
CHAPTER 1 • ODL: what, why and for whom?

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1. OPEN AND DISTANCE LEARNING

ODL - Open and Distance Learning - combines the properties of open learning with those of distance learning.

Roughly speaking, open learning refers to minimal constraints on access, pace and method of study. The term is often used to encourage traditional institutions to minimise barriers between themselves and aspiring learners. In some cases it involves little more than improved marketing and more flexible schedules, but it can also involve the use of sophisticated technology. Because physical access to education is an issue for many learners, it is immediately clear why 'open learning' and 'distance learning' constitute a natural pair.

Distance learning refers to the use of a variety of techniques (increasingly ICT) to make learning possible by bridging the spatial and sometimes also temporal distance between teachers and learners.

Stressing the open learning aspect, ODL uses a variety of techniques stemming from distance education to provide as many learners as possible with an education. When putting more emphasis on the distance learning aspect, ODL refers to distance learning with minimal access constraints.

On a more conceptual level, the distance-component in ODL is not only referring to a physical distance or to an asynchronous learning situation, but also to a metaphorical distance between learning and teaching, giving the learner much more control over his or her learning process, including over learning outcomes.

- **Lifelong learning**

Lifelong learning refers to all the learning activities undertaken throughout life, with the aim of improving knowledge, skills, and competencies in a personal, civic, social, and/or employment-related perspective.

Although 'aim' indicates intentionality on behalf of the learner, it is clear that not all learning is intentional.

Also, accreditation of prior learning, especially prior experiential learning, is often a crucial element in encouraging formal types of education as part of lifelong education.

• **Blended learning**

Blended learning combines e-learning (or online learning) with typical classroom training, combining the positive aspects of both (24/7 accessibility and face-to-face interaction).

Blended learning is especially important since learning theory as well as experience indicate that a certain amount of real-life interaction is crucial in many, if not most learning projects.

Because of the importance and potential success of blended learning it would make sense to use a separate category Open and Blended Learning, but doing so would only contribute to the proliferation of not always clear terminology. We will therefore continue to refer to Open and Distance Learning, even when it is clear that 'distance' will often mean 'blended'.

	Closed	Open
proximal	traditional classrooms etc.	on-site open learning centres
blended		
distal	some types of distance learning	open and distance learning

Axis 1: education

ODL takes place in an educational setting that can be categorised as formal, non-formal or informal.

Formal education

Formal education is typically provided by an education or training institution. It is structured in terms of learning objectives, learning time or learning support and leads to certification. Formal learning is intentional from the learner's perspective.

Non-formal education

Non-formal learning is not provided by an education or training institution, and typically does not lead to certification. It is, however, structured in terms of learning objectives, learning time or learning support. Non-formal learning is intentional from the learner's perspective.

Informal education

Informal learning results from daily life activities related to work, family or leisure. It is not structured in terms of learning objectives, learning time or learning support and typically does not lead to certification. Informal learning may be intentional but in most cases it is non-intentional (or "incidental"/random)

	Formal	non-formal	Informal
certification	Yes	No	No
structured	Yes	Yes	No
intentional	Yes	Yes	Seldom

Application domain

Learning exists in many domains and ODL may be described in terms of the domain to which it belongs.

- general and cross-domain
- corporate
- government
- health care
- military
- K-12 (primary and secondary education)
- higher education
- informal learning (museums, communities, homes, etc.)
- professional associations
- non-profits

Health care and military are included as separate domains because of their importance, their specific needs, and the often restricted interpretation of 'open' based on prior learning, security issues, etc.

Obviously, some domains are more appropriate for ODL than others, and some ODL tools¹ are more appropriate for some application domains.

Combining both classifications yields the following grid that can be used to categorize ODL.

	Formal	non-formal	Informal
general and cross-domain			
corporate			
government			
health care			
military			
K-12 (primary/secondary education)			
higher education			
informal learning			
professional associations			
non-profits			

Axis 2: learning

Learning theory

Although not entirely independent, learning and education are obviously not the same thing.

In a Piagetian context, two major cognitive processes are identified. Assimilation is the process of incorporating new information into existing structures. Accommodation is the development of new cognitive structures.

In that very broad context, learning theory differentiates among many different types of learning, including

- classical and operant associative (or conditioned) learning;
- discrimination learning;
- habituation;
- concept formation;

- problem solving;
- perceptual learning;
- psychomotor learning;
- imitation;
- insight learning;
- imprinting
- transfer; and
- recall and forgetting.

ODL products may be categorised in terms of the types of learning they support.

In the post-Piagetian context, most of the work on learning in the context of ODL is based on a constructivist theoretical framework, emphasising the critical role of social interaction among learners. Lev Vygotsky was one of the first to stress the importance of the environmental context, particularly, the importance of the social environment². Along those same lines, Reuven Feuerstein has stressed the importance of mediation in this process: A mediator (teacher, parent, sibling, etc.) interprets the environment. Social interaction and mediation come naturally to our species, and ODL faces the task of incorporating these natural learning processes.

Constructivism

Many providers explicitly adhere to the constructivist frame of reference. The Greenfield Coalition (www.greenfield-coalition.org) lists among its 7 beliefs the following two:

- faculty play a key role in guiding students in the learning process
- learning is a social process, which requires interaction with mentors and peers.

Andragogy

With the increasing importance of adult education, andragogy—the science of adult learning—has also become increasingly important. Adult learning differs from childhood learning in many respects, and ODL (as is true for any adult learning) needs to take these differences into account.

Much more than children,

- adults are autonomous and self-directed;
- adults are goal-oriented;
- adults are problem centred;
- adults need to know why they are learning something;
- adults need a pragmatic angle;
- adults have accumulated life experiences³

Also, adults' motivation for learning (and participating in education) differs from that of children:

- adults want to create or maintain social relationships;
- adults want to meet external expectations;
- adults want to serve others better;
- adults want professional advancement;
- adults use learning as an escape;
- adults turn to learning for stimulation;
- adults are motivated by pure interest⁴.

Axis 3: learning styles

A learning style refers to a person's preferred or default cognitive processes, including storage and retrieval of information, perceiving, thinking, and problem solving. A learning style contains a number of axes. Several approaches coexist, but most of them are variations on the following structure:

- the introvert - extrovert axis, dealing with how important social contacts are in the learning process; in constructivist learning theories, social interaction among learners plays an essential role;
- the sensory - intuition axis, measuring the need for personal sensory experience;
- the rational - emotional axis, indicating the degree to which a person reacts rationally or emotionally to new information; and
- the open - closed axis, measuring how 'open' someone is to new information.

Even this very crude approach allows us to differentiate among 16 learning styles, each of which represents between 1 and 13% of the general population.

Much more than in a traditional classroom, in distance learning a teacher or course designer can - must - take the needs and sensitivities of different learning styles into account. In a classroom, a teacher is likely to end up with a compromise between his or her personal learning style and what is already an average of the learning styles of the student population. Open learning requires and distance learning enables the development of products that are much more in tune with the individual style of each of the students.

The Grasha-Riechmann Student Learning Style Scales (GRSLSS) differentiates among 6 learning styles which stress the social dimension of cognitive processes.

- Independent learners prefer independent study, self-paced instruction and prefer to work alone.
- Dependent learners look to the teacher and to peers as a source of structure and guidance and often rely on an authority figure.
- Competitive learners are motivated by the desire to perform better than their peers. They like to receive recognition for their accomplishments.
- Collaborative learners easily share information with their fellow students. They prefer lectures followed by discussions and projects carried out by small groups.
- Avoidant learners are not especially keen on attending classes.
- Participant learners are eager to participate in activities and discussions.

While each person possesses some aspects of each learning style, a study based on the GRSLSS showed significant differences between the learning styles of the student population enrolled in distance education and those enrolled in traditional classroom courses⁵. Students enrolled in distance education proved to be much more independent learners. This indicates that teachers should not simply assume that the mix of teaching styles they use to address the variety of learning styles in the traditional classroom will also work in an online course.

Typically, successful distance learners depend less on concrete experiences than unsuccessful students⁶. The same study also indicates that successful distance learners prefer abstract concepts. This, of course, is a description of an actual situation and is by no means normative. Independent learners self-select into distance education if distance education is better suited to their needs. But the challenge for designers of ODL courses lies in the adoption of materials that address the needs of other learning styles as well. '[Teachers] should try to ensure that their methods, materials and resources fit the ways in which students learn and maximize the learning potential of each student'⁷. This does not imply that students should only be presented tasks that suit their own learning style. Independent learners will participate successfully in group tasks if

the structure of the activities is transparent and if they are adequately coached by the instructor. Competitive learners can be made to collaborate if collaboration benefits their academic result, etc.

ODL products may be categorised in terms of the types of learning styles they take into account, either explicitly or by allowing for a sufficient degree of personalisation.

Axis 4: ODL tools

E-Learning

E-Learning, short for any learning aided by ICT, is not the core element of ODL, although it is clear that ICT offers tremendous opportunities to make ODL more attractive and more effective.

At this point, however, the distinction between what we could refer to as E-ODL and ODL is not really meaningful. Many tools exist in non-E and E-versions. Hybrid tools are ICT-enhanced.

Communication paradigms

Based on the number and type of interaction between students and teachers and among students, Paulsen differentiates between among types of ICT-aided learning, useful to categorise ODL tools⁹.

1. one-alone: (online) resources paradigm
2. one-to-one: the e-mail paradigm
3. one-to-many: the bulletin board paradigm
4. many-to-many: the conferencing paradigm

Technology

Computers, PDA's, and other ICT artefacts offer the distinctive advantage of possessing both a personal and a public dimension⁹.

Of increasing importance in the domain of interpersonal interactions are mobile technologies. Not only do they fit the dynamic aspect of human relations, they also allow for micro-coordination (the possibility to make last-minute decisions about where to go, what to bring, etc.), give an added sense of security and allow just-in-time access to information. At the same time, mobile technology is potentially disruptive to more traditional settings such as the home, the classroom, and to people's leisure time.

Pilot studies have focused on the role of mobile ICT in tests and assignments¹⁰, collaborative learning¹¹ and distributed training¹².

Since the 1990s, new communication patterns have emerged and new cultures and subcultures of technology use are established as new mobile technologies become affordable. At this point these have not yet developed into matured learning environments, but they definitely have that potential.

It should be clear that ICT is not a neutral component in Open and Distance Learning. Not only is ICT adapted to our everyday practices; our practices also change as the result of the use of ICT¹³.

Synchronous vs. asynchronous tools

Essentially, the difference between synchronous and asynchronous settings is that students cannot interact (ask questions) in real time. Apart from this, synchronous and asynchronous tools offer the same functionality.

Quite often, tools can be used in a synchronous as well as an asynchronous manner. A book, for example, is an asynchronous tool when read by students in their own time but can also be used

as a synchronous tool, e.g. when read and discussed in a classroom.

Specialised vs. generic tools

Specialised tools are developed with a specific purpose—often a specific content—in mind.

Generic tools are typically 'open shell'. They have no specific content and are used by students and/or teachers to tailor to their own content and their own needs. An obvious example of a generic tool is a word processor, but many others exist.

Management tools

Including resources, communication, grading, etc., management tools are a special category of ODL tools. They offer a one-stop approach to students and teachers alike.

Axis 5: instructional design

In the context of a project on the role of ICT in flexible learning, Harper et al. are working on a generic approach to learning design based on the constructivist notion that learning is an active process of constructing knowledge and that instruction is the process by which this construction is supported.

Rule-based designs

Rule-based designs consist essentially of closed tasks whose completion requires the application of rules, procedures or algorithms.

Incident-based designs

Incident-based designs expose the learners to preferably authentic events or incidents. They involve individual or group reflection as well as judgments and feedback.

Strategy-based designs

Strategy-based designs include complex and ill-defined tasks, decision-making tasks, troubleshooting, diagnosis and strategic performance of an individual or a group.

Role-based designs

Role-based designs involve the acquisition of skills, knowledge and understanding through the assumption of roles, preferably in real-life settings.

Axis 6

This axis groups a number of factors, such as copyright, open source, enrolment and price. We will not discuss them in this introductory chapter.

2. MOVING BEYOND THE INTRODUCTION

For obvious reasons, this introductory chapter is just that: an introduction. The following chapters explore many of the concepts presented here in greater depth and the last chapter points towards tools that may be helpful for implementing ODL. But already from this introduction it should be clear that implementing ODL is not an easy undertaking. Not only is ODL as complex and diverse as all education is, it is also very new and not all of the lessons that can be learned from traditional face-to-face education apply. A well designed course of action is essential, but so is an adventurous attitude. Locate yourself on the six-dimensional map presented in this chapter and start exploring...

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CHAPTER 2 • HOW TO GET STARTED IN ODL

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The chapter will take a look at certain issues that need to be considered when deciding on composing the content for ODL:

- The pedagogical platform - creating a model for the overall approach to the use of ODL in a specific context
- The modularity of ODL - modules, work-packages and learning objects
- How to get started - the steps in instructional design

1. THE PEDAGOGICAL PLATFORM

Deciding on the kind of pedagogical platform to use is fundamental in any education system but especially given the individual and independent learning that characterises ODL.

A pedagogical platform is an abstract thing; it is a model that includes the following considerations:

- the pedagogical (how to teach – goals, aims and methods suitable for target group)
- the technological (what media to use that are suitable for the target group)
- the technical (what equipment is best to use for the chosen methods and media)
- the organisational (resources and planning, development, management and maintenance of ODL).
In practice the pedagogical platform will comprise:
 - electronic user facilities (virtual classrooms, learning management systems)
 - sign in agreements
 - work flow and agreements with teachers
 - a variety of study materials
 - supplementary offerings such as seminars, conferences, and introductory or taster courses
 - marketing of the study-program

...in short all the considerations needed to be an ODL provider.

For institutions considering ODL it is crucial to decide what kind of pedagogical platform(s) will be used to facilitate the learning events or courses.

The chosen pedagogical platform reflects the pedagogical thinking regarding the entire learning event; in ODL this entails the interaction between participants, teacher and content.

When deciding on a platform the questions to ask include:

- Will the chosen pedagogical platform encompass and support the participants' different backgrounds and their learning styles?