edit collaborative pages, encouraging interaction and shared knowledge building among students. The interface provides options to name a new page and select the desired format (HTML, Creole, or Wiki format). This activity is designed to promote teamwork, enabling students to contribute content collectively and apply communication skills in a practical context. The layout remains consistent with the rest of the platform, featuring a clear navigation panel on the left for easy access to other sections such as courses, assessments, and personal settings.

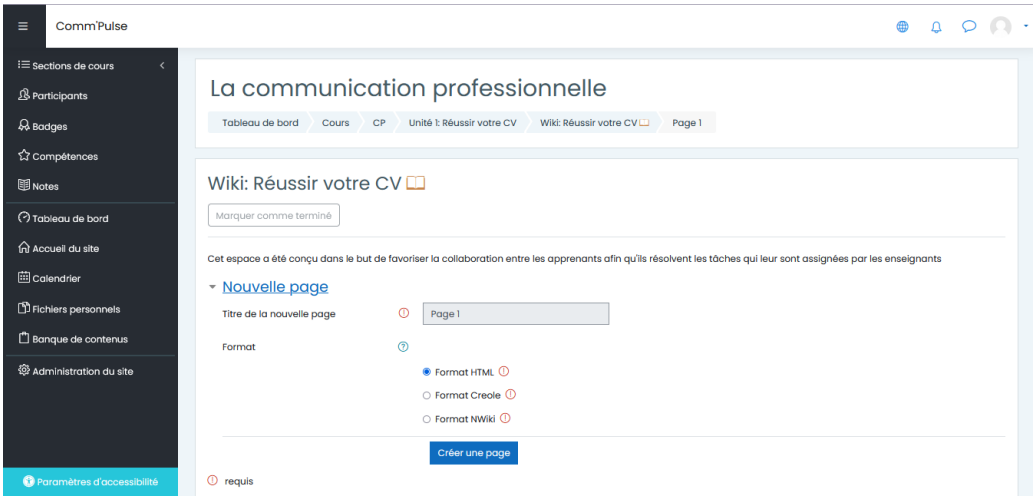



**Figure 9.** Example of the WIKI communication tool in our platform.

**Figure 10** illustrates the *Discussion Forum* section within the *Professional Communication* course on the Comm'Pulse learning platform, specifically under *Unit 1: Succeed in Your CV*. The forum is designed to promote interaction and idea sharing among learners. It provides a space where students can ask questions, exchange opinions, and discuss topics related to writing an effective CV. The interface allows users to start a new discussion by clicking on the "Add a discussion" button and to navigate between previous and next activities using quick-access options. As in other sections of the platform, the left-hand navigation panel offers links to different modules, assessments, and personal settings. This collaborative feature enhances communication, peer learning, and engagement within the virtual classroom environment.

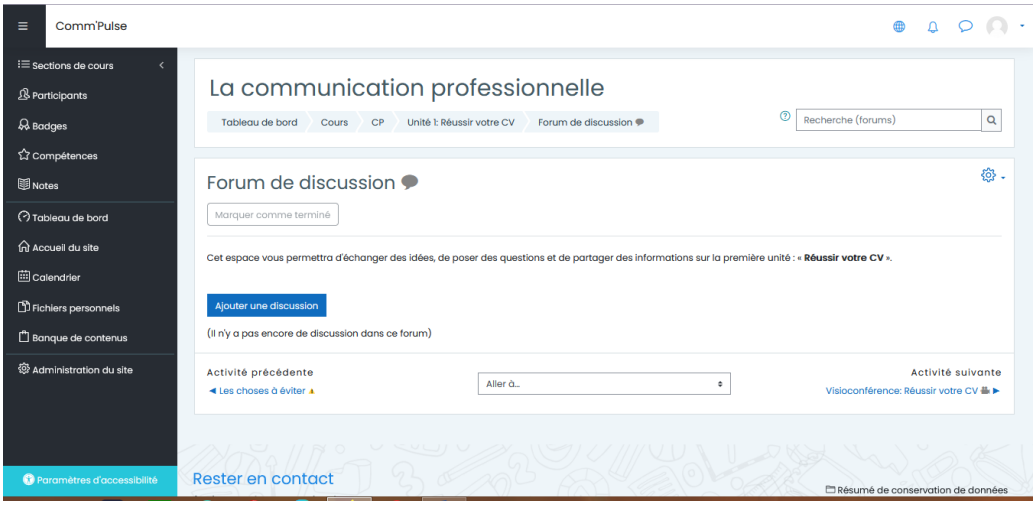



**Figure 10.** Example of the Forum communication tool in our platform.

**Figure 11** shows the *Videoconference* interface of the *Professional Communication* course on the Comm'Pulse learning platform, within *Unit 1: Succeed in Your CV*. The page provides access to an online meeting space where learners can join live virtual sessions with instructors and classmates. A central button labeled "Enter into the session" allows participants to connect directly to the video conference. The section also includes an area for recordings, although no session has yet been recorded in this example. As in previous pages, the navigation panel on the left gives users easy access to other course sections, activities, and tools. This feature supports synchronous learning, enabling real-time interaction, discussion, and feedback between learners and instructors.

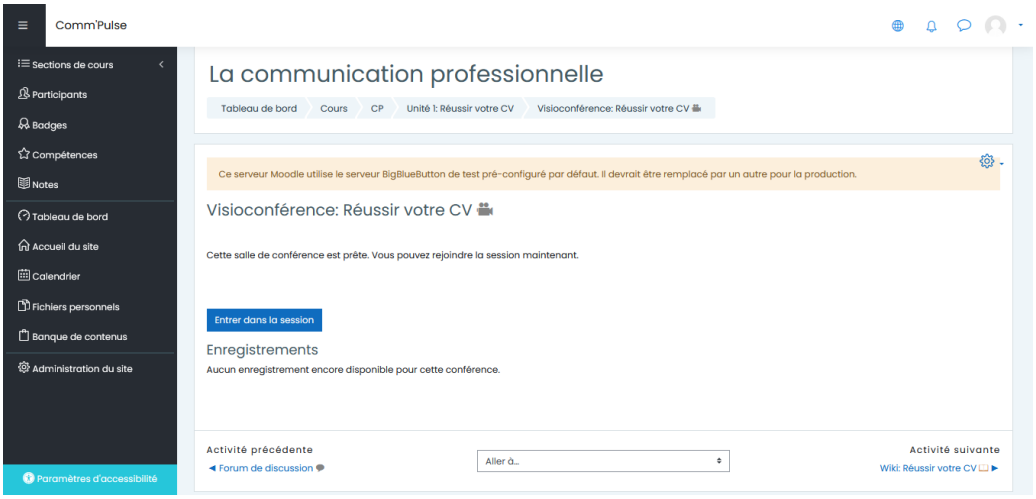



**Figure 11.** Example of the videoconferencing communication tool in our platform.

**Figure 12** presents the *Instant Messaging* interface of the *Professional Communication* course within *Unit 1: Succeed in Your CV* on the Comm'Pulse learning platform. This feature is designed to facilitate real-time communication and collaboration among learners. It enables participants to discuss topics, share opinions, and exchange information instantly within the learning environment. The page provides links to access chat rooms, view message history, and consult participants' activity logs. As with other sections, the left-hand navigation menu allows easy access to various parts of the platform, including the dashboard, assessments, and personal settings. This interactive tool enhances student engagement and supports continuous peer-to-peer collaboration in the course.

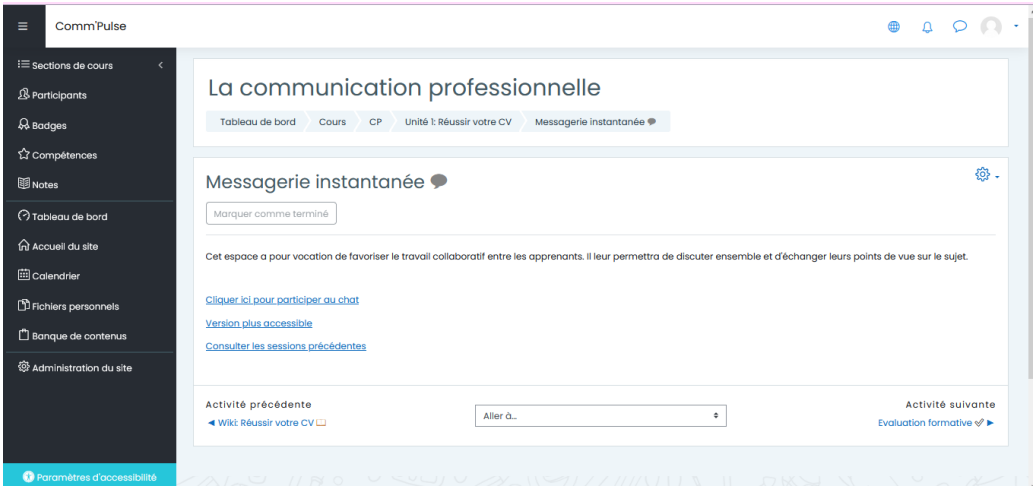



**Figure 12.** Example of the Chat communication tool in our platform.

## 5. Discussion

The present study contributes to the field of instructional design by illustrating how the ADDIE model can be applied to develop a learner-centered SPOC that leverages multiple communication tools. Although empirical evaluation has not yet been carried out, several implications can already be discussed.

First, the integration of both synchronous (videoconferencing, chat) and asynchronous (forum, wiki) communication tools appears essential for replicating the richness of classroom interactions while offering flexibility. This dual approach aligns with existing research that emphasizes the complementarity of real-time and time-independent interactions in fostering engagement and deeper learning [24].

Second, the ADDIE-based design process demonstrates the value of a systematic instructional model in guiding the development of digital courses. By following an iterative process of analysis, design, development, and implementation, the course was progressively refined to meet learners' professional needs. This structured approach echoes findings in the literature that highlight ADDIE as a reliable framework for ensuring pedagogical coherence and quality in online education [25].

Third, beyond design considerations, the potential impact on learner outcomes is significant. The SPOC format, supported by Moodle, provides opportunities for collaborative learning, peer feedback, and the development of professional communication skills. These elements are particularly relevant in the context of higher education programs aiming to enhance employability. As Dong et al. (2021) argue, SPOCs can bridge academic training with professional practice when appropriately supported by digital tools and instructional strategies [26].

At the same time, the study acknowledges several limitations. The absence of empirical evaluation means that claims about effectiveness remain hypothetical at this stage. Furthermore, the results presented are descriptive rather than analytical, focusing on design choices and implementation steps. Addressing these limitations will require systematic data collection and analysis, including learner perceptions, participation rates, and learning outcomes.

Looking forward, the evaluation phase of the ADDIE model will provide the opportunity to test these assumptions

and generate evidence-based insights. Such an evaluation will not only validate the effectiveness of the communication tools integrated into the SPOC but also identify areas for improvement. Ultimately, this will contribute to a more robust understanding of how instructional design models and digital communication tools can enhance learning in professional higher education contexts.

# 6. Conclusions

In conclusion, this study has shown that the ADDIE instructional design model can be effectively applied to create an engaging SPOC that leverages online communication tools to enhance learning. By systematically following the analysis, design, development, and implementation phases of the model, we developed a tailored professional communication course for second-year Master's students, hosted on the Moodle platform. The integration of discussion forums, videoconferencing, chat, and wiki tools fostered interaction, collaboration, and learner engagement key elements in replicating the social dynamics of a physical classroom in an online environment.

While the course implementation has been successful, the next essential step lies in the evaluation phase of the ADDIE model. A thorough assessment of the course design, the effectiveness of the communication tools, and participants' learning outcomes will provide valuable insights to iteratively refine and optimize the program. Looking ahead, we plan to conduct a comprehensive evaluation of learner satisfaction, knowledge acquisition, skill development, and overall improvement in professional communication competencies. This process aims not only to validate the strengths of the course but also to identify areas for enhancement, ultimately contributing to a more impactful and transformative learning experience in future iterations.

It should be emphasized that the present work focuses primarily on the design and implementation stages, with particular attention to the integration of communication tools into the SPOC. The evaluation phase, which constitutes the final stage of the model, has not yet been conducted and will be the subject of a complementary study. This future investigation will examine students' actual participation, their perceptions (both quantitative and qualitative), and the impact of the training on the development of professional communication skills. The results of this empirical study will be presented in a subsequent article to ensure a rigorous, data-driven analysis.

# Authors Contributions

Conceptualization, N.A. and K.M.; methodology, O.F.Z.; validation, N.A. and K.M.; formal analysis, O.F.Z.; writing–original draft preparation, O.F.Z.; writing–review and editing, N.A. and K.M.; supervision, N.A. and K.M. All authors have read and agreed to the published version of the manuscript.

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# Informed Consent Statement

Not applicable.

# Data Availability Statement

Data sharing is not applicable to this article, as no datasets were generated or analyzed during the current study.

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# Conflicts of Interest

The authors declare that there are no conflicts of interest.

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