GUIDE

for a blended or full distance learning project

By Mokhtar Ben Henda

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Foreword

his guide is meant as a guidance tool for AUF member universities in their efforts to set up a blended or distance learning programme. It is structured into parts corresponding to a process of operationalisation of such projects from the formulation of an implementation strategy to the assessment of results.

In addition to conceptual and theoretical elements, this guide provides practical recommendations covering regulatory, economic, technological and methodological aspects adapted to the implementation, monitoring and evaluation of a blended or distance learning course. However, the institutions considering its use should act within the framework of a settlement strategy (strategic development plan & action plan) which outlines the objectives and results to be achieved and the quality indicators to be measured. Technological, human and financial resources are also necessary to achieve convincing results and generate value added. Above all, it is essential to define a legal and

regulatory framework, an attractive economic model and set up a steering and monitoring system to provide support and make the most of the experience resulting from the planned process of blending or virtualising teaching and learning.

Institutions are also responsible for ensuring the effectiveness and efficiency of the corrective and innovative measures to be implemented as part of their improvement plans to continuously upgrade the quality of their blended or distance learning activities. This implies integrating, as soon as a proposed blended or distance learning is set up, a steering and monitoring system and a quality as-

Clarification of Terminology

There is now general agreement that ODL is changing the unity of time, place and action of the classic so-called "face-to-face" training courses. However, whenever the unity of time and/or action is changed it is referred to as "open learning". When only the unity of place is changed it is referred to as "distance learning". When the unities of time, place and action are changed, one refers to "Open Distance Learning". Throughout this Guide, the term inclusive ODL will be used to refer to all forms of ICTs use in learning offers.

surance approach for assessing its products. Several project management methods from the business world can be applied in this regard i.e. (AGILE, ADAPTATIVE, PERT, PRINCE...).¹

¹ Lebouc, D. (2012). Développer un produit innovant avec les méthodes agiles. Éditions Eyrolles.

General framework

he international context of education is experiencing a profound change, caused by the development of information and communication technologies (ICTs) and the use of constructivist* and social constructivist* teaching and learning methods. Distance education, formerly practised as a means of disseminating knowledge via postal correspondence or educational television and radio, is being regenerated by ICTs in a new form of spatially and temporally virtualised learning.

Using digital technologies, two main models of distance learning can now be identified: a bimodal model and a blended one. The bimodal model does exist in institutions which, in addition to their traditional face-to-face teaching, offer parallel distance learning, generally for a different audience. Whereas, the mixed or blended model seems to be the prevailing option in contemporary approaches to ICTs-based education. This does not lead to the creation of two distinct entities within educational institutions, but rather consists of "mixing within the same qualification learning sequences both in face-to-face and e-learning* formats, which can either coexist with the face-to-face format or be the only format available for the module"².

Blended education or training thus enables any education or training institution to integrate digital technologies into its educational practices by combining existing face-to-face education with online (distance) education. This combination at various proportions (see Figure 1) is generally the result of various factors. In addition to the pedagogical and didactic interests attributed to ICTs and TICE, there is in particular a need for cost control, an improved management of space/time and a need to introduce innovative methods to gear students more effectively to the requirements of the labour market and social and professional success. However, the transition from a traditional educational model to a new and blended model requires institutional measures and conditions that can sometimes be cumbersome from a legal, economic, technological and educational point of view.

² François Orivel (2009), "Analyse économique de l'éducation à distance à l'ère de l'e-learning", Université de Bourgogne, IREDU-CNRS, Poitiers.

Specific framework

The African context

T his guide was developed at the request of the AUF to support French-speaking universities in Africa in their educational digital projects, in particular the development of blended and distance learning systems. It will therefore strive to be as close as possible to the specific expectations characterising the context of developing countries while remaining open to a global context of technological and pedagogical innovations now influencing training and education in general.

In fact, digital/online education in sub-Saharan Africa, and distance education in particular, has repeatedly been described as controversial and highly paradoxical. Christian Depover points out that "The endemic crisis in education in some developing countries, especially in sub-Saharan Africa ... is hardly questionable, both in basic and higher education"³. He sees what he calls the "specificity of the South" as a threefold deficit: in human resources (few researchers in education sciences and TICE), in objective scientific studies (apart from institutional communication and false advertising) and in updated tools and concrete local references for training engineering (good practices).

Distance education in Africa is nothing new today since there is a wealth of experiences and more and more initiatives in this field, even though the region is considered one of the most affected by the digital divide, and therefore the least covered by advanced technologies⁴. The AVU (African Virtual University), created in 1997, has already, for more than two decades, set a first milestone in the African digital learning landscape despite results described as biased by Pierre-Jean Loiret in a very "techno-centric" political speech and a "marketing of utopia" which have not lived up to the high expectations raised with the launch of this facility⁵. However, AVU has created emulators in countries such as Senegal (UVS), Burkina Faso, Ivory Coast (VUIC), Tunisia (VUT), Chad (VUC), etc. Other regional and international institutions have taken over, such as the Université Numérique Francophone Mondiale (UNFM, 2003) ⁶ (World Francophone Digital University), the Pan African Virtual and E-University (PAVEU, 2017) ⁷ created as part of the Agenda 2063⁸ of the African Union, etc. All these are operational, yet studies have

³ DEPOVER C. (2008). « Formation à distance, multiples Sud », Distances et Savoir, Vol.6, n2. https://www.cned.fr/ds/vol6/nu-mero-2

⁴ EDOURAD M. (2018). « Mise en place d'un dispositif d'enseignement à distance par les TIC en Afrique de l'Ouest : le cas de l'Université Virtuelle de Sénégal ». Mémoire de Master, Université Panthéon-Sorbonne (Paris 1)

⁵ LOIRET P.-J. (2007), « L'enseignement à distance et le supérieur en Afrique de l'Ouest : une université façonnée de l'extérieur ou renouvelée de l'intérieur ? », Thèse de doctorat, Université de Rouen, 2007

⁶ UNFM, https://www.unfm.org/unfm/

⁷ PAVEU, https://paveu.africa-union.org/

⁸ Union Africaine, Agenda 2063, https://au.int/fr/agenda2063/vue-ensemble

shown they remain vulnerable to major problems such as being too anchored in an international logic, importing models from the North to the South, and being locked into purely technological approaches while what is at stake more concretely is a better intelligibility in the implementation of actions and in the governance of projects⁹.

The African and Malagasy Council for Higher Education (CAMES) also stands out as a key player institution in the African higher education ecosystem. Cames has published a large number of references in which it has expressed its interest in taking into account the ICTs aspect. "Such baseline will undoubtedly facilitate the better evaluation and supervision of ODL, and harmonise information systems as universities deal with the issue of massification, which requires a different type of governance and improved foresighting"¹⁰. In its latest Strategic Development Plan (PSDC 2020-2022)¹¹, CAMES focuses on the use of digital pedagogy in Higher Education and Research through a series of workshops, tools and resources ¹² for the benefit of its member Higher Education and Research Institutions. These tools and reference frameworks are considered to be one of the pillars in the implementation of the quality approach instruments, still a fundamental requirement for the education ecosystem in Africa.

Regarding distance education, the CAMES ODL reference framework provides a list of potentially useful complementary indicators for assessing both the level and the capacity to use digital content and technologies in pedagogical, research and administrative activities. It should be remembered that, within the scope defined for this Guide, it will not be possible to tackle the issue of quality assurance in detail, though there is an urgent need to operationalise a viable and standardised blended or distance learning programme. However, considering various testimonies, Africa in its various regions still shows a contrasted situation depending on the country. A general observation can then be made that "continuing open and distance learning [...] remains at an embryonic stage and its fundamentals are not well established in society, including among those involved in education...". However, the low level in the deployment of open and distance learning in continuing education contrasts with the stated desire of decision-makers to start their implementation in their respective countries"¹³. To this end, the countries concerned would lack context-specific models of arrangements, while considering their situation in terms of infrastructure, social anchoring of ICTs, the regulatory and legal basis and adequate human and financial resources as well.

In this context of higher education in Africa, La Francophonie, through its leading structures (AUF and OIF), has always provided extensive support to ODL projects. AUF

⁹ Edouard, Op.cit, p.33

¹⁰ CAMES (2014), "Référentiel pour l'accréditation des offres de formation ouvertes et/ou à distance (FOAD)"

¹¹ PSDC 2020-2023, http://www.lecames.org/wp-content/uploads/2019/09/PLAN-Strate%CC%81gique_Brochure_20-pages_VF.pdf

¹² Référentiels du CAMES, http://www.lecames.org/documents/referentiels-cames/

¹³ TONYE E., et.al. (2008), « La formation continue et à distance (FOCAD) en Afrique centrale : étude de faisabilité contextualisée », https://www.researchgate.net/publication/301564594_La_formation_continue_et_a_distance_FOCAD_en _____ Afrique_centrale_etude_de_faisabilite_contextualisee

currently supports more than 80 academic degrees at all levels (Bachelor's, Master's, DU, etc.) in various specialities, in partnership with universities in sub-Saharan Africa, in Europe, in Maghreb countries, in the Middle East and in the Indian Ocean. In its 2017-2021 strategy, the AUF expresses its desire to "set up new educational organisations by supporting new teaching methods using digital tools, digital learning spaces, online courses and educational resources, thanks to IFIC and next-generation CNFs"»¹⁴.

La Francophonie also works under the banner of the Parliamentary Assembly of the Francophonie (APF), which in July 2019 published its own resolutions on the use of digital technology for distance education and training in higher education in French-speaking countries¹⁵. It calls on "governments to make use of these tools to ensure the full impact of French-language education in the digital offer of higher education and Open and Distance Learning" and "States, in the face of increasing numbers of distance higher education offers, to provide themselves with an appropriate regulatory framework to monitor the quality of the teaching and learning".

The Francophone experience in education in the African context has met with considerable success through programmes such as the Francophone Initiative for long-Distance Teacher Training (IFADEM)¹⁶. Although offering a training system highly adapted to countries' educational and administrative realities, IFADEM has developed and combined active teaching methods, innovative technological means, part-time distance learning, tailor-made training content, local human resources and international expertise providing a model for many ODL university projects in Africa.

Distance education models would ultimately have become quite complex and diverse in nature to such an extent that they would seem unlikely to be harmonised and standardised in any way. In fact, rather than agreeing on a standard framework of a single environment that would be suitable for all scenarios; there is actually a great variety of tools and an infinite number of varied contexts in the face of which the only way to achieve coherence is to conduct an in-depth analysis of the state of the art, the needs and expectations of a target population in order to define the most relevant model of digital training offer. Nevertheless, it is essential not to limit ODL to a mere "material" observation and least of all to a desire to impose a top-down approach to organisational principles, to the negligence of local parties and to certain beliefs based on the consideration that the industrialisation of training is a means to compensate for the inadequacy of face-to-face offers through distance learning¹⁷.

¹⁴ AUF (2017), « Stratégie de l'AUF 2017-2021 », https://www.auf.org/wp-content/uploads/2017/04/Strat%C3%A9gie-2017-2021.pdf

¹⁵ APF (2019), « Résolution sur l'usage du numérique pour l'enseignement et la formation à distance dans l'enseignement supérieur dans l'espace francophone : Abidjan (Côte d'Ivoire), 8-9 juillet 2019 », https://apf.francophonie.org/IMG/pdf/11.4_cecac_-_resolution_usage_du_numerique_dans_l_enseignement-2.pdf

¹⁶ IFADEM, https://ifadem.org/fr

¹⁷ DEPOVER, Op. cit.

The aim of this guide is precisely to contribute to this African ODL ecosystem by proposing options that can be adopted and adapted within academic institutions as a complement to other ODL initiatives, projects and strategies at the national, regional or international level in collaboration with structures such as CAMES, AUF, OIF or projects inspired by the experience of IFEF¹⁸ and IFADEM. These structures inevitably have working guidelines that would be of great use to academic institutions.

¹⁸ IFEF, https://ifef.francophonie.org/node/31

Introduction to the guide

WHY & FOR WHOM THIS GUIDE?

A guide should be adapted to the needs of a community of practice expressing specific requirements to achieve identifiable and measurable objectives. This is the aim of this guide, which is aimed at a public of educational stakeholders, differing in terms of their individual prerogatives, yet sharing the same overall mission that of transforming, if not innovating pedagogical methods through digital education within the context of the emergence of States. However, given the wide variety of strategies for pedagogical change, this Guide focuses on the most recommended ones for the audience it is aimed at.

This guide is proposed as a theoretical, technical, methodological regulatory and framework document for blended and distance learning in university training institutions of La Francophone. To this end, it provides recommendations in line with the higher education reform projects of the Agence Universitaire de la Francophonie in terms of digital education policy. This can be of use to managers and decision-makers Higher in Education and Research Institutions on strategic issues (regulatory and financial) as well as to project leaders and lecturers/trainers on the technical and pedagogical aspects of blended or distance learning.

Note 1

We should point out that the taxonomy used in this guide switches between education and training depending on the situation. Generally speaking, training falls within non-school and non-academic institutions and includes continuing training for professionals, while education has to do with the transfer of knowledge in educational institutions in general. However, some universities may also provide continuing education for professionals...

This Guide is useful - from a theoretical and practical point of view - for people in charge of innovating the educational policies of their institutions and it may help in the design and implementation of ODL systems for the blending of existing face-to-face training.

Remember also that this Guide is not intended to be exhaustive and does not attempt to be consistent with all situations of very diverse natures. Nor does it seek to explore complex technical details, sophisticated pedagogical approaches, binding specifications, etc. Rather, it is aimed at a General public seeking appropriation in the field of digital education, facilitating the latter in several Higher Education and Research Institutions, with no major investment in terms of logistics and human resources.

More extensive resources, tools and services are available online as complements to the content for further upgrading. These include repositories of pedagogical competences, guides for designing pedagogical scenarios, normative documents for training offers, repositories for the design and use of



blended learning programme provided using technological means. The face-to-face part remains the responsibility of the teaching staff of each university. In this guide, the face-to-face format in a blended learning project is limited to the training of trainers work shops that would be conducted for the project team.

Open Educational Resources (OER) as well as Creative Commons licensing, for quality assurance and certification of pedagogical competences, etc.

All the above-mentioned resources will be needed once the basic objectives in the guide are achieved. The AUF is equipped to support institutions wishing to move to an advanced stage of ODL through the training of trainers, adapted reference frameworks and appropriate tools needed for this purpose.

STRUCTURE OF THE GUIDE

Given the criteria and conditions underpinning the AUF's support for blended learning, this Guide is structured in two parts:

- Part one: theoretical framework. This part will provide a preliminary analysis of the context of blended and distance learning according to the criteria and conditions required for such training. Of particular concern are the regulatory and legal framework, the business model, the pedagogical modalities and the technological environment needed to implement blended or distance learning within a higher education institution.
- **Part 2: practical elements.** This part outlines the steps involved in setting up an ODL project and its implementation. The aim is specifically to put forward practical elements for the planning of a project for the implementation of a blended or distance learning programme from the perspective of the management of a blended or distance learning project (i.e. specifications, operationalisation, experimentation, evaluation, validation and delivery). In this regard, the Guide provides the steps that will facilitate the AUF's support of such a project from the design to the completion.

Part one

General environment for blended or distance learning

T he advent of ICT in education and its impact on teaching methods and training offers goes along with some constraints. These have had a major impact on the governance models of universities and higher education institutions leading to new strategic alliances, consortia and autonomy. The two major factors that have most affected bimodal and blended distance learning are undeniably the legal framework and the economic model, which differ greatly from traditional educational models. Making the most of distance learning practices in terms of costs and the recognition of degrees issued have been among the stumbling blocks faced by actors involved in pedagogical innovation and ODL.

Four major aspects of distance learning should therefore be explored:

- 1. A regulatory framework often marked by a legal vacuum preventing several ODL projects from being completed and from gaining recognition for the value of skills and degrees acquired through distance education;
- 2. An economic model favouring equitable distance and face-to-face education Taking into account the specific nature in terms of distance and the methods to rationalise it from a time and cost point of view is another factor in attracting and motivating people, but one that is not yet widely practised;
- 3. Innovative pedagogical approaches making the most of the growing potential of digital technologies. Most pedagogical practices are still centred on the traditional use of educational technologies. Only very few take into account the added value of active learning.
- 4. Technological environments adapted to the contexts and profiles of students. As educational technologies are increasingly structured around innovative educational devices and digital working environments, many actors in education still rely on fragmented and poorly collaborative tools and resources.

ODL REGULATORY FRAMEWORK

KEY QUESTIONS



- Why is a regulatory framework important for ODL?
- How can regulatory compliance with a legal reference text be established?
- What types of ODL regulatory documents can a higher education institution produce and make use of?

GENERAL PROVISIONS

Education, like any other field of activity benefited from the gradual and widespread regulation of the digital world. Economy, health, administration, finance, transport, telecommunications, etc. all have adopted various forms of regulations structuring their modes of operation. Both international regulatory texts (conventions, agreements, treaties) binding on States (UN, ISO, ITU, IEC, EU, OECD, etc.) and national legal texts (laws, decrees, orders) or internal governance documents (circulars, internal regulations, prescriptions, directives, etc.), have defined procedures adapted to the use of digital technologies in different areas.

What characterises these different regulatory texts is their classification according to a

hierarchical order derived from the institutional position of their author. No text may be contradictory to a higher ranked one. The international conventions, for example, are known to have precedence over regional and national laws. At the national level, laws are voted by Parliament according to the Constitution, while decrees and orders are decisions taken by the President of the Republic or the Government (Ministers). Circulars, rules of procedure and memos are issued by directors and heads service.



Figure 1 : Hierarchy of legal texts

Higher education institutions are governed (like other institutions in the national public or private education system) by series of regulatory procedures which, among others, regulate their curricula and the degrees to be awarded after passing a State recognised and validated examination. These degrees are often placed under the supervision of the Ministry of Higher Education, which confers accreditation to award them. They give students/participants and employers the assurance of a qualification recognised by the competent ministries. The common rules of knowledge management and control applicable to the distance learning system in any university undertaking a reform, including ODL must, comply with the national normative and regulatory framework in force. These rules are subject

to validation by the internal governing authorities of the institution. They are common to all programmes (Bachelor, Masters and Doctorate degrees) and aim to improve, in line with regulatory provisions, the principles and practices of implementing the ODL system to ensure clarity, equality and transparency for students/participants and to support lecturers, researchers, jury members and administrative staff in this organisation and in the validation of the knowledge acquired through ODL.

GENERAL RECOMMENDATIONS

Given that ODL is not limited to a mere offer of

ODL REGULATORY FRAMEWORK

It is essential for the University to have a regulatory text (internal rules of procedure, development plan, action plan) listing ODL as a learning option. This should be based on regulatory and legal provisions inspired by a higher-ranking reference text (e.g. laws, decrees, circulars) failing this reference text, the University may explicitly specify in its internal rules of procedure or in a memorandum, to align the regulatory modalities of ODL with those of face-to-face learning. This initiative will therefore serve as case law for ODL.

online classes or educational applications, educational institutions need to be legally defined in terms of roles and responsibilities, operating resources and costs, the organisation and valorisation of results, etc.

Once formalised in compliance with the regulations in force, ODL :

- May respond to management problems (better moderation of teaching loads and reduced use of classrooms) without infringing the institution's administrative rules;
- Can be valued as part of the institution's quality processes and included in the strategic achievements of good university governance;
- Can lead to certification of the programme based on national or international standards;
- Would be eligible for funding in respect of the institution's teaching missions.

Defining a regulatory framework for ODL means prescribing additional conditions based on high level normative or legal standards:

- A training offer (mock-up) with precise information on the pedagogical activities to be carried out their modalities (ODL or blended) (ODL or blended), and the average time required to complete them: Blended learning or ODL has to be described in a working paper (mock-up/syllabus) and reported in the institution's reference documents (i.e. strategic development plan, action plan). The different stages of ODL, the phases of acquisition of theoretical knowledge, the practical exercises, the average time required for completion and the assessment methods must also be described in a sequenced manner and communicated to students;

- **A pedagogical system with proper assistance to support distance learners:** The ODL authorising officer is required to set up an appropriate framework (environment) to provide the required technical and pedagogical assistance to learners. This assistance, which involves support rather than supervision, implies ensuring that deployed resources fit in with the programme's objectives. These resources (material and human) include both the technological apparatus and the referents assigned to carry out this assistance (tutors, trainers, content experts, supervisors, technicians, etc.). Example: in a distance learning programme, assistance limited to an e-mail communication or access to a "hotline" with an automated response system could be deemed inadequate. It is therefore essential to set up a pedagogical system¹⁹ described in an internal reference document.
 - Modes of monitoring and evaluation marking out or endorsing distance learning: (formative*, summative*, certificative*, normative*, criteria-based*)²⁰ assessments make it possible to measure the academic learning outcomes, to survey the degree of learner satisfaction, to verify the achievement of pedagogical objectives and to ensure the quality of learners' professional skills. These assessment methods need to be reported and described in official documents of the programme (e.g. mock-up) or of the institution (e.g. action plan);
- A viable and equitable economic model : An ODL programme is conducted under conditions differing from those of a traditional classroom-based programme. Beyond the repeated questions about the effectiveness of procedures with regard to the monitoring and evaluation of learners, questions are often raised about indicators for measuring the time and the cost of teaching loads for content design, and mentoring. There are many possible scenarios. These differ from the private to the public sector, but all depend on the legislative provision of each country. In this respect, members of the strategic planning committees of academic institutions must be sufficiently well informed to draw up appropriate accounting lines for ODL in the light of the country's legal and regulatory texts (e.g. Labour code, finance law). These accounting lines should be viable and equitable between ODL and faceto-face learning to ensure the pedagogical and economic attractiveness of distance education. ODL slogan "anyone,anywhere, anytime" should not be an obstacle, but rather a motivating factor that is in turn governed by the "win-win" approach.

¹⁹ Definition of "system" by Michel Lebrun: "We define a system as a coherent set of resources, strategies, methods and actors interacting in a given context to achieve a goal", 2009. More precisely, it is "a set of actors (learners, tutors, training managers) and technical tools (pedagogical resources, communication resources, platforms) arranged in space and time, according to a learning goal".

²⁰ see. « Quels sont les types d'évaluation ? », https://www.onlineassessmenttool.com/fr/base-connaissances/base-de-connaissances-evaluations/types-evaluations/item10637

 A charter for the system : ODL is a training approach that involves meeting new behavioural preconditions to which the actors concerned must conform. These are often rules of good practice, codes of conduct or rules of ethics and deontology.

For example, a charter for a pedagogical system would contain details about commitments made by educators and participants with regard to respect for personal data and privacy, commitments made in terms of support and modes of interaction, etc. Sanctions are generally provided for any breach of these rules in ODL Community activity. This charter may not be inconsistent with the official documents of the institution (e.g. internal rules of procedure and action plan).



Figure 2 : Fundamentals of an ODL regulatory system

PRACTICAL MODALITIES

Compared to ODL, higher education institutions generally fall into one of the following configurations:

- 1. They have an operational ODL system, validated by stable internal and external regulatory texts. These institutions would be well-advised to improve their ODL system by complying with international standards and norms for quality assurance and certification (national, regional or international);
- 2. They have an ODL system and a distance learning department but do not follow blended or distance learning processes in line with international standards. These institutions would do well to choose first to upgrade their pedagogical methods and their teams of trainers/administrators involved in ODL;
- Their lecturers and learners make use of online (on social networks) available means and resources to practice ODL on a personal and random base. These institutions would be better advised to adopt ODL as a pedagogical option in their governance models and integrate it in their official documents (i.e. strategic development plan, action plan, internal rules of procedure);
- 4. There is no ODL or blended learning programme available either when it comes to choosing an institution or in non-formal teaching/learning practices. This may be due to various reasons, including lack of/poor Internet access, lack of accessible IT

infrastructure for all, poor skills in the use of digital technology for education purposes. This guide could trigger an application for the AUF support in setting up the first blended learning programme from an existing classroom-based training programme.

A rational approach to a blended or distance learning project should necessarily be based on the preparation of the regulatory framework that would legitimise the subsequent technological, pedagogical and economic options offered by ODL.

Regulatory prerogatives of a university!

Any higher education institution is entitled to produce a specific category of internal regulatory documents (strategic development plan, action plan, internal regulations, memorandum, minutes, etc.) based on high-level legal texts (Labour Code, laws, decrees, ministerial orders, etc.). In this case ODL can be instituted as a regulatory education option. Should there be no documents constituting a specific reference, the University may issue a case law document referring to general principles of the constitution or any other reliable national legal source in a related field.

SPECIFIC RECOMMENDATIONS

An ODL regulatory framework implies taking into account a set of parameters that need to be clearly defined in an official document:

- 1. Indications that ODL includes:
 - Appropriate technical and pedagogical assistance to support the learner throughout the programme;
 - Information to learners on the activities to be carried out remotely and their estimated average duration;
 - Assessments during and at the end of the programme.
- 2. Details on the pedagogical process of distance learning, including:
 - The work required of learners and the timescale for completing it;
 - Specific monitoring and evaluation modalities for open or distance learning sequences;
 - The organisational, pedagogical and technical support and assistance provided to learners
- 3. A description of how the programme is organised, in particular:
 - The skills and qualifications of those in charge of assisting the learner throughout the programme;
 - The technical arrangements used to support or assist learners, periods and places allocated to talk to the people in charge of assisting them or the available media to contact these people;
 - The timeframe provided for the assistance if not immediately provided.
- 4. Means for monitoring the pedagogical assistance (on the tutors' side) :
 - Attendance records and records of pedagogical assistance and support* kept on the technical platform;
 - Tutors' reports on the pedagogical activity and the work progress

- 5. Means for monitoring attendance (learners' side)
 - Electronic traces of activities in replacement of signing or roll call in classrooms;
 - Information and data related to the follow-up of the action, support and assistance to learners by tutors;
 - Data from specific assessments, carried out by tutors throughout or at the end of the programme;
 - Automated reporting by the platform

CASE STUDY: KEY REFERENCE TEXTS OF THE FRENCH LAW

KEY FRENCH LEGAL TEXTS ON ODL

- DGEFP Circular no. 2001-22 [of 20 July 2001] on open and/or distance learning "ODL": definition, provider obligations, cost liability over employer participation obligations. [https://travail-emploi.gouv.fr/publications/picts/bo/05092001/A0160004.htm]
- Decree No. 2014-935 [of 20 August 2014] on open or distance learning programmes ODL https://www.cpformation.com/decret-no-2014-935-du-20-aout-2014-relatif-auxformations-ouvertes-ou-a-distance/]
- Decree no. 2017-382 [of 22 March 2017] amending article D6353-4 of the Labour Code defining elements required as a basis for an existing ODL [https://www.cpformation.com/article-d6353-4/].
- Decree No. 2017-619 [of 24 April 2017] on the provision of distance learning in higher education institutions [https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000034485233/]
- Law no. 2018-771 [of 5 September 2018] for the freedom to choose one's future career. This law makes it possible to diversify how employees acquire their skills by opening up new prospects for open or distance learning (ODL), the organisational rules of which have been specified by a decree [https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000037367660/].
- Decree No. 2020-373 [of 30 March 2020] amending the Labour Code Section 1 : Distance learning (V).

EXAMPLES OF ODL CHARTERS AND RULES OF PROCEDURE

- Rules of Procedure of Continuing Education and ODL. University of Toulouse, 2018: https://www.ut-capitole.fr/medias/fichier/74-reglement-interieur-des-services-deformation-continue-et-foad_1530689647268-pdf
- L'École du Digital, Elabs Formation, 2020: https://www.elab-formations.com/regle ment-interieur/
- Charter for Distance Learning, Education Sciences Adult Education, University of Lille1
 http://master-ipm.univ-lille1.fr/sites/master-ipm.univ-lille1.fr/files/master-ipm/documents/charte_ipm_lille1.pdf

- Rules of procedure for OTC distance learning²¹: https://formationenligne.org/reglement-interieur-formation-a-distance-otc/
- Rules of procedure of Campus médecis: http://www.campus-medicis.com/ contents/en/d78_reglement_interieur.html
- Rules of Procedure of WPChef Formation SAS hereinafter referred to as the Training Provider: https://wpchef.fr/reglement-interieur/
- CNED : Rules of Procedure, Continuing Education: https://www.cned.fr/media/702604/reglement-interieur-fc-cned.pdf

ECONOMIC MODELS OF ODL

KEY QUESTIONS

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- Which economic model should be used for a digital transformation via ODL?
- What activities related to ODL should be remunerated?
- What exactly is being measured, monitored and therefore remunerated? Is it Attendance or learning?
- How should the time and cost of distance learning activities be calculated?

SIMULATION

The economic model of distance education is another stumbling block for public and private institutions due to a large number of variables difficult to be modelled and measured. This is one of the most complex missions of the ODL, which Arnaud Coulon and Michel Ravailhe called " Economie de dispositif de formation " (economy of the training system)²².

PUBLIC AND PRIVATE ODL

²¹ Instituts Sciences Campus, Burkina and the European Examination Centre. Instituts Sciences Campus are two private institutions under the supervision of the Ministry of Higher Education and Research of Burkina Faso.

²² Arnaud Coulon et Michel Ravailhe. « FOAD : économie des dispositifs et calcul des coûts ». https://www.centreinffo.fr/IMG/pdf/economie_et_calcul_des_couts_foad.pdf [Consulté le 05/01/2021]

There is more interest in a "business model for the digital transformation of learning programmes"²³ in the academic environment, which would suit the university's dual mission, first as a historic public service, but would also open up to paid continuing education in order to increase its own financial resources.

These are therefore two ODL systems governed by two distinct economic models: on the one hand, a social model less focused on profit, and on the other hand, a commercial model based on the ROI principle (return on investment).

The first model is almost exclusively the responsibility of Public universities (or a few associations), whereas the second one is common to the institutions providing continuing education as a lucrative service: private universities, specialised training centres, companies and, to a lesser extent, state universities.

In the first case, the value system and funding rationale of state universities, as well as purely administrative procedures for allocating resources, make it very difficult

to address the question of costs due to the complexity inherent to measuring the actual expenditure.

in the second, simply transferring or providing materials for educational purposes (textbooks, software, online classes, tests, etc.) must be considered as a supply of goods or services which must be recorded and priced in detail.

CONSTRAINTS AND DIFFICULTIES

Both public and private sectors however come together under a series of constraints making it difficult to reach a consensus on the same ODL economic model for either sector:

- Specific characteristics unique to each public or private institutions providing ODL programmes (target groups, resources, contexts, etc.);
- The variability of the time spent in distance learning and the associated uncertainty in its conversion and valuation in terms of labour/man hour costs;

Public or private !

The economic model presented in this guide focuses more on public higher education institutions, which generally have three different sources of income: State allocations, tuition and self-generated resources. State allocation remains the larg est source of funding despite the empowerment of some state universities and the no table influence of the private sector in distance learning.

This would mean that the resources actually allocated by public institutions and States for the promotion of this new model of education may not be fully supplied by private initiatives.

Observation!

There is a question arising as to the existence of a viable economic model for digital pedagogy in universities. Various studies have shown that such a model is possible, provided that conventional thought patterns are broken down and that the profound changes brought about by the new educational model are accepted.

²³ Eric Pimmel et.al, « Modèle économique de la transformation numérique des formations dans les établissements de 'enseignement supérieur », Rapport à la ministre de l'enseignement supérieur, de la recherche et de l'innovation, France, n°2019-094, IGESR, octobre 2019 [Consulté le 05/01/2021]

- The obsolescence of the traditional scale for calculating and paying for face-toface education is inevitably altered in the context of ICTs based distance education
- The monitoring methods in terms of attendance and participation of face-toface education are quite different in the context of distance learning.
- Specific remote monitoring methods (messaging, forum, virtual classes, instant messaging, etc.) are not recorded as regular virtual workload of lecturers...

In addition to these common constraints, various particularities lead to the differentiation of economic models between public and private ODL programmes.

SCENARIOS AND RECOMMENDATIONS FOR ODL ECONOMIC MODELS

Based on the differences noted in the organisation and functioning of state universities and private institutions, this guide outlines potentially suitable scenarios and recommendations for each model. Each institution is responsible for choosing a solution that fits its status and context.

■ ECONOMIC MODELS OF A PUBLIC (NON-PROFIT) ODL PROGRAMME

An ODL programme challenges traditional economic models and calls for new forms of organisation based on different scenarios. State universities are faced with a variety of complex situations when it comes to managing the economic aspects of blended or distance learning programmes :

 One of the most important tasks in an ODL economic model is measuring the time spent by lecturers/instructors in carrying out a digital activity. This issue applies to the design and use of content as

Time in the digital space!

The use of digital technology is shaking up the regulatory framework. Is time in the digital space specific? Should consideration be given to defining it and integrating it into services as a variable? What can we call this time transcending hitherto recognised and accepted borders?

much as to the support provided to learners (tutoring). Content can be designed once but repeatedly used and in different applications and situations. Virtual asynchronous* support time is also often difficult, if not impossible, to measure. This raises the question about recognition and payment for services rendered;

Only very few institutions are developing "Referential Frameworks based on Time Equivalence " to ensure a balance between classroom and distance learning activities. Existing reference frameworks tend to outline rather less operational guidelines related to specific contexts. This makes it very difficult to predict a uniform cost per hour of remote working time. Some institutions, however, have resolved to adopt values in line with their own contexts, based on structuring regulatory frameworks.

Below is an extract from the Order of 31 July 2009 approving the national reference system for time equivalence drawn up in France in application of paragraph II of article

7 of decree no. 84-431 of 6 June 1984 as amended, setting the common statutory provisions applicable to teacher-researchers and establishing the special status of university professors and lecturers²⁴.

PEDAGOGICAL ACTIVITIES						
Description of activities	Calculation method	Observation				
to be taken into account)					
 Designing and online delivery of a teaching or training module with no direct tasks regarding student support and assessment. 	 Identical flat rate/hour with that of classroom teaching. 					
 Responsibility for an Open and Distance Learning module or an alternative form of distance learn- ing involving direct assistance and assessment of students. 	 Adjustable flat rate depending on the nature of the programme, the time spent in the corresponding classroom activity and the number of students. 					
 Design and elaboration of new lessons or innova- tive pedagogical practices. 	 Adjustable flat rate according to the na- ture of the innovative activity con- cerned. 					
II. Mentoring activities for students in in	itial and continuing education as part of lea	arning and VAE				
Supervisor (including tutoring).	 Hour based Flat rate per student 	 All the activities men- tioned in paragraph II must be laid down in a charter drawn up by the institution. They can be adjusted ac- cording to the nature of the programm e and the field of study. 				
 Supervision of internships (on-site monitoring, student and tutor meetings, follow-up and re- porting) 	 Hour-based flat rate per student ac- cording to the type of follow-up on a minimum basis set by the BOARD. 					
 Educational visits with students. 	Flat rate per visit					
 Participation in active guidance and vocational integration activities. 	Time dedicated to these activities					
 Supervision of tutored, graduation and learning projects. 	 Hour based Flat rate per student 					
Supervision of dissertations and theses	 Hour based flat rate per student and per academic year 					
 VAE: personal support/assistance and participa- tion in academic juries. 	Flat rate for each person concerned					
III Responsibility for pedagogical structures or missions						
Coordination by external speakers.	 Flat rate according to the number of students supervised. 	According to the charter drawn up by the institution or the engagement letter.				
 Responsibility as a pedagogical team. 	 Flat rate according to the size of the structures concerned and the number of students supervised. 					
 responsibility for divison, course structure, de- gree, programme syllabus, certification, coordi- nation of internships. 	 Flat rate according to the size of the structures concerned and the number of students supervised. 					
Research supervision	 Flat rate according to the size of the structures concerned and the number of students supervised. 					

²⁴ Source : https://www.legifrance.gouv.fr/affichTexte.do?cidTexte =JO RFTEXT000020974583. [visited on 05/01/2021]

 Responsibility for a pedagogical and didactic equipment (e.g. platform for practicals). 	 Flat rate according to the size of the structures concerned as well as the technical nature of the equipment and the number of visitors. 	
 responsibility for international mobility 	 Flat rate according to the size of the structures concerned and the number of students supervised. 	
 Supervision of international pedagogical projects 	 Flat rate according to the size of the structures concerned and the number of students supervised. 	
 Partnership missions, relations with the environ- ment, actions to promote learning programmes. 	 Flat rate. 	
 Responsibility as a job placement office. 	 Flat rate according to the size of the structures concerned and the number of students supervised. 	
 Responsibility for a specific pedagogical mission approved by the BOD. 	 Flat rate according to the nature of the mission, the size of the structures con- cerned and the number of students su- pervised. 	

Table 1: National reference system of time equivalence, France, 2009 (Template)

Several other measures advocate the development and integration of an adapted ODL economic model in a public institution based strategy:

- Formalising in an official document the issue of time equivalence and combined face-to-face and distance teaching/lecturing. The overall tuition for distance learning programmes will depend on these equivalences and combinations. Compensation in the form of allowances, release time and compensation for academic resource designers, tutors and instructors, could save additional fees to ODL programmes;
- To this end, rethink the organisation of the learning programme by reducing, for example, the time spent on lectures and redistributing class hours so as to generate savings that can be redeployed on equipment, tutoring or academic content development;
- Considering changing the method used to calculate techers/lecturers' classroom time in terms of number of course units and student load in favour of greater flexibility and pedagogical innovation;
- Compensating for the shortfall resulting from these calculation methods, which may lead to a reduction in the volume of overtime, by proposing allowances for additional work and pedagogical innovation for example;

Precisions!

Allowance: certain functions in a time equivalence reference are subject to allowances (e.g. pedagogical responsibiity) which may be converted into release time.

(Classroom) Release time: the amount of time that a teacher can free up to carry out an assignment (e.g. Director of Studies). Some assignments (e.g. head of training division) can be broken down into two complementary activities: one associated with assuming responsibility and leading to an allowance and the other associated with carrying out the activity and leading to classroom release time. Also envisage a pooling of educational resources to save on costs of digital production: e.g. a shared internal repository of educational resources with a Creative Commons copyright policy model and a widespread international culture of Open Educational Resources (OER).

These general measures inevitably raise a key question: how should digital teaching/lecturing be measured and remunerated? The answer lies in the provisions setting out the teachers/lecturers classroom time as provided in the State civil service. It is therefore important to make

Observation!

The national and international standards for aligning time equivalences between the various distance and face-toface training activities provide institutions with substantial leeway and make it difficult to give a precise answer regarding time equivalences or time release in the case of pedagogical changes or the use of digital technology for lectures.

sure, based on the context that lecturers meet their statutory classroom time quota, considering possible compensation with regard to extras in an ODL programme. Teachers with non-teaching duties may apply for a compensation in the form of classroom release time from responsibility allowances.

Universities in general have opted for various solutions for the remuneration for online classes:

- The simplest option would be to consider one hour of distance learning as equivalent to one-hour lecture, based on the principle that one hour of planned model class is equivalent to one paid hour, regardless of the mode (face-to-face, distance or blended). no specific payment would be made for the development of resources or materials for blended or full distance education;
- In some cases, lecturers wishing to switch all or part of their classroom time to distance or blended mode, or to design digital resources resort to calls for proposals with external funding;
- CNED (National Centre for Distance Education) in France opted to pay content designers on a flat-rate basis. The principle adopted is to entrust authors with the design of content modules that are integrated into a reusable and therefore depreciable collective multimedia product;
- The University of Angers also has an encouraging policy in place and allocates 96 hours of tutorial equivalent time for the design of a 30-hour tuition;
- At the University of Tours, each completed hour of a Master's course using digital technology is worth 1 hour time release;
- The University of Strasbourg and the University of Paris 6, for their part, have opted for an allowance-based system to promote the development of new content.

In the end, each institution has developed and adopted their own set of standards with varying degrees of generosity and stimulation, depending on their strategy and context. The conclusion is that it is very complex to determine a per-hour rate for distance

education. Besides, only few institutions have been able to estimate the cost of digitisation successfully without much effort and countless obstacles.

In contrast to this, most scenarios suggest that :

- Fewer face-to-face lectures and tutorials (i.e. less Hour/Student ratio) results in time and cost savings. The latter savings may potentially be used for the development of more digital resources and the setting up of small groups for a better support through tutoring;
- A multiple-year financial analysis approach based on the fixed costs of the development phase and their depreciation over time is more recommended.

For more details on the experiences of French and other universities with the "Economic Models of the Digitisation of learning in Higher Education Institutions", see also the report n°2019-094, of October 2019, submitted by the Directorate General of Education, Sport and Research to the Minister of Higher Education, Research and Innovation in France²⁵.

ECONOMIC MODELS OF A PRIVATE (NON-PROFIT) ODL PROGRAMME

Private institutions adopt more precise and detailed economic models for their ODL projects than do public institutions.

In some private higher education institutions (e.g. Université catholique de Lille, Université Laval, École polytechnique fédérale de Lausanne, Université de Louvain, etc.), pedagogical investments are discussed annually between deans and lecturers. Lecturers have their annual service time defined taking into account the student load, the ECTS (credits) of the Subject and/or the nature of the planned innovation. For example, at the Catholic University of Leuven in Belgium, a lecturer-researcher is statutorily required to deliver five course units a year, but a one-course reduction is possible if the lecturer wishes to change his or her course unit (time release/conversion).

But the business sector leads the ODL market with different economic models, including the Activity-Based Costing method (ABC: *Activity Based Costing*)

When applied to ODL, the ABC method reveals the fact that the costs are not mainly based on outputs, but rather on activities generally broken down into three categories:

- Production activities directly contributing to the development of the ODL product/service. This may include the costs involved in the production of pedagogical materials (course units and multimedia resources to support pedagogical resources; quizzes, pedagogical activities, scripted or scenariobased lessons, assessment material for tutoring, etc.);
- 2. Support activities helping production activities to achieve the desired results. This may include, for example, the cost involved in logistics such as IT, clerical

²⁵ Eric Pimmel et. al, Op. cit.

work, as well as management and maintenance costs including form and content verification and validation, calculated based on negotiated hours or days/men or according to applicable fee schedule

 Structural activities contributing to the setting of objectives, the definition and implementation of learning programme and the monitoring of its performance. This can be assessed in terms of the cost/time both of the management team and the quality management team, etc.

a complete mapping of the training activities and their respective associated tasks must first be carried out in order to identify their respective costs and thus, a proper identification of the costs of the ODL programme through the ABC model, . The ODL

project supervisor must be involved in compiling the list of activities selected after any adjustments. In such cases, questionnaires and interviews play a decisive role in identifying the activities subject to costing

The following grid, drawn up as part of a cost analysis of an ODL learning programme at the University of Picardie Jules Verne in France²⁶provides a summary of the categories of activities requiring specific costs for a private ODL based on an ABC approach.

Precision!

Many State Universities seeking to achieve a financial stability and equilibrium through complementary own resources opt for a mix between a public and a private economic model (initial and continuing education). The point is that continuing education has the potential to generate additional income that could be used to develop quality digital re sources which may subsequently be recycled in initial learning programmes.

Activities	specific costs	comm	Total	
		Time spent	Amounts	
Facility set-up				
Advertising				
Compiling files				
Registering applicants				
Scheduling meetings				
Educational content design				
Uploading of lessons				
Coaching students				
Planning assessments				
Assessing students				
Total		100%		

²⁶ Arnaud Coulon et Michel Ravailhe. « Les couts de la formation ouverte et à distance : première analyse ». http://sup.ups - tlse.fr/documentation/docs/fich_118.pdf [Consulté le 05/01/2021].

Table 2 : Grid for identifying the categories of ODL tasks and costs allocation (Template)

It is clear from this grid (and the following one) that this model is aimed at describing tasks, a major part of which cannot be identified in a public economic model since it is part of the general expenses of the institution such as administrative tasks (e.g. "Advertising", "registering applicants", "planning assessments", etc.) or technical tasks ("facility set-up", "administering the server", etc.).

The following grid, drawn up in the same perspective of a privately funded ODL programme provides a more detailed list of activities and stakeholders in charge of those. Many of these activities are of an administrative, pedagogical or technical nature, which, in public universities, are not subject to specific expenses since they are included in the tasks of the competent services responsible for the general running of the institution.

	ACTORS INVOLVED IN AN ODL APPARATUS													
	N°	ACTIVITY TITLE	А	В	с	D	E	F	G	н	I	J	к	
	A01	Feasibility study of the project												A: Education manager
	A02	Setting up and testing of prototypes												
	A03	Development and organisation of the infrastructure												B: Project leader
	A04	Support the ongoing change												
	A05	Promotion of Open and Distance Learning												C: Coordinator/animator
	A06	Management of ODL input and output												
	A07	Instruction of files												D: e-Tutor
	A08	Creation and validation of contents												
	A09	Adaptation, integration and uploading												E: Teacher/Lecturer
	A10	Appropriation of contents												
5	A11	Training of actors												F: ADM
	A12	Information watching												
	A13	Reporting												G: Administrative
	A14	Regulation of the ODL system												correspondent
`	A15	Animation of the ODL system												H: Administrative staff
	A16	Publishing and updating of documents on server												(Accounting department)
	A17	Server administration												I: VOF committee
í	A18	Improvement and adaptation of existing resources												
	A19	Receive/welcome learners												J: CNED
	A20	Planning of ODL scenarios												
	A21	Support of learners												K: Learners
	A22	Preparing and animating groupings												
	A23	Provision of content on the platform												
	A24	Correction and publishing of exercises												
	A25	Preparation of tests												
	A26	Correction, validation and publishing of results												
	A27	Support learners' certification												
	A28	Evaluation and reporting on the experience												

Table 3 : Grid for identifying activities and their assignment to actors (Template; source : Arnaud Coulon et Michel Ravailhe)

The ABC method is based on an analytical approach that differentiates between costs, or expenses, along two different axes to estimate the actual costs of operations²⁷ :

- Direct and indirect costs ;
- Fixed and variable costs

	Fixes costs (Or structure costs) They remain constant despite variations in activity, but can produce threshold effects: for example, a training room will be adapted to a given number of trainees.	Variable costs (Or operating costs) They are variable according to the activity level: depending on the volume of training hours, the number of trainees, the number of groups, etc.
Direct costs They have a direct link with the training action.	 Staff expenses Project supervision, development of pedagogical resources Purchase/production of digital pedagogical resources (licences/maintenance) Purchase of tools - the training platform (LMS) - or renting (in case of a fixed cost, regardless of the number of learners), maintenance Premises: Training room, computer room/multimedia resource centre for the programme Communication expenses 	 Staff costs: instructor, coach, tutor, pedagogical coordinator: syllabus prescription, disciplinary tutoring and support for learning methodology (synchronous* and asynchronous* time schedules) and the syllabus, running pedagogical sequences in person or remotely in the form of virtual classroom Licensing of multimedia pedagogical resources Pedagogical resources and documentation or support materials provided to trainees (copying, sharing)
Indirect costs They are common to various operations in the organisation of a training activity They are carried out according to distribution keys. The learning activity covers "its fair share" of the overall structural expenses	 Structure costs Support functions (administrative and technical services), supervision (director and education manager); Cost of non- educational premises Equipment depreciation (e.g. IT equipment) Staff training 	

Table 4: Costs for the provision of an ODL $\mathsf{Programme}^{28}$

Based on this non-exhaustive grid, the ODL project steering team should set cost indicators to measure the performance of an activity and represent its resource requirements. Cost indicators may be compared to a work unit (according to the institution's general chart of accounts) the standard unit of measurement notably used to determine the cost of a service provision.

■ GRID FOR THE CALCULATION OF COSTS FOR A PRIVATE ODL (TEMPLATE)

Summing up the costs of a private approach to ODLF, the Vademecum of Good Practices on the Financing and Implementation of ODL of the "French Forum of Digital Education

²⁷ For a case study of the application of the ABC method, see Arnaud Coulon et Michel Ravailhe. « Les couts de la formation ouverte et à distance : première analyse ». http://sup.ups-tlse.fr/documentation/docs/fich_118.pdf [Consulté le 05/01/2021].
²⁸ Financing and implementation of ODL : Vade-mecum des bonnes pratiques. www.una-univ-bordeaux.fr/Dow-nload/News/Info/document/233.pdf [visited on 05/01/2021]

Actors" (FFFOD) sets out a list of benchmarks that would facilitate a more precise identification of costs of ODL according to the strategies and methods chosen including media²⁹. None of these costs should be left out unless there are no resources available for their implementation.

	- Designation of the second seco
Charges for the device	Project steering, management and evaluation
charges for the device	 Training of trainers and coaches in the use of the devices deployed
deployment	 Training of trainers and coaches in the pedagogical methodologies
	inherent to each device
	 Communication on the device to partners, prescribers, donors and the
	general public.
	 In-house production of resources
Costs for the deploy-	 Outsourcing production (tailored content or mediatisation of existing)
ment and maintenance	- outsourching production (tanoicu content or mediatisation or existing
of pedagogical resources	content)
	 renting or purchase or oπ-the-shelf content A deption of the second secon
	Adapting certain resources to new distribution channels (e.g. adapting a
	resource for use on a smartphone)
	 Regular updating of product information
	⇒ Regular updating of product information
Casts for the deploy	 Renting or purchase of a content distribution platform
costs for the deploy-	 Deployment of a website and mobile applications
ment of pedagogical re-	 Content integration time in the various distribution media
sources	 Maintenance, technical support, integration of updates of the selected
	devices
_ .	 Pedagogical follow-up: support to achieve the learning objectives
Trainee support costs	• Technical follow-up: support in the use of learning access tools (use of a
	computer, a mobile phone, an LMS platform, social networks).
	• Administrative follow-up: support for the validation of the smooth
	running of the learning programme, especially among prescribers and
	donors.
	\Rightarrow Variable costs based on the level of personalisation and the extent of the
	support provided
	Support provided
General costs	Fixed costs of the structure in terms of stan, premises, IT equipment to be elemented according to coole recovered distribution models.
	charged according to each resource distribution method.

Table 5: Costs for the provision of an ODL Programme

■ **RECOMMENDATIONS**:

The design and implementation of a distance learning system generally requires two types of costs: investment and operating costs³⁰.

²⁹ Financement et mise en œuvre de la FOAD - Vade-mecum des bonnes pratiques – FFFOD, octobre 2011. <u>http://www.fffod.org/ressources/article/vademecum-financement</u> [visited on 05/01/2021]

³⁰ Drissi et. al. « La formation à distance, un système complexe et compliqué », 2006. https://www.epi.asso.fr/revue/articles/a0609b.htm [Consulté le 12/12/2020]

– Investment costs:

- Resource expenses (purchase of documentaries from a television channel, purchase of books, scientific journals, etc.);
- Expenses for IT equipment (server, Internet connection, computers for graphic design, camera, frame grabber, etc.) and pieces of software (graphic design software, system software, video editing software, etc.);

- Operating costs:

- Costs related to the volume of hours claimed by tutors, lecturers-tutors, the education manager, the administrator, etc.;
- Expenses related to students group sessions, expenses for certain services ...

With a view to anticipate the costs of the distance learning system, it is recommended to:

- Anticipate both costs at the earliest possible stage;
- Anticipate both costs with precision and rigour by:
 - Listing the departments that might contribute and proposing arguments to get them to embark on the project (Business plan);
 - Using open source software to lower investment costs and involve associations in the co-financing of the project;
 - Reducing the number of working hours per tutor to lower operating costs by increasing learner autonomy through the improvement of the platform (communication tools, etc.).
- Anticipate costs by considering the lectures/tutors offers and, above all, the number of hours as compared to those of traditional learning programmes.

Similarly, the university must allocate part of its budget to tutoring and the design of learning modules for the project. These are hidden costs often related to the administration of the learning programme via the platform, to the sensitisation and co-ordination of support staff, and to the updating and maintenance of the system.

PEDAGOGICAL APPROACHES TO BLENDED AND DISTANCE LEARNING

KEY QUESTIONS



- How to combine face-to-face and distance learning modes?
- How are ICTs altering teaching and learning for both lecturers and students?
 - What does digital education offer as new pedagogical skills?

GENERAL FRAMEWORK

The integration of ICTs in education, from the first generation of correspondence courses started in the 1840s to modern interactive media technologies and the Internet, has brought about profound changes in pedagogical activities of teachers and learners/students. Ranging from face-to-face teaching methods to complete distance teaching methods, a wide variety of ICTs based pedagogical approaches are now commonplace.

Face-to-face learning is the most traditional approach to education and learning, with a direct, essentially transmissive interaction between the teacher/lecturer and the class. Distant education, for its part, offers various methods to set up ICTs-based learning (cf.

box). Apart from the fact that it is suitable for all numbers of students, there is a wide range of possible teaching and learner options. But the greatest advantage of distance learning lies in adaptive* or personalised learning whereby the computer is used to provide distinctive content based on each learner's progress rather than a onesize-fits-all approach. It provides learners with the opportunity to showcase their talents and learn at their own pace and convenience. An ODL focusing on the integration of ICTs ensures a better adaptation and modularity respectively to the individuals and to the training. It takes into account the unique individual and collective dimensions of people, and is based on complementary and multiple learning contexts in terms of time, place, human and technological pedagogical mediation and in terms of resources as well³¹.

Three major teaching options using ICTs!

- Full distance learning: students learn online with 24/7 access to courses and activities via a web browser;
- Blended learning: a learning modality combining face-to-face and online learning;
- 3) Comodal or bimodal learning: each session is offered in two modes, face-to-face and distance learning and requires a simultaneous management of face-to-face and synchronous virtual class (livestrearning) and an asynchronous online class (video-recording of sessions and online activities).

Guide for a blended or full distance learning project
PART ONE: GENERAL ENVIRONMENT

³¹ Open and distance learning L'accompagnement pédagogique et organisationnel. Conférence de Consensus, 27, 28 et 29 mars 2000. Collectif de Chasseneuil.

Distance teaching therefore implies the adoption of new pedagogical approaches based on an understanding and mastery of two essential notions: space and time.

While the unity of time and place has long been constitutive of teaching, digital technology is altering spatial-temporal significantly these references. Learning no longer takes place in an institution. The training can therefore be carried out in a virtual space with no face-to-face interaction. Teaching no longer takes place according to a fixed weekly "timetable". It now takes place according to two time patterns which synchronous* and asynchronous* time patterns.

WHAT IS FUNDAMENTAL IN DISTANCE EDUCATION?

Three distance modes

- Moving from a lecturer-centred teaching to a learner-centred, more active and interactive learning model;
- An increase in interaction between learner/lecturer, learner/learner, learner/content and learner/external resources;
- Integrated formative and summative assessment mechanisms for learners/students and lecturers.

ICTs are designed to ensure that learning takes place at the pace and convenience of the various actors involved (lecturers & learners/students). Distance (virtual spaces) and time lag (asynchronous communications*) are some of the key factors differentiating distance education from classroom-based learning. However, these factors require preparation and predisposition at various levels that would either success or failure factors as regards adopting a distance learning system. The switch to distance learning is a multifaceted process, which affects both the structural environment and the teaching practices of both lecturers and students:

ODL AS AN INNOVATIVE PEDAGOGICAL PRACTICE FOR LECTUR-ERS/TEACHERS.

It is essential to regard distance education as a major change in pedagogical practices. This should not be simply considered as an extrapolation of teaching and learning practices from a face-to-face based model to a distance and ICTs based model. When choosing distance teaching the pedagogical process should also be modified with regard to the methods and means used to transfer knowledge as well as modes of interaction with learners, learning monitoring and assessment methods. These changes will be carried out on four fundamental aspects of distance learning, namely the educational content design, the scenario-based design of learning pathways, tutoring and assessment. Each of these four aspects involves new pedagogical specificities in comparison with face-toface teaching as a result of ICT use:

- Pedagogical content design brings in the notions of granularity* (modularity/detailed segmentation) and metadata description of resources to facilitate their re-use and adaptability to any other learning context;
- The scenario-based design of learning pathways facilitates the integration of interactive activities into learning content, enabling learners to carry out activities to

achieve the educational objectives expected at the end of a context-specific learning programme;

- Tutoring provides support for learners. It can be carried out by Somebody else than the person responsible for the design of the course and the pedagogical scenario. In addition to the pedagogical task of supporting the transfer of knowledge, distance tutoring helps to manage socio-affective situations with a view to addressing noted cases of learner's passivity, demotivation or drop out, by proposing individualised support methods (individualised pathways);
- The assessment of/for learning introduces formative assessments* (self-assessment) and collaborative assessments (group dynamics) in addition to summative and individualised assessments which are specific to face-to-face learning.



Figure 3 : Key aspects of pedagogical action in distance education

ODL: AN INNOVATIVE PEDAGOGICAL PRACTICE FOR LEARNERS

Based on the definitions of theorists in the field, five fundamental concepts of ADF can be identified:

- The separation between trainer and learner, i.e. the geographical distance which is the first distinctive feature of ODL. Yet the separation is not only physical for the learner. They may also be pedagogical, technological, psychological and cognitive;
- The separation between the learner and his/her peer group ;

Given these two criteria, there are two major factors to be considered in the pedagogical impact of ODL on learners: autonomy and collaboration:

– Autonomy: Emphasis is placed on autonomy in ODL to better democratize this experience where learners explore and show strong levels of understanding related to concepts and knowledge construction. Learners should be able to gradually take control of their learning process without continuous lecturer/teacher assistance for the sake of autonomy. This requires personal initiative, critical thinking, mastery of tools and devices, and constant self-assessment; otherwise the risks of demotivation, dropping out and abandonment are on the rise.

Empowered learning pathways with regard to educational content designers (granularity*) and related activities (e.g. specific issues/contexts) for the learner to build a personalised pathway according to his/her needs and profile³². Jacques Rodet identifies three aspects on which learners can exercise their autonomy: their interactions with peers (communicative aspect), tutoring (support), course content and modularity (granularity)³³.

Some recommendations would be helpful in creating personalised learning pathways:

- Consider the general learning objectives when suggesting an individualised pathway to learners;
- Give learners the impression they have mastered their ODL experience by allowing them to choose what activities to do and progress at their own pace rather than telling them how, what and when to do them;
- Emphasise the importance of online self-assessments that enable them to assess their own progress and understanding of knowledge;
- Develop periodic assessment mechanisms to help learners check their progress along the way and make sure they are on the right track;
- Respond to a range of different learning styles according to learners' personal preferences or learning styles by offering a wide range of activities and exercises to choose from
- Provide immediate constructive feedback in the form of orientation and feedback system
- Report on learning pathways to identify the most typical and atypical learning behaviours for future improvement of ODL.
- Collaboration: group dynamics and collaborative work. Group activities range from informal discussions to highly structured collaborative group activities. This is referred to as active pedagogy. The research concludes that the lack of natural group dynamics in ODL may lead to learners' isolation. Collaborative learning is about providing learners with a sense of community. They are given an active role and

³² Mamadou Touré, M. « La place de l'autonomie de l'apprenant dans la conception des formations ouvertes et à distance en Afrique de l'Ouest. Revue internationale des technologies en pédagogie universitaire, 11 (3), 22–37, 2004. https://doi.org/10.7202/1035701ar [Consulté le 22/12/2020]

³³ Jacques Rodet. « Autonomie et métacognition des apprenants à distance. Chroniques et Entretiens. La formation à distance », 2005, http://jacques.rodet.free.fr/chronent.pdf [Visited on 22/12/2020]
responsibility. Opting for a collaborative and/or community-based pedagogical focus is in line with the most commonly used learning theories when developing online learning environments: behaviourism, cognitivism, connectivism, constructivism* and social-constructivism*. Its main objective is to prevent isolation. Difficulties and risks associated with the implementation of this type of pedagogy should not, however, be ignored. The documentation and feedback provide substantial details on the characteristics of individual and group support for ODL learners³⁴.

WHAT ABOUT PEDAGOGY IN A BLENDED APPROACH?

Blended learning is the combination of online electronic media and traditional face-toface learning methods. Given that it combines the advantages of face-to-face pedagogical theories (behaviourism, constructivism*, social-constructivism*, etc.) with those of digital tools/devices, blended learning is considered to be one of the most appropriate pedagogical models to be adapted to a large number of profiles and contexts.

The main issue in a blended learning system is to combine both face-to-face and distance approaches using digital technologies.

One of the common understandings of blended learning is its comparison to a "flipped classroom" model*, as it changes the traditional learning environment by provision of the most part of the pedagogical content before classroom sessions thus turning classroom sessions into supervised learning sessions.

The risk with this kind of blended learning approach would be to implement it without mastering the necessary pedagogical implications of this combination. Many lecturers simply copy their face-to-face teaching practices onto distance learning tools/device, such as filming a one- or two-hour face-to-face lesson (the length of a classroom session) and then uploading it on a video platform or on social networks. Others simply send e-mails with course syllabi in PDF format attached thereto.

PEDAGOGICAL MODALITIES OF BLENDED LEARNING

However, there are various ways of integrating ICTs in education, ranging from full faceto-face to full distance learning The noted degree of blended learning is generally measured in terms of the proportions between face-to-face and distance learning. There are many combination alternatives, and this makes it complex to choose a specific approach to suit a training course for a given category of learners. Finding the right balance between two types of activities is part of a blended learning type Serge Leblanc (University of Montpellier) has developed based on exponential support for face-to-face learning through digital distance learning processes:

³⁴ Hugues Choplin, et al. « Concevoir et mettre en œuvre des dispositifs de formation ouverte et à distance - rapport final de recommandations ». 2002. edutice-00000627 [visited on 22/12/2020]

- Improved face-to-face learning with multimedia supports: classroom use of multimedia resources by lecturers and/or learners. Example: Use of slideshows, internet resources (manufacturer's documentation, installation instruction videos).
- Improved face-to-face learning pre-session or inter-session work : Lecturers and students each have an electronic mailbox. Lecturers make various resources available online to students before and after every class.
- Alternate face--to-face learning Organising lectures alternating between face-toface and distance learning.
- Reduce face-to-face learning: The main part of the programme is classroombased. Self-learning, in te form of individual or group work.



Figure 4 : Blending levels of learning, from full face-to-face to full distance

ODL & MICRO-LEARNING

Young people have less interest in spending time watching video-conferences or reading endless books. They prefer immediate use or application of knowledge and need to learn anytime and anywhere. They are more active when it comes to choosing the knowledge and skills they believe will be useful in the short term. As such, microlearning provides short sequences of content learners can study at their convenience. Content may come in many forms, from simple text to interactive multimedia, yet should always be short-form content. This is a learning approach based on delivering knowledge in short and highly purposeful units. This is the ideal way to find a rapid solution/answers to specific problems.

The key features of a microlearning module are :

- Time: microlearning is performed in short time bursts. A typical module can be completed in about five minutes. The time limits range between 1 and 10 minutes;
- Focus: each module provides a precise answer to a unique problem or question;
- Variety: Microlearning content types include video tutorials, audio podcasts, presentations, interactions, plays, simulations, scenarios, assessments, text-based work tools and short online courses;
- Adaptability to mobiles devices: content is designed to be accessible when needed thus making it an ideal way to learn on a smartphone or tablet.

Inspired by MOOC (Massive Online Open Course) as open and massive online learning accessible to an unlimited number of learners, microlearning can take the following forms:

- SPOCs (Small Private Online Courses): are deliberately designed for a limited number of learners to encourage individual and collective exchanges throughout the learning process;
- COOCs (Corporate Online Open Course): "Corporate" refers to the private and professional aspect of the COOC, which make it different from MOOC. Online courses are therefore not developed by instructors or lecturers, but by professionals in the sector (employees, managers, experts) in charge of highlighting one or more aspects of their field of expertise. They also follow the same structure as MOOC at university level and the same four characteristics: be web-based, collaborative, include assessment modules and be time-limited;
- SOOCs (Small Online Open Courses): similar to MOOC in the sense that it is open and free, but with two notable differences. At first, it provides highly specialised expertise, which naturally limits the number of participants. Furthermore, they provide more collaborative tools to promote social learning and therefore the sharing of good practices among experts.

All new forms of ICT-based learning programmes are geared towards a common paradigm: serving learners in the best possible way and placing them at the centre of the pedagogical system deployed. This objective is at the heart of the new learning methods falling under the label of "Active Pedagogy".

ACTIVE PEDAGOGY

The aim of active pedagogy is to make learners play an active role in their own learning process, helping them to build their competences in real-life or near-real-life situations. Adopting an active pedagogy therefore involves ensuring that learners acquire knowledge by actually doing something worth it.

The value of this type of pedagogy does not lie in the fact that the learning process is action-based, but rather that the search for results encourages learners to think, to question what they have learned and to look for alternative approaches³⁵. Concretely, active pedagogy involves materials such as business oriented games, simulations, case studies, tutorials, or real work situations, problem solving, project-based teaching and case studies, synchronous cooperation and collaboration, discussions and debates, role-play and simulation exercises, serious games, flipped classroom*, etc.

GENERAL RECOMMENDATIONS

One of the advantages of blended learning is to bring both worlds closer by introducing forms of distance learning in classroom-based learning which is in turn moved away from old paper-based solutions by now uploading digital media in different formats on virtual platforms. But a blended learning strategy can only be developed in case teachers/educators' communities are willing to embrace change.

Various recommendations can be made for a successful blending process.

- Develop blended learning to meet local, community or organisational needs rather than using a generic approach;
- Start with a strong basis in e-learning pedagogy and technological knowledge ;
- Use a modular design: a blended course composed of separate modules or blocks is easier to update as the instructor gains experience and finds ways to make gradual improvements;
- Initciate a pedagogical interdependence between classroom and online activities;
- Get the right combination of content and activities to create a balance between interactions with teachers/lectures and learners' autonomy ;
- Consider blended learning as a process of scientific remodelling, reshaping courses rather than simply introducing technology;
- Change learners' perceptions of blended learning as involving fewer classroom sessions and therefore less work;
- Make sure that the combination of virtual and physical environments is based on an understanding of the strengths and weaknesses of each environment as well as the appropriateness of the option for learners;
- Provide feedback on the quality of online and classroom discussions both for faceto-face and distance learning activities.

³⁵ La pédagogie Learning By Doing, https://www.learningbydoing.fr/pedagogie-active/. [Visited on 26/12/2020]

TECHNOLOGICAL ENVIRONMENT FOR A BLENDED OR DISTANCE LEARNING

KEY QUESTIONS



- Which technological environment would be suitable with regard to each pedagogical modality?
- What hosting plan is needed for an LMS: dedicated, shared or cloud-based?
- What type of equipment would be appropriate for learners?

GENERAL CONTEXT

Teaching with digital educational resources, both face-to-face and at a distance requires tools and technologies ranging from a simple mobile phone to a more complex device of networked machines, collaborative platforms and multimedia pedagogical resources. Using specific tool(s) for distance teaching depends on the context, objectives and capacities of both teachers/lecturers and learners.

There are countless technological solutions and scenarios for their introduction in the field of education to the extent that each experience is unique according to its objectives, context, audience and resources. It is however possible to categorise these experiments on three scales of technological sophistication:

A golden mean

In this guide, the orientation is to remain within the technological happy medium of ODL solutions to try to meet a reality that is neither below the aspirations of universities (especially in developing countries), nor below their very technological and financial means.

- 1- Individual and separate initiatives not part of an institution or group-based strategy. Given the global ubiquity of digital technologies, especially mobile technologies (smartphones, tablets and laptops), any teacher/lecturer can bring their own ICT social practices into line with educational activities aimed at their students. They therefore introduce a certain degree of virtuality into their teaching practices to create improvised hybridisation. This is a primitive version of what is now emerging as "social learning";
- 2- Institutions adopting distance learning and integrating it as a module in their digital information systems in the form of technological environments designed around pedagogical platforms such as Moodle, Blackboard, etc. and supported by continuous training and skills development programmes. This is the most popular solution, halfway between the improvisation of individual initiatives and the procedural rigour of large-scale projects with massive technological investments;
- 3- Projects and programmes dedicated to distance learning through the development of learning centres or connected third parties open over a maximum range of hours and favouring the well-being of students, project-based work, the use of advanced

technologies such as connected devices, 3D immersion, artificial intelligence, big data and *learning Analytics*. These solutions are generally developed by companies and projects with substantial financial and technological investments.

Actually, there are so many technologies to select and combine for blended or distance learning depending on the context. The current massive rush to digital education and distance learning, besides being propelled by the Covid-19 crisis, is due to solutions that have become less expensive and increasingly manageable for large and small cohorts of learners. This also means more alternatives for teachers/lecturers to reach distance learners who do not have the means to, or are not in a condition to come to the classroom.

It is essential in any project to set up a blended or distance learning programme to consider both what is available in one's own educational environment and what is offered on the networks in order to better respond to contextualised learning situations. Hybridisation is now a broad canvas of office, mobile and cloud-based technology combinations in various blended learning methods.

HYBRIDISATION, A MULTI-MODAL TECHNOLOGY

Blended learning, a Multimodal technology

Once a technology, no matter how simple, is used to relocate and defer a pedagogical activity from the space/time frame of a classroom, it systematically leads to blended learn ing. Blended learning mechanisms are the most widely used today with a wide variety of combinations of office, cloud-based, mobile, social networking and other technologies.

Teaching/lecturing in a blended or full distance mode no longer requires significant investments in technology thanks to solutions that are accessible to all budgets. Cloud computing and mobile technology provide opportunities for projects with low budget.

CLOUD LEARNING OR WEB LEARNING

Cloud learning is a distance learning device using cloud computing resources (i.e. the use of remote servers to store content accessible to many people). During the Covid-19 crisis in 2020, a massive rush to web-based and cloud-based educational services brought to light the value of online software tools and services (Webservices) such as Google Classroom, Microsoft Teams, etc. and cloud storage services (e.g. Dropbox, Hubic, etc.) to ensure pedagogical continuity, at risk due to the confinement measures imposed on educational institutions.

Cloud learning is based on few key principles:

- Have a permanent and quality Internet connection to access and download multimedia resources (text, image, sound, video). These resources are often adaptive (adapted to PCs, Tablets and Smartphones);
- Have a terminal adapted to connect depending on the context (PCs, Tablets, Smartphones);
- Have an account on Cloud servers to access a large number of services (free or paid) that support e-learning: video conferencing tools and software (e.g. Zoom, Google

Hangouts), online virtual classes (e.g. Google Classroom, Microsoft Teams), data backup tools (e.g. Dropbox, Google Drive), etc;

Cloud computing introduces an efficient scaling mechanism that enables the development of an e-learning system to be outsourced to providers offering different levels of service performance, ranging from the basic and free to the highly sophisticated with significant financial compensation. An e-learning system based on a cloud computing infrastructure is now reliable and can greatly enhance the management capacity of the educational system and establish a win-win situation for suppliers and customers.

It is easy to draw parallels between the benefits of cloud computing and the advantages of blended learning: reduced physical infrastructure costs, thus lower operating and maintenance costs, rapid deployment, scaleability, configurability, mobility and permanent access to high-performance materials and applications via single access points.

The advantage of Cloud learning lies in the fact that most learners have smartphones and other devices connected to the Internet. As a result, another form of so-called mobile education is likely to be widely developed.

MOBILE LEARNING

Blended learning relies primarily on access to technology, but not all institutions have appropriate technological options. However, nearly all students have a fully equipped computer and a mobile phone equipped with Internet access for research and access to educational applications.

Mobile learning, also known as m-learning or nomadic learning, has greatly gained in pedagogical maturity and remains at the heart of blended learning bringing in a variety of modalities inaccessible to desktops. Becoming increasingly intuitive, it provides shorter, less complex and less time-consuming learning formats, allowing continuous access to knowledge thanks to its adaptability to any mobile device: smartphones, tablets and laptops. It thus enshrines the principle behind the slogans "study where you want and when you want" and BYOD (Bring Your Own Device).

Mobile learning proves to be of great benefit to geographical areas with little or no connectivity. In Africa, in particular, where 60% of the population lives in rural areas³⁶, Internet access is hindered by the rising cost of education and the lack of proximity to schools. Both obstacles can be addressed by means of mobile technology. An

appropriate use of mobile phones in classrooms needs to be taught and encouraged to make sure these are well integrated into learning styles, and not repressed as is still common practice in many school institutions. There are, however, a few steps that need to be taken before an m-learning environment can be set up:

Measure 1 - Identify the need and analyse the audience: the aim is to check if there is a need for mobile learning in the institution. To this end, it is

BYOD !

BYOD ("Bring Your Own Device"), French translation : PAP ("Prenez vos Appareils Personnels"), consists of allowing learners to bring their private mobile devices to class provided that the institution examines the implementation of data security measures, risk reduction, privacy safeguards and compliance with the reference texts in force.

important to identify gaps in existing training methods and to consider how mobile learning can fill these gaps. It is especially important to check if the target audience is ready for m-learning and are familiar with using mobile devices;

Measure 2 - Costing: this involves estimating the cost associated with the implementation of mobile learning, taking into account, the development of adaptive content*, possibly the cost for integration into an LMS, and the hardware cost of both mobile devices and related infrastructures (e.g. network & telecom connectivity costs);

Measure 3 - Choosing devices: this involves making a choice between purchasing mobile terminals for learners (as a connected classroom) or opting for a BYOD strategy (see precision box);

Measure 4 - Design adaptive contents*: in case of BYOD, it is important to plan contents adapted to the size of the devices used and use tools providing adaptive performance;

Measure 5 - Selecting the right delivery method: This involves choosing a content delivery method that is simple and suitable for medium bitrates and medium resolution displays.

GENERAL RECOMMENDATIONS

A technological environment for a learning device requires special measures on several scales: operationalisation, maintenance, use and training/learning.

A technological apparatus intended for blended or distance learning is often an integral part of an institution's general information system. Special measures are therefore needed for the pedagogical activity³⁷ :

³⁶ Oluwatobi, Stephen, et Isaiah Olurinola. « Mobile Learning in Africa: Strategy for Educating the Poor ». SSRN Electronic Journal, janvier 2015. ResearchGate, doi:10.2139/ssrn.2606562. [Visited on 22/12/2020]

³⁷ Recommandations visant l'utilisation optimale des technologies d'aide à l'école. Réverbère, https://www.periscope-r.quebec/sites/default/files/recommandations_technologies_daide_a_lecole-30505-4.pdf [Visited on 15/12/2020]

- Make sure that the technological equipment of the institution meets the operational needs of distance education (e.g. student database, registration systems, remote access to course content, appropriate software to manage distance education such as an LSM system, etc.);
- Make sure that the premises dedicated to distance learning are provided with electrical and computer resources (e.g. power sockets, Wifi terminals, network plugs, etc.);
- Ensure a controlled and free access to an Internet network in all premises used by learners, if not in the whole institution;

The technological equipment of a pedagogical device needs to be permanently maintained:

- Ensure a regular renewal of technological equipment needed by learners on site (computers, software, headsets, tablets, microphones, etc.);
- Make sure that there are technical staff available on site who are able to solve technical problems related to the equipment used to provide tuition, update the software and equipment on a regular basis, etc. ;

The use of a digital teaching device requires considering the following measures:

- Ensure continued on-site access to technological resources for learners as needed (an open access space/room);
- Approve the use of learners' personal technology equipment for online learning activities (with tight security measures);
- Approve the use of learners' technological equipment from outside the institution, i.e. access in Virtual Private Network (VPN) mode which provides secure access from an external access point (home);

The proper management and use of a digital teaching system requires specific skills and training:

- Provide structured and planned training time for all staff in respect of the technological equipment used for digital teaching;
- Implement recurrent workshops for the appropriation of the technological support functions associated with the equipment used for m-learning;
- Shape the strategy for using the technological apparatus for teaching/lecturing and learning (e.g. tutorials, manuals, guides)
- Take part, as a manager of the pedagogical system, in the training courses provided on the technological equipment used for distance learning.

PART TWO: Developing an ODL project

or the transition from a classroom-based physical learning environment to an online virtual learning environment, it is essential to set up an integrated environment covering all its pedagogical, technological, human and communicational complexities. A " setting up ecology " researchers have presented under four variable categories: structural (as a system), actuarial (functions, tasks, roles), individual (actors' practices), and domain (disciplines)³⁸.

It is recommended that a project management approach is used to manage an elearning device project, considering that the design, implementation and management must be based on the different poles making up the project (teachers/lecturers, learners, knowledge, groups and context). It is therefore important to consider each pole according to the above-mentioned variables while trying to answer several preliminary questions before getting started with the project:

- Should the decision to switch to blended or distance learning be an individual or an institutional decision? If not, did it arise out of personal curiosity or out of a conscious strategic decision to identify and measure the consequences and added value of ICT use in education?
- Have the roles and commitments of teachers/lecturers and students in this new learning scenario been defined and mapped out?
- Is there a project team (teachers/lecturers and technicians) qualified to support the transition to e-Learning* (before and after)?
- Have educational resources been adapted for use in a distance education system?
- Are training-of-trainers sessions on e-Learning* skills envisaged and scheduled?

TEAMS AND REFERENCE FRAMEWORKS

The implementation of blended learning programmes may be seen as a project management process that requires specific work teams and documents for coordination, monitoring and evaluation.

³⁸ Charlier Bernadette et.al. « Articuler présence et distance : une autre manière de penser l'apprentissage universitaire », 2004.

WORK TEAMS

A blended or distance learning project is a team project involving teachers/lecturers and students as well as technicians and administrators in charge of financial and human resources related issues. Each person contributes according to his or her function and job profile as defined in the preliminary project file drawn up by the institution.

Although it is no general rule, a blended learning or distance learning project may be managed by three types of team: a project team (PT), a steering committee (SC) and a monitoring committee (MC). This organisation is provided for information purposes only. Each institution is free to adapt to local conditions.

PROJECT TEAM (PT)

The project team (PT) consists of resource persons who have been chosen according to their profiles, roles and commitments to pedagogical innovation through ODL. The project team analyses the needs of the university and compiles an application file to address all types of ODL calls for proposals and project proposals. The team should be multi-skilled, including people with pedagogical as well as technical, financial, legal and human resources management skills. Its main task is to compile a project file as comprehensive as possible by providing the maximum amount of information regarding its feasibility.

STEERING COMMITTEE (SC)

A steering committee should be set up once a blended learning project is discussed within the institution. It consists mainly of the extended project team consisting of one or more experts representing one or more key partners (e.g. AUF for projects from its partner universities). This joint committee ensures the smooth running of the project in line with the objectives and operating procedures agreed upon.

The steering committee draws up reports on a regular basis, on the progress of activities during the implementation phase. Its remit, set out in a framework agreement between the parties involved, is defined by the partners by mutual agreement.

MONITORING COMMITTEE (MC)

A Monitoring Committee comprises the project team and the steering committee, plus potential partners from the host university involved in the blended or distance learning project (i.e. other universities, private sponsors, research structures, industrialists, etc.

The main task of the Monitoring Committee is to oversee the project's progress towards its pedagogical objectives. If need be, the Committee takes action on issues of a strategic nature or relating to the governance model of the ODL mechanism in place.



Figure 5 : Committees involved in an ODL project

TECHNICAL DOCUMENTATION FOR IMPLEMENTATION AND MONITORING

A blended or distance learning project funded by the AUF is based on an operating process laid down in various recommended working documents:

- A project proposal form (pre-project phase);
- An evaluation report produced by a committee of experts regarding the preproject;
- A project opportunity form in case the project proposal is approved;
- A project roadmap ;
- Follow-up sheets for the operationalisation of the project;
- final evaluation and project delivery report.

This is not a static process. It adapts to specific situations in each institution, the nature of calls for proposals and the project structure itself.

The series of documents in this guide may correspond to many scenarios in the deployment of blended or distance learning. These documents are grouped into three categories covering three steps of project implementation: before, during and after project delivery.



Figure 6 : Mapping of a blended learning project

Note, however, that the ODL project considered in this guide is based on a local pedagogical system model in which mobile or cloud-based pedagogical practices, as described in the first theoretical part, may be integrated. It should also be noted that the said system is a coherent combination of heterogeneous elements made up of technological and digital recourses, strategies

technological and digital resources, strategies, methods and human actors aimed at operating a training offer using information and communication technologies. These various aspects are covered here, broken down by theme and chapter.

Project documentation !

Not all documents listed in an ODL project file have to be actually included. The file compiling process may possibly vary according to several criteria depending on the specific context and the experience of each institution.

Phase 1	Phase 2	Phase 3
DESIGN	OPERATIONALISATION	EVALUATION AND DELIVERY
 Compiling of a pre-project file (sheet) by the PT (Appendix 1) Examination of the proposal by a committee of experts (Appendix 2); Opportunity note from the Committee of Experts (Appen- dix 3); Roadmap after project selec- tion and validation (Appendix 4); 	 setting up of the LMS; Training of trainers (minimum skills required); Content development monitored by the project manager (Appendix 5); Drafting of a monitoring grid by the person in charge of pedagogical content (Appendix 06); 	 Pre-established training evaluation grid: learner (Appendix 7); Personalised learning assessment grid: learner (Appendix 8); Learning assessment grid: tutor (Appendix 9); Project assessment and delivery report (Appendix 10)

These are the three periods/phases of the project:



Figure 7 : The three major phases of an ODL project



Guide for a blended training project

PHASE O1 - DEVELOPMENT AND VALIDATION OF AN ODL PRE-PROJECT FILE

A blended or distance learning project needs to be based on " solid " design criteria to avoid some start-up pitfalls. These criteria are revealed by a preliminary analysis of the existing situation.

To embark on an ODL project, project applicants should first provide a pre-project proposal drawing up an inventory of the available means and resources (Appendix 1). This proposal may be a descriptive form justifying the relevance of the project in the eyes of a validation entity which could approve, reject or request a revision of the proposal. This step is essential and depends on the nature of the call for projects and the



organisational model of each institution, which may move directly to the next steps.

It should be remembered that the evaluation of ODL projects is carried out according to generally observed criteria in project management, based on the principles of relevance, coherence and feasibility (see box):

Efficiency criteria of a project

Relevance: these are indicators reflecting the scientific, socio-economic and institutional (governmental and inter-governmental) environment in which the programme takes place. Three factors in particular can be taken into consideration: priority objectives of university programming; potential for learner recruitment; potential for professional integration and post-doctoral studies as part of an academic career.

Coherence: the assessment of the coherence of the project should highlight consistency, in terms of the organisation and structuring of the project and its constitutive elements, among the previously defined objectives, the means to deploy and the expected results. Three factors may be considered in particular. the training programme with regard to the target knowledge and skills on completion of the programme; the steering or monitoring committee; the communication plan and target audiences.

Feasibility: this assessment should report on the progress, difficulties and obstacles that may affect the implementation of the programme and the objectives initially defined, in the light of the means implemented and predictable events. Three factors may be considered in particular: a provisional budget and the search for financial autonomy; teachers/lecturers training plan of the institution hosting the programme; and partnerships.

Any new project generally begins with the creation of a file including a study of the existing situation and a needs assessment. This file is then submitted to a commission of experts for evaluation according to its coherence, relevance and conformity with the

situation at hand. Once the project has been validated, an action or implementation plan, or project "roadmap" should be drawn up in the first instance. This ODL pre-project compile phase is carried out in two steps:

- 1. **Step 1 :** File compiling: this involves providing a description of the context of the ODL pre-project (Appendix 1);
- 2. **Step 2**: Opportunity study: this consists of an evaluation and relevance report on ODL pre-project carried out by the committee of experts (Appendixes 2, 3).

Step 1 : FILE COMPILING

The purpose of this first pre-project file (see Appendix 1) is to assess the state of the art and the conditions under which a blended or distance learning course will be successfully implemented in the context of the institution to host the programme. Furthermore, it aims to record indicators that could serve as a basis for determining which type of blended or distance learning will be associated with an existing training module in the said institution.



Figure 8 : First step of an ODL pre-project file compiling phase

Proposing an ODL pre-project consists of providing an overview of the context in which the training will take place (Appendix 1). This is a specifically structured form providing information outlining the main features of the planned ODL facility.

The purpose of this form is to demonstrate to all stakeholders the general interest of the pre-project and its feasibility. The form draftsperson should therefore act as a salesperson and highlight the potential benefits for their institution. He/she has to

clearly state the needs and objectives of his/her institution with regard to the implementation of a blended or distance learning programme. He/she is also expected to provide proof of the existence in his/her university of a minimum resource potential (human, technological, financial, etc.) likely to support the flexible and rapid implementation of a blended learning programme.

Pre-project form

This form (Appendix 1) is optional in its structure. It is can vary depending on the contexts and objectives of the project. ODL project leaders may draw inspiration from it when setting up ODL projects in other regional or international partnership contexts.

The pre-project form should include the following information:

- A description of the objectives of the project;
- Information on the project leader and the partnership framework ;
- The pedagogical details of the project ;
- The technical details of the project ;
- The economic model of the project ;

Guide for a blended training project

- The sociolinguistic policy of the project ;

Step 2 : OPPORTUNITY STUDY

The opportunity study is carried out by the commission of experts in charge of assessing the relevance of the pre-project. It first assesses the consistency of the pre-project file to issue an opportunity note which, in case of validation, results in the production of planning documents.



Figure 9 : First step of an ODL pre-project file compiling phase

1- PROJECT ASSESSMENT

The evaluation is based on the relevance of the following criteria:

- Provided that the project team has initial skills relevant for ODL;
- Provided that the project team has prior educational resources (content, activities, assessments, etc.) in line with ODL use;
- Provided that the institution hosting the blended learning programme has a technological infrastructure (IT and telecommunications) suitable for managing the ODL part of a blended learning programme (student equipment, public Wi-Fi access, VPN network, ADSL);
- Provided that the institution has clearly defined the pedagogical needs to be met to manage a blended training programme from an administrative and technical stewardship, pedagogical coordination and a budgetary management point of view;
- Provided that the institution has clearly defined an economic model specific to the ODL part, in accordance with the rules of the institution and the finance laws in force in the country;
- Provided the project team has clearly defined the objectives to achieve, planned the actions to carry out and identified the resources to deploy;
- Provided the project team has specified the roles and responsibilities of each member involved in project support (project manager, legal referent, education manager, technical manager, pedagogical resource designers, tutors, etc.).

The Commission produces two specific documents:

- 1. An evaluation grid (Appendix 2)
- 2. A note of opportunity in case the pre-project is approved (Appendix 3).

▷ Pre-project evaluation grid

The Commission reports presence/absence of several criteria grouped under several axes on the grid (Appendix 2) :

- General context of the project;
- Assessed needs of the project ;
- Declared objectives of the project ;
- Required competences for the project ;
- Existing pedagogical resources accessible for the project ;
- Technological infrastructure available favourable for the project ;
- Stakeholders involved in the project ;
- Financial resources mobilised for the project (economic model).

The proposal is confirmed if a predetermined percentage of positive criteria is met (e.g. 50% This rate is proposed as a minimum standard for an institution seeking funding and/or support for an ODL project. It can be adjusted depending on the context.

▷ An opportunity note for the project

The Opportunity Note (Appendix 3) is a second model submitted to the Commission of Experts evaluating the pre-project. It provides an assessment of the relevance of the pre-project and can therefore result in approval or denial of the AUF with respect to the support of a proposed ODL project.

In the light of this note, the decision will be made to end, continue or call for revision of the pre-project. In the latter case, the expert commission must give precise recommendations aimed at optimising the conditions of the pre-project's approval in a new and improved version.

The note of opportunity of the pre-project should focus on the following aspects:

- The project team determines the programme needs if not its priority nature;
- The current situation of the host institution and the possible scope of a blended learning project;
- The contributions of blended learning for the said institution ;
- Key success factors and potential risks in the institution with respect to the completion of such a project;
- First cost estimation of such a project (economic model) ;
- Decision: choosing to launch the project or not.

The opportunity note is essential for medium and large scale projects (involving several partners and large numbers of learners) before proceeding with a more in-depth feasibility study.

■ VALIDATON OF THE PROJECT

Once the project is validated, a first working meeting of the project committee should take place to produce the project planning documents. At this stage, two documents may be considered to frame the project in space and time:

- 1. A roadmap (action plan : Appendix 4) ;
- 2. An operational plan (Gantt chart)

▷ A roadmap (action plan)

A detailed action plan is essential in the initial phase of a project development process. It is a sort of project roadmap that needs to be developed, documented and approved by the stakeholders. A model is provided in Appendix 4.

The roadmap provides answers to the questions "when", "who", "how" are the expected results going to be achieved. It describes the work organisation, identifies the actors and the specific activities assigned to them and sets the timetable and resources needed to achieve the planned action strategy. The roadmap finally describes how the project will be executed, monitored and controlled, and then completed and delivered.

A roadmap should primarily include the business model of the project, the stakeholders, their roles and responsibilities, the pedagogical resources to be digitised and exploited, the support, monitoring and feed-back mechanisms, timeline, etc.

The general structure of a roadmap may focus on the following aspects:

- Pedagogical model: blended or full distance learning ;
- Methodology: managing the digital reference of the project;
- Stakeholders: roles and responsibilities ;
- Digital environment: internal or outsourced ;
- Set-up work ;
- Training of the supervising staff
- Schedule management;
- Cost management (economic model)
- Monitoring and feed-back;
- Risk management;
- Project deliverable

▷ Operational plan (Gantt chart)

An operational plan is a document setting out the objectives the project manager intends to achieve within a given timeframe. The operational plan must be consistent with the action plan. Both are, in some ways, key guides giving the project leader an overview of the project and its implementation stages.

The operational plan is usually a graphic (i.e. Gantt chart) which allows a project manager to monitor the progress in all the stages or steps making up the project lay out plan (general matrix).

Using a Gantt chart, complete projects can be set up and managed on the basis of a standard and tested methodology. The Gantt chart makes it easy to add or delete tasks, set or change their length, sequence tasks, etc.

Guide for a blended training project

PHASE 2 - OPERATINALISATION OF THE ODL PROJECT

This second phase is at the heart of the project as it leads to the concrete implementation of the essential components of the ODL mechanism and to its operationalisation.

This is a four-step process:

- 1. Step 1 : Setting up of the platform (LMS) ;
- 2. **Step 2** : Training of trainers in the project steering committee;
- 3. Step 3 : The design of ODL pedagogical content;
- 4. Step 4 : Editing of online courses

Step 1 : SETTING UP OF THE PLATFORM

The characteristics of the project listed in the action plan provide information on the configuration of the technological environment of the ODL facility.

At this stage, three key choices have to be made:

- 1. The pedagogical platform to set up ;
- 2. The platform's hosting mode
- 3. Installation and configuration of the platform for a shared use.



Figure 10 : Elements of choosing and installing a technical environment for an ODL programme



■ 1- CHOOSING A PEDAGOGICAL PLATFORM

Choosing a pedagogical platform provides the ODL project with an innovative model of pedagogical development to replace a common practice that is more akin to an online course delivery. The educational platform market is very prolific in such important solutions, but the tendency has shifted massively in favour of an open-source software product, namely the Moodle platform.

According to January 2021³⁹ statistics, Moodle is installed on more than 210,000 sites in more than 254 countries (out of 324 countries in the world) with more than 268 million resources used by more than 250 million users.

Along with the free nature of Moodle, it reproduces the conditions for action learning based on the new pedagogy of constructivism* and that of social constructivism*. Its activities and complementary modules (plugins) are conducive to what is now commonly known as active pedagogy and group dynamics. It is therefore highly recommended to choose a pedagogical platform for any ODL project. The present guide provides a selection of chapters according to the technical and pedagogical specificities of this multilingual platform.

The remaining choices to be made include first of all the installation of the latest version of Moodle, and secondly choosing a hosting solution, which is yet to be determined between shared hosting and private or virtual hosting.

2- CHOOSING A HOSTING SOLUTION

Choosing to host the Moodle platform should be considered from technical, administrative and organisational perspectives.

From a technical point of view, it is important to be familiar with the characteristics of the different types of hosting offers on the Internet today, which range from simple shared hosting to dedicated hosting, virtual private servers (VPS) and cloud computing based hosting.

Moodle is developed on Linux using Apache, MySQL and PHP (also sometimes known as the LAMP platform). When hosting Moodle the platform operates with Unix, FreeBSD, Windows, also MAC OS X, Netware and any other operating system equipped with a PHP web server (4.1.0 version or higher) and a MySQL or PostgreSQL database management system.

From an administrative and organisational point of view, it is crucial to make a choice that best suits the institution's logistical and organisational capacities to manage the ODL by itself or to resort to external actors.

³⁹ Moodle statistics. https://stats.moodle.org/

▷ Hosting types

There are four common types of hosting⁴⁰: shared, dedicated, VPS and cloud hosting.

	SHARED HOSTING	DEDICATED SERVER HOSTING	VPS HOSTING	CLOUD HOSTING
Definition	Consists of using a single physical server to host multiple websites. This reduces the maintenance costs and provides low-cost solutions. It is the most cost-ef- fective and widespread solution in the world since it is possible for some serv- ers to host hundreds of websites simul- taneously. Shared hosting is a suitable solution for sites with low or medium traffic (< 1000 visits per day).	You may have your own machine fully and exclusively dedicated to a website. This configuration is most widely used for hosting sites with high traffic. The server configuration is under the full responsibility of the site owner who often relies on professionals to ensure an optimal performance and security level.	A virtual private server lies between the shared and the dedicated ones. It con- sists of several virtual servers sharing the same physical server and using vir- tualisation technology. The hard disk drive of the physical server is shared be- tween various virtual servers, each with its own CPU and memory allocation. The VPS thus provides more flexible admin- istration, settings and installations than a shared server.	Cloud hosting is based on cloud computing technologies for an un- limited number of machines to op- erate as a single system. Cloud hosting does not simply rely on a physical machine split into many virtual machines: it relies on the in- terconnection of many of these physical machines, which in turn are split into virtual machines.
Advantages	 Low-cost hosting Maintenance, security and backup are normally provided by the hosting provider. 	 Allows the server configuration and its CPU/RAM resources to operate at full capacity; Can be fully customised; Less expensive than a virtual server. 	 Easy installation, deployment and migration between physical servers; Possible reduction or savings on li- censing costs (borne by the physical server); Simplified backups (snapshot of the virtual machine and its data); 	 Guaranteed server resources (CPU, RAM); Scalable data storage; Flexibility of the website's growth; low prices and sophisticated functionalities A potentially unlimited lifespan.

⁴⁰ Jacques Tremblay, « Types d'hébergement Web », 2020. https://www.tophebergeur.com/blog/type-hebergement-web/. [Visited on 12/12/2020]

Disadvantages	 Free or low-end products, generally reserved for personal sites Solution not adapted to websites with a high traffic or requiring a spe- cific configuration 	 More expensive than shared hosting Requires a technician for server configuration and maintenance, including backups, security updates, RAID monitoring, etc. Non-redundant and non-scalable: increasing risk of hardware crashes. Replace after 3-5 year intervals 	 Dependence on a host server (in case of a crash) Specific administrative requirements (security, backup) Little exchange or cooperation between IT and database administrators 	 Requires a technician for the server configuration and maintenance Dependent on the Cloud Service Provider Less flexibility than physical servers The most expensive solution
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Table 7: Web hosting types



Figure 11 : 4 Web hosting types (Source : https://blog.simplebo.fr/comment-fonctionne-hebergement-site-internet)

▷ Choosing a hosting scenario

Understanding the stakes involved in the different solutions for site hosting is therefore important ,be they shared, dedicated, virtual private servers, or cloud based. Most importantly, it is important to understand the meaning of the indicators of service quality, performance, security, customisation or flexibility characterising one solution or another.

Hosting can also be performed internally on the host institution's servers, provided they have theirs. This would eventually require purchasing a server, but also looking for the required skilled persons for the installation and maintenance, unless the institution included the ODL system in its management policy for its existing IT system.

Generally speaking, it is recommended that, failing a previously defined solution, the traffic density factors (low, medium or heavy traffic) should be taken into consideration when opting for shared or dedicated hosting. The budget is equally an important criterion albeit the platform's performance must come first. The most important thing is to provide proper hosting and to have a site installed for years, rather than having to transfer the site repeatedly - with sometimes high additional costs.

In the end, Moodle hosting still depends on various factors. There are three possible options namely :

- 1. Hosting on the host institution's server;
- 2. Hosting on the server of an external national operator;
- 3. Cloud hosting.

Choosing any solution should normally be based on the specific context of the host institution.

3- INSTALLATION AND CONFIGURATION OF THE PLATFORM

The installation and configuration of Moodle is extensively documented on the Internet. These two operations are carried out according to the hosting type and support opted for.

Once Moodle has been installed and configured, a URL address and user and administrator accounts are normally set up and provided to the project leader or to a technical administrator of the platform. These access settings are used by the platform administrator to configure course sections, extensions (plug-ins) for activities to be added, learners' registrations, etc.

This Guide is not a description of the steps involved in the hardware installation of Moodle or its operational settings, which, while changing from one context to another, is dependent on the activities and extensions (plugins) installed therein.

This Guide, however, points to potential tools for pedagogical and communicative interaction as a means of enriching an e-learning environment. These tools are designed

Guide for a blended training project

to facilitate interaction between tutors, learners and pedagogical resources via the network. There are many types of plugins to update for each version of Moodle.

▷ Moodle : standard activities & resources

One of the great successes of Moodle, apart from its free nature and linguistic diversity, lies in the possibility to customise online courses.

A large number of plugins (extensions) are offered free of charge by Moodle staff which, once they are installed, can change the design and functionality of Moodle to suit specific learning needs.

Also known as plug-ins or plug-ins, only a few of them are Moodle default plug-ins. New extensions are continuously being added to an online Moodle plugin directory⁴¹.

A permanent review of the extensions installed should therefore continuously be carried out according to the types of activities programmed in the online courses.



Figure 12 : Moodle activities and resources

▷ Moodle : complementary plugins

There are many open source plugins in Moodle. They are listed in various categories (administration, evaluation, collaboration, etc.) and types (activities, notification, exercises and quizzes, etc.) for different versions of the Moodle LMS.

⁴¹ Moodle plugins. https://moodle.org/plugins/

moo	d	eplugins							
Purpose (any)	•	Plugin type (any)	•		Moodle version (any)	-		What are	you
Administration		Activity module		c.ii	Moodle 3 4		ins	l 🥒 Recentivu	und
Assessment		Admin tool			Moodle 3.3			, , necently (apu
Collaboration	Í	Advanced grading method			Moodle 3.2				
Communication		Assignment / Feedback plugin	E	e	Moodle 3.1			Unicheck (ex	κ. L
Content	ď	Assignment / Submission plugin		s	Moodle 3.0			Designed based	d or
Interface	ht	Assignment / Legacy plugin		Sf	Moodle 2.9			Unicheck is a pl	lagia
10 105 110 ₃ co ois	y and	Atto HTML editor / Atto plugin		T	Moodle 2.8			neiping educate	ors :
		Authentication method		10	Moodle 2.7				
		Availability restriction		se	Moodle 2.6			Lawsen and the second	
		Block		e	Moodle 2.5			To anlesk Unicheds settings	yn Sers
		Book / Book tool		a	Moodle 2.4			Auto check new submissions	0 14 0 14
		Cache store		a	Moodle 2.3			Druk assignment	•
		Calendar type		a	Moodle 2.2			hidronics with a natch less	0 D
		Course format		a	Moodle 2.1			Hide sources with a matchiness 🍵 than jacobb	0 x
		Data format		a	Moodle 2.0			thereby charlons and references. Show similarity scores to shader is	0 y
		Deteksor / Deteksor Gald tora		У				Show similarly reports to students	0 9

Figure 13 : Online Plug-ins catalogue (Moodle.org)

Besides, despite the fact that Moodle prepares multimedia files for display in the browser, the actual display of certain resources is ensured by different types of browser-specific plug-ins (plug-ins or add-ons), basically Adobe Flash, QuickTime, Windows Media Player and Real Player. In case the users' computers are not equipped with this software, they will be asked to install them. These software components are generally free, easy to install and widespread in use. This should therefore be no major problem for most users.

Below are download links for the most popular software upgrades for user machine in computing environments:

- QuickTime: https://support.apple.com/fr_FR/downloads/quicktime
- Windows Media Player: https://support.microsoft.com/fr-fr/help/14209/getwindows-media-player
- Java et Java Runtime : https://www.java.com/fr/download/

Step 2 : TRAINING OF TRAINERS

Before opening the Moodle platform for real exploitation, the entire project team has to be trained in the pedagogical activities and skills required to empower them following the support period. This includes competences relating to the administration of the platform as well as the development of course content and tutoring, the modelling of learning pathways, knowledge assessment and many other innovative techniques of pedagogical activity based on ICT in Education. At this stage training has to be gradually combined with the acquisition of ODL skills. A face-to-face introductory training course consists of the following five aspects:

- 1. Mastery of the general environment of an ODL platform (i.e. Moodle);
- Mastery of techniques for designing and structuring online courses;
- 3. Mastery of modalities required for learning pathways design ;
- 4. Mastery of tutoring functions ;
- 5. Mastery of knowledge assessment methods.



In this guide, classroom training is considered only for trainers involved in the implementation of the ODL project. Any face-to-face part of a blended learning programme is handled by the institution as part of its general training offer.

These five main areas, which constitute an initial

core of ODL skills training, may provide the project team with sufficient autonomy to enable them to move on to other forms of pedagogical activities afterwards (active pedagogy such as flipped classroom or gamification).

Depending on the time allocated for the training of trainers during this first step of the project support, the training may be carried based on the following options :

- 1. "Turnkey" learning/training pathways;
- 2. "À la carte" training workshops;
- 3. A "compact" training workshop.



Figure 14 : Organisation chart of the training of trainers phase

Various skills standards and a wide range of training materials are provided online for project team members to be trained in these core areas, including :

- ICT UNESCO: a competency framework for teachers/lecturers⁴²
- The AUF's ICT/ICT Skills Repository⁴³;
- IFIC training programmes⁴⁴;
- The IFIC Distance Learning Platform Doctoral Colleges⁴⁵;
- Édubase, a national database of pedagogical scenarios ⁴⁶.

These data repositories are generally interoperable and provide complementary and pooled training resources.

However, a specific set-up of tailored training based on specific skills for a given category of person involved in blended learning could be envisaged.

Turnkey training courses are generally found online. Some are well adapted for initial training on the general operationalisation of an ODL and others are more focused on the appropriation of a specific aspect of ODL.

At this stage in the training of trainers, the most important skills are listed in the following order of priority:

- 1. Deployment of an "e-training" platform: installation, administration and integration of pedagogical content, example and case-oriented task: Moodle ;
- 2. Design, development and use of online courses;
- 3. Basic concepts of ODL and scenario-based pedagogy;
- 4. Distance tutoring: function or profession;
- 5. Various other complementary training courses.

TYPICAL TRAINING MODULES FOR PROJECT TRAINERS

Module 1	
Title	Deployment of an "e-training" platform: installation, administration and integration of pedagogical content, example and case-oriented task: Moodle
Objectives	Following an introduction/presentation of the main functionalities of a pedagogical platform and the different Synchronous and Asynchronous* models and that of the open source world, learners should go through a series of pedagogical resources ordered sequentially according to the step-by-step chronology for the deployment of an e-learning solution. The last module, an introduction to the integration and administration of the pedagogical platform in a wide-ranging techno-pedagogical

⁴² TIC Unesco : http://www.unesco.org/new/fr/communication-and-information/resources/publications-and-communica-tion-materials/publications/full-list/unesco-ict-competency-framework-for-teachers/

⁴³ Transfer AUF, Le Référentiel de compétences TIC / TICE de l'AUF, https://transfer-tic.auf.org/le-rérentiel-de-compétencestic-tice

⁴⁴ IFIC. Parcours de formation type. https://transfer-tic.auf.org/ateliers-types

⁴⁵ IFIC, Formation de formateurs. https://aneuf.auf.org/formateur.html

⁴⁶ Edubase : une banque nationale de scénarios pédagogiques. https://eduscol.education.fr/cid57544/edubase-une-banquenationale-scenarios-pedagogiques.html

	environment, will provide an introduction to the concepts "plugin", security, archiving, etc. Learners should complete each module in a collaborative role-playing exercise including installation, administration and course editing functions, to ensure all participants access the integrated course as learners.
Pedagogical method	Face-to-face
Duration	3 days
Targeted skills	 Installation and administration of a massive and online training platform (Mastering the installation process of a massive training platform, its administration and maintenance); Integrate pedagogical contents into an online and massive training platform (Mastering the basics of using a platform to put pedagogical content online as well as the management of the main functionalities). Draw on their expertise as a face-to-face and distance teachers, on the concepts introduced during the training and on the tasks they are expected to carry out on their own MOOC/CLOM project.

Module 2

Title	Design, development and use of online courses
Objectives	 Know how to structure a course and provide it in an electronic format; Know the steps involved in the creation of an online course; Become familiar with using a learning management system (Moodle©) Master an authoring system of interactive exercises (Hot Potatoes©); Set up a scenario for the use of your online course
Pedagogical method	Face-to-face
Duration	3 days
Targeted skills	Develop pedagogical materials in digital formatEditing and sharing information on the Internet

Module 3

nouure 5	
Title	Fundamentals of scenario-based pedagogy
Objectives	 Design effective training programmes by articulating the knowledge targeted and the activities proposed to learners in a structured and relevant way; Increase the capacity to innovate by integrating new pedagogical approaches (flipped classroom*, the project approach, game-based learning, etc.), new social practices (online mass courses, social networks, mobility), or new technologies (e.g.: enhanced reality);

	 Anticipate the operational implementation of scenarios designed on e- learning platforms.
Pedagogical method	Face-to-face
Duration	3 days
Targeted skills	 Design an e-learning system at all levels of granularity* (training offer, course session, activity, etc.); Structure the training system and design the learning scenario; Design the scenario for learners' coaching and support; Create scenario-based pedagogical video sequences; Use a techno-pedagogical environment to implement the resources, activities and assessments developed according to the pedagogical and support scenario.

Module 4	
Title	Defining distance tutoring : Function or profession
Objectives	 Initiate a reflection on distance tutoring ; Consider the tutor's different modes of intervention; Develop distance mediation skills ; Share a common vocabulary on the concepts of tutor, tutoring and the tutor's modes of remote action; Vade mecum of tutoring interventions and candidate's analysis of his own practice.
Pedagogical method	Face-to-face
Duration	3 days
Targeted skills	Tutoring learners

Table 8: Typical training course for trainers

COMPLEMENTARY MODULES

Besides these basic ODL courses, other complementary courses may also be proposed (less strenuous for this introductory phase) depending on the context (time and availability of learners and trainers). These are, among others, as follows:

- Assessment in learning devices ;
- Building and managing an online community ;
- producing an educational video ;
- Re-enchanting knowledge, know-how and life skills transmission through pedagogy-driven video games in a digital teaching context.
- Building an economic model of an e-learning system.

"À la carte" training workshops

À la carte training courses, based on autonomous competences, may also be considered if need be. Any operator or training sponsor can tailor a training course to meet his or her own needs.

The Guide provides a set of skills deemed useful for this first training phase to prepare the project team members to cope with the new pedagogical and technical environment of ODL programmes.

These skills are listed below according to the order of priority previously established, These include: "using Moodle", "designing pedagogical content", "scenario-based pedagogy", "tutoring" and "assessment". These are classified in terms of "Knowledge" and "Know-How"

Skills related to the technological apparatus (Moodle)

- Analyse the existing training system, identify emerging needs and relevant solutions;
- Configure a techno-educational environment taking into account the requirements of the installation context;
- Define the general and specific objectives of an e-learning system;
- Install and manage a massive online training platform;
- Configure a techno-educational environment taking into account the requirements of the installation context;
- Integrate pedagogical content into a massive online training platform.

Skills related to the development of pedagogical content

- Edit content online;
- Edit content on the Internet ;

Skills related to scenario-based pedagogy

- Develop a learning progression starting from disciplinary content;
- Design the scenario for learner's coaching and support;
- Create scenario-based pedagogical video sequences ;
- Design an e-learning system at all of its levels of granularity* (training offer, course session, activity, etc.);
- Structure the training system and design the learning scenario ;
- Use a techno-pedagogical environment to implement the resources, activities and assessments developed according to the pedagogical and support scenario.

Skills related to tutoring

- Develop and animate a community of practice ;
- Design simple sheets to help people learn how to use tools and applications;
- Tutoring learners at a distance.

Skills related to assessment

- Design modalities for the assessment of learners' knowledge and skills;
- Develop an assessment strategy for the training system;

- Evaluate the training system to improve its quality;
- Assess a techno-pedagogical environment and its available tools to determine the most appropriate for an e-learning system and learning activities.

■ COMPACT TRAINING (EXPRESS)

The third scenario for the project team's training at this initial stage may also be condensed and express. Instead of planning multiple training workshops focusing on a series of separate skills and distributed according to various training pathways over time, a compact training plan suitable for training and combining the priority skills described above can be developed.

- General objectives of a compact training programme

A first type of compact training workshop aims to familiarise the team member with the various uses of several information technology tools in a pedagogical context. The main objectives are:

- Understand the benefits of the various ICT tools in modernising pedagogical practices;
- Acquire new skills in the use of various ICT tools (editing, communication and assessment) to be able to integrate them in a classroom context as the basis for an online course;
- Get acquainted with the basic functions of a distance learning platform before developing training materials

- Operational objectives of a compact training programme

- Discovery course : Understanding the role of ICT in education :
 - Why ICT in Education?
 - How can these skills development be integrated into training?
 - What digital skills are essential?
 - What skills are needed to integrate ICT use in classrooms activities?
 - What approach could improve classroom use of ICT in Education?
- Introductory training : Introduction to working on an LMS
 - Benefits of the pedagogical platforms, panorama, selection criterion;
 - Learning the main functionalities of a pedagogical platform (Moodle);
 - Learning how to use the tools used to work on the platform in both student and teacher modes;
 - Initiation to scenario-based pedagogy (formulation of objectives, sequencing, implementation).
- Advanced training : Assessment in an online course
 - Importance and peculiarities of assessment in ODL;
 - Learn how to use an interactive exercise generator, functionalities;
 - Import MCQs into Moodle;
 - Generate activity and performance reports on Moodle.

Each of these compact training models should provide project team members with a minimum set of skills to enable them to switch to a blended or distance learning model.

Priority must be given to appropriating the basics of developing pedagogical resources and associated activities, tutoring and assessment using ICT.

Step 2 : DEVELOPMENT OF PEDAGOGICAL CONTENT

Periods dedicated to the development of resources are an opportunity for project members to put the skills acquired during one of the previous training sessions into practice (turnkey courses, à la carte training or compact training courses).

At this point, teachers members of the project team have already been trained to content design and structuring according to the principles of ODL. They are able to perform the tasks assigned to them to a relative degree. Nevertheless, it is advisable to monitor the quality of the resources to be developed during this initial phase. The quality of lessons and tutoring will depend on this.

REVIEW OF THE PEDAGOGICAL SEGMENTATION OF AN ONLINE COURSE

A training material can have different designations. The taxonomy is sometimes confusing between "syllabus", "online course", "educational object", "learning resources", etc. A course material also has a no less confusing subdivision involving 'part', 'chapter', 'module', 'section', etc.

Another concept often used in pedagogical jargon is "pedagogical granule*" as in granularity, meaning a lesson or a document within a lesson, etc.

The most important aspect of any structure is to make sure that the segmentation done takes into account the potential autonomy of the various segments (grains*) so that they can be reused in different pathways. This is the principle of granularity* in education.

REMINDER OF THE COMPONENTS OF AN ONLINE COURSE

Granularity in education

Based on the principles of granularity, a pedagogical granule is the smallest semantic unit beyond which information can no longer be segmented. "Granularising" a training material means dividing its content into various items for combination into different learning pathways according to learners' individual levels and expectations. This makes it possible to develop tailored courses and pathways.

Given this general definition of course structuring in terms of modules, sequences, activities and resources, a key point to remember is that an online course is also made up of complementary resources (i.e. Text files, images, Video, URLs, Glossary, FAQs), learning activities (exercises), coaching (tutoring), communication (forum, instant messaging), assessment (Quiz), etc.

It is therefore crucial for the course designer to combine a set of essential elements for the modules and activities, which the online course is mostly focused on.

Parts of a module

- A definition of prerequisites ;
- Setting of general objectives ;
- A description of target competences ;
• A set of sequences including activities.

- Parts of a sequence

- Specific objectives ;
- A brief course description;
- Content knowledge;
- Learning activities;
- Complementary resources;
- A formative assessment method*
- Interaction tools;
- A glossary;
- A list of frequently asked questions (FAQ)

- Parts of an activity

- Instructions and expected results ;
- Facilitation resources;
- Working methods (individual or/and collaborative);
- Assessment criteria;
- Interaction tools;
- Schedule for completion;
- Self-assessments.

MONITORING OF COURSE MODULE DESIGN

The control and monitoring of these different stages, prior to the implementation of the ODL apparatus makes it possible to identify the skills that need to be strengthened within the team.

This monitoring and control work is carried out through regular data collection by the project manager and the content designers through two documents :

- 1. A monitoring grid designed by the ODL project leader (Appendix 5) ;
- 2. A monitoring grid drafted by the content designers (Appendix 6).

These two grids provide a synthesis of most of the recommendations made in the IFIC White Paper to form the so-called "design monitoring tools".

- Monitoring grid by the blended learning project leader

The mission of the project manager is to oversee the smooth running of all project operations, the respect of timelines, the diligence of team members and, above all, the regular and efficient development of the pedagogical resource design process and its online delivery. ODL project teams in many cases did not carry out such tasks, which require learning, coaching and monitoring during the implementation of operations.

These are the main reasons why the project manager is required to spend considerable time assisting his/her teammates in defining priorities, drawing up timetables and defining respective responsibilities and functions to avoid possible tensions that may arise within the team or with external actors.

The monitoring grid to be filled in by the project manager (Appendix 5) is one of the tools developed for this purpose. It covers the main administrative and technical (and possibly economic) operations for the monitoring and control of the smooth running of operations. It is therefore important to fill in this grid on a regular basis, together with the team in case of difficulties or possible ambiguities.

Monitoring grid drafted by the content designers

The Content Designer Monitoring Grid (Appendix 6) is a natural extension of the training workshops attended by the project team. It lists the main requirements to be met by designers: setting out prerequisites and objectives, sequence-based structuring, design of various learning activities, self-assessments, etc.

The grid enables designers to remember what they learned during workshops and how to apply it strictly if need be. The project manager is able to identify problem areas and take the necessary actions to address them by reviewing the grids filled in at each step of the design.

Step 3 : EDITING OF ONLINE COURSES

The next step is the hosting of the resources developed for ODL on the Moodle platform. This requires a logical of organisation.

REMINDER ON THE ORGANISATION MODES OF AN ONLINE COURSE

This involves first of all appropriating the skills of designing and structuring learning resources (course materials, simulation, assessment materials, etc.), in short, all the scientific and pedagogical material involved in the distance learning course(s) planned by the host institution.

A course designer is expected to segment his/her resource content into units according to the course organisational structure adopted. These units may vary depending on the organisational structure and may be called lessons, chapters, sections, modules, activities, etc.

Following the nomenclature generally used in Moodle, the first model suggested is a course structure in modules, divided into sequences consisting of activities and resources.

Combining these different components into a course results in a scenario-based pedagogy ior learning (see box).

Choosing a learning scenario!

A learning scenario is the a priori (planned) or a posteriori (observed) description of the process of a learning situation or learning unit aimed at the appropriation of a specific set of knowledge, specifying the roles, activities and knowledge management resources, tools and services required for the implementation of activities. (J.P.Pernin, 2003).



Figure 15 : Module organisation pattern

There are many possible modes. These depend on the density of the teaching material, the learning scenario, the original design of an existing course, etc. A sequence may for example correspond to a chapter, a part or a section of a chapter. A single sequence may be a module just as an activity may itself be a sequence. A single resource may sometimes be used as a sequence. To sum up, there are various factors coming into play in a pedagogical arrangement or structure.

HOSTING OF COURSE RESOURCES ON THE MOODLE PLATFORM

Lessons are learning spaces on Moodle where teachers post materials intended for learners. Teacher/educators post resources and activities therein and organise them according to the objectives and pedagogical method to apply. Therefore, posting those courses online is subject to various types of interventions that one person alone may be able to manage depending on the context and the sharing of responsibilities. Anyone with administrative rights can perform, for example, a range of operations on the platform including:

- Adding a course: creating a new course area on Moodle ;
- Module(s) upload: creation of one or more modules in the corresponding course area;
- Structuring of modules: creation of modules categories based on a hierarchy structure relevant to the organisation of the different courses;
- Setting up module(s): controlling the visual aspect of content for learners;
- Adding module sequences where and when needed;
- Adding activities directly related to sequences or to modules ;
- Adding resources into sequences ;
- It is possible to add blocks in Moodle for additional resources to a course such as Calendar, Glossary, Blog, etc.

SETTING UP COURSE RELATED ACTIVITIES

A course consists of both scientific content and pedagogical activities. Fourteen default activities are installed in Moodle. They include functions learners are expected to carry out themselves (individually), in groups or with tutors.

- Workshop allows for peer review ;
- Database allows participants to create, maintain and search file databases;
- Chat allows participants to engage in real-time synchronous discussion ;
- Consultation to gather data from students to help educators get to know their classrooms and to think about their own teaching methods. Consultations are predefined (cannot be changed);
- Assignment allows teachers to grade and comment on files submitted by students, or on an online or offline work;
- Feedback allows for the creation and carrying out of surveys for gathering comments;
- Forum allows participants to carry out asynchronous discussions*;
- Glossary allows participants to create and manage a list of definitions, like a dictionary;
- Lesson allows for a flexible delivery of content, according to various programmable pathways;
- External tool allows participants to interact with LTI-compliant learning resources and activities on other websites;
- SCORM Package allows for the integration of SCORM packages into course content;
- Poll allows teachers to ask questions and provides multiple response options;
- Test allows teachers to design and include tests (quizzes), which can incorporate correct answers and/or automatic feedback;
- Wiki a collection of web pages anyone can create or edit.

These activities are intended for use by course designers or tutors to create learning scenarios. The tutor is generally responsible for opening them up to learners according to a pre-established scenario and schedule.

Technically, a course material about the Moodle platform should explain these operations and provide simulations of how to set up an online course.

PHASE 3 - EVALUATION AND DELIVERY

Once the training of the project team members and the design of resources and activities are completed, once the assessment and self-assessment modalities are defined and once the general support scenario is determined, then the third phase of support can be proceeded with. This essentially involves testing the operability of the system in a simulation of a short and detailed distance learning course.

This third phase should result in possible readjustment(s) of the apparatus and its final validation before it is delivered for integration into a real ODL programme.

This phase is divided into three steps:

- 1. Step 1 : Planning a test of the apparatus;
- 2. Step 2 : Carrying out a test of the apparatus;
- 3. Step 3 : Validation of the results and delivery;

Step 1 : PLANNING A TEST OF THE APPARATUS

The test phase must be carried out on selected volunteers among a real population of learners. A team of tutor/teachers shall also be set up from among the project's pedagogical team. After being trained in using an ODL programme, teacher/trainers need to test their newly acquired skills in a context closer to their future teaching environment.

This test is organised into five key phases:

- Choosing the module to be tested ;
- Selecting a sample group of learners;
- Assigning tutors for the supervision of the sample group of learners;
- Design of assessment questionnaires ;
- Test plan





Figure 16 : Organisation chart of the blended training test phase

CHOOSING THE MODULE TO BE TESTED

It is preferable to choose a module with a length close to the average length of all the modules and including most of the characteristics to be tested: resources in various formats (text, audio, video, applications, etc.), various teaching approaches, various interaction tools (synchronous*, asynchronous*), various working methods (collaborative, individual, etc.).

The organisation of this test module would be more appropriate if it is structured in several sequences with as varied activities and resources as possible.

This module might have been planned in advance when creating online courses (phase 2 step2). A cross-cutting module regardless of educational level is also advisable to have a heterogeneous population across various academic levels. The main purpose of the test remains the verification of the effective technical and procedural functioning of the apparatus rather than a real transfer of knowledge.

SELECTING A SAMPLE GROUP OF LEARNERS

Learners are selected with different profiles (geographical location, type of fixed and mobile terminals, age, level of education) and must first be introduction to the context during a face-to-face session for them to understand how the simulation works.

Blended learning in a real-world context must include training sessions on the use of the apparatus intended for learners.

This introductory stage may be a face-to-face session to explain how the platform works and how to work remotely. It can also be condensed into training materials accessible on the institution's server as tutorials, guides or video sequences.

ASSIGNING TUTORS FOR THE SUPERVISION THE SAMPLE GROUP OF LEARNERS

Tutors are selected among the team members. Some may not be familiar with distance tutoring but may be assisted by more experienced colleagues from the project team. Involving as many participants as possible in tutoring is highly recommended, as they

are the largest group of participants in an ODL apparatus after learners. They outnumber content designers.

It is thus suggested that periodic tutoring courses should be planned for as long as ODL lasts. This type of training maintains a certain level of mastery of the ODL apparatus which in turn enables tutor/teachers to have a more precise idea of the concrete tasks of tutoring and pedagogical support* in a distance teaching/training context. In the same way, they will gradually come to accept the principle of being assessed by their learners.

DESIGN OF ASSESSMENT QUESTIONNAIRES

Assessment is essential in an ODL programme. This often falls into three types:

- Predictive* (or diagnostic) assessment to find out if a student could take a training course;
- Formative assessment to find out if learning is being constructed as expected ;
- Summative (or certification) assessment to check if the training objectives have been achieved.

The most important thing about assessment, however, is that it is also carried out in the reverse direction: i.e. assessment by learners who provide their appraisals of the course. This is not very common in conventional educational communities. In some cultures, contexts or for some teachers this is even frown upon. Yet this is increasingly used as a means of revising and upgrading both face-to-face and distance learning courses and curricula.

The focus on the performance of the ODL apparatus is more important at this stage of the test phase. An assessment that focuses on the learner's learning pathway is normally part of the course or module content. It is carried out by the content designer and provided by the course tutor.

On the other hand, an evaluation of the training programme may be carried out by the education manager or the training administrator to examine the conditions under which the training takes place. This is a sort of general assessment of the teacher's pedagogical performance and the general conditions in which the training takes place, based on the observations and comments of learners.

Various evaluations of this type can be programmed on Moodle. These are, among others, preconceived questions ("Consultation") or specific questions designed by the course designer or tutor (Activities "Quiz", "Survey", "Questionnaire", "Poll").

The "consultation" module

 "Consultation" refers to a kind of predefined referendum in which the proposed questions are preconceived and cannot be changed. Tutors can use them to collect data providing them with information on students' appraisals of both the nature of the course and the conditions under which it takes place. Tutors wishing to create their own questions will instead use the "feedback " activity (Appendix 9).

The questionnaire

The "Questionnaire" activity is defined on the Moodle site as a poll type activity designed to collect data from users. This module allows the teacher to create a range of questions, for example, to gather students' feedback on a course or activities. The goals of the Questionnaire module are quite different from those of the Moodle "Lesson" or "Quiz" modules. The Questionnaire module is not intended to be an assessment of students, but rather to get their opinion on the course (Appendix 7).

Feedback or surveys

 "Feedback" or "Survey" activities may also be used by the teacher/tutor to create a personalised survey questionnaire to gather feedback about the conditions in which the course takes place.

"Feedback" allows for the creation and administration of surveys to gather feedback. Feedback makes it possible to draw up a full questionnaire for the course evaluation by students to improve the content for future participants. It allows for anonymous surveys on course choices, school rules, etc.

Creating this type of questionnaire for the Test phases requires looking up into the Moodle documentation and planning this as a training theme in phase 2.

Other assessment activities may also be planned to design evaluation grids. These may be used both for the evaluation of the training by learners and that of learners by trainers.

They are introduced here as guidelines but it is advisable to go back to a course on Moodle to explore their design method.

- Workshops:

The workshop is an opportunity for learners to assess each other, thereby engaging learners in a responsible collaborative activity increasingly sought after in active pedagogy orientations. Course designers and tutors are therefore encouraged to learn about the process (workflow) of this activity and to monitor them closely to avoid any form of subjective evaluation.

Tests and Quizzes:

• The "test" activity module allows teachers to design and manage tests with various types of questions. Unlike the "Questionnaire" activity module, the test is used more often to assess learners' knowledge.

– Polling:

- The "poll" activity allows teachers to ask guestions and provides multiple response options;
- Hot Potatoes Quiz:
 - This activity module allows teachers to integrate exercises created using the Hot Potatoes software suite into Moodle. "Assignment" pages may include different media (text, sound, video), and learners' answers are recorded.

TEST PLAN

The project manager and the assigned ODL coordinator are responsible for creating a schedule for the test. This schedule indicates the period, the tutors involved, the dates and times of the synchronous meetings, the date of the informative* and summative* assessment, the dates of delivery and collection of the various questionnaires to be filled in both by learners and tutors. It is based, among others, on the learning scenario developed when structuring the course or module.

STEP 2 : IMPLEMENTATION AND OBSERVATION OF THE TEST PHASE

The actual conduct of the test phase should take place under conditions very similar to a full-scale ODL context. This basically includes the following phases:

activities*

- 1. An initial face-to-face meeting ;
- 2. Tutored distance work ;
- 3. Formative assessment
- Summative assessment activities*;
- 5. Functional assessment activities* ;



Figure 17 : Organisation of an ODL programme test phase

INITIAL FACE-TO-FACE MEETING

The objectives of this gathering (the organisation and financing of which is the responsibility of the institution carrying out the project) are as follows:

Initial contact with learners :

- Introduce the training module, schedule and work arrangements (learning scenario);
- Brief learners on the use of the platform, focusing on the tools they will use most during the programme: instant messaging, forum, wiki, assignment submission, etc.

At this meeting, teaching materials are handed out to the participants: leaflets, manuals, programmes, calendar, links to support resources.

Participants are also provided with their access details to the platform as learners.

TUTORED DISTANCE WORK

Learners are guided during this stage by a schedule drawn up beforehand by the course designer and/or tutor who developed the learning scenario when the course module was designed.

The planning includes objectives to be met, activities to be carried out by learners and tutors and a schedule for completion and deliverables as well.

The schedule of the tutored work must include among others:

- 1. Synchronous activities with their dates;
- 2. Asynchronous* activities, the duration and due dates ;
- 3. Formative* and summative* assessment activities and the respective dates.

The tutored work phase extends throughout the test phase and must be punctuated by formative* and summative* assessment phases.

FORMATIVE ASSESSMENT

The goal of a formative assessment is to monitor student learning to provide ongoing feedback that can help students identify their strengths and weaknesses and target areas that need work. It also helps recognise where students are struggling and address problems immediately (Wikipedia).

This assessment normally takes the form of self-assessment using Quizzes to enable learners to determine if they are properly assimilating the notions and concepts of the course.

Quizzes and questionnaires must be set up for multiple attempts, instant display of results, assistance and suggestions to find the right answers, regardless of time or number of attempts.

Formative evaluation* follows a regulatory logic; it is aimed at supporting the learning process and helping learners to get closer to the training objectives and is therefore part of a helping relationship based on trust and cooperative work (Pernoud, 2001).

Formative assessment* can take place on Moodle through various modules and assessment activities including "Survey", "Workshop", "Test", "Questionnaire".

SUMMATIVE ASSESSMENT

This is an assessment of acquired knowledge. This takes place after completion of the training course and aims to ascertain that "the learning outcomes targeted by the training have been achieved" (Wikipedia).

This is carried out at the end of the test phase using existing modules and activities in Moodle.

The difference with formative assessment* is that these summative assessments (usually marked) have to be set up to monitor the time allowed for completion, only single attempts are possible, and no clue is provided, etc.

FUNCTIONAL ASSESSMENT

Most important in the testing phase is the appraisal learners and tutors make regarding the training process.

Following the summative assessment, learners and tutors fill in two standard forms, one for learners (Appendix 8) and one for tutors (Appendix 9). The two questionnaires provide everyone with the opportunity to express their opinions on the course and to identify both its strengths and weaknesses.

These questionnaires are accessible to both profiles of participants at the end of the training. Their answers are automatically analysed and reported by Moodle. These reports will serve as a basis for the project team to plan corrective solutions for problem areas highlighted in the questionnaires.

STEP 3: VALIDATION OF RESULTS AND DELIVERY

Reports, once filled-in and validated by learners and tutors, are then produced and edited and sent to a Restricted Team (the project leader, the coordinator and the pedagogical board) for both quantitative and qualitative processing.

The board then meets to review the results of the processing and make the necessary recommendations regarding the corrective measures to take with regard to the various problems recorded prior to validation and delivery of the apparatus.

This step will therefore be divided into 4 phases:

- Upgrading of the apparatus
- Validation of the project deliverables
- Project completion report and delivery



Figure 18 : Organisation of the project validation phase

UPGRADING OF THE APPARATUS

The experimental phase of the apparatus ends with the implementation of the recommendations resulting from the test phase by addressing the noted malfunctions and integrating the approved corrections and improvements.

All stakeholders are involved, each according to their respective roles and competences, to address noted shortcomings: technicians, teacher-content designers, tutors and administrators.

The validation of the project requires an acceptable level of operability of the system during the ODL support period.

The project leader coordinates this operation and validates the corrections brought to the various aspects of the apparatus.

VALIDATION OF THE PROJECT DELIVERABLES

The operability of the APPARATUS Is measured according to the quality of its various aspects, especially its technical, administrative, pedagogical and didactic aspects. The financial aspect, though not extensively discussed in this Guide, is a validation criterion affecting the institution's potential to guaranty the sustainability of the ODL offer.

The indicators used to validate the project are essentially found in the results of questionnaires 8 and 9 indicating the levels of satisfaction of learners and tutors with the progress of the Test phase.

These indicators are used to fill in the form in Appendix 10 by the project leader, who then submits it to the Committee of Experts for the project completion report to be drawn up.

PROJECT COMPLETION REPORT AND DELIVERY

A project completion report must be drawn up according to the results obtained to validate the smooth running of the ODL apparatus prior to its delivery to the host institution.

The report concludes observations regarding the post-project period and possible initiatives to enrich and share the ODL experience.

Once the ODL apparatus is validated, the academic institution take full responsibility for the system and will ensure its supply, maintenance and provision to other courses or modules forming part of the university curriculum.

Guide for a blended or full distance learning project

Conclusion

t is worth emphasising that a blended or distance learning project is a potentially complex, yet unique and enriching experience. There is no generic turnkey solution suitable for all situations and contexts and many institutions often have to adapt ICT to their own technological, pedagogical and administrative context. This Guide therefore provides rather general measures, not specific any given institution. The document provides solutions for the design and implementation of a modular ODL project in line with current practices in many higher education institutions in French-speaking countries. The initial objective is to reform existing training offers for the purpose of introducing distance learning components or to switch completely to distance learning. There is, however, no reason not to use this Guide to design new blended or full distance learning (SPOC), provided that it is supplemented by more precise instructions adapted to these teaching styles.

This Guide provides only basic pedagogical activities and the usual monitoring and evaluation procedures. In more elaborated blended or distance learning programmes, however, there are more advanced techniques, including how to design pedagogical scenarios and active learning pedagogy activities⁴⁷, how to create and use Open Educational Resources (OER) under Creative Commons licences, how to implement quality assurance procedures, etc. These advanced techniques and modalities would come into play in later phases after the implementation and appropriation of the first level of ODL management as proposed in this Guide.

The success of a distance education project in Global South Countries seems to depend on the availability of IT equipment and infrastructure, and above all on the commitment of teachers as direct actors, and on administrative and political leaders as influential facilitators for strategic decision-making as well. The initiative of a higher education reform by ODL must consider the promotion of good practices resulting from the creativity of local actors. North/South collaborations are recommended and should not be one-way, especially in case distance learning relies, for example, only on videoconferences conducted in lecture theatres or on top-down technologies. Local appropriation of the various aspects of ODL is a prerequisite for progress in creativity and innovation.

Guide for a blended or full distance learning project

⁴⁷ Marc-André Girard et al, Pédagogie Active - Manifeste pour une pédagogie renouvelée, active et contemporaine. https://www.java.com/fr/download/

87

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Glossary

- PEDAGOGICAL SUPPORT: The support does not have anything to do with knowledge transmission. Its purpose is to encourage learners and help them to take ownership of their training programme at their own pace and according to their profile. It ensures learners's concerns are addressed and answered by providing a simple solution within a set timeframe. In an Open and Distance Learning context, there is a difference between technical support and social support...
- LEARNING ACTIVITY: The basic unit of a module for achieving one or more specific objective(s) with regard to a competence. An activity includes homogenous and interrelated tasks corresponding to the most basic level of a specific job (example: the tutor carries out various monitoring and support tasks as part of his main activity as a tutor).
- PLATFORM ADMINISTRATOR: IT system administrator (manages accounts and authorisations, the general structure, course parameters etc.).
- ADAPTIVE LEARNING: This refers to the idea of personalised learning. Lessons, exercises and methods are adapted to each learner in real time, according to his or her pace of learning. This method is based on Big Data and neuroscience technologies.
- **ASYNCHRONOUS LEARNING:** In asynchronous training, discussions are not live but rather carried out via discussion forums or e-mail, which do not allow for an immediate reply.
- SYNCHRONOUS LEARNING: Synchronous training involves interaction between participants (both trainers and learners) via instant messaging, videoconferencing, web conferencing and other tools allowing simultaneous conversation.
- BLENDED LEARNING: Blended learning is a hybrid learning model: the aim is no longer to distinguish between face-to-face and distance learning, but rather to combine them. Learners switch between both models. They can start their training with a distance learning module followed by a classroom module for instance.
- FLIPPED CLASSROOM: Flipped classrooms refer to a new pedagogical approach whereby classroom and home activities are reversed or flipped. Instead of learning in class and practising at home, students should learn at home, using appropriate pedagogical content, and put into practice what they have learned in class. This gives the teacher more time for students having more difficulties.
- STEERING COMMITTEE: A steering committee (SC) is formed once the ODL project is approved. It is composed mainly of the university project team plus, if necessary, one or more external experts. This joint committee ensures the smooth running of the project in line with the objectives and operating procedures agreed upon. The steering committee prepares regular reports on the progress of activities during the implementation.
- MONITORING COMMITTEE: A Monitoring Committee (MC) comprises the project team and the steering committee, plus potential partners from the host university involved in the blended or distance learning project (i.e. other universities, private sponsors, research structures, industrialists, etc. The main task of the Monitoring Committee is to oversee the project's progress towards its pedagogical objectives. If need be, the Committee takes action on issues of a strategic nature or relating to the governance model of the ODL apparatus in place.

- (Course) CONTENT DESIGNER: A resource person, usually a teacher or trainer, who is a specialist in a subject or discipline and who develops knowledge content to be delivered in a training or learning context according to the objectives set in a training offer.
- CONSTRUCTIVISM : Constructivism considers learning as a process of knowledge "construction" that occurs in the interaction between the thinking person and the environment in which he or she lives. These theses grant an essential role to the actions and operations carried out by the subject person in the structuring of the thought process. "Constructing" knowledge means using prior knowledge as a basis for representation, calculation and reflection on one's own action. Prior knowledge serves as a process of assimilation of new knowledge. This means that whatever a person is going to learn depends on what they already know.
- ONLINE COURSE: An online course is a learning pathway to be completed on a computer, tablet or smartphone and during which a learner will acquire knowledge and/or skills. It consists of a set of modules (which can be subdivided into sequences) consisting of pedagogical content and assessments. As learners moves forward, they may be awarded certificates validating their learning.
- ODL APPARATUS: A set of structured elements (methods, tools, procedures, routines, principles of action, actors) aimed at producing individual and collective competences; a set of material and human resources designed to facilitate a learning process.
- E-LEARNING : E-learning refers to distance learning, more precisely training on the Internet.
- PROJECT TEAM: A Project Team (PT) is an internal part of the university institution hosting the blended learning project. The project team (PT) consists of resource persons who have been chosen according to their profiles, roles and commitments to pedagogical innovation through ODL. The project team analyses the needs of the university and compiles an application file to address all types of ODL calls for proposals and project proposals. The team should be multi-skilled, including people with pedagogical as well as technical, financial, legal and human resources management skills. Its main task is to compile the most complete project file.
- FORMATIVE ASSESSMENT: This takes place during the learning process and aims to provide learners with as complete and accurate information as possible regarding their progress towards the learning objectives and the difficulties they are encountering.
- PREDICTIVE ASSESSMENT: Predictive assessment is a means of verifying learners' prior knowledge. Based on tests and simulations, it provides information on their ability to take the training, And is thus carried out PRIOR TO training. This can be called a "knowledge assessment", which is relevant prior to any trainin session for the design of context adapted pedagogical scenarios
- **SUMMATIVE ASSESSMENT**: This is carried out at the end of a learning process and its aim is to check to check if learners have met learning objectives.
- ODL: Standing for Open and Distance Learning. This refers to a learning model that emerged in the 1990s that broke with the unity of place and time by relying on digital technologies. This includes all distance learning courses, be they correspondence or online, individual or group, initial or continuous training.

- PEDAGOGICAL GRANULE: This refers to the smallest pedagogical unit in a learning programme. The granule or grain is a pedagogical tool. Microscopic pedagogical tools and elementary learning units are combined to form personal learning paths.
- GRANULARITY: The level of segmentation of pedagogical content into a series of elementary items (called granules), which may be recombined within the programme to meet personal learning needs.
- LCMS: LCMS or Learning Content Management System are web-based solutions used to create and manage learning content. It is basically a space where learning content is stored for easier access and use. The space equally includes tools for the creation of pedagogical content for trainers.
- LMS: Learning Management System : The concept refers to a web-based software system used to create online learning platforms, where groups of learners can be created and managed. These platforms typically include a communication system, an access control system, and the administration of groups of learners.
- LEARNING MODULE (of a course): a unit within a learning path. A component defined by objective(s), timeframe, prerequisites, content, assessment consisting of smaller pedagogical granules.
- MOOC: This is an English term referring to Massive Open Online Courses. These are free online courses available for every one to enroll and ofte provided by Universities. Participants, both trainers and students, communicate exclusively via the Internet and use open educational resources. Some MOOCs now provide certification at the end of the learning path.
- LEARNING PATHWAYS: this term refers to all learning modules a learner is required to complete. This meets various criteria: the specific need for training and the level of competence possessed in the subject "taught". This allows for personalised learning processes.
- ACTIVE PEDAGOGY: This PEDAGOGICAL approach aims to involve learners in their own learning process to a greater extend. Learners interact with each other and with the trainer. The latter encourages and guides them through direct and permanent interactions. Participants are sel-directed on various sequences of the learning process and tutored (assissted) on others.
- Action Plan: An action plan gives priority to more important initiatives in order to meet certain objectives. In ODL, an action plan is designed like a guide offering a framework or structure when carrying out a blended learning project.
- PRE-PROJECT: The pre-project in ODL is not the project's specifications. This is a first projection of what the project might be with regard to the initial idea. From an organisational point of view, it is required to consider the whole perspective of the project an to operatonalise the approach. The following questions will have to be answered for each set objective: what actions? What organisation? What technical and pedagogical, material and financial resources are needed?
- (Pedagogical) RESOURCES: A resource is made up of adequate and targeted content (aimed at meeting an identified need) and a suitable media container (single or multiple media, such as paper- based, magnetic or digital) which, in a learner-learner interaction (synchronous or

asynchronous, face-to-face or remote), enables an intention to be implemented in the transmission, appropriation or sharing of knowledge.

- PEDAGOGICAL SCENARIO: A document presenting an orderly succession of teaching sequences involving human and multi-support resources designed to contribute to learners' mastery of a professional objective and/or skill. This is a planned organisation of learning activities using learning resources for a given learning objective and context.
- SOCIAL CONSTRUCTIVISM: A teaching method whereby learners are individually responsible for their own learning process and that of the group through reciprocal sharing of knowledge. Knowledge "construction", although personal, takes place in a social environment. Information is related to social background and context and comes both from one's own thoughts and from others' interactions.
- SPOC: The English acronym stands for "small private online course". These are distance learning courses. SPOCs differ from MOOCs (Massive Open Online Courses) in that they are short-term formats, private and intended for a limited number of learners. "Private" refers to tailored, custom-made, company-specific. MOOCs are, for their part, public or open.
- TUTOR/TUTOR-LEARNING COACH: Supports and assists a person or a group throughout the learning programme. This assistance may be of a technical, moral, pedagogical or administrative nature. Such tutors are not involved in the content (see teacher-tutor), but sometimes serve as a bridge between teachers/lecturers and learners.
- **TUTORING :** "A form of assistance in individualised instruction provided either to support a learner with specific needs or to provide special, supplementary or distance training".
 "Tutoring may be also be provided to small groups of persons.

Appendixes

Appendix 1 : ODL PRE-PROJECT FORM (TEMPLATE)

EVALUATED PRO	JECT
Title of the pre-project :	Project number :

1 PRESENTATION OF THE PROJECT (CONTEXT AND JUSTIFICATION, GOALS, COMPREHENSIVE STRATEGY AND EXPECTED RESULTS...)

[one page maximum]

2 PROJECT INITIATOR

University (or training) institution initiating the project (host institution of the blended project)

Name of the institution : Name of the highest ranking official in the institution :

Person in charge of Blended Learning within the institution Surname : First name: Title : Function: E-mail address :

3 PROJECT PARTNERS

Is the blended learning project subject to an agreement with :

If yes:

• Lists of partner universities awarding diplomas

Name of the institution :/ Contact within the institution :Name of the institution :/ Contact within the institution :Name of the institution :/ Contact within the institution :

Guide for a blended or full distance learning project
APPENDIXES

Lists of other partner universities

Name of the institution:	/ Contact within the institution :
Name of the institution :	/ Contact within the institution :
Name of the institution :	/ Contact within the institution :

List of major members of the Socio-Economic⁴⁸ and Institutional⁴⁹Board

Name of the institution:	/ Contact within the institution :
Name of the institution:	/ Contact within the institution :
Name of the institution:	/ Contact within the institution :

4 PEDAGOGICAL SPECIFICITIES OF THE PROJECT

٠	Title, grade and subject area of th	e proposed blended learning :
•	Academic level of the proposed b	lended learning project
	Bachelor Masters Doctorate	
•	Framework of the proposed blend	ed learning
	National programme Delocalised programme ⁵⁰ Dual or conjointdegree programmes	
•	Status of the proposed blended le	earning
	Initial training [Continuous training	
•	Level of hybridisation in the existi	ing training
	Full training programme Courses within the programme Course module(s)	

Overall ratio between face-to-face & distance learning ٠

NB: Adapt the terminology to the institution's organisation model.

Other(s):

⁴⁸ Businesses, companies, foundations, associations, etc.

⁴⁹ Governmental, intergovernmental institutions, etc.

⁵⁰ Delivered in a different institution from the one awarding the degree (e.g. courses in Hanoi, but degrees are awarded by a French university)

Face-to-face learning ... %

Distance learning: %

•	Blended learning models available
	Transmissive model [Lectures] : Handouts, conferences, online courses, etc.
	Active pedagogy [Tutoring] : Practicum, collaborative projects, remote assistance, etc.
•	Expected number of students enrolled in the proposed blended learning
•	Governance of the proposed blended learning
	Was a project committee formed to implement and monitor the blended learning programme?
	yes 🗌 no 🗌
•	Profiles of members forming the project committee of the proposed blended learning?
	Administrative head ⁵¹ Image: Im
•	Required skills for the blended learning programme
	Has the institution initiating the project designed a programme to upgrade teachers' skills with regard to specific ODL skills before the blended learning programme is launched? yes no no
	If yes, which of the following?
	Management of learning platformsICreating online coursesIScenario-based pedagogyITutoringIActive pedagogyIEducational assessmentIOther:I

Guide for a blended training project APPENDIXES

⁵¹ The administrative head is also in charge of legal and financial affairs within the committee.

Has the institution initiating the project designed a programme to upgrade learners' skills with regard to specific technological (ICT use) and pedagogical (active pedagogy) skills required for an online learning programme prior to the introduction of the blended learning programme?

	yes 🗌	no [
If yes, in what form ?			
Intensive training before the Support based on the projec	project t requirements		
Self-paced online training Other:			

The blended learning project define the students' exit profile in terms of knowledge and professional skills, and the professions they give access to.

VAS	no	
yes	110	

The blended learning project build on any international blended learning programme provided at the national and regional level.

yes 🗌	no 🗌	

If yes, name some :

5. I	PEDAGOGICAL	SPECIFITIES	OF THE PROJECT

Technological resources required for the blended learning programme

What digital infrastructure will be provided for the blended learning programme?

External hosting server Equipped computer room (s) Broadband Internet access Wifi connection for students Digitisation equipment Video editing equipment Video conferencing system Digital learning platform (CMS/LCMS) Local technical maintenance team Others:	Local hosting server	
Equipped computer room (s) Broadband Internet access Wifi connection for students Digitisation equipment Video editing equipment Video conferencing system Digital learning platform (CMS/LCMS) Local technical maintenance team Others:	External hosting server	
Broadband Internet access Wifi connection for students Digitisation equipment Video editing equipment Video conferencing system Digital learning platform (CMS/LCMS) Local technical maintenance team Others:	Equipped computer room (s)	
Wifi connection for students	Broadband Internet access	
Digitisation equipment Image: Constraint of the second system Video conferencing system Image: Constraint of the second system Digital learning platform (CMS/LCMS) Image: Constraint of the second system Local technical maintenance team Image: Constraint of the second system Others: Image: Constraint of the second system	Wifi connection for students	
Video editing equipment Image: Constraint of the second system Video conferencing system Image: Constraint of the second system Digital learning platform (CMS/LCMS) Image: Constraint of the second system Local technical maintenance team Image: Constraint of the second system Others: Image: Constraint of the second system	Digitisation equipment	
Video conferencing system	Video editing equipment	
Digital learning platform (CMS/LCMS)	Video conferencing system	
Local technical maintenance team Others:	Digital learning platform (CMS/LCMS)	
Others:	Local technical maintenance team 🗔	
	Others:	

6. SOCIOLINGUISTIC SPECIFICITIES OF THE PROJECT

Hourly volume per language				
French	English	National language	Other(s):	
Number of hours:	Number of hours:	Number of hours:	Number of hours:	
%:	%:	%:	%:	

• Language policy of the proposed blended learning programme

• Blended learning project in its socio-economic environment

To what extent does the blended learning project bring social benefits for students (flexibility, mobility and time management, etc.)?

To what extent is hybrid training an asset (an advantage) for the professional integration of students?

7. ECONOMIC SPECIFICITIES OF THE PROJECT

• Financial equilibrium of the proposed blended learning programme Will registration for the hybrid course be subject to additional fees for students?

ves	no 🗌
,,	

The distance learning activities of the blended learning system will be:

Integrated into the global salary of teachers:
Rewarded as additional activities:

The blended learning project will be allowed to use external services (tutoring, course digitization, Internet hosting, technical maintenance, etc.):

The financial resources for the blended learning project are:

Internal (from the institution)	
External (donations/partnerships)	

The institution plans for an autonomous budget in behalf of the blended learning project:

ves

no 🗌

The estimated ratio of financial support the institution requests from an external partner compared to the overall cost of the blended learning project:

0-10%	
10-20%	
20-30%	
30-40%	
40 % plus	

• Institution ownership of the project

• Describe internal elements to the institution that will contribute to the success of the blended learning project (human resources (including faculty), material and financial resources, etc.):

Describe the potential benefits of implementing the blended learning project for universities in French-speaking countries.

•••••••••••••••••••••••••••••••••••••••	•••••••••••••••••••••••••••••••••••••••	 •••
••••••••••••••••••		

APPENDIXES Guide for a blended or full distance learning project

8. GENERAL PROVISIONS

What are / will be the difficulties and obstacles likely to be encountered, or already encountered, in the definition and implementation of the blended learning project? What measures are planned to overcome these difficulties?

Measures envisaged to overcome the identified difficulties

Depending on the weaknesses identified, the measures envisaged can be presented as an activity developed as part of the blended learning project and taken to produce **expected results**, more precisely **immediate result(s)** with respect to the activity implemented. Within the framework of a strategy built on the project-based approach, the definition of each activity always begins with an action verb: strengthen, develop, structure, enable, etc.

9. APPLICATION FROM THE INSTITUTION INITIATING THE PROJECT

To be completed and signed by the highest ranking official of the institution initiating the project or by the head of its international relations department.

Surname :

First name: Title :

Signature and stamp (Required)

10. 1- CONSTITUTION OF THE FILE

The pre-project fie should include the Following documents:

- This application form, duly filled in;
- List of project committee members; For each member, provide the following information in tabular form: surname and first name - Status (grade/function) - Area of specialty - Role in the project
- Curriculum vitae of the project leader;

All the documents listed must be in French and sent in PDF format.

An institution may submit more than one project.

Appendix 2 : ODL PRE-PROJECT EVALUATION FORM (TEMPLATE)

INSTITUTION	
PROJECT LEADER	
ACADEMIC YEAR	
EVALUATION CRITERIA	x
General context of the project	
The host institution has (already) implemented a blended learning programme.	
The host institution receives national or regional technological support.	
Declared for needs of the project	
Management of a blended learning programme	
Technical implementation	
Financial resources	
Other(s)	
Declared objectives of the project	
Clear educational objectives	
Clear Scientific goals	
Improvement of the learning system	
Other needs:	
Priority skills required for the project	
Digital course design	
Use of a learning platform (Moodle)	
learning support (tutoring)	
Scenario-based learning	
Other(s):	
Existing pedagogical resources accessible for the project	
Digital lessons	
Training manuals	
Quizzes	
Other(s):	

Tec	nnological infrastructure available favourable for the project	
	Accessible equipment to learners (PCs, tablets, etc.)	
	Local area network	
	Broadband Internet (ADSL)	
	Connected room/hall with free access	
	Video conferencing system	
	Wifi access outside classrooms (common areas)	
	VPN network (access from outside)	
	Other(s):	
Pro	files reported to be among the project team	
	Education manager	
	Technical manager	
	PEDAGOGICAL CONTENT DESIGNERS	
	Tutors/coaches for learners	
	Other(s):	
Fina	ncial resources mobilised for the project	
	The project receives internal financial support	
	The project receives external financial support	
	Total	

APPENDIX 3 : ODL PROJECT OPPORTUNITY NOTE (TEMPLATE)

ODL PROJECT OPPORTUNITY NOTE

PROJECT TITLE

INSTITUTION

PROJECT LEADER
Domain/theme
Academic level
ACADEMIC YEAR
Duration of training

I. QUALITATIVE EVALUATION OF THE PROJECT

The abstract should not exceed 1,500 words (approx. 1 Page duplex printing). This should be in French and 2 pages maximum:

I.1 Quality of the technological framework of the institution (is the technical environment of the institution favourable for sustainable online learning empowerment?)

I.2 Quality of the project's pedagogical team (is the general level of the team sufficient to pool the skills acquired from the ODL session to replicate the process?)

I.3 Quality of pedagogical resources (are the existing resources sufficient to assess the quality of the planned ODL proramme?)

I.4 Institutional anchoring of the project (to what extent does the project receive some institutional support?)

I.5 Contribution of the project in behalf of the institution (can the project improve the quality of the university's learning curricula?)

I.5 Success factors (what could make this programme a replicable model?)

II. JUSTIFICATION OF AN EXTERNAL INTERVENTION

(Advantages of the project for an external partner: how is the support of this project an advantage for the said partner?)

APPENDIX 4 : ROADMAP (TEMPLATE)

Roadmap

PROJECT TITLE

(Indicative model to be adapted to each context)

CONTEXT ELEMENTS

- Project number :
- Host institution:
- Project title:
- Project learder :
- Referent:
- Academic year:

PROJECT SYNOPSIS

This paragraph summarises the general objectives of the project.

ODL PEDAGOGICAL MODEL

This paragraph sets the pedagogical model of the blended system to be implemented: identifying, if necessary, one of the six types of blended learning previously described ("Typologies of blended learning").

It also sets and prescribes the quota of distance learning as compared to face-to-face learning.

METHODOLOGY: MANAGING THE DIGITAL REFERENCE OF THE PROJECT

The institution assigns a digital reference network to support the project. This approach, combing learning, monitoring and assessment, needs to be clearly described and planned (who, when, how).

STAKEHOLDERS, ROLESAND RESPONSIBILITIES

- The host institution

The host institution brings together the persons in charge of monitoring the smooth running of the project and taking strategic decisions on behalf of the initiator. Indicate on which direction, service, department, discipline, project, etc. depends the ODL programme to set up.

- PROJECT TEAM

The project team is headed by one and only one project manager. Specify the areas of expertise, roles, missions and responsibilities of each member of the team.

External contributors

If the project team does not bring together all the expertise required for the smooth running of the project, it is necessary at this stage to have identified the external experts (tutors, resource developers, technicians, etc.) the team may solicit for collaboration in the appropriate moment and under appropriate conditions (financial conditions included).

– End users

Specify the category of end-users of the apparatus: academic level, number, single or shared path, etc.

ODL DIGITAL ENVIRONMENT

– Definition of the system

Define the technical configuration of the ODL apparatus: specify the pedagogical platform to be used, decide on the place and conditions of its hosting, list all the tools, applications and complementary services needed for the programme.

- Connectivity and remote access

Identify the solutions to deploy to facilitate remote access to the platform and maintain virtual contact among the different actors of the ODL programme: specify the mode of access to the platform outside the institution (VPN network, tunneling, roaming, roaming user profiles); specify if access is planned in adaptive mode (responsive design) using PCs, tablets and smartphones; specify if videoconferencing solutions are planned and of what type (via web interfaces or specific IP protocols).

SET-UP WORK

- conditions for producing pedagogical content

Describe the choices and conditions under which the digitisation of pedagogical resources should be done. Define, among others, the types of content: courses, exercises, quizzes, educational videos, SCORM content aggregations, web resources, etc; Also define the quality of the resources to be used: new content, existing content, innovations, scenario-based content, etc. Specify the rights and licences options: OER or/and proprietary resources.

- conditions for providing pedagogical support (Tutoring)

Identify tutors and the conditions of their appointment. Define, among others, if tutors are from within the institution, if they are both course designers and tutors of their own resources, if they are paid or not. Also, indicate in case any external contractual tutors are used, their academic levels and their level of involvement.

TRAINING OF THE SUPERVISING STAFF

Define a precise training schedule for the members of the pedagogical team (content designers, trainers, tutors, technicians, administrators). As a general rule, everyone involved in the running of the ODL proramme should be trained to carry out the type of activities they are expected to perform within the pedagogical system.

SCHEDULE MANAGEMENT

– Master Plan

The project master planning is a summary project schedule limited to the major milestones (project submission, validation, start-up, mid-term review, completion). It is one of the key tools of strategic steering. Choose the most effective visual representation possible (timeline, milestones and deliverables).

– Operational plan

The operational plan is usually a graphic (i.e. Gantt chart) which allows a project manager to monitor the progress in all the stages or steps making up the project lay out plan. At this stage of the ODL project, it should provide details of the master plan.

COST MANAGEMENT (ECONOMIC MODEL)

At this stage, workloads (tasks, activities or deliverables) have to be specified. These may be calculated in terms of costs according to the economic rules applied in the institution. Estimating the costs of these charges is an essential part of the economic model of the project.

MONITORING AND FEED-BACK

- Operational communication tools

Define how communication will take place between members of the project team and the project leader: type of media (paper-based, e-mail, collaborative application...), type of content, frequency, etc.

– Meetings

Define the nature and the mode of meetings between the different project teams. For every meeting: the frequency, duration, place, host, who sets the agenda, who draws up the minutes, who moderates, etc.

– Fee-back

Define the nature and frequency of reporting by the steering team about the progress of the ODL project.

RISK MANAGEMENT

The aim here is to make an inventory of events likely to disrupt the smooth running of the project, and to assess the impact of these risks on the project. These may be of a technical, human or financial nature; internal or external to the institution. However, there is no point in listing risks without planning countermeasures to avoid them or limit their impact.

PROJECT DELIVERABLE

The project completion is declared between the two parties by a series of documents including the final report of the project leader. This report should provide indicators to assess the pedagogical quality of the project: participation and attendance rates of participants, drop-out rates, volume of work submitted, actual rate of remote access and classroom attendance, general success rate, etc.

The report should also summarise all the problems and difficulties actually encountered, be they technical (platform malfunctions, computer network problems, power supply problems, etc.) and human (absence of tutors at appointments, absence of learners at synchronous sessions, etc.) or financial (insufficient resources for certain activities such as tutoring, development or acquisition of pedagogical resources, etc.).
APPENDIX 5 : MONITORING FORM BY THE PROJECT MANAGER

To be filled in by:

Date:

Project number :

Project title :

Course title:

CONTENT DESIGN: DESIGNERS

▷ Item No. 01

- The list of module designers is established and the work contracts (agreements) are validated.
 - O Yes
 - O No

▷ Item No. 02

The list of designers must be drawn up and validated from the start of the project. This list is the basis for creating designers' accounts on the Moodle platform.

- All designers are informed of the roadmap and timelines for the completion of the design work :
 - O Yes O No
 - .

▷ Item No. 03

Consultation with, and buy-in from the entire team on the schedule and roadmap is essential to avoid conflicts in terms of planning.

- Content designers are informed of the availability of the Moodle platform and its Url address and account settings for accessing it remotely.
 - O Yes
 - O No

▷ Item No. 04

- Content designers have received their access parameters to the platform and all have validated their creator accounts.
 - O Yes
 - O No

▷ Item No. 05

- The designers have well assimilated the recommended framework for the design of modules.
 - O Yes
 - O No

▷ Item No.06

- For any case, indicate the measure(s) to be taken to ensure that all designers assimilate and comply with the recommended design framework:

.....

▷ Item No. 07

- Describe any problems in accessing Moodle brought to your attention by the designers and the measures to be taken to ensure problem-free access for each designer.

Problems encountered	Proposed solutions

▷ Item No. 08

- Describe any problems using Moodle functionalities that have been brought to your attention, and the steps that need to be taken to enable each designer to use them properly.

Problems encountered	Proposed solutions

CONTENT DESIGN: THE PEDAGOGICAL TEAM

▷ Item No. 09

- All the courses/modules to be designed for the ODL programme are final and the contents have been validated within the host institution (by a pedagogical board).

0	Yes	The modules grid must be filled in and validated by the pedagogical board of the university
0	No	hosting the ODL programme. Based on this grid, course spaces will be created on the ODL
		platform and permissions will be granted to designers.

▷ Item No. 10

- Scientific module managers (from the pedagogical board) were designated for the validation of the scientific content produced by content designers.

С	Yes	The pedagogical board is essential for an ODL programme. It ensures the scientific quality
С	No	and legitimacy of the designed modules. It gives recommendations for upgrading the
		modules and ensures the quality of assessments.

▷ Item No. 11

- The members of the pedagogical board are informed of the need to validate the modules contents as they become available.

- O Yes
- O No

▷ Item No. 12

- The exchange conditions between the designers and the pedagogical board have been set up to ensure regular validation.
 - O Yes
 - O No

▷ Item No. 13

- An ODL programme administrator was appointed and his account is validated on the platform.
 - O Yes
 - O No

▷ Item No. 14

- What steps have already been taken as part of the preparation of the promotion and management of the ODL programme?

	In course	Completed	Notstarted
- Call for applications for prospective students			
- Promotional brochure of the Masters programme			
- Provisional budget			
- Project charter			
- Tutor contract			
- Designer contract			
- Coordinator contract			
- platform template			
- List of frequently asked questions			
- Module catalogue			
- Assessment schedule			
- Modalities of supervision of students re- search projects			

Guide for a blended training project APPENDIXES

APPENDIX 6 : MONITORING GRID FOR CONTENT DESIGNERS

To be filled in by:

Date:

Module number:

Title of the module :

Course title:

Question No. 1

- Have you defined clear and precise objectives for your course?
 - O Yes. I'm sure;
 - O Yes. I think so;
 - O No. I cannot define the objectives;
 - O No. I haven't had the time yet.

Question No. 2

- Have you structured your course in learning sequences corresponding to the objectives you had defined?
 - O Yes. Absolutely;
 - O Yes. But, I am not yet satisfied with the sequencing ;
 - O No. I can't do it alone ;
 - O No. I haven't had the time yet.

Question No. 3

- For the sequences, have you planned :

	Yes. For all sequences	Yes. Only for certain sequences Yes. Only for certain sequences		No. I haven't had the time yet
A description recalling the objectives, the prerequisites				
A graphic organizer				
Course materials				
Learning activities				
Additional resources to consult				
Formative assessments				
Interaction tools				
A glossary				
A list of frequently asked questions				

Question No. 4

- For the Activities, have you planned :

	Yes. For all activities	Yes. Only for certain activities	No. I find it hard to fulfill this requirement	No. I haven't had the time yet
A description recalling the work instructions, the expected result				
Resources to facilitate the completion of the activity				
Working methods (individual or/and collaborative)				
Assessment criteria				
Interaction tools				
Schedule for completion				

Question No. 5

-

For the interactive self-assessments designed, have you planned :

	Yes. For all self- assessments	Yes. Only for certain self-assessments	No. I find it hard to fulfill this requirement	No. I haven't had the time yet
Feedback(s)				
Links to the relevant resources				
A "Help" system in case of difficulty				

APPENDIX 7: EVALUATION BY LEARNERS: PREDEFINED GRID

Relevance

Answers	Not Yet	Hardly ever	Rarely	Sometimes	Often	Nearly always
	answered					
	In	this online course	•			
1. My learning focuses on subjects I am interested in.	\odot	0	0	0	0	0
2. What I learn is important for my pro- fessional practice.	\odot	0	0	0	0	0
3.1 am learning how to improve my professional practice.	\odot	0	0	0	0	0
4. What I learn is consistent with my professional practice.	\odot	C	0	0	0	0

Reflective thinking

Answers	Not Yet	Hardly ever	Rarely	Sometimes	Often	Nearly always
	answereu	In this on	ine course			
		in uns on	ine course			
 I take a critical look at my learning style. 	\odot	С	0	0	C	0
6. I take a critical look at my own ideas.	\odot	0	0	0	0	С
7. I take a critical look at the ideas of other students.	\odot	С	0	0	0	0
8. I take a critical look at the ideas developed in the documents.	\odot	C	C	C	C	C

Interactivity

Answers	Not Yet answered	Hardly ever	Rarely	Sometimes	Often	Nearly always
In this online course						

9. I explain my ideas to other students	\odot	С	С	С	0	С
10. I ask the other students to explain their ideas.	\odot	С	С	С	0	0
11. Other students ask me to explain my ideas.	\odot	0	0	C	0	0
12. Other students respond to my ideas.	\odot	0	0	С	0	0

Teachers' support

Answers	Not Yet answered	Hardly ever	Rarely	Sometimes	Often	Nearly always
		In this on	line course			
13. The teacher stimulates my think- ing.	O	С	С	С	0	0
14. The teacher encourages me to take active part.	Θ	С	С	С	0	0
15. The teacher sets an example in terms of expression	Θ	С	С	С	0	0
16. The teacher sets an example in terms of self-criticism	$oldsymbol{\circ}$	С	С	С	0	0

Peer support

Answers	Not Yet	Hardly ever	Rarely	Sometimes	Often	Nearly always
	answered					
		In this on	line course			
17. Other students encourage my participation.	\odot	0	0	0	C	0
18. The other students congratulate me on my contribution.	\odot	C	0	0	С	C
19. Other students encourage my participation.	\odot	С	C	C	C	C
20. Other students take part in my efforts to learn.	\odot	С	C	C	C	С

Interpretation

Answers	Not Yet	Hardly ever	Rarely	Sometimes	Often	Nearly always
	answered					
		In this onli	ine course			
21. I understand the messages of other students.	\odot	0	С	0	0	0
22. Other students understand my messages.	\odot	0	С	C	C	C
23. I understand the messages of the teacher.	\odot	C	С	C	C	C
24. The teacher understands my mes- sages.	\odot	0	С	C	0	0

25. How long did it take you to fill in this query form?

26. Do you have any other comments?

APPENDIX 8: EVALUATION BY LEARNERS : PERSONALISED GRID (TEMPLATE)

This is a completely anonymous questionnaire. Your evaluation will serve to improve the quality of future training courses.

Did you look up the website dedicated to this programme?

- O Yes
- O No
- Prior to taking the course, were you already familiar with distance learning methods?
 - O Yes
 - O No

Was the training adapted to your social life outside the university?

- O Yes
- O Rather
- O Not really
- O No
- O No answer

In your opinion, did this distance learning course produce the same results as a faceto-face course?

- O Absolutely;
- O Suitably
- O Not really
- O Not at all
- O No answer

 How is this distance learning course different from your face-to-face learning? (Multiple-answer question)

- O Greater individual autonomy
- O No more risk of loneliness
- O More flexible working time
- O More collaborative activities
- O A new form of monitoring by teachers
- O A new form of assessment
- □ Other(s):
- What types of constraints (permanent or occasional) did you encounter during the distance learning course?
 - O Not enough time to attend all the synchronous sessions
 - O Low-performance computer

- O Slow Internet connection
- O Lack of support from the tutor
- O Other(s):
- No answer

How were your conditions of remote access to the platform for this programme (hardware used, Internet connection)?

- O Excellent
- O Good
- O Fair
- O Poor
- O No answer
- Was the lenght of the programme appropriate?
 - O Too short
 - O Suitable
 - O Too long
 - O No answer

Was the time devoted to practical exercises or simulations during the modules sufficient?

- O Yes
- O No
- O No answer

Were you generally satisfied with the pedagogical methods used?

- O Yes
- O Rather
- O Not really
- O No
- O No answer
- How would you appraise the performance of your tutor?
 - O Excellent
 - O Brilliant
 - O Perfect
 - O No answer

What do you think of the quality of the materials used during the programme? (Presentations, documents, video...)

- O Excellent
- O Good
- O Fair
- O Poor
- O No answer

Beyond	the content aspect, was this programme an enriching experience?
0	Yes
0	No
0	No answer
What d	id you like most about this training programme?
What d	id you like least and your proposals to remedy it?

APPENDIX 9 : EVALUATION BY TUTORS : PERSONALISED GRID (TEMPLATE)

The data collected through this questionnaire will be used to improve the monitoring conditions provided to learners during future programmes.

- Were you already familiar with the methods used in distance learning before taking part in this course?
 - O Yes
 - O No
- Have you ever tutored in a distance learning programme?
 - O Yes
 - O No
- Have you ever been trained in remote tutoring?
 - O Yes
 - O No
- Have you looked up the website dedicated to this programme?
 - O Yes
 - O No
 - O No answer
- In your opinion, did this distance learning course produce the same results as a faceto-face course?
 - O Absolutely;
 - O Suitably
 - O Not really
 - O Not at all
 - O No answer

What makes this distance learning course different from your usual face-to-face learning? (Multiple-answer question)

- O More autonomy for learners
- O No more risk of loneliness
- O More flexible working time
- O More collaborative activities
- O A new form of monitoring by teachers
- O A new form of assessment
- □ Other(s):

What types of constraints (permanent or occasional) have you encountered during the remote tutoring of learners? Not enough time to follow learners individually 0 O Slow Internet connection O Low responsiveness of learners on forums O Non-attendance of learners in synchronous sessions O Other(s): No answer How were your conditions of remote access to the platform for this programme (hardware used, Internet connection)? O Excellent O Good O Fair O Poor O No answer Was the lenght of the programme appropriate? O Too short O Suitable O Too long O No answer Was the time devoted to practical exercises or simulations during the modules suf-ficient? O Yes O No O No answer Do you find the learning activities in the modules you have tutored suitable and sufficient? O Yes O Rather O Not really O No O No answer How would you appraise the responsiveness of learners? O Excellent O Brilliant O Perfect O No answer What do you think of the guality of the materials you used during the training pro-gramme? (Presentations, documents, video...)

O Excellent

Guide for a blended training project APPENDIXES

0	Good
0	Fair
0	Poor
0	No answer
Beyond	the content aspect, was this programme an enriching experience?
0	Yes
0	No
0	No answer
What o	did you like least and your proposals to remedy it?
•••••	
······	

APPENDIX 10 : PROJECT ASSESSMENT AND DELIVERY REPORT

The validation of the project requires an acceptable level of operability of the system during the implementation phase of the blended learning programme. The following indicators are to be filled in by the project leader.

VALIDATION OF THE PROJECT DELIVERABLES

- Technical aspects:	YES	NO
• Was the platform hosted on a server owned by the institution?		
 Can the platform be accessed from all types of mobile terminals? 		
 Was the connection often stable during the training? 		
 Was the platform often stable to go through with the training? 		
 Management and administrative aspects 		
 Does the institution provide in-house services, or has it con- tracted with a service provider or an external expert for regular assistance and maintenance of the platform? 		
 Has the institution appointed a distance learning administrator? 		
 Has the institution provided an annual budget for the ODL pro- gramme? 		
 Did the project team had roles and responsibilities clearly defined to meet the various ODL project objectives? 		
 Have all team members completed the training of trainers sched- uled in step 1 of phase 2 of the project? 		
 Have all the courses planned for the test phase been finalised and hosted on the platform? 		
•		
– Pedagogical aspects		
 Did the learners carry out most of the training activities? 		
 Has the drop-out rate exceeded half of the students enrolled? 		
 Were the attendance statistics on the platform above the average (see "attendance" activity on Moodle)? 		

•	Did the work submitted by the learners exceed the average for all the planned activities?	
•	Were the tutors regularly present during the synchronous ses- sions?	
– Dida	ctic aspects	
•	Has the project team properly mastered the new training meth- ods introduced by the ODL programme?	
•	Based on the results of the questionnaire designed for the evalu- ation of the training programme (Appendices 7, 8), were the ma- jority of learners satisfied with the distance learning programme provided in the test phase?	
•	Based on the results of the questionnaire designed for the evalu- ation of tutoring (Appendix 9), were tutors for the most part sat- isfied with the distance learning provided as part of the project?	
•	Were the tutors satisfied with their tutoring experience (Appendix 9)?	
•	Is the pedagogical team convinced they can replicate this peda- gogical method in other disciplines?	
	Result	

PROJECT COMPLETION REPORT AND DELIVERY

Based on the previous results and the mutual consensus between the project team and the validation committee, a report is drawn up to validate the functioning of the ODL apparatus and submitted to [Name of the institution].

In this respect, the [Name of the institution] and the validation committee have agreed as follows:

After validation of the ODL apparatus by the two parties [Name of the institution] now takes full responsibility for the apparatus and will ensure its supply, maintenance and operation in accordance with its education policy.

Table of contents

FOREWORD	3
GENERAL FRAMEWORK	5
	_ 7 _ 11
	_ //
	11
STRUCTURE OF THE GUIDE	12
PART ONE	13
ODL REGULATORY FRAMEWORK	14
ECONOMIC MODELS OF ODL	20
PEDAGOGICAL APPROACHES TO BLENDED AND DISTANCE LEARNING	33
TECHNOLOGICAL ENVIRONMENT FOR A BLENDED OR DISTANCE LEARNING	G _41
PART TWO	46
TEAMS AND REFERENCE FRAMEWORKS	47
PHASE 1 – DEVELOPMENT AND VALIDATION OF AN ODL PRE-PROJECT FIL	E _ 52
PHASE 2 - OPERATINALISATION OF THE ODL PROJECT	58
PHASE 3 - EVALUATION AND DELIVERY	77
CONCLUSION	85
BIBLIOGRAPHY	87
GLOSSARY Appendixes	91 95
APPENDIX 1 : ODL PRE-PROJECT FORM (TEMPLATE)	
APPENDIX 2 : ODL PRE-PROJECT EVALUATION FORM (TEMPLATE)	
APPENDIX 3 : ODL PROJECT OPPORTUNITY NOTE (TEMPLATE)	_105
APPENDIX 4 : ROADMAP (TEMPLATE)	_106
APPENDIX 5 : MONITORING FORM BY THE PROJECT MANAGER	_109
APPENDIX 6 : MONITORING GRID FOR CONTENT DESIGNERS	_112
APPENDIX 7 : EVALUATION BY LEARNERS : PREDEFINED GRID	_114
APPENDIX 8 : EVALUATION BY LEARNERS : PERSONALISED GRID (TEMPLAT	E)

______117
APPENDIX 9 : EVALUATION BY TUTORS : PERSONALISED GRID (TEMPLATE)_120
APPENDIX 10 : PROJECT ASSESSMENT AND DELIVERY REPORT ______123

List of figures

Figure 1 : Hierarchy of legal texts	. 14
Figure 2 : Fundamentals of a regulatory system for ODL	. 17
Figure 3 : Key aspects of pedagogical action in distance education	. 35
Figure 4 : Blending levels of learning, from full face-to-face to full distance	. 38
Figure 5 : Committees involved in an ODL project	. 49
Figure 6 : Mapping of a blended learning project	. 50
Figure 7 : The three major phases of an ODL project are as follows	. 51
Figure 8 : First step of an ODL pre-project file compiling phase	. 53
Figure 9 : First step of an ODL pre-project file compiling phase	. 54
Figure 10 : Elements of choosing and installing a technical environment for an ODL	
programme	. 58
Figure 11 : Web hosting types	. 61
Figure 12 : Moodle activities and resources	. 64
Figure 13 : Online Plug-ins catalogue Moodle (Moodle.org)	. 65
Figure 14 : Organisation chart of the training of trainers phase	. 66
Figure 15 : Module organisation pattern	. 75
Figure 16 : Organisation chart of the blended training test phase	. 78
Figure 17 : Organisation of an ODL programme test phase	. 81
Figure 18 : Organisation of the project validation phase	. 84

Abbreviations and acronyms

CAMES	African and Malagasy Council for Higher Education
МООС	massive Open Online Course
CMS	Content Management System
CNF	Francophone Digital Campus
DRAO	West Africa Regional Directorate
DRACGL	Regional Directorate for Central Africa and the Great Lakes
EAD	Distance learning
ODL	Open and Distance Learning
IFADEM	Francophone Initiative for Teacher Distance Training
IFIC:	Institute of La Francophonie for Knowledge Engineering and distance learning
LCMS	Content Management System
LMS	Learning Management System
МООС	Massive Open Online Course
TICE	Information and Communication Technology in Education
VPS	Virtual Private Server