METHODS AND TYPES OF RESEARCH
IN DIDACTICS OF LANGUAGES AND CULTURES

by Christian PUREN
Professor emeritus of University Jean Monnet of Saint-Etienne (France)
www.christianpuren.com
contact@christianpuren.com

SUMMARY

Acronyms

DLC: Didactics of Languages and Cultures (≈ "Applied Linguistics")
IAR: Initial Academic Research

Abstract

This text is the English version of Chapter 5, "Mettre en oeuvre ses méthodes de recherche" ("Implementing research methods") of my online course "Méthodologie de la recherche en didactique des langues-cultures" "Methodology of research in didactics of languages and cultures" (DLC), French original version of July 25, 2013, translation to English November 10, 2022. In this text, "Chapter 5" therefore refers to the text itself. In the first part, I present the different types of research in DLC based on a model that crosses the comprehension-intervention axis with the object-subject axis. In the second part, I review the different research methods that seem to me to be the most appropriate, and I argue that it is necessary to cross them as well in order to take into account properly the complexity of any didactic problem. As a general conclusion, I support the idea that DLC being an intervention discipline aiming at the generalization and the perpetuation of proposals for the improvement of the teaching-learning process, the horizon of any research project is the "research-development", which mobilizes all types of research at its service.

Notes

For the readers reading this printed text, in paper version, here are the two transformation models allowing to reconstitute the complete Internet links of the references to the documents published on my site:

–"Document 004" or "004" ➔ https://www.christianpuren.com/bibliothèque-de-travail/004/.
–"2003b" ➔ https://www.christianpuren.com/mes-travaux/2003b/.

I thank in advance the readers who would like to send me their remarks and suggestions. They can do it by using the function "Contact me" of my site (http://www.christianpuren.com/me-contacter/). These messages reach me directly and are not public.

General introduction

The first four parts of this "Méthodologie de la recherche en DLC" course were about how to conduct one's research project (the research *process*). This part 5 is about how to conduct the research itself (the research *process*): in this sense I will speak here of "DLC research methods", my primary target being, in this part 5 as in all the parts of this course, "initial academic research" (henceforth "IAR"), *i.e.*, the research done to write a thesis. I will refer to the authors of such research as "student researchers," with the term "supervisors" referring to their research supervisors. The general term "academic research" will include, in addition to the research of these students, the research conducted by faculty members and resulting in articles, books, seminars, courses, conferences, and other public communications. Unless otherwise specified, both terms ("initial academic research" and "academic research") will refer to research in the didactics of languages and cultures (henceforth "DLC.");

Research methods are of course important in themselves because the quality of the work will depend largely on their relevance and the researcher's mastery of them. But since initial academic research training is training in research through research, research methods are also research training methods. This is why I advise my readers to (re)read before this chapter 5 my

article entitled "Processes and strategies of research training in language-culture didactics" (2001a).

The conception of the discipline and of research in that discipline determines the conception of research methods. The two must be coherent, which is why the former should be presented before the latter in the general introduction of a dissertation or thesis, as I will do in this article. I have presented the whole of my personal conception of DLC in a manifesto entitled "Pour une didactique comparée des langues-cultures" (2003b). I advise my readers to (re)read that text as well before studying this chapter, and to keep it in view for reference when needed: it is the seven major disciplinary "approaches" that I present there (comprehensive, environmentalist, qualitative, pragmatist, complex, constructivist and comparative), which explain and justify in my eyes the methods that I will present here.

Links such as "2001a", "2004b", as above, are clickable in the on-screen pdf version of this text and refer directly to these articles on my site. They are included in full in the final bibliography (for example: www.christianpuren.com/mes-travaux/2001a/).

1. Part 1: Conceptions of DLC Research

Introduction to Part 1: Modeling the different types of research

Here is the model I propose for the different types of research in DLC. It is complex, because these types are numerous (7 in my model) and dissertations and theses always combine several types at the same time. All this first part of Chapter 5 will be devoted to the commentary and the illustration of this scheme.
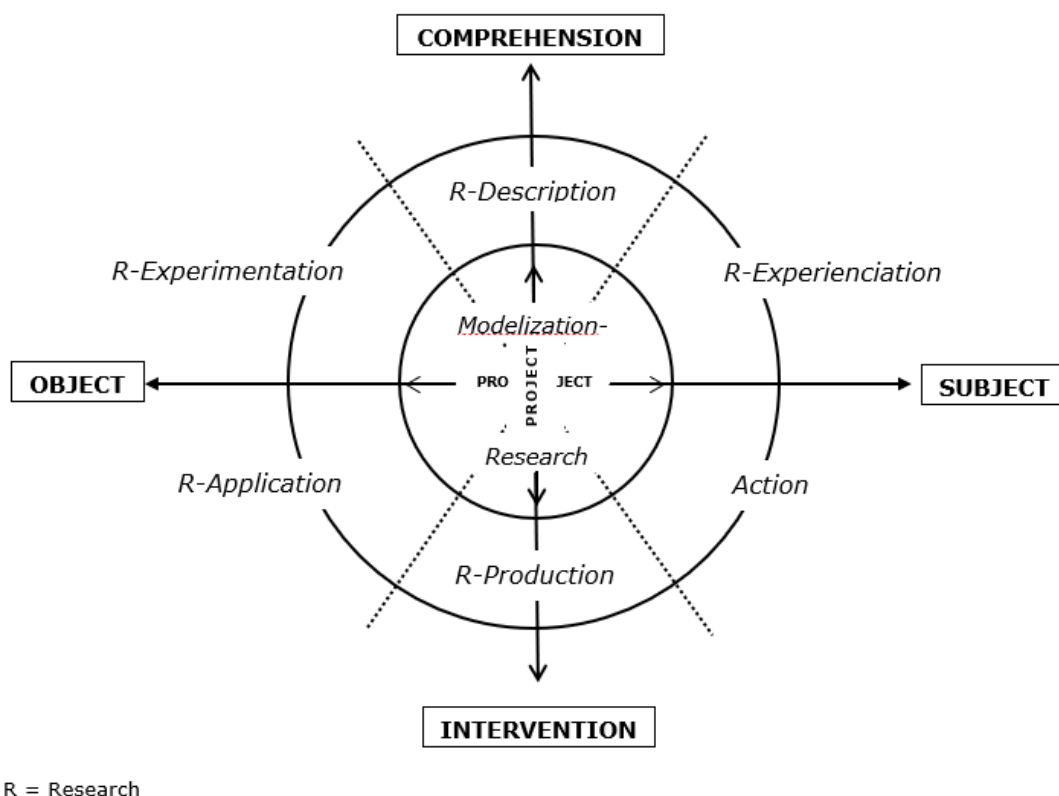
R = Research

The different types of research are not exclusive of each other: on the contrary, there is always a combination of different types in IAR. Examples (to which I will return in the chapters that will be devoted to them):

- Any IAR in DLC must be in part a **research-modelization** (cf. chap. 1.3), *modelization* being for DLC - which is a "science of the imprecise"[1] confronted with the fundamental complexity of its object, *i.e.*, the joint process of teaching-learning of a language-culture - the equivalent of *theorization* in the sciences that claim to be "exact".

- The importance of contextualization in DLC research - teaching-learning being very strongly dependent on its environment - means that it is necessary to present in some detail both the field and the research device in that field, which falls under the heading of **research-description** (cf. chapter 1.4).

- Since DLC is a "praxeological" discipline (*i.e.* whose aim is action), the work of the dissertation or thesis must include the production of intervention tools, and in this sense it is always partly a matter of **research-production** (cf. chapter 1.5). In some cases, these tools are concrete and finalized: they are didactic materials (didactic documents, exercises, pedagogical sheets...) elaborated by the researcher himself; in other cases, these tools are limited to conceptual outlines (e.g. a list of general principles) and/or concrete outlines (e.g. the structure of a didactic unit). Directors generally ask for the actual implementation of these tools in the field when possible: the best initial training in DLC research is certainly the one where one tries to start from the field and return to it.

- All IAR, because it is at the same time personal training in research, is also to a certain extent **research-experienciation** (cf. chapter 1.7): the ability of the student-researcher to reflect on his or her experience as a researcher in order to derive maximum benefit from it for his or her own training is one of the main criteria for evaluating a dissertation, and it is the first criterion for evaluating the oral defense.

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[1] Cf. the book by Abraham A. MOLES, entitled "Les sciences de l'imprécis" (1990).

1.1 Between the object and the subject, the project

Research can be more or less "object-oriented" or "subject-oriented". I used these two concepts as the boundaries of a continuum in my 1998(f) article entitled "Perspective objet et perspective sujet en DLC". A fully pre-programmed grammar progression and teaching of grammar through structural exercises, as in the audio-oral methodology, is strongly "object-oriented" insofar as it is the language object that drives the teaching process. Conversely, grammar teaching that starts from the learner's productions and his reflection on his own errors (in other words, from the conceptualization of his interlanguage) is strongly "subject (learner) oriented". In this text, I use this model to describe the general evolution of DLC over the last thirty years. [2]

In an IAR in DLC, similarly, the student researcher may focus primarily on:

> - on its research object, such as when it proposes to test the implementation of an approach, process, technique, procedure or method[3] (this is then "application research"), or to validate hypotheses concerning invariants or causal relations within the teaching-learning process (this is then "experimentation research");

> - or on oneself as a subject, when its main objective is to become aware of one's own opinions, representations, attitudes, behaviors and conceptions as a teacher and/or researcher: it is then a "research-experimentation".

Between these two extreme examples, all IAR in DLC must deal with the requirement of objectivity and an irreducible part of subjectivity, this part being always important in the case of research in our discipline, where the didactic researcher is an integral part of his own research environment, as the teacher is an integral part of his own teaching environment.[4]

Therefore, the research "project" should not be seen as being right in the middle between object and subject: depending on how it is conceived, it moves more towards the object or towards the subject, and shifts of this kind may occur during the project itself (*i.e.* during the research, and throughout the dissertation text). In IAR in DLC, where the research also aims at the training of the researcher himself, the subject (the researcher) is always part of the project: the latter consequently occupies a certain span including object and subject, in proportions that can also vary: this is what I wanted to indicate by the way I represented it in the center of my model, between the two small horizontal arrows of opposite direction:
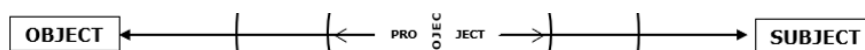
The table below shows the major opposing characteristics of object orientation and subject orientation in an IAR project:[5]

Object orientation	Subject orientation
1. The effort of objectivity	The management of subjectivity
2. Constructed and controlled experimentation	The empirical experience
3. The quantitative approach	The qualitative approach
4. The measurement effort	The effort to categorize
5. The search for invariants	The search for regularities

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[2] Cf. also, in my online course "La didactique des langues-cultures comme domaine de recherche", Part 3, "La perspective didactique 1/4. Modèles, théories et paradigmes"", chapter 5.1 "Conceptions de la didactique de la culture: évolution historique de la relation objet-sujet et des démarches", pp. 22-24.

[3] For the definition of these different concepts, see Document 004: "Le champ sémantique de 'méthode'".

[4] Cf. in Document 046 entitled "Les composants de la complexité", the last element cited, "l"inclusion de l'observateur", with the example of the teacher in his or her classroom, who "can never observe from the outside, in a totally objective manner, the behavior of his or her students, since this behavior is influenced by his or her presence".

[5] I was inspired to elaborate this table –modifying it strongly to adapt it to the DLC– by the one proposed by Maryline COQUIDÉ 2003 (p. 7).

6. The search for causal relationships	The search for empirical correlations
7. Research reports	Descriptions and narratives

As I said above, the subject can never be evacuated from IAR in DLC, insofar as this work has as its primary objective the formation of the research subject himself. There are, to my knowledge, three possible ways of managing this subjectivity:

- The first, the most elementary but most indispensable, is to be aware as a researcher of one's own subjectivity, and not to conceal it but, on the contrary, to assume it in one's work while showing that one has been able to identify it, to master its effects as well as possible, and to derive maximum benefit from it in terms of personal training for research.[6]

- The second is to confront one's own subjectivity with other subjectivities in order to reach as many agreements as possible with other people, and to make disagreements explicit by showing that one has "understood" them (*i.e.* that one has been able to describe, analyze and interpret them). Action research" in DLC (cf. chapter 1.8), because it involves the collaboration of several researchers and teachers, allows for an intensive use of this mode of management, but individual student-researchers (the most frequent case for IAR) also have the possibility to implement it. I have not always done this in my career as a research director, but if I could do it again, I would now require my students, for example, to systematically compare their analyses and interpretations of their observations or teaching materials with those of the teachers or even the learners being observed or used; or, for example, that their interventions or proposals for intervention be systematically submitted for evaluation to these teachers, or even to their learners, and that they give rise to confrontations, which will then be presented, analyzed and interpreted in the research work itself.

This mode of dealing with subjectivity through the confrontation of different subjectivities is required by the nature of DLC as I understand it, where the preferred method is the qualitative method, in which, as sociologists A.M. HUBERMAN & M.B. MILES (1991), "there are no recognized canons, decision rules, algorithms, or even heuristics...to indicate whether conclusions are valid and procedures sound" (p. 374), and where verification of conclusions is done "through extensive work replicating a result in another data set, or through discussions among colleagues aimed at developing an intersubjective consensus" (*id.* , p. 37).

- The third way of managing subjectivity consists in the researcher putting forward his project, since it is his project that legitimizes his presence and his strategy as a subject in front of his research object. I noted in my [1997(b)] article that for the American pragmatists, according to one of the best known representatives of this philosophical current, Richard RORTY, the criterion of "truth" is not correspondence with reality, but more modestly the relevance and effectiveness for the realization of human projects in the environment in which they are situated (1993, p. 19, p. 22), and for this reason they "renounce knowledge of the truth in itself in favor of the search for a common agreement" (1995, p. 119). The French epistemologist Jean-Louis LE MOIGNE, for his part, considers that the direct confrontation of the subject with the object does not have a satisfactory solution, and that it must pass by the mediation of the project. Hence his advice, which he addressed to researchers and student-researchers in didactics of languages and cultures during a colloquium held in 2005:

> *[...] Let us not lock ourselves into the sterilizing alternative of the binary choice between objectivity and subjectivity! It is not one or the other, it is a third term which is above and which, to make an image, I will call "projectivity". Tell me what are the projects in relation to which you order, you organize, you give meaning, you articulate the proposals that you make to me. If I hear this project, the knowledge that you transmit to me will fit; if I do not hear this project, I will have an* a priori *dubious* attitude *towards the knowledge that you propose to me, but I will try to interpret it in relation to my projects, elaborating then knowledge that you will be able to find in your turn intelligible.* (2005, p. 427)

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[6] This is the main reason why I believe that the author of a research dissertation or thesis uses the first person singular ("I") to talk about himself.

This idea has an important consequence, and that is that, from the general introduction of a thesis, the objectives of the research project must be presented even before the methods implemented, with the motivations that have incited the researcher to get *involved (implication, en French)*; The decisive issue is that, after reading this passage, the readers (the members of the jury) not only understand these objectives, but are convinced of their interest (1) for the training of the student-researcher in research, (2) for the teaching-learning of languages in the context that he or she has chosen, and (3) more generally, for reflection and action in the discipline of DLC. What J.-L. LE MOIGNE also said during this same conference about teaching also applies to research:

> *[...everything about helping people to act and helping them to teach is too often expressed in terms of methods and never in terms of ends, rarely in terms of a project. We are all asking "how do I do it?" and we are rarely in a position to ask "why do I do it?" And yet, if I don't have an answer to the "how", I will find it on my own. On the other hand, the answer to "why do I do it" is not often given in advance, and we don't like it to be imposed on us. Therefore, does it not deserve to be carefully considered?* (2005, p. 422)

I have used the term "involvement" (*implication*, in French) above to characterize the personal relationship between the subject and the object of research when it comes to IAR in DLC. So-called "scientific" research certainly requires personal motivation, but the researcher must somehow keep it as far as possible from his subjectivity: I propose to call this type of motivation "commitment" ("*investissement*", in French). Action research, on the other hand, is, as we shall see (cf. chapter 1.8), a type of militant research, that can be defined as a "engagement" (same word in French: "engagement"). In this way, I arrive at the following model:

OBJECT ←—————————		—————————→ SUBJECT
Scientific research	IAR in DLC	Action-research
commitment	*involvement*	*engagement*

The "involvement" of the student-researcher in DLC corresponds to a position of balance that is not always easy to maintain; nor is it necessarily desirable: I do not see why the researcher should not "involve" himself personally when his observations, analyses, interpretations and proposals touch on what he considers to be important social values or issues, for example when his research leads him to tackle, within the didactological perspective, ethical or ideological questions[7]. But the student-researcher writing his dissertation or his thesis will have every interest in "compensating" in a way for these moments by others where he will show, on the contrary, his capacity of distancing himself from his personal environment and experience: the research-experimentation must be accompanied, paradoxically, by an effort of objectivation.

1.2 Comprehension for intervention, intervention to comprehend

Comprehension and intervention are the other two main types of orientation of research projects, and, like the two orientations object and subject in the project, they are also strongly interrelated in language-culture didactics: one seeks indeed to understand in order to act better, but also to act in order to understand better: Jean-Louis LE MOIGNE, in the same conference quoted *above* (2005), summarizes an argument of Giambattista Vico, for whom it is necessary not to lock oneself in the method, because –and the words are of this Italian philosophy of the XVIIIe century– "the method harms the *ingenium, and* the *ingenium*, this foreign faculty of the human spirit which is to connect, was given to the human ones **to comprehend, that is to say to make**" (quoted p. 431, emphasis added). With this criticism, Vico targets the *Discourse on Method*, and the "fundamental" place (in the strong sense of the term) that Descartes attributes to "*the* method", which is in this case *his* method, the analytical method. This is not to deny the need for rigor in research methods, but to insist on the fact that they are only means to an end,

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[7] Cf. in the course "La DLC comme domaine de recherche", Part 8 entitled specifically "La perspective didactologique (2/2): Idéologie et déontologie".

and that one of the first criteria for evaluating a research paper or a thesis, before the analytical skills of the student-researcher, is his or her level of personal involvement in an intervention project that he or she has designed to be useful to teachers and learners.[8]

- ***Comprehension*** is achieved through the activities of *description*, *analysis* and *interpretation* that are constitutive of the definition of DLC.[9] In this discipline, interpretation is only possible by taking into account the intentionality of the actors (learners and teachers)[10] : it is part of what is called the "comprehensive approach", which consists in

> *[to] focus on the actors in their environment by valuing their awareness, their experience and their intentionality, i.e. their degree of real "comprehension" (hence the name of this approach) of the games they play, the issues they face, the actions they carry out and the projects they build. This comprehensive approach corresponds to the emergence of a comprehensive paradigm [...] which is based on a rehabilitation of the explicit and reflected part of the action, as well as of the competence of the actors to analyze themselves their environment and the actions that they carry out there*.[11]

- ***Intervention*** is the action on the teaching-learning process that aims to improve this process by proposing to teachers and learners ways and means of teaching-learning together more effectively. However, it does not have to be limited solely to what seems possible in the field at the time of the research: cf. in chap. 1.8, what I say about the proactive attitude that the student researcher may have to adopt.

An IAR can be defined in terms of positioning on a continuum between these two boundaries of comprehension and intervention, which are both opposed and complementary in DLC: it is impossible to conceive of intervening in a given field without having understood how the teaching-learning process is currently functioning there, and why: in other words, the necessary initial "observation"[12] of any IAR must be made in an "comprehension" manner. Conversely, the intervention, because it shifts perspectives, positions and issues, makes it possible to complete and deepen the comprehension. In short research texts (in articles), it is understandable that the researcher can focus on one or the other objective: comprehension or intervention. But in the long texts that are the works of IAR, in which it is a question for the author to show that he/she has given himself/herself a global competence as a researcher in DLC, I consider it necessary that both objectives be pursued. However, some works may give more importance to comprehension, and others to intervention: this is what I wanted to represent in my model by the two small vertical arrows on either side of the project:

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[8] I remind you that I am talking here about *initial* academic research, which aims at training in research through research, and whose first criterion is therefore "process-oriented" (the quality of the training process carried out) before being "product-oriented" (the quality of the research carried out): an IAR, even if it leads administratively to a certification (obtaining a master's degree or a doctorate) is first and foremost a *formative* evaluation; at least in the French university tradition, and this is what justifies the fact that the research supervisor, in France, is an ex officio member of the jury: he or she is the only one able to bear witness to the training process carried out by his or her student throughout his or her research time. This does not apply, of course, to the evaluation of an article proposed in a journal or collective work.

[9] Cf. the definition I give of this discipline at the beginning of my course " La DLC comme domaine de recherche, Part 1, "Les trois perspectives constitutives de la didactique des langues-cultures", "Présentation", pp. 2-4.

[10] See, for example, my 1994(d) article on the need to involve teacher intentionality in the interpretation of classroom observations. I mention here only the direct actors in the learning process - the teacher and the learners - but there are indirect actors who can nevertheless have a great influence on this process, such as textbook authors, trainers, pedagogical advisors, inspectors and others responsible for the official orientations of school education.

[11] Quote from article 2003b which I advised reading at the beginning of the introduction to this paper.

[12] On this concept, see 047 "Glossaire des mots-clés de la recherche en DLC", pp. 3-4.
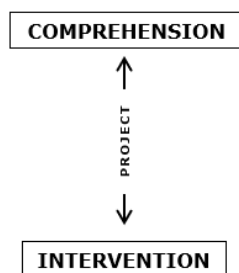
1.3 Research-modelization

For DLC, modelization is the epistemological equivalent of theorization in the so-called "exact sciences". Not only all research in DLC, but all types of research of which it is composed, must therefore include an element of modelization, whether the models used are borrowed as is, modified or created.

This is why, in my general diagram of the different types of research, *supra* p. 3, the research-modelization is represented by a central c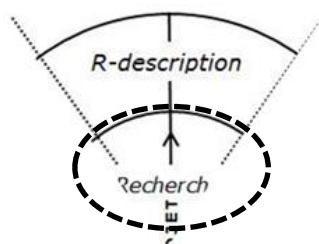ircle where everyone is concerned: everyone has a "pie portion" inside this research-modelization. For example, in the part below of the general diagram, which concerns the description search, it is the lower point (indicated here by the ellipse in large, dotted lines):


As we saw in the previous chapter, what interests the researcher as much as the DLC teacher is not the description for its own sake, but the description for the intervention; and the intervention concerns a process of teaching-learning of a language-culture which is complex in particular because it is "situated" (*i.e.* closely linked to its environment)

This is why DLC analysis is fundamentally of a "systemic" type, that is, as Bernard WALLISER wrote in his 1977 book *Systèmes et modèles. Introduction critique à l'analyse de systèmes*, that it puts forward "the relationships between available means, objectives and constraints internal or external to the system" (p. 10), and that the main tool used is *modelization*.

I refer on this question of modelization as a tool for the analysis of complex systems to the following documents:

    1) For a presentation of the tools and functions of modelization, see Document 014 "Modélisattions et modèles. Bernard WALLISER 1977", as well as chapters V, VI and VII of the same work by B. WALLISER on the syntax, semantics and pragmatics of models.

    2) On the opposition between theory/theorization and model/modelization, in Document 015, "Théories externes versus modèles internes. Edgar MORIN et Richard RORTY". Whereas a *theory* aims to describe reality in itself, with accuracy as its evaluation criterion, a *model* aims to act on reality, with relevance, adequacy and effectiveness as its criteria.

    The following diagram illustrates the epistemological positioning of the *model* as a privileged tool at the service of the *project*, between theory and practice, between object orientation and subject orientation, between comprehension and intervention.
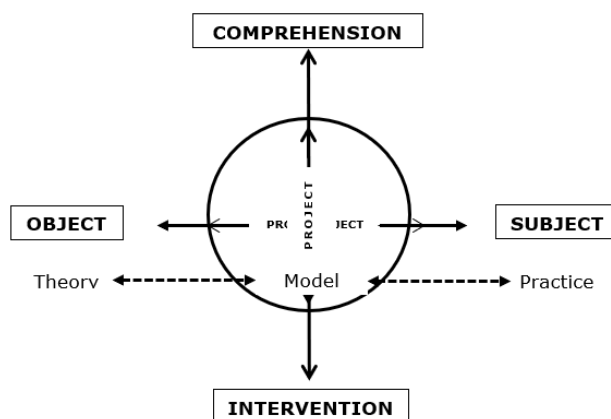
3) For examples of DLC models,

- in my course "La didactique des langues comme domaine de recherche", Part 3: "La perspective didactique 1/4. "Modèles, theories et paradigmes", more precisely in the whole of chapter 2, "Les modèles du champ didactique", pp. 9-15, where I address the following questions (references to the authors cited here can be found):

> *2.1 The concept of "model", between theory and practice*
> *2.2 Examples of models of the didactic field (perspective)*
> *2.3 Characteristics and functions of didactic models*
> *2.4 Main didactic areas requiring global models*

- in my 2013(a) article "La formation à la recherche en didactique des langues-cultures entre exigence de conformité et exigence d'originalité : le cas des concepts", Chapter 1.4, "Concepts et configurations conceptuelles : la 'modélisation'" pp. 9-13.

4) For a typology of graphic representation schemes for models, see the collective work *La formation en questions* (1999h), chapter 2, "Comment théoriser sa pratique? (la formation des questions)", in sub-chapter 2.2, "Les différentes configurations conceptuelles", pp. 25-29.

After the publication of this book, I abandoned the concepts of "theory" and "theorization" -which I used at first for DLC following Robert GALISSON, who spoke of the "internal theorization" necessary in an autonomous DLC- for those of "model" and "modelization", which seemed to me to be more adequate in relation to my personal conception of DLC and of research in DLC. I report this terminological shift in a 2004(d) article, p. 2.

5) For a concrete example of model building, see the 1999(h) book (in collaboration), chapter 2.3, "Petite séance de travaux pratiques de théorisation", pp. 30-33. This is a model of the various factors involved in the formation of a teacher's personal methodology.

The researcher in didactics of languages and cultures may have to resort to extra-didactic theories when he is confronted in the course of his work with problems that do not fall within his disciplinary field, or for which it seems to him that didactics does not offer sufficient tools (principle of "emergence"); in the contrary case, he is satisfied with the tools of his discipline ("principle of subsidiarity"). These are the ideas that I presented and defended in a conference in 2009(f), where I proposed the following model:

DCL domain: sub-domains			
educational	**cognitive**	**cultural**	**language**
philosophy	neurology	history, geography, economics, etc.	sociolinguistics
psychology	cognitive sciences	sociology	linguistics
pedagogy	psycholinguistics	cultural anthropology	grammar
didacticians			
teacher-learner			

The upward arrow, which represents in this diagram the application of the two principles mentioned above of "emergence" and "subsidiarity", also corresponds to what I consider to be the most relevant approach for the training of a DLC student-researcher: He starts from the concrete teaching-learning process, which he tries to model (with his own models or with existing didactic models), and he calls upon extra-didactic theories only at a second stage, and only for the problems encountered that his discipline does not allow him to manage, or to manage sufficiently for his research. I am critical of those dissertations or theses in which the author devotes an entire first part to the presentation of cognitive, pedagogical, sociological, linguistic or even sociolinguistic theories. Generally speaking, these theoretical elements are not used effectively - and for good reason! -in the second "practical" part of the dissertation or thesis, and those that are could very well have been presented only at the time of their use for the purposes of didactic comprehension and intervention.[13]

In the logic of Popperian "falsifiability"[14] , we can consider that even in the sciences that claim to be exact, there are no real "theories", but only models, that is to say, tools for comprehension and/or intervention that will be abandoned as soon as other, more powerful and more efficient tools appear. In the following table, taken from his 1990 book, Jean-Louis LE MOIGNE contrasts two types of modelling, the first of which, "analytical modelling", corresponds to what is usually called "theorization" in the exact sciences:

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[13] Some research supervisors undoubtedly consider that these first parts (1) testify to the effort of general "theoretical training" of their students, and (2) correspond to what is legitimately asked of them, which is to first take stock of the "literature" on their research theme, before trying to contribute to the building, or even to go further. On point (1), I think that it is better to ask the students during their research course for reading sheets on the articles/works that are considered to be essential reading for their general training, and on point (2), cf. *below* chapter 2.1 devoted to the "documentary method": the first evaluation criterion for this method, in the framework of an IAR, is the capacity not of comprehensive reading, but of *selecting*, in one's readings, the elements that one is going to be able to mobilize in the service of one's personal research.
[14] See chapter 1.6.3, *below,* p. 18.

Analytical modelization	Systemic modelization
Object	Project or process
Element	Active unit
Set	System
Analysis	Design
Disjunction	Conjunction
Structure	Organization
Optimization	Adequacy
Control	Intelligence
Efficiency	Effectiveness
Application	Projection
Evidence	Relevance
Causal explanation	Teleological comprehension

When DLC research is object-oriented, as is the case in experimental research and application research (see my general diagram of research types, *above,* p. 3), it favors analytical modelization. In contrast, subject-oriented research-experimentation and action research emphasize systemic modelization. I leave it to my readers to identify the numerous correspondences between this table by J.-L. LE MOIGNE, the one inspired by Maryline COQUIDÉ ("Orientation objet - Orientation sujet", *supra* chap. 1.1) and the one also mentioned *supra* (chap. 1.3, point 2), "Théories externes versus modélisations internes. According to Edgar MORIN and Richard RORTY", Document 015.

The use of extra-didactic theories or models as tools of analysis must be done with extreme caution, since the didactician then goes beyond his field of competence: it is better to borrow analyses already made by specialists, if one really needs them, than to risk personal analyses by means of tools one is not sure of mastering. The analysis of practices observed in a teacher, for example, can in certain borderline cases be covered by psychoanalytical analysis[15] , but it would not seem reasonable to me for a researcher in didactics to risk it...

I have sometimes borrowed extra-didactic models, such as those I cite in my 2013a article in a chapter entitled precisely "Introducing an extra-didactic conceptual model" (chap. 2.10, p. 23): these are the "object-subject" model, borrowed from philosophy, and the "process-product" model, borrowed from business management. But these are very abstract and limited models (to a couple of concepts, in both cases), and they can therefore, it seems to me, be directly transposed to be used as tools not external, but internal to the discipline: in other words, the analyses that I make by means of these models are not the analyses of a philosopher or of a specialist in business management (which I am not...), but the analyses of a didactician. It is for the same reason that the borrowing of isolated concepts from other disciplines seems to me to be legitimate (cf., in this same article 2013a, chap. 2.6. "Introduire un concept extra-didactique", pp. 20-21).

1.4 Research-description

In the expression "research-description", I give to "description" the meaning of "description-for-comprehension", of "comprehensive description" (cf. the position of this research in my general schema of the types of research, *supra* p. 3), and this term thus gathers here in my mind the three activities necessary to comprehension, namely *description* proper, *analysis* and *interpretation*.[16]

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[15] See Document 039, "Didactique des langues et analyse des pratiques. Bornages épistémologiques et disciplinaires".

[16] For a concrete illustration of these three basic data processing activities in DLC research, I refer to my definition of the discipline as presented in Chapter 1, "Introduction," Part 1 of "La DLC comme domaine de recherche" (section 1.2 c, pp. 2-3), where I use the example of a teacher educator conducting a formative observation in a beginning teacher's classroom.

The research-description component is going to be particularly important in the part of the dissertation work that reviews the state of research[17] , as well as in research that relies primarily on classroom observations and/or analyses of instructional materials (I discuss these two methods in the second part of this article, in Chapter 2.2 and Chapter 2.3, respectively).

The term "description" also has the meaning of "narrative" when it no longer concerns a static element (e.g. an environment, a situation, a device), but a dynamic element, as is the case when it concerns a teaching-learning process (e.g. the organization of successive materials and activities within a didactic unit, the realization of a class sequence), or when the research itself must be described in its procedure (the succession of activities carried out by the researcher). This is the case when it is a teaching-learning process (e.g. the organization of successive materials and activities within a didactic unit, the realization of a class sequence), or when the research itself has to be described in its procedure (the succession of activities carried out by the researcher) and in its evolution (e.g. the modification of the objectives, methods and/or research activities due to difficulties or opportunities arising in the course of the work).

One naturally finds "descriptions and narratives" in the subject orientation paradigm proposed *above* in the table in Chapter 1.1, *versus* "research reports" in the object orientation paradigm. But in a DLC dissertation or thesis, just as the presentation of extra-didactic theories must be limited to what is essential for the research and which DLC itself does not provide (in application of the principle of "subsidiarity", cf. *supra* p. Similarly, descriptions and narratives must be limited to what is indispensable for readers to *understand* the research, that is to say, to those that the researcher, at one time or another, analyses and interprets in relation to his or her research: what the members of a jury will be able to legitimately criticize are those passages that do not meet these conditions, because they are, as we say, "purely", "simply" descriptive or narrative. The risks of "descriptivist drift" and "narrativist drift" are particularly high in the presentation of the initial findings, the research field and the research process, and more generally in types of research-experimentation and action research, where the contextual and chronological dimensions are sufficiently important that the research field and the temporal course of the research must be presented in sufficient detail.

Thus, in a research on the researcher's personal implementation of the actional perspective in his own school FLE classes (an experimentation-application type of research privileging the methodological perspective, therefore), it will be unnecessary to include a detailed analysis of the inadequacies of the dominant methodology and of the textbooks used, or a complete synthesis on the history of the teaching of this language in his country or on its current status, on the one hand because the researcher will not need to mobilize all these data for his research, and on the other hand because his readers, in the same way, will not need them in order to understand his research project and to evaluate its proposals and results. The researcher can be satisfied with clearly explaining how and to what extent the action-oriented perspective responds, at least in part, to the needs of his or her country's society, to institutional objectives and/or to the demands and expectations of learners.

1.5 Research-production

Production research in DLC is that which aims at developing products for teaching-learning, and this is why, in my general scheme of research types (*supra* p. 3), it is oriented towards "intervention". These products can fall under any of the three fundamental perspectives of the discipline: methodological, didactical and didactological.[18]

- By definition, the methodological perspective includes all proposals concerning teaching-learning methods. In any research, these proposals will necessarily limit their field according to the research problematic; they will concern for example a type of public, an objective, a device,

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[17] In Chapter 1.9, I will again discuss this "point about research" in its differences from what is called "meta-research."

[18] On the description of these three perspectives, see the Part 1 of my course "La DLC comme domaine de recherche", which is precisely dedicated to it.

a support, a technology, an activity, an approach, a pedagogy: young children, FOS, communication skills, group work, games, songs, authentic documents, literature, interactive board, written or oral comprehension, lexicons, global simulations, writing workshops, action scenarios, project pedagogy,...

Insofar as the "modelization" dimension must be taken into account in any research, these products generally take the form of "teaching sheets", which propose teaching models: this is why, in my general schema of research types (*supra* p. 3), research-production is "intervention" oriented. But these products can also be models of comprehension: the following two, which can be found in the Working Library of my site, fall under the methodological perspective:

> - 011 " Diagram of the audiovisual training unit 1[e] generation "
> - 041 "Action analysis of the explanation of literary texts (table)

- From the didactic perspective, the following grids of analysis of didactic materials and observation of classes[19] , or, to continue with the examples of the models published in the Working Library, all the following[20] :

> - 010 "The four historical procedures of grammar teaching
> - 016 "Historical evolution of cognitive models of language teaching-learning activities in language-culture didactics"
> - 017 "Cognitive Instances of Teaching-Learning. "RIMERAI" model "
> - 018 "Model of the different types of grammar in DLC
> - 019 "Conceptions of cultural didactics: historical evolution of the object-subject relationship and approaches
> - 024 "The three fundamental cognitive operations of project management[21]
> - 025 "Intersections between learning action ("tasks") and use action ("actions")
> - 026 "Different possible directions of action in the didactics of languages and cultures".
> - 029 "Historical evolution of didactic configurations
> - 034 "The primary process of instructional design
> - 040 "Modeling of the historical evolution of the types of coherence of the didactic units ("entries") in school didactics of the foreign languages-cultures in France".
> - 050 "Grid for analyzing the various current types of implementation of action in language textbooks"

- Finally, products such as pedagogical and ethical charters[22] , curricula, teaching-learning contract models, training programs[23] , as well as the following models in the Working Library, fall under the didactological perspective:

> - 002 "The three constitutive perspectives of the didactics of languages and cultures" (the final recursive model)
> - 022 "A complex "meta-model": typology of the different possible logical relations between two opposite terminals"
> - 038 "Typology of observation projects of language classroom practices

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[19] They fall under the didactic perspective insofar as they are designed to analyze materials and classes implementing different methodological orientations.

[20] I list my own models below. Two others also belong to the didactic perspective: 012 " Typology of learning strategies. Paul CYR 1996 " and 027 " Taxonomy of intellectual activities of D'Hainaut (adaptation to DLC) ".

[21] Even if this analysis model concerns a specific methodological orientation (project methodology), it is situated in a didactic perspective because it mobilizes an element of the field of didactic perspective, namely cognitive models.

[22] See the three drafts of the *Universal Charter of the Teacher of Languages and Cultures* written by three classes of students in the Master 2e year of FLE, reproduced in the corrected version of the Dossier n° 8 of the course " La DLC comme domaine de recherche ", Dossier 8 entitled " La perspective didactologique (2/2): l'idéologie et la déontologie " (pp. 3-5).

[23] See the document entitled "General Architecture of a University Education in the Didactics of Languages-Cultures", 2010a.

- 039 "Didactics of languages and analysis of practices. Epistemological and disciplinary boundaries".
- 046 "The components of complexity

Research-production is not simply combined, in a thesis or dissertation, with research-modelization, as we have seen above. It will also be combined with research-experimentation if the researcher himself implements his productions in his teaching and research field. If this implementation aims to validate or invalidate the hypotheses or research questions on the basis of which he or she has developed his or her productions, it will also be research-experimentation. If this implementation only aims at testing them, it will also be called application research.[24]

1.6 Research-experimentation and research-application

There are two main opposite ways of linking experience and knowledge, depending on whether one starts from the first to go towards the second, or the opposite:

1.6.1 The inductive method

We start from the experience of a few facts to derive knowledge (which will take the form of a proposition with a general value: law or rule).

- In the teaching-learning of grammar, this method consists in going from the example to the rule: from a regularity observed in a certain number of examples, we will consider that it is found everywhere, that is to say that we will draw from it ("induce", exactly) a language norm; thus, that the conjugated verb introduced by "although" and "even if" is always conjugated in French respectively in the subjunctive and in the indicative.

- In didactic research, it is thus considered, based on the observation that students learn in very different ways from one another, that all teachers must constantly vary their teaching methods or offer all students situations where they can implement their own learning methods.

1.6.2 The deductive method

When the deductive method is used, the starting point is the opposite of knowledge in order to produce experience.

- If this knowledge is considered certain, it is an *application*.

- Thus, in the teaching-learning of grammar, we will start from the rule of the agreement of the past participle with the direct object complement placed before a verb constructed with the auxiliary "to have" to carry out a language production by transforming "I found this coin; I did not steal this coin" into : "It's a coin that I found; I didn't steal it": in this case, we speak of an "application exercise" in language-culture didactics.

- Three examples of "research-application" in language-culture didactics:

a) I take up an example cited above: starting from the proposition that all teachers must constantly vary their teaching methods or offer all their students situations in which they can implement their own learning methods, a number of articulations and combinations of different approaches and steps, and a number of sequences of independent work, will be sought and tested.

b) Based on the proposition that learning is the construction of one's own knowledge by the student, we will research and test all the possible activities in all the learning areas that

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[24] I discuss this distinction between research-experimentation and research-application in Chapter 1.6 below.

implement this proposition: conceptualization activities of the learners on their own language errors, on their cultural representations and on their learning strategies.

c) Based on the two propositions that we learn better if we are motivated and that the game motivates the students, we are going to look for and test a maximum of different games.

In application research, it is therefore the modes and means of application that are sought and tested, and not the general proposal itself, the objective being to diversify them, to select the most effective ones, and/or to identify the most suitable ones for particular learners, objectives and teaching-learning environments.

- If this knowledge is considered as not certain and if it is this knowledge that we want to test, and not its implementations as above - in other words, if this knowledge is a hypothesis that we want to validate or invalidate -, it is an *experiment*.

- Thus, in the teaching-learning of grammar, students will be asked to check whether the rule they have already arrived at on the basis of the available examples is also valid in other examples: if sentences that do not respect the rule are nevertheless correct, and/or if sentences produced by respecting the rule are nevertheless not correct, the rule is invalidated, or at least its domain of validity is not as general as previously thought, and it must be reformulated accordingly.

- To illustrate the "research-experimentation" in language-culture didactics, I will take up the three cases presented above and modify them:

a') One group of students will be taught according to a specific methodology (the so-called "communicative approach", for example), another group will be taught according to a very eclectic methodology, and a third group will be taught with a maximum amount of autonomous, individual and group learning time.

b') One group of students will be taught grammar using intensive conceptualization of their errors; a second group will be taught to conceptualize correct statements and present them as such; and a third group will be taught not to conceptualize, but only to do intensive training exercises based on language models to be reproduced *(i.e.* "structural exercises"). The objective of the research was, by comparing the progress of each group at the end of the learning period, to verify whether what is called the "constructivist hypothesis" - which corresponds to the following general proposition: "the process of learning a language by a learner consisting in a positive evolution of his interlanguage, his reflection on his errors strongly facilitates this evolution" -, if this hypothesis is correct or not.

c') We will compare the progress of several classes, somewhere systematic play activities are organized, and others where they are absent.

We can see that research-experimentation requires, contrary to research-application, the use of "control groups", that is to say, groups which are not subjected to experimentation, or which are subjected to contradictory experimentation.

The difficulty, if this type of research is to be conclusive, is to isolate as much as possible the variable on which the experiment is based: in the three examples cited, these are respectively the presence or absence of (a'') methodological variations, (b'') learners' conceptualization of their own errors, and (c'') play activities. Even if care is taken to compose the groups identically, to assign them the same teacher and to provide them with the same working conditions (to try to neutralize as much as possible the factors of learners, teachers and environments), multiple interferences will be inevitable. Let's take the same three examples in a row:

a''') Individual learning methodologies (cultures, profiles and strategies) will necessarily interfere with teaching methodologies, and experience shows that the former can have at least as much impact as the latter.

b''') Nothing will prevent students who are subjected to structural exercises or conceptualizations based solely on correct statements from reflecting on their own about the errors they will inevitably make.

c''') Even if the classes where the game is systematically implemented have better overall results, a certain number of questions will arise, which can undoubtedly be integrated into the experimental system, but which will make it more complex to implement... and to evaluate. For example - and without claiming to be exhaustive -: Is the game suitable for all learners, or does it favor some and disadvantage others? Wouldn't the positive effect of the novelty disappear after a while, with the appearance of a certain weariness? What would be the medium- and long-term effect of the disappearance of the activities replaced by play activities? What would happen, in the perspective of a generalization of these activities, if they were implemented by teachers who are not passionate about them, who have personal reticence or even blockages towards play activities? What would happen if all teachers made students play intensively in all school subjects? The experiments that a student researcher can carry out are always limited in space and time, so that the validation of his or her hypotheses is always subject to reservations of this type.

- In the three research-experiments cited, "identical" groups will not remain so for long: the presence of negative or positive leaders or the arrival of fortuitous events can thus very quickly considerably modify the "atmosphere" of the groups, which, as we also know from experience, has important effects on the quality of collective and individual learning.

- In the three experimental researches mentioned - and this is also the case in any research-experimentation in DLC - two effects well known to psychologists and sociologists are involved, the "Hawthorne effect" and the "Pygmalion effect", which a "Portal of information on the psychology of work" intended for professionals presents very synthetically as follows

> *In psychology, the Hawthorne effect describes the situation in which the results of an experiment are not due to the experimental factors but to the fact that the subjects are aware of participating in an experiment in which they are being tested, which generally results in greater motivation. [This psychological effect is similar to the Pygmalion effect, which is observed in students whose performance improves simply because the teacher expects more from them.*[25]

Given the weight of the teacher in the teaching-learning relationship, and the importance of this relationship in the learning process, it is certain that these two effects interfere very strongly with the results of any DLC experiment, without it being possible to identify and evaluate them precisely.

In medicine, there are at least two techniques designed to counteract these effects: "blind" experiments (doctors and evaluators do not know which groups are or have been experimented on, and which groups are not), and the use of placebos in certain patient groups. But it is not clear to me how these techniques - or what others? - could be used for this purpose in DLC...

1.6.3 The hypothetical-deductive method", or "experimental method

In the examples of experimentation that I have given above, a hypothesis was first posed - made on an inductive basis - before attempting to validate it: epistemologists speak of the "hypothetico-deductive method" or the "experimental method".

In some cases, the initial hypothesis is finally invalidated, so that research must be resumed on the basis of a new hypothesis. This is what happens in the long run of scientific research, according to Thomas KUHN, for whom science progresses by "paradigmatic ruptures" invalidating all previous hypotheses. One of the examples given by this epistemologist is that of astronomical science, with the passage from Ptolemy's paradigm (the earth is fixed at the center

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[25] www.psychologuedutravail.com/psychologie-du-travail/effet-hawthorne/(accessed June 19, 2013).

of the universe, the stars revolving around it as if fixed on a vault - the "celestial vault" of the poets... -) to the Copernicus-Galileo paradigm (the earth revolves around the sun with other planets-satellites, and it has itself a satellite, the moon) and then to the Hubble paradigm (the sun is itself one of the stars of a galaxy in a universe of countless galaxies). For Karl POPPER, moreover, a hypothesis is scientific only if one admits the principle of its "falsifiability", or "refutability", *i.e.* if one admits that there is at least one contradictory hypothesis likely to be validated, and which in this case would make the first hypothesis "false" or "refuted"... and so on.[26]

In the human sciences at least, the initial hypothesis may not be strictly speaking invalidated, but may have to be modified: reformulated, clarified, made more complex, subjected to conditions, etc.

- In the teaching-learning of grammar, learners will thus be asked to make hypotheses about the rule on the basis of examples (inductive method), and then to test these hypotheses by checking whether the statements produced by applying this rule (deductive method) are correct or not, or whether statements considered to be correct, found by themselves or brought by the teacher, obey the rule or not; if this is not the case, learners will have to modify their first rule, and test the new one.

- In the dissertations and theses in DLC that I have directed or for which I have participated in the jury, I do not recall the implementation of such recursivity. The initial hypothesis or hypotheses are never totally invalidated (this would be interpreted as a failure of the research project by the researcher... and no doubt by most of the jury members!): the research sometimes leads to conditional validations of hypotheses or new complementary hypotheses, but not to contradictory hypotheses.

We are very far from being able to implement the experimental method as it is conceived in the exact sciences, where it appears as the strong version of the hypothetico-deductive method. Here is how the philosophers of the CERPHI (Centre d'Études en Rhétorique, Philosophie et Histoire des Idées, de l'Humanisme aux Lumières, ENS Lettres et sciences humaines) present it, in a text entitled "L'expérimentation" (Experimentation) on the site of this Study Center, www.cerphi.net/:[27]

> *The relationship between thought and experience is played out at the level of experimentation itself and at the theoretical level, insofar as experimentation is a technical device that makes it possible to observe whether the quantities, isolated by the theory to account for phenomena, behave in fact in accordance with the expectations of the theory. Experimentation no longer appears as an observation, and far from being a point of departure for the theory (induction, classical empiricism), it appears on the contrary as a retrospective proof. [It is thus a] new alliance of truth and method, by which experimentation appears as a theoretical proof, a verification*.

This extreme version is reached in laboratories, where the manufactured reality is no longer the empirical reality (we manipulate voluntarily reduced models of reality so as to isolate the variables on which the theoretical hypotheses are based), or is even inaccessible to the senses (in nuclear physics experiments, for example).

Gaston Bachelard drew from this an epistemology that is widely used in France in the didactics of exact sciences (and it strongly influences the sciences of education, which are almost exclusively inspired by this didactics), and which is based on the concept of "epistemological obstacle": scientific knowledge is not built from sensible experience, but against it. Here are some passages from his work *La formation de l'esprit scientifique. Contribution à une psychanalyse de la connaissance objective* (14e éd. Paris, J. Vrin, 1989, 1e éd. 1938):

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[26] These two authors, KUHN and POPPER, can be researched in the file of my *Essai sur l'éclectisme*, where I present their theory (1994e).

[27] The link to this text, from which I extracted the passage below in December 2004, is no longer valid (June 2013).

[...] The adolescent arrives in the Physics class with empirical knowledge already constituted: it is not a question then of acquiring an experimental culture, but of changing experimental culture, of reversing the obstacles already piled up by daily life. [We will begin our investigation by characterizing these obstacles and by showing that there is a rupture and not a continuity between observation and experimentation. (p. 18 and p. 19)

In the formation of the scientific mind, the first obstacle is the first experience, it is the experience placed before and above the criticism, which is necessarily an integral element of the scientific mind. Since the criticism did not operate explicitly, the first experience cannot, in any case, be a sure support (p. 23).

A psychoanalysis of objective knowledge must therefore apply itself to discolor, if not erase, these naive images. When abstraction will have passed through, it will be time to illustrate the rational schemes. In short, the first intuition is an obstacle to the scientific thought (p. 78).

The generalization of this conception of science and science education is debatable and discussed even among science didacticians: Maryline COQUIDÉ cites the case of official science didactics in England, where the national curriculum moved in the 80s and 90s from a narrow and rigid epistemology - with an approach inspired by the strong version of the experimental method, articulating "prediction and hypothesis generation; observation, measurement and manipulation of variables; interpretation and evaluation of scientific evidence") to a broader and more flexible epistemology. In some sciences, such as ecology, astronomy, or geology, it is not possible to control and manipulate *variables* in the laboratory, but only to observe *correlations*, from which *factors* will be induced.

In didactics of languages-cultures, as we have seen in examples given in chapter 1.6.2. In language-culture didactics, as we have seen in the examples given in the same chapter 1.6.2, it is possible to manipulate variables in the classroom (recourse or not to methodological eclecticism, to conceptualization, to play,...), but on the one hand it is impossible to isolate these variables entirely from other factors that are difficult to control, or even to identify (the actual personal activity of the learners, the atmosphere of the classroom, the novelty, the level of expectation of the teacher, his training and personal motivation, etc.), on the other hand research in language-culture didactics, if it is to be effective, must be carried out with the aim of improving the quality of the teaching. In this sense, language didactics is clearly much closer to ecology and ethology than to the physical sciences, and very close to medicine, where we find these two different strategies of manipulating variables in an experimental situation, and of analyzing correlations in a natural situation.[28]

One of the epistemological options available is not to try to isolate variables from their environment, but to compare the same variables in different environments: we will discuss this again in connection with the "comparative method" (cf. chapter 2.7), which some consider to be the "first stage", others a "substitute" for the experimental method in the Human Sciences.

Nevertheless, for the analysis of complex mechanisms in complex environments involving human beings - as is the case of the joint teaching-learning process - what corresponds to "scientific validation" can, in my opinion, only be achieved in the form of an intersubjective agreement between actors and observers.[29] I set out this idea in an article from [1997(b)], in a passage where I find myself on one of the characteristic ideas of action research (cf. chapter 1.8):

In contrast to the demands of G. Bachelard, the internal theorization of DLE does not have to be carried out against the empirical data, but on the contrary, first of all, in order to give an account of a maximum of empirical data in a way that is satisfactory for the actors themselves of the teaching-learning process; In concrete terms, "satisfactorily" means, for example, that in a training course, the trainee teachers agree, after discussion

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[28] Examples given by Maryline COQUIDÉ (2003).

[29] Medicine again provides a good example, with the regulations concerning medical decisions at the end of life, which in France must be taken collectively when the patient is no longer able to do so. We will find this idea very strongly put forward in the "action research" (cf. chapter 1.8).

between themselves and their trainers, that the partial conceptualization or theory presented/retained enables them to better understand everything that they and their students do in their classes, and how and why they do it.

I no longer speak of "theorizing" in DLC, or even "internal theorizing", but of "modelization".[30] I have not seen any such research in my career, but one could well imagine a dissertation or thesis "applying" (in the sense of "making it work," as one would say "running" a computer model), to test its capacity for comprehensive description of classroom practices and to improve them, global models such as, in the Working Library on my site[31] , that of the "fundamental methodological oppositions" (008), of the learning strategies (012), of the cognitive models (016, 017) of the modes of the teaching-learning relationship (022), of the orientations of action (025), of the didactic configurations (029) ; or the model of different "documentary logics" that I sketched in a 2012(j) article entitled specifically "Didactic Treatment of Authentic Documents and Specificities of Literary Texts: From the Historical Model of School Tasks to the Five Current Documentary Logics (*with Some Hypotheses for Research Programs*)" (my emphasis at the end of the title).

1.7 Research-experienciation

The concept of "research-experienciation" has been developed by science didacticians to think about the academic functions and forms of experimental activities in the teaching of science subjects. In the Bachelardian epistemology, which is the reference for these didacticians, empirical experience, as we have also seen above, is considered an obstacle to the acquisition of scientific knowledge. However, this epistemology is in contradiction, in school didactics, with the implementation of active methods, which requires on the contrary to start from the lived and concrete experience of the students.[32]

To manage this contradiction, these didacticians will postulate that research-experienciation can prepare for research-experimentation if a third type of research is organized between them that establishes a transition between them.

In an ICEM-Pédagogie Freinet dossier of March 1993 devoted to the theme of "Scientific learning by heuristic methods"[33] , it is proposed that, between "the experiment to see" which is a matter of "simple empirical trial and error" and "the experiment to vary one of the factors of the phenomenon" which is a matter of experimentation, a third intermediate type of experiment, "the experience to understand", is proposed, justifying it in this way:

[...] if "experienciation" does not guarantee a better mastery of experimentation, the fact remains that a certain practice of the latter can be effectively supported by the former. For the experimental method actually has two faces. The one we have been thinking about the most since Claude Bernard consists in going from the hypothesis to the anticipated conclusion, and then returning to the hypothesis by integrating the experimental results. This effectively requires the use of formal thinking and operative reversibility. The other side is based on the separation of variables by comparison of natural situations and provoked situations, this separation being clarified in a progressive way.

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[30] Cf. *supra* p. 11, on the terminology of Robert Galisson. Cf. also, in the course " La didactique des langues comme domaine de recherche ", Part 3 : " La perspective didactique 1/4. Models, theories and paradigms", Chapter 2.1 "The concept of "model", between theory and practice", pp. 9 *sqq*. Or in Document 015 the table entitled "External theories versus internal models. According to Edgar MORIN and Richard RORTY".

[31] www.christianpuren.com/bibliothèque-de-travail/.

[32] In France, there is a well-known and institutionally recognized program, founded by a Nobel Prize winner in physics, Georges Charpak, whose objective is to "contribute to improving the quality of science teaching in primary and secondary schools", and which is very significantly entitled "La main à la pâte" (literally: "to put one's hand to work"): www.fondation-lamap.org/fr/.

[33] www.freinet.org/ne/47/dossier-47.pdf, accessed June 21, 2013. The focus of the file is on the experimental sciences.

The same idea of an intermediate type of research substituting a pedagogical transition to the epistemological rupture between experimentation and experimentation is found in Maryline COQUIDÉ. In a 1998 article, she proposes to use three different "didactic modes" in school science teaching (the numbering is mine):

(1) Action-experience mode or experienciation

The experience-action mode, or experienciation, allows students to explore and act, through varied and diversified situations, with the aim of practical familiarization with objects, phenomena, and scientific and technical instruments. The teacher's role is therefore to think of arrangements, situations or interventions that will allow for fruitfulness. But also, to encourage comparisons, to stimulate questioning, to introduce doubt, to help reformulate and to encourage practical learning.

(2) Object experience mode or experimentation

The experiment-object mode, or experimentation, facilitates the comprehension of the actual practices of science, with indispensable articulations between empirical and experimental moments in the investigation, and a particular importance given to reasoning, methodology, and the validity of conclusions. The aim is to confront the students with a real situation that is not very well developed, to help them problematize or formulate a project, to encourage the effective implementation of investigations, to encourage dynamism and confrontation, to distinguish between pedagogical guidance for exploration and pedagogical guidance for validation, and to encourage the students to reflect on their approaches and their reasoning

The experimental and technological science device offers a privileged framework for implementing such an empirical investigation, by giving the possibility of carrying out long experiments, confronting the resistance of reality and facilitating a better comprehension of certain aspects of scientific work.

(3) Experiment-tool or experiment-validation mode

The experiment, in this mode, can be considered as a tool put at the service of theoretical elaboration, for the construction of concepts or models. Experiments are considered within a framework of systematic conceptual learning, and this mode is more developed in the practical work. It is a question of putting intellectual constructions to the test, in order to test their relevance and their domain of validity. It should be noted that here the resistance of reality is often blurred, by arrangement or by direct help from the teacher.

Mode 1 is called by the author herself "experienciation". Mode 3 is characterized by the function that experience assures, which is to be "at the service of theoretical elaboration": it thus corresponds to what I called "research-experimentation" in my initial diagram. Mode 2, an intermediate mode, therefore, of transition, is called "experimentation": it does indeed make a first shift towards the object, but it must be maintained halfway between subject and object since the teacher must ensure "indispensable articulations between empirical moments and experimental moments in the investigation".

These "empirical moments" correspond, it seems to me, to the "natural situations" of the ICEM document, and these "experimental moments" to the "provoked situations" of the same document. The pedagogical strategy is therefore the same, and it consists of designing a hybrid type of research, half-experienciation, half-experimentation, constituted by a permanent to-and-fro between the two modes: it is a logical way - perhaps the only one - to combine transition and rupture in a single phase.[34] The examples given in the ICEM document - in the "experiment to see", we observe water currents in a washing machine, in the "experiment to understand", we observe the same currents in a coffee pot and compare the two observations" - confirm the homology between the two strategies, since these comparisons will allow the pupils, as Maryline

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[34] It remains to be seen whether this beautiful pedagogical logic responds to the cognitive mechanisms actually at work in the students, but that is another story... and a fine subject of research for specialists in cognitive science.

COQUIDÉ wants in this intermediate phase, to "problematize" and to construct a "(research) project"[35] , before, as it is said elsewhere in the ICEM dossier, the appearance of...

> *[...] forms of thinking that the young child does not yet possess but that mature in the middle schooler: questioning, issuing and choosing hypotheses, experimenting to verify the hypothesis, searching for variable factors in a phenomenon, isolating one of these factors, studying its variations with various mathematical tools, interpreting the results, etc.*

From my experience as a research supervisor and member of defense juries, I think that we can identify in dissertations and theses characteristics that belong to the three different modes described by M. COQUIDÉ. One finds moreover between these three modes the same type of continuum that I propose between the object and the subject, within the middle the project (cf. chapter 1.1). In the same way, the work of the supervisor vis-à-vis his student-researchers can be at certain moments, as M. COQUIDÉ, speaking of the teacher's work with regard to his students, "to encourage comparisons, to re-launch questioning, to introduce doubt, to help reformulate and to encourage practical learning" (mode 1), or again "to help problematize or formulate a project, to encourage the effective implementation of investigations, to encourage dynamism and confrontation, to encourage students to reflect on their approaches and reasoning" (mode 2). In a Master 2e year dissertation or a thesis, which is *acadamic-level* research, however, one can only very occasionally admit a purely empirical approach such as the one M. This is why, in the "comprehension-subject" quadrant of my general diagram of research types (*see above,* p. 3), I propose only research-experienciation, which corresponds essentially, in my mind, to mode 2 described by M. COQUIDÉ.

I mean "experienciation" in the sense of the student researcher's individual confrontation with the fundamental problems of any research and the difficulties of any research process, which will make the whole of his or her research, once completed, a personal training experience.

As I wrote in the Introduction to Part I, "any IAR, because it is at the same time personal training in research, is also to some extent research-experienciation: the ability demonstrated by the student-researcher to reflect on his or her experience as a researcher in order to derive maximum benefit for his or her own training is one of the main criteria for evaluating a dissertation or thesis, and it is the primary criterion for evaluating its oral defense."

This dimension of experienciation gives all initial research a subjective dimension, and all IAR writing a dimension of personal description-narrative, which must certainly be controlled (cf. *supra* chap. 1.1, and chap. 1.4), but which are nonetheless constitutive of this research: all IAR is also, to a certain extent, an "initiatory research", which can be defined as "a personal experience in which one is able to describe the experience of the other". All IAR is also, to a certain extent, "initiatory research", which can be defined as "a personal experience in which one cannot dissociate the thought and the lived, the conceptual and the existential"[36] .

1.8 Action research

Among the many descriptions of action research available[37] , I have chosen the following one, by Christian VERRIER (1999), which characterizes this type of research very well by appealing to its values, aims and principles, in addition to its implementation procedures and processes:

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[35] I find the same mediation function of the "project" in my general outline on p. 3. Cf. also the beginning of chapter 1.1, entitled "Between the object and the subject, the project".

[36] I borrow the concept and its definition from Freemasonry: the formula seemed to me to fit perfectly with the initial research in DLC.

[37] A "definition" *stricto sensu*, *i.e.* aiming at the greatest conceptual abstraction, would give something like: "type of research that gives priority to action". It is too general here, because we need to know at least (1) about the action: who carries it out, on what objects, with what objectives, under what conditions, with

> *A research approach that has developed on the basis of a challenge to "traditional" forms of research, a critique of the use of social sciences as instruments of domination, and a desire to integrate the results of research into social action. Action research proposes to establish a new relationship between theory and practice (not to be confused with applied research). Action research refers to a process of knowledge oriented towards the emancipation of researchers and subjects (subjects are defined as the persons or groups on whom the research is focused). It implies the definition of a common goal between researchers and subjects. In this respect, Kurt Lewin, the promoter of action research[38], said: "The researcher and the subjects of the research move together towards knowledge". Thus, the subject-object relationship between researchers and what are traditionally called the "objects" of research must be abolished. A certain critical empathy must replace a generalized mistrust, a dynamic and autonomous comprehension must unite all partners. Action research can limit the asymmetry between researchers and research subjects; it can even ensure that research subjects have real control over the problematization, the research process and the management of the results.*

As can also be read on the LISRA website, which, like the association itself, is entirely devoted to action research in the social sciences[39], "AR [action research] is not a methodology but an approach", "a process of transformation", "a mode of engagement and existence", in which many different currents coexist.

More than *involvement*, however, it is really a question of true militant *engagement*, this current of research-action being thus situated on the side of the most extreme subject orientation of this diagram that I proposed in chapter 1.1:

OBJECT ←		→ SUBJECT
Scientific research	IAR in DLC	Action-research
commitment	*involvement*	*engagement*

I have chosen to present this version of action research here because it appeared to me to be the most radical: what interests me here is not to discuss the different conceptions of this type of research, but to highlight as best as possible the specificities of the epistemological positioning of IAR in DLC in contrast with a very different model.

As a result, this version is certainly not suitable for IAR as is. The following table brings together what I believe are the main opposing characteristics of the two types of research:

Action Research (Strong version)	Initial Academic Search
1. Challenge to the "traditional" forms of "academic" research.	Respect for the forms, rules and constraints of academic research.
2. The research starts from a request from unsatisfied field actors.	The research starts from a decision of the researcher motivated by the obtaining of a degree.
3. Joint commitment of the researcher(s) and the field actors.	Possible involvement of the researcher alone.
4. Researcher(s) and field actors participate in the entire research process with equal status and responsibility: the concept of "collective researcher".	The student researcher is solely responsible for his or her research.

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what means and methods, with what evaluation, and (2) about the research: what are the other elements in relation to which the action is considered to have priority?

[38] Work of Kurt LEWIN quoted in note in this definition: *Dynamic psychology. Human relations*, 1931 [Leipzig: S. Hirzel Verlag].

[39] "LISRA (Laboratoire d'Innovation Sociale par la Recherche-Action) is an autonomous and evolving platform for cooperative work and the sharing of tools made available to people who wish to develop an action research approach" (www.recherche-action.fr). In writing this chapter, I relied primarily on the two LISRA documents 2013a and 2013b.

5. No specific skills or prior training required: knowledge is directly induced from the research experience.	Research is the culmination of a disciplinary training that has previously provided a body of specific knowledge. In addition, research training is provided prior to and/or at the beginning of the research.
6. No assumptions, no pre-established methodology.	Preliminary hypotheses, pre-established methodology.
7. No initial literature search: documentation needs will emerge and will eventually be met during the course of the research.	The research work begins with documentary research and analysis, in order to establish a synthesis and an assessment of previous research on the same theme.
8. Evaluation and use of the research by the field actors themselves.	Evaluation by the members of the thesis jury. The possible exploitation of the research in the field after the defense is not taken into account.
9. The evaluation is done primarily in relation to the specific context of the field actors, and on the criterion of improving their knowledge and mastery of their own work environment.	The evaluation is done primarily in terms of contributions to the personal training of the student-researcher, and to disciplinary reflection and intervention in general.

Even though these two types of research are thus radically opposed on essential characteristics, I found it interesting to include action research in my general scheme for three reasons:

1) The first reason is that action research, as seen in the table above, contrasts well with some of the major characteristics of IAR.

In the social sciences, where action research is mostly implemented, it also competes not only with academic research, but with another type of research, which is *expertise*. From the documents I consulted (in particular LISRA 2013a & b), I arrive at the following table (I take the example of an expertise requested by the managers of a company upstream of a project they want to launch)[40] :

Type	Action Research	Expertise	Academic Research
Orientation	Subject	Project (of the client company)	Object
Actors	Participants	Professional expert(s)-consultants	Professional Researcher(s)
Position	Commitment	Mediation (between company officials and staff)	Distancing
Activity	Cooperation	Consultation	Analysis
Objective	Transformation	Decision (of the company)	Knowledge
Production	Process	Report	Writings, oral presentations (defenses, conferences, seminars, etc.)
Evaluators	Participants	The sponsor company	Jury members (thesis) or peer reviewers (articles)

This new comparison allows us to "reshuffle the ideas", as we say "reshuffle the cards"; and, to extend the metaphor, we can see that even if the cards (/ ideas) are no longer in the same order (/ in the same paradigms), it is indeed the same deck of cards (/ the same overall conceptual problem). This comparison highlights the complexity of IAR, at least in DLC, which partly escapes the oppositions she describes between action research and "standard" academic research (that of statutory teacher-researchers), for several reasons:

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[40] I have deliberately left out the case of the "experts" of the Language Policy Division of the Council of Europe, who developed, for example, the Common European Framework of Reference for Languages (CEFR, 2000), because they intervene with a status just as ambiguous as that of their productions, and because they intervene in a field - the DLC - where the very notion of expertise is questionable. Cf. my review (2012a) of Bruno MAURER's book, *Enseignement des langues et construction européenne. Le plurilinguisme, nouvelle idéologie dominante*.

- because this IAR is both subject and object oriented in proportions that can be relatively diverse and changing;

- because the project concerns both the research theme (object orientation) and the training of the student researcher in research (subject orientation);

- because the researcher's position may tend more towards commitment or towards distancing, and may evolve from one to the other during the same research;

- because the objective is indeed knowledge, but also the transformation of the field (proposals for improvements in teaching-learning) and of the researcher himself (self-training);

- because the process of research is at least as important as the product of research (the thesis), since it is this process that ensures training in research.

2) The second reason is that, despite important differences that sometimes constitute incompatibilities, action research "challenges", as we say, the IAR in DLC, *i.e.* it constantly reminds it of a certain number of requirements that the French academic environment, with its sometimes very marked academic tendencies, would tend to make it forget.

I will take up below some of these requirements, which correspond to approaches that seem to me to be constitutive of research in DLC, and which I presented in my article "For a comparative didactics of language-cultures" (2003b). In order not to make my text too long, I leave it to my readers to note the coherent relationships between these different approaches. Unless otherwise indicated, quotations in quotation marks are taken from the documents I consulted on action research (LISRA 2003 a & b).

- The pragmatist approach

Any initial research in DLC, because this didactic is meant to be an intervention discipline, must take into account the question of action. The student-researcher must develop a "thought of practice, [a] culture of action"; "although a researcher, [he or she] is 'involved' since he or she deliberately intervenes in reality and is not simply a detached and distanced observer of it."

This willingness to act is based on the awareness of a "social responsibility". A student-researcher must ask himself the question of the social utility of his research: how can the actors in the field find an interest in my research; how can I be useful to them? And this action cannot do without declared values: "autonomy, emancipation, cooperation, social progress, respect for actors". Action research also calls for an "ethic of commitment": as I noted in Chapter 1.1, "I see no reason why the researcher should not 'commit' himself personally when his observations, analyses, interpretations and proposals touch on what he considers to be important social values or issues, for example when his research leads him to address, within the didactological perspective that is constitutive of DLC, ethical or ideological questions."

- The comprehensive approach

It corresponds to a desire to "valorize the actors", that is, in DLC, first of all the teachers and learners. "There is no such thing as a "cultural idiot": individuals know what they are doing and develop their own sociological methods to understand and respond to the situations they experience"; there is "informal lay knowledge" among field actors[41] . As sociologists A. Michael HUBERMAN and Matthew B. MILES (1991), "the fact that individuals do not share researchers' conceptualizations does not mean that such conceptualizations are false or artificial."

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[41] This last expression inevitably brings to mind the "knowledge of action" that Jean-Marie Barbier talks about in the book he directed, entitled precisely Theoretical knowledge and knowledge of action (1996).

- The environmentalist approach

Field actors have developed "skills that are unique to each situation, constantly readjusted, rediscovered, optimized, and recontextualized"; like action research, initial DLC research must be at least in part "situational work."

- The qualitative approach

In this situational work, issues emerge "from the experience and context" and from "direct observation of realities", "by successive decantations". This is one of the methodological options that HUBERMAN & MILES consider to be valid to a certain extent: "The conceptual framework should emerge empirically from the field as the study progresses; [...] the instruments, if there are any, should be constructed from the properties of the field, and from the way the actors apprehend them."

One of the validation processes of this framework is intersubjective agreement, which is central to action research, and which initial research in DLC would also be well advised to use: cf. in chapter 1.1, what I wrote about this mode of managing subjectivity, namely confrontation with other subjectivities.

- The complex approach

Because it takes into account the diversity of actors and their environment, it is understandable that the promoters of action research also refer to complex epistemology: "How can we respond to the complexity of our times? and "Every human situation is complex: [how] can we make living systems intelligible without simplifying them? It is also understandable that they claim to be holistic and to have a "systemic" and "generalist" approach, referring explicitly to the conceptual framework of Edgar Morin.

Action research is thus to IAR what Freinet pedagogy is to the action perspective: an extreme form - extremely coherent, systematic and committed - that it is always interesting to keep in mind, if not as a focus, at least as a point of comparison.

To conclude this point 2, I would like to add an idea that I found in one of the documents I consulted on action research[42] , that of proactivity:

Proactive: the ability to anticipate what will happen by influencing the parameters of a system (experimentation) rather than reacting once these parameters have produced their effect (feedback). For example, in a blocked institutional context, it is preferable to provoke a crisis or a conflict in order to analyze the logics of power and thus allow a collective reappropriation of the meaning of a situation.

I do not think that a student-researcher gains by following the example given here... On the other hand, even if he or she must take into account the context concerned in his or her intervention proposals, nothing obliges him or her to limit himself or herself to it, and it is in his or her best interest, on the contrary, when the teaching-learning of language-cultures has remained very "traditional" there, to adopt a proactive attitude at certain moments. Here, for example, is my critique of a recent thesis (2013) in my proposed final report section to the jury chair:

The current methodological situation of the teaching of French as a foreign language (FLE) at the university [...] , very traditional, makes that in this thesis the proposals tend to follow those which were made at a time when one sought to liberate the methodology from the dictatorship of the manufactured dialogues as learning supports: the long resumption, pp. The long repetition, pp. 113-115, of a debate, which currently seems a bit vain, on what can really be the "authenticity" of an "authentic" document in language-culture didactics, and under what conditions, is characteristic from this point of view. One can appreciate the realism and the modesty of the candidate's project, but a thesis must also go beyond the only objectives immediately attainable by the only actors currently in

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[42] LISRA 2013a, slide #7.

the chosen field; because academic research, as a means of training for research, must face the didactic problems in all their current complexity; and because it must also prepare a future that is not entirely inscribed in the present. In short, one would have wished in this thesis, besides the realistic and certainly effective treatment of a difficult situation, a little more prospective...

In my *Essay on Eclecticism* ([1994e](#)), I chose as an exergue to the second part an affirmation by Paul Veyne that may come as a surprise from a recognized historian such as himself, pronounced moreover on a very solemn occasion, on the occasion of his reception at the Collège de France: "It is more important to have ideas than to know truths. [Truth is not the highest value of knowledge. (1976, p. 62). This statement seems to me to be very accurate as far as initial research in DLC is concerned: being able to produce and defend new, innovative, original ideas seems to me to be at least as important, for a young researcher - and in any case more interesting for his readers -, than conscientiously describing for pages on end realities that are often not very motivating. Intervention in DLC research should not only be at the service of remediation, but also of didactic creativity.

3) The third reason is that every student-researcher has a vocation, once he or she has defended his or her thesis, to carry out other research work afterwards. There is nothing to prevent them from turning to action research, drawing inspiration from this or another current, or even negotiating hybrid forms of action research (under the responsibility of these actors) and university research (under their own responsibility) with field actors.

However, the incompatibilities between the two types of research seem to me to be so strong and numerous that I do not think it possible, personally, to achieve a stable hybrid form. In any case, such hybridization would constitute a "mixture of genres" that I believe should be avoided at all costs in an IAR. The negotiation with the field actors of such a mixed form of research and its management require, moreover, skills that are not part of those that must be validated in a dissertation or a thesis; nor is the capacity to solve all the epistemological and ethical problems that such a delicate research device must pose. This is why I would advise student-researchers against embarking on such an adventure. One of the very few negative "pre-reports"[43] that I had to write during my career concerned a thesis that was presented as action research. This thesis, in fact, did not respect in my eyes the conditions that would have been indispensable for an action research to be accepted:

Action research as a mode of research is criticized by many academics, including language-culture didacticians. This is not my case, and I believe, on the contrary, along with other colleagues, that this type of research has a perfect place in a discipline such as language-culture didactics, which must have both a comprehensive (and not only critical) approach to the actors, their activities and their environment, and an "interventionist" aim, i.e. the concrete improvement of learning.

But for it to have its place, it must conquer and maintain it at the price of a particular rigor in its procedures. This rigor concerns in particular the following points:

1) Taking into account the fact that even if the researcher has mobilized field actors in common research, a university thesis is addressed not only by convention, but by nature, to the members of the defense jury. [...]

2) The greatest possible clarity about the roles, responsibilities and contributions of the various participants in the research, as well as the integration of their own assessment of the results of the research and their impact on their practice into the research review itself. [...]

3) Special attention to the so-called "literature review", i.e. the state of research and the critical presentation of the tools available for it (whether one calls them "theories" or "models", according to one's personal epistemological conceptions), as well as the transfer of this knowledge, as far as possible and in appropriate forms, to the other participants in the research. [...]

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[43] To be defended, a thesis in France must have received two positive pre-reports written by two evaluators from outside the university where the candidate is registered with his or her director.

4) A close and thorough analysis of the data collected according to the "theories" or "models" selected. [...]

5) A clear initial problematic, with research questions and hypotheses linked and prioritized in the general introduction, and then taken up one by one in the systematic assessment drawn up in the general conclusion. This problematic, because it is complex by nature, like any problematic, must include a "meta" point of view, i.e. a questioning of the questions themselves [...].

1.9 Metasearch

I have already touched on the question of the "state of research" in Chapter 1.4, in connection with research-description. I will come back to it at greater length in the second part of this Chapter 5, a particular method being dedicated to it, the "documentary method".

So-called "meta-research" is a particular type of research that consists of both a systematic and critical review of published research on a given topic, but unlike "state of the art" research (which is the objective of the initial literature search in a dissertation or thesis), it aims to generate new knowledge and new avenues of research *by itself.*

Some articles (necessarily long...) by confirmed researchers are only meta-research. When they are successful, they allow to deepen the research in an impressive way: it is as if my initial schema of the types of research was projected in the third dimension, as if it was suddenly transformed into a sphere...

This type of research cannot be accepted for an entire dissertation or thesis because initial research must serve as research training, and for that personal field research is essential. It would in any case exceed the knowledge and skills expected of student researchers. But it seems necessary to me that they have this type of research in mind:

1) as a direction in which to orient their entire point about literature, so as to move it as far away as possible from a mere compilation of readings;

2) and as a model for dealing with the part of the state of research concerning "specific concepts": I return to this question in chapter 2.1 devoted to the documentary method, *infra* p. 31.

Conclusion of the first part

The necessary diversity of research types is not specific to DLC. Maryline COQUIDÉ, who is a specialist in educational sciences, writes for example in a 2000 article:

Any research process [...] requires the articulation of different postures, from "lived" experience, through more or less controlled and systematic empirical practices (exploration and investigation), to experimental practices, and the articulation, in investigations, of documentary research and experimental research; this leads to a broad vision of scientific experience [...], and which includes in a very interactive way the investigation process, active observation, the application of techniques, experimentation and modelization.

This (chronological) articulation and even combination (in synchronicity) of different types of methods must be done in a thoughtful and explicit way: in the same way that learners are now asked to reflect on their learning process by conceptualizing their interlanguage and making their learning cultures and strategies explicit, and a teacher is asked to be a "reflective practitioner", so too is a student-researcher asked to show that he or she has reflected on his or her research and research in general in his or her discipline. This means, in concrete terms, that he/she must make explicit, whenever necessary, and at least in the general introduction to his/her work, his/her conception of DLC and of his/her research in DLC, in order to justify the methods he/she has chosen to implement.

These questions are among the priority issues that the student researcher must discuss and negotiate directly with his or her supervisor. This first part of Chapter 5, with the general outline of the types of research and its commentary, was intended to provide them with some tools for joint reflection and decision-making.

2. Part 2: DLC research methods

Introduction of the second part

This second part does not pretend to cover all possible research methods in DLC. That is why I have entitled it "research methods in DLC" and not "research methods in DLC". If they have the possibility to consult it (it is unfortunately not freely available on the Internet...), my readers will be able to broaden their vision of the diversity of methods by consulting the *Guide pour la recherche en didactique des langues et des cultures. Approches contextualisées* (BLANCHET Philippe & CHARDENET Patrick dir., 2011), to which some thirty DLC research directors contributed.[44] It is not my intention here to deal exhaustively with each of the methods I present, but to review them, justifying my choice, and indicating references and links that will allow each person to study in greater depth the methods he or she has chosen for his or her personal research.

In DLC as I understand it, i.e., as a discipline of both comprehension (through observation-analysis-interpretation) and intervention,[45] research methods concern the collection of data and their processing, whether these data are "simply"[46] collected by the researcher (through observations, reading books and articles, analysis of students' productions, surveys and interviews with different actors, for example) or generated by interventions carried out for this purpose (in experimental classroom sequences, for example).) or generated by interventions carried out for this purpose (e.g. in experimental classroom sequences).

2.1 The documentary method

I use the term "documentary method" here to refer to techniques for researching and analyzing documents that are already available and that provide immediately usable information concerning the research topic,

> - or because they are analyses that have already been carried out: theses, articles, books and other texts or conferences of researchers who have already worked on the question, in particular those who are "authorities" in their field of specialization; It is hard to imagine a research project on interculturality, for example, without Geneviève Zarate, Louis Porcher or Martine (Abdallah-)Pretceille not only being cited and appearing in the final bibliography, but also and above all without their concepts and ideas being analyzed, compared, discussed and, if necessary, criticized in the body of the dissertation or thesis, including by integrating the historical perspective (the evolution of these concepts and ideas in their work): This type of critical treatment, close to the approach of meta-research, seems to me to be required of student-researchers for each of the "specific

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[44] I participated in this collective work with an article entitled "La "méthode", outil de base de l'analyse didactique", pp. 283-306, republished on my site in 2023: 2011k.

[45] See my definition of DLC as presented and discussed in Chapter 1, "Introduction," of Course "La didactique des langues-cultures comme domaine de recherche", Folder #1.

[46] I put the word in quotation marks: these methods are not easy to implement, indeed, and it is difficult to avoid the effects of the researcher's intervention: the questions asked in a survey, for example, always more or less direct the answers given.

concepts" of their research, taken in isolation, or with their interrelations if they refer from the outset in their initial problematic to a given conceptual framework;[47]

- or because they provide data ready to be analyzed: for example, it is hard to imagine research on language didactics in a given country without analyzing the most commonly used textbooks; or research on language teacher training without analyzing the curricula of professional training centers and training programs.

When existing documents are not sufficient - which is often the case when the research concerns the researcher's own field - the researcher will have to complete the search for existing documentation by producing or encouraging the production of his or her own documents: research on the planning of teaching sequences will thus require the researcher to collect written preparations from teachers; research on learning progression, written productions from learners over time; research on grammar teaching, class recordings; research on language teacher training - to take up an example given above -, the results of a survey carried out specially by the researcher among all the interested parties: heads of training institutions, trainers and teachers

2.1.1 Documentary research

To the documentary method correspond first of all - chronologically speaking, during the research process - the so-called "documentary research techniques". All universities offer training days for these techniques, which are now massively based on computers.

I will limit myself here to resources available online: here are a few links (verified in June 2013) to interesting sites and documents; the links to other sites they indicate will allow for sufficient expansion of searches based on most of the documentary needs of DLC student researchers:

- *Library sites*

    - In France, the main online library for the didactics of languages and cultures is that of the CIEP (Centre International d'Études Pédagogiques de Sèvres, www.ciep.fr/). The CIEP offers an online bibliographic service with sections concerning language didactics, including a section "New acquisitions" which can be very useful for the student researcher, because it indicates new publications, among which some that he or she may be reproached for not having consulted during his or her defense...

    - The Bibliothèque Nationale de France (BNF) also has a search engine that draws on several thousand libraries, with the possibility of requesting a loan: http://ccfr.bnf.fr/portailccfr/jsp/index.jsp. Among the collections listed, the "SUDOC Catalogue" (Système Universitaire de Documentation de l'Agence Bibliographique de l'Enseignement Supérieur, www.sudoc.abes.fr/), which can be consulted directly: it also allows you to search for theses and journal issues online, and to request a loan.

- *Sites of associations and/or magazines dealing with didactic themes*

    In alphabetical order, and without any pretension to exhaustiveness (even if I limit myself, as here, to sites concerning entirely or partially the FLE):

    - ACEDLE, Association des Chercheurs et Enseignants en Didactique des Langues Étrangères (acedle.org/), and its journal *Les Cahiers de l'ACEDLE* ;

    - AUF, Agence Universitaire de la Francophonie (www.auf.org/): you will find an international search engine on FLE to keep up to date with conferences and other study days (type "FLE" in the internal search engine), and the possibility to subscribe to a free newsletter announcing these types of events (type "FRAMONDE").

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[47] On the specific concepts, see chapter 2.2, "Concepts spécifiques", in chapter 4, "Élaborer sa problématiqu" de recherche ", of the course "Méthodologie de la recherche en DLC", p. 11.

- *ALSIC*, a journal on *language learning and information and communication systems*, (http://alsic.revues.org/) with numerous articles on the use of educational technologies in language teaching and learning;

- APLIUT, Association of language teachers in IUT (www.apliut.com/), and its magazine *Les Cahiers de l'APLIUT*;

- APLV, Association des Professeurs de Langues Vivantes (www.aplv-languesmodernes.org/), and its journal *Les Langues modernes*;

- ASDIFLE, Association de Didactique du Français Langue Étrangère (asdifle.com/), and its journal *Les Cahiers de l'ASDIFLE* ;

- Franc-Parler, Le site des professeurs de français", site of the International Organization of the Francophonie (www.francparler-oif.org/), with pedagogical sheets, articles and thematic files;

- "ÉDUFLE.NET, collaborative site of the FLE" (www.edufle.net/), with a series of thematic files in didactics of the FLE more or less well documented;

- FIPF, the International Federation of Teachers of French, which publishes the paper review *Le Français dans le monde* (www.fdlm.org/), with the summaries of the issues (only since 2009, unfortunately), pedagogical sheets, dossiers (curiously classified under the heading "Blogs"), a sitography.

- *Publishers' websites*

The publishers of language textbooks all now have their own websites, where most of them not only announce their new products, but also offer the possibility of consulting or even downloading a sample unit of their new products, and more and more often, the corresponding pedagogical guides. It is a good idea to visit these sites regularly to keep abreast of the evolution of textbooks, which are often good indicators of developments in the didactics of language-cultures, if not of the actual practices of teachers in their classes.

- Official websites

In some countries, there are official sites dealing partly or entirely with the issue of language teaching and learning. This is the case in France, with, for example

- EDUSCOL, "National portal for education professionals", and its modern languages section (www.eduscol.education.fr/langues);

- ÉMILANGUES (www.emilangues.education.fr/), support site for European sections.

- Website www.christianpuren.com

My personal website has a section called "My favorite sites" (last updated June 2013), where you will find some of the sites referenced above, as well as a more developed bibliography-sitography on the action-oriented perspective and project-based pedagogy.

- *Techniques of documentary research on the Internet*

A complete course, including guidance for site evaluation and research presentation, is available online at
http://aeris.11vm-serv.net/cours/chercher/methodes.html.

- *Use of Internet search engines*

If you type *"use of search engines"* in... a search engine, you will find links to many sites presenting this search method. The minimum to know is :

- that you must put in quotation marks the expressions that you want to find as they are (and not each of its elements): "*didactics of cultural languages*", for example; if you do not put the quotation marks, all the documents containing one or the other of the three key words will be proposed in search results;

- and that the space is equivalent to "AND": *"language didactics"* [space] *intercultural*, or *"language didactics"* [space] *"intercultural approach"* will search for documents where both expressions are found.

The precise knowledge of all the "Boolean operators" (AND, OR, NOT, etc.) allows you to save precious time in your online searches, by limiting the results obtained from the start. A search on the expression *"Boolean operators"* will give links to numerous practical information sheets on the use of these operators.

Just as it is not recommended to quote definitions from "general public" dictionaries (*Le Larousse*, *Le Robert*, etc.) to define the key concepts of an academic research (except possibly to better show the different meaning that these concepts have in DLC or that one gives to these concepts in one's own research), it is not recommended to refer to "general public" online encyclopedias such as Wikipedia, even if some of its articles may be of high quality. And one should not give the impression that one has started one's documentary research by starting with the bibliographical references of this site...

As we know, one finds the best and the worst on the Internet, and the "academic style" of a document is not in itself a guarantee of seriousness. The minimum prudence requires, at least when one starts one's research and does not yet have the means to judge by oneself the quality of the texts, to retain only documents published on university sites, or of recognized institutions, associations or reviews, or at least signed by people regularly invited in colloquiums, seminars and other university study days (launch a search on their name to consult their CV).

Research on the Internet should not prevent one from continuing to use more traditional techniques, but which can give equally interesting results, especially in the long term: noting bibliographical references that *seem* interesting in publications on themes close to those of one's research, and then systematically verifying the real interest of each one; browsing from time to time, if one has the possibility, the specialized shelves of libraries and bookstores; leafing through publishers' catalogs (now all available online); exchanging ideas and findings with other students (for this too, geographical distance is no longer a handicap, if one knows how to break one's isolation), etc. One of the characteristics of the professional researcher is to be in a spirit of permanent "documentary watch", for which all times and all means are good...

Another piece of advice concerning what should become a reflex as soon as possible: note immediately, for any passage or entire document copied from a paper document or found on the Internet, all the references that will be necessary later to cite it in your work (including the date on which you consulted the document, which should be specified when it is an online resource). If you download entire documents in pdf format (the most common), the safest and most convenient way is to use software that allows you to add these references directly to the document (there are free software programs for this purpose that can be downloaded from the Internet).

Be careful, however, (a) not to drown in documentation, and - another possible perverse effect of an uncontrolled documentary research - (b) not to modify one's problematic every time one comes across an article shedding new light on one's research theme. One must know how to (a') select from one's readings what is most directly relevant to one's research, and (b') decide on one's problematic at a given moment, and stick to it afterwards.

The problem at the very beginning of research - a source of understandable anxiety for many student-researchers - is that one reads to construct one's problematic, whereas to read "well" one should have already constructed it... The only treatment that I know of cannot be done at the time, but later: it consists in reading again, during the course of the research, at least the articles and works that one read at the beginning and that one considers to be most important. If the notes taken during this second reading are very different from the first ones, it is a sign that a real training process has taken place in the meantime...

One last remark: I have already discussed in this course "Research Methodology", in chapter 1 "Working with your supervisor"[48] , the question of the expectations and demands that one may have with regard to one's supervisor concerning documentation. See Chapter 2 ("What are the functions of a research supervisor?") and Chapter 3 ("What can I expect from my supervisor with regard to my research?"), p. 3.

2.1.2 Literature review

Strictly speaking, there is no documentary analysis technique specific to DLC research, and it is doubtful that it will be possible and useful to develop one in the future, given the very diverse nature and status of the documents used by researchers in this discipline. In a very general way, it seems to me that this researcher must have at his disposal both :

> - from a qualitative point of view, a good capacity for "comprehensive" reading of all types of documents, such as his general academic education should normally have given him;

> - and from the quantitative point of view, a good working capacity, which allows one to shuffle and re-shuffle in all directions the data from the field with the ideas of others and one's own ideas until one reaches that critical threshold (sometimes close to obsession...) from which, over the whole of one's field of observation and intervention, a new conceptual network will progressively emerge and be structured : the originality of the research, which is one of its first expected qualities, does not come - or very rarely - from truly new ideas, but, between already known ideas, from new relations established in an unforeseen way and which turn out to be relevant to its research problematic.[49]

Very empirically, I always contented myself with writing down, on bristol cards at the beginning of my career and then in computer files and directories, the quotations that seemed to me intuitively interesting (with their complete references !), as well as, just below and immediately, the comments and ideas they suggested to me, then rereading all these notes from time to time (especially in periods when inspiration is lacking).), as well as, just below and immediately, the comments and ideas that they suggested to me, then to reread all these notes from time to time (in particular in the periods of writing when inspiration is down...); or even, when I owned the book, to simply mark in its margins the passages that interested me at first reading and to scribble a few key words; then to reread them, later, to relate them to other quotations and other ideas noted in the meantime elsewhere. One of the most common definitions of intelligence, the ability to connect ideas, seems to me to be particularly relevant to the conduct of the research process.

For documentary analysis, some DLC researchers use a particular method, "content analysis", whose particularity - interesting for example for the analysis of class recordings, interviews, official instructions or even pedagogical guides of textbooks - is to try to establish correspondences between the semantic or linguistic structures of the texts and the psychological or sociological structures (opinions, representations, attitudes, conceptions, ideologies,...) which were at work in the production of the statements. One will be able to see if this method is interesting or even indispensable for one's own research by consulting one or the other of the following two works:

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[48]   www.christianpuren.com/cours-méthodologie-de-la-recherche-en-dlc/chapitre-1-travailler-avec-son-directeur-de-recherche/.
[49] See my article 2013aon this subject.

- ROBERT André B., BOUILLAGUET Annick, *L'analyse de contenu*, PUF, coll. " Que sais-je ? " n° 3171, 128 p.

- BARDIN Laurence, *L'analyse de contenu*, Paris, PUF, coll. " Le psychologue ", 3e éd. 1983 [1e éd. 1977], 234 p.

These books are unfortunately not available on the Internet, but an online search using the keywords *"Content analysis" definition* (typed in this way) gives many results, including the following links to documents written by academics and available online: there is even an entry in Wikipedia ;-).

For two objects specific to teaching, namely didactic materials and classroom practices, there already exist in the didactics of language-cultures, if not methods, at least specific tools, that any researcher in this discipline must know. I will discuss them in the following two paragraphs.

2.2 Analysis of teaching materials

I suggest that my readers [re]read chapter 1 (pp. 3-12) of Dossier n° 5: "La perspective didactique 3/4", half of which is devoted to teaching materials.[50] In particular, they will find there the presentation of several typologies of analysis of these materials, with seven tasks accompanied by their answers.

Among the documents used by the DLC researcher, "teaching materials" (textbooks, workbooks, teaching guides, audio and video recordings, etc.) occupy a special place for reasons of accessibility and convenience (it is easier to analyze textbooks than to observe classes), but also for a strong "epistemological" reason.) occupy a special place for reasons of accessibility and convenience (it is easier to analyze textbooks than to observe classes), but also for a strong "epistemological" reason: a discipline whose object is the joint teaching-learning process and which aims to intervene, cannot neglect tools that are so constantly used jointly by teachers and learners.

This is why, like the methodology of classroom observation (which I will discuss next), the methodology of analysis of teaching materials has given rise to some publications in our discipline.

- Two textbook analysis sheets remain among the best known and most functional to date, even though they both date from 1984:

- BARILLAUD Marie-Christine, DAHLET Patrick, HILGERT Jean-Marc, JUSTOME Sylvie, ORSAUD Vincent, " Méthodes FLE d'ailleurs et d'aujourd'hui. Vol au-dessus d'un nid de méthodes ". *Le Français dans le monde* n° 185, May-June 1984, pp. 20-26,

and most importantly:

- BERTOLETTI Maria Cecilia, DAHLET Patrick, " Manuels et matériels pour l'apprentissage du F.L.E. Ébauche d'une grille d'analyse ". Le *Français dans le monde* n° 186, July 1984, pp. 55-63. This grid is available on my site (with the kind permission of the journal), Document 032. I have made a detailed analysis of it in an article of 2011(a), where I show that this grid is under the strong influence of the authors' reference methodology - in this case, of the communicative approach; as are all the others, moreover, and this is reason enough for each researcher to build his own analysis grids. There is at least one other good reason, and that is that these grids must be developed according to one's own research objectives and hypotheses.

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[50] This chapter is part of the course "DLC as a Research Area".
(www.christianpuren.com/cours-la-dlc-comme-domaine-de-recherche/dossier-n-5-la-perspective-didactique-3-4/).

- The collective work *Se formation en didactique des langues* (PUREN C. *et al.*, 1998) offers an analysis grid of textbooks (as well as official texts) for each of the themes addressed in the eleven chapters: general objectives, communication in the language classroom, training for learning, teaching-learning of culture, mother tongue/ foreign language, methods and methodologies, oral comprehension and expression, written comprehension and expression, teaching-learning of grammar, vocabulary, and evaluation.[51]

- Directly usable tools for analyzing FLE textbooks can also be found in Janine COURTILLON's 2002 book: *Élaborer un cours de FLE*, Paris: Hachette, 2002.

- A recent issue of *Modern Languages* (No. 1, January-February-March 2010) offers a dossier of twelve articles on the theme of "Designing a language textbook".

- Finally, the Council for Cultural Cooperation of the Council of Europe has published a *Guide for authors of textbooks and teaching materials* written by Andy Hopkins as a supplement to the *Common European Framework of Reference* (Strasbourg, December 1996 CC-LANG (96) 17 rev.). It has been republished as Chapter 8 (pp. 233-271) of the *User's Guide [to the CEFR]* which can be freely downloaded (in doc format!) at the following address www.coe.int/t/dg4/linguistic/Source/SourcePublications/GuideCECR-utilisateurs-Avril02_fr.doc.

As this latter document is available online and offers a very important list of possible "entries" for the analysis of this type of material, I personally consider that its reading should be required for any student-researcher whose research incorporates the analysis of didactic materials.

2.3 Classroom observation

I suggest that my readers (re)read Chapter 2 (pp. 13-23) of the Part 5 of the course "La DLC comme domaine de recherche"[52]. Half of this part is indeed devoted to "practices". It is about classroom practices, and I naturally address the question of their observation.

The observation of teaching-learning practices has long been the subject of numerous works in the educational sciences (since Marcel POSTIC's classic, *Observation et formation des enseignants*, Paris, PUF, 1e éd. 1977, 336 p.). As far as DLC is concerned, we can cite:

> - A thesis defended in 2002 by Françoise DARGIROLLE on the theme *L'observation de classe dans la formation des enseignants de langues étrangères*. University of Paris-III, June 24, 2002. It is reproduced in full in Document 035 with her kind permission.

> - Studies on oral interactions in the language classroom (one can type *interaction "didactique des langues"* on the Web); the main specialist of the question in French as foreign Language (FFL) is Francine CICUREL: cf. in particular her recent book on the question : *Interactions dans l'enseignement des Langues. Agir professoral et pratiques de classe*, Paris : Didier, 2011, 287 p.

> - The book *Se former en didactique des langues* cited above (PUREN C. *et al.* 1998) proposes a grid for analyzing classroom practices for each of the themes addressed in the eleven chapters of which it is composed.

> - An entire issue of the *Études de Linguistique appliquée* (Paris: Klincksieck), n° 114, April-June 1999) was devoted to the theme "Observation de classe et didactique des langues". I was the coordinator, and I wrote a long "Presentation" (1999d) where I propose in particular a "typology of class observations in language didactics".

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[51] This work being collective, and moreover still distributed by the editor at the present time, I cannot unfortunately propose these grids in download on my site.
[52] File #5, "The Didactic Perspective 3/4," www.christianpuren.com/cours-la-dlc-comme-domaine-de-recherche/dossier-n-5-la-perspective-didactique-3-4/.

- Another of my articles entitled "Psychopedagogy and language didactics. About formative observation of classroom practices" (1994d). In it, I discuss the question of the interpretation of observation data, the thesis I defend being that this observation cannot be done without referring essentially to the teacher's intentionality. This implies, in my opinion, that classroom observations, in a research in our discipline, should imperatively be completed by an interview with the observed teachers.

The analysis of classroom observations may lead to the involvement of other disciplines, as I show in Document 039, already quoted *above* in chapter 1.3 ("Research-modelization"). The principle of subsidiarity, which I propose to apply in this case, should not prevent one from enriching one's methods of observation with elements borrowed from other disciplines. I recommend reading the following book, intended for sociology students: ARBOIRO Anne-Marie & FOURNIER Pierre, *L'enquête et ses méthodes : l'observation directe,* Paris : Nathan-Université (collection " 128 "), 2001[1e éd. 1999] , 128 p.

2.4. The questionnaire and the interview

As for observation, the methodology of the survey by questionnaire or interview is not fundamentally different in DLC from that proposed by sociologists: I refer on this subject to a few well-known and appreciated works - the first three are published by the same publisher and in the same collection as the work on observation mentioned above:

1. BLANCHET Alain & GOTMAN Anne, *L'enquête et ses méthodes : l'entretien*, Paris : Nathan-Université (collection " 128 "), 2001[1e éd. 1992] , 128 p.
2. KAUFMAN Jean-Claude, *L'entretien compréhensif*, Paris : Nathan-Université (collection " 128 "), 2001[1e éd. 1996] , 128 p.
3. SINGLY François de, *L'enquête et ses méthodes : le questionnaire,* Paris : Nathan-Université (collection " 128 "), 2001[1e éd.1992] , 128 p.
4. BEAUD Stéphane & WEBER Florence, *Guide de l'enquête de terrain*, Paris : La Découverte (coll. "Guides Repères"), 2003.
5. BERTHIER Nicole, *Les techniques d'enquête : méthode et exercices corrigés*, Paris : Armand Colin (collection " Cursus TD ", 2000 [1e éd.1998], 256 p.

These books are not downloadable online, as far as I know, but a search on the Internet allows to find presentations and for some extracts.

If any of these methods are used in a research project such as a Master's thesis or a dissertation in DLC, it seems to me that at least one corresponding methodological work should appear in the bibliography. These techniques are not innate nor are they acquired by simple practice in the field, especially in the limited time that DLC student-researchers can devote to them.

It will be interesting to consult Paul CYR's book entitled Les *stratégies d'apprentissage* (Paris: CLE international, 1998 [1st éd. 1996]). Several examples of questionnaires intended for learners are indeed proposed, as well as an interview guide with teachers; they are of course related to the theme of this book, but they give an idea of what these types of tools can concretely be in research in DLC.

Questionnaires are relatively easy to implement, but very delicate to design: it is necessary to be clear about the hypotheses that we are trying to validate, and about the type of data that we will need to cross-reference to achieve this, in order to ensure that we can collect them. This is why a first version of a new questionnaire is always tested on a few individuals before distributing the final form; and this is also why it is particularly recommended to submit these different questionnaires to the research supervisor *beforehand, making the underlying hypotheses explicit*, since without their knowledge it is impossible to evaluate the relevance of a questionnaire. Questionnaires are particularly useful for quantitative analysis, because they can be used to reach a large number of people (see chapter 2.5.1, below).

Interviews are a technique better suited to qualitative analysis (see below, Chapter 2.5.2), since they allow us to delve more deeply into certain themes and to work on the cognitive, affective and volitional dimensions of the actors (their knowledge, their beliefs, their experiences, their feelings, their motivations, etc.), dimensions that are absolutely essential in a discipline such as DLC. Unlike questionnaires, interviews are often easier to prepare (they are sometimes simple questioning outlines), but they are more delicate to implement in the field (personal contact requiring more time and involvement on the part of the interviewees, management of unforeseen events that are inevitable during an interaction, etc.) and the data they generate are more cumbersome to manage (transcription of recordings; selection and analysis of interviews; cross-checking of the different interviews, etc.)

It is sometimes interesting to combine the two techniques: for example, a questionnaire with some open-ended questions, selection of people to be interviewed from the questionnaire returns, and interviews with these people with some closed questions.

The three methods presented below-quantitative, qualitative, and comparative-are exclusively data analysis methods.

2.5. Quantitative and qualitative methods

2.5.1 The quantitative method

The objective of quantitative analysis is to overcome subjective impressions, personal and collective prejudices and stereotypes. The quality of this type of analysis depends on the quantity and representativeness of the people surveyed, the rigor of the statistical processing, the clarity of the final presentation of the data... and last *but not least, the* relevance of the analyses and interpretations made within the discipline and in relation to the research problem. Quantitative analysis is most often applied to the results of questionnaires collected from teachers and learners in large numbers, but it can also be applied to analyses of teaching materials, or even, with adapted grids, to classroom observations.

Here are two texts available online that I think any student researcher who plans to develop and reproduce some numerical tables in his text should have read:

- CIBOIS Philippe, *Les méthodes d'analyse d'enquêtes*, online corrected version (and freely downloadable) of "Que sais-je ?" n° 3782, definitely out of print.
.

- Grémy J.-P., 2003, "Introduction à la lecture des tableaux statistiques", *Sciences Humaines*, 69p. Available online.

In particular (I have compiled the list below from the most frequently identified errors or deficiencies in student-researcher work):

1) to pre-test the questionnaires with a few individuals before distributing them in large numbers;

2) to present and justify the entire approach used: how and why the questionnaires were designed (in particular, on the basis of which hypotheses and/or research questions), the respondents chosen ("constitution of the sample"), the procedure used, the analysis of the results; all of the questionnaire forms and any interview outlines must be reproduced in an appendix, so as to allow readers to assess their relevance to the research problem themselves;

3) to take into account the number of people interviewed when interpreting and presenting the results: 20 teachers interviewed at random are not necessarily representative; calculating percentages to the nearest tenth (*i.e.* with one digit after the decimal point) on such a small sample makes no sense;

4) not to forget that figures are not interesting in themselves, but only insofar as they are analyzed (related to each other) and interpreted (related to the research problem).

It is difficult to set *a priori* (this is a question I am often asked by student researchers) the minimum number of individuals to be interviewed; it is only after the fact that one can judge:

1) whether the quantitative method is credible (whether the sample is representative, knowing that a very relevant selection can sometimes compensate for a limited number of respondents);

2) whether it was adequate, *i.e.*, whether it yielded results that could not have been obtained by the qualitative method;

3) if it was effective, *i.e.* if its "cost-benefit" ratio is advantageous, *i.e.* if the interest of the results is commensurate with the work that its implementation required: it is important to avoid giving the readers the impression that, as we jokingly say in French, "one used a sledgehammer to crush a fly"...

2.5.2 The qualitative method

With the qualitative method (often called "qualitative analysis"), it is not a question of measuring phenomena (quantitative method), but of *comprehension their nature and their deep "quality"*: this is why the qualitative method is the most in line with the epistemology of DLC, if at least one shares this idea of the Anglo-Saxon empiricists according to which the theory must emerge from the comprehensive observation of reality itself.

2.5.2.1 The qualitative analysis model of A.M. HUBERMAN & M.B. MILES (1991)

One model of qualitative analysis that I found particularly appropriate for research in a DLC designed in this way is the one proposed by A.M. HUBERMAN & M.B. MILES - representatives of what is precisely called "comprehensive" sociology - in their 1991 book entitled *Analysis of Qualitative Data*. I presented this model very schematically as follows in my 1997(b) article:

A.M. HUBERMAN & M.B. MILES 1991 define qualitative analysis as they propose it for social science research:

- by its object, namely empirical data made up not of numbers but of words organized in texts, and collected by observations, interviews, extracts of documents or recordings;

- and by its mainly inductive methodology, which consists of :

1) to "condense" empirical data by "selection, centering, simplification, abstraction and transformation" (p. 35);

2) to present them in the form of matrices, graphs, diagrams and tables in order to "draw conclusions and take action" (p. 36);

3) finally, to elaborate/verify these conclusions through extensive work on replicating a result in another data set, or through "discussions among colleagues aimed at developing an intersubjective consensus" (p. 37)[53] . Indeed, in the humanities, according to the authors, "there are no accepted canons, decision rules, algorithms, or even heuristics in qualitative research to indicate whether conclusions are valid and procedures sound" (p. 374).

The aim of A.M. Huberman & M.B. Miles is to gradually achieve "conceptual/theoretical coherence" (p. 413) by linking each piece of data collected in the field to other data, then grouping them together under broader and broader

---

[53] Even in the so-called "exact" sciences, for most of today's epistemologists and sociologists of science (cf. in particular Bruno LATOUR 1987 and 1991), what is scientific is what is recognized at each moment as such by the scientific community. A.M. HUBERMAN & M.B. MILES do not specify this, but it is undoubtedly obvious to them that the intersubjective consensus they speak of can only be obtained in a local manner (it is obtained on determined points) and temporarily (it is constantly susceptible to termination).

> *"conceptual elements" (constructs); these conceptual elements will finally be linked together in a "theory", which is defined as a "conceptual framework" consisting of a description of the key concepts (dimensions, factors, variables) as well as of their relationships and interactions.*
>
> *In reality, inductive and deductive approaches are implemented simultaneously in a dialectical way, the researcher always starts from a certain pre-established overall conception that he/she constantly modifies in the course of his/her work, so that "a conceptual framework is simply a momentary version of the map of the territory explored by the researcher"* (p. 54).

This approach proposed by A.M. HUBERMAN & M.B. MILES corresponds exactly to my personal conception of DLC research, whose fundamental mechanism is a process of "internal modelization", and not that of the application of external theories (cf. chapter 1.3, point 2).

Two other bibliographic references on this method of qualitative analysis:

- FRISCH Françoise. 1999. *Les études qualitatives*. Paris, Les Éditions d'Organisation, 182 p.
- PUREN Christian 1999h: the two chapters I wrote in this book.

2.5.2.2 Biases in the qualitative analysis

When using qualitative analysis, as is most often the case in DLC research, the student researcher must be particularly alert to the "biases" that can affect the selection and interpretation of his or her data. I simply copy below a passage from my 2001a article:

> *As we saw in Part 2, qualitative analysis, at least as defined by A.M. Huberman and M.B. Miles (1991), is based on texts processed by the inductive approach, and does not aim for the objectivity of the so-called "exact" sciences, but for intersubjective consensus. This is why it is particularly sensitive to the various biases that can weaken or invalidate the results of research. By partially repeating the work of these two authors (p. 416), I will thus present (in a non significant order) the six archetypes of bias that seem to me to be particularly at work in conceptualization in DLE research training[54] :*
>
> 1) The holistic bias*: this consists in granting a priori a certain coherence to the data sets collected, at the expense of the search for heterogeneities and contradictions.*
>
> 2) The universalist bias*, which works as a relay to the holistic bias: it consists in systematically seeking new data and constructing new conceptualizations in order to widen as much as possible the area of validity of the chosen principle of coherence. This bias is particularly noticeable in the writing of many theses: even though their authors are situated in a perspective of specialization that would amply justify limiting the area of validity of their propositions, they often behave as if they were convinced that the defense of their propositions necessarily implied the affirmation of their universal validity. All the authors of the various theses I have read on the game, for example, assert or suggest that this technique (and sometimes even a specific type of game) could and even should be generalized to all audiences, domains, activities, levels, objectives and teaching-learning situations.*
>
> 3) The elitist bias*: giving* a priori *special weight to data/concepts/conceptualizations - presented in published texts, especially the writings of recognized didacticians and/or those claiming to be from other more recognized disciplines in the University.*
>
> 4) Innovation bias*: giving* a priori *a higher importance and interest to data/concepts/conceptualizations that are new to the discipline.*
>
> 5) The individualistic bias*: giving* a priori *a privileged reliability and weight to data coming from one's own experience or observations.*

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[54] I also rely on my experience as a director and member of the jury of theses in DLE. [Note of the quoted article: DLE = Didactics of Foreign Languages].

6) Proximity bias*: focus on the most recently collected or encountered data/concepts/conceptualizations.*

In practice, different biases can combine and reinforce each other. For example, it is very common in the theses of young researchers that biases 1, 2 and 3 are combined in a use of quotations that reduces the thinking of their authors in order to hide (consciously or unconsciously) the divergences between them. Another example: in collective discussions in training seminars, data or ideas from recent personal experience will tend to take on excessive importance (biases 5 and 6).

In any case, it is clear that the most powerful method for simultaneously combating all these types of bias is the activity that I have called "extension", carried out in the form of research and confrontation of a maximum of data/concepts/conceptualizations coming from the most diversified sources possible.

The activity here called "extension" corresponds to that of *crossing data of diversified origins*, which is undoubtedly the fundamental method of DLC research (I call it a "meta-method" in the conclusion of Part 2) because it makes it possible to identify, beyond the subjectivity inherent in each of the sources, "intersubjective constants" which can, if they do not produce true "scientific demonstrations", lead to reasonable convictions on the part of the researcher and his readers. I have always advised my student researchers never to use "demonstrate" in their research work, but "show".

2.6. The historical method

I will briefly recall here this method, since it is one of those I use systematically, and that one consequently finds permanently in the whole of this course on the methodology of research in DLC: most of my modelling concerning the whole discipline, indeed:

- either explicitly integrate the historical dimension (for example in the Working Library documents 016, 017, 019, 029, 040);

- either have been developed from the historical perspective, which they allow in return to go through; it is the case of the field of the didactic perspective (cf, in the course "DLC as a field of research", Part 3 "La perspective didactique 1/4 – Modèles, theories et paradigmes", chap. 1.2 "Perspective didactique et perspective historique", pp. 5-9); or the overall scheme of DLC (p. 4) with the three perspectives - methodological, didactical and didactological – which correspond in fact to the three historical stages of construction of the discipline: cf. in this same course Part 7, "La perspective didactologique 1/2: L'épistémologie"–, as I present them also in my article of 1994(a).

Two of my texts, published 25 years apart, illustrate the importance I have always given to this historical perspective:

- the general conclusion of my *History of Language Teaching Methodologies* (1988a), where I list the "lessons" that this history provides, and which seem to me to correspond to the intellectual attitude of any researcher in DLC, whether he is a beginner or an experienced one (p. 396 of the original paper version, p. 265 of the open pdf online version) :

- A lesson in modesty, first of all, whatever our training, our experience, our status and our function. The succession of different methodologies, their inscription in a determined place and time as well as their insufficiencies and internal contradictions remind us of our own limits and determinations.

- The lesson of prudence, then, with regard to the effects of coherence of the methodological discourse and the perverse effects of the coherence of the methodological constructions, which all tend to function, with or in spite of their authors, as "systems for constructing certainties and servitudes" as R. GALISSON remarked in 1982 (p. 67).

> ***- A lesson of reserve***, *finally and above all, with regard to the voluntarism, the maximalism, even the messianism too frequent in the research and the training in LVE. History brings, with the perception of the complexity and the permanence of the fundamental problems of information/learning of the LVE, a salutary retreat in front of any discourse which claims to be authoritative : whether it is in the name of* **science** *(one or the other of the reference theories of the DLVE), of* **experience** *(the individual practice or the collective experimentation) and/or of* **conscience** *(in the name of non-didactic knowledge such as sociology... or history itself !).*

- my recent 2013i conference, where I develop what I see as the four major "use values" in DLC:

> *1. History as an analyzer of the mechanisms of functioning of the didactic field*
> *2. History as a complex approach to current didactic issues*
> *3. History as a tool and model for teacher education*
> *4. History as a source of innovation through conscious and voluntary differentiation*

I refer my readers to these developments: not all research requires the historical perspective, of course, but all student researchers should ask themselves whether their personal research would not benefit from incorporating it.

2.7 The comparative method

On this approach, I refer my readers to the text I recommended reading in the introduction to this chapter 5, "Pour une didactique comparée des langues-cultures" (2003b). As I write in the introduction to this article, each of the six approaches that I consider fundamental to DLC - comprehensive, environmentalist, qualitative, pragmatist, complex and constructivist - "justifies the initiation of a seventh, that of comparatism".

Dominique GROUX reminds us, in the editorial of the online version of an issue of *Cahiers pédagogiques* on comparative education (n° 378, Nov. 1999), that according to Emile Durkheim:

> *The comparative method is a substitute for the actual experimental approach. It allows us to work on phenomena that cannot be subjected to experimentation because of their scale or for ethical reasons. The comparative method, because it is analogical, is to the educational sciences what the experimental method is to the exact sciences.*

The same idea was taken up by the sociologist D. Raynaud in a speech given at a seminar of the Centre d'Études Sociologiques de la Sorbonne (CESS, Paris-IV) on 10 March 2004. He presented a "gradualist conception" of the experimental method, which he borrowed from the introducer of experimental medicine, Claude Bernard. For him –and D. Raynaud emphasized his convergence with Émile Durkheim on this point– "the first stage [of the experimental method] *consists simply in comparing observations made in different circumstances, so as to 'reason about the influence of circumstances'.[55]*

This weak version of the experimental method seems to me to be perfectly suited to DLC, where indeed one "reasons about the influence of circumstances" (cf. the constant importance of the environment). Case studies, which constitute the bulk of research in IAR in this discipline, will be all the more reliable if student-researchers have the means to compare different circumstances: indeed, one can only avoid simple description/narrative in a case study in DLC research training if the previous disciplinary training has been sufficiently broad and assured to provide the instruments and points of comparison that a single field of observation cannot provide by itself.

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[55] www.cess.paris4.sorbonne.fr/CR100304/Raynaud.pdf (link broken at present date, July 2013).

Conclusion of the second part. The "meta-method" of DLC research: the crossing of methods

A "meta-method" –as we say a "meta-rule"– is a method for choosing between different methods.

Research in DLC, as in all human sciences whose subject is complex, requires the crossing of a maximum of sources of information considered relevant:

> 1) surveys and/or interviews with various **actors**: political, administrative and pedagogical leaders, inspectors, trainers, teachers, learners, textbook authors, publishers, in order to gather from them not only information, but also, as far as possible, reactions to the researcher's analyses, interpretations, intervention proposals and actual interventions;

> 2) analysis and interpretation of the various "**primary documents**"[56] : official texts, inspection reports, training programs, manuals, course preparations and learners' work, observed classes, teaching materials, etc.;

> 3) analysis and interpretation of "**secondary documents**", which are the documents produced by the researcher himself in the framework of his experiments: elaborated didactic materials, sequences carried out in classes...

> 4) analysis and interpretation of "**third party documents",** in particular articles, courses, conferences and books by didacticians, linguists, sociologists, philosophers, etc.;

> 5) and, *last but not least,* exchanges and discussions with his supervisor and other (student-) researchers.

This crossing of sources in itself requires different research methods: thus, teachers' opinions, representations and conceptions will be collected by surveys and/or interviews, classroom practices by observations, and the didactic design of materials by analyses. However, the same data should be processed by different methods if possible: it is therefore advisable to combine the analysis of a textbook with that of other contemporary textbooks (*comparative method*) and other older textbooks (*historical method*), with the collection of the opinions of teacher and learner users (*interview*) and even with the *observation of* completed or experienced classes using this textbook.

This cross-referencing of sources is all the more necessary when data are difficult to collect or sources are questionable. One of the areas in which data is undoubtedly the most difficult to collect, analyze and interpret is that of learning strategies, and this is why, in his 1996 book on this subject*,* Paul Cyr proposes, with concrete examples of tools that will be useful to consult, to use several different methods simultaneously, namely

> *[...] observation and intuition, interviews and other think-aloud procedures, learner note-taking, learner journaling[57] , researcher-administered questionnaires and surveys, and data collected during training in the use of learning strategies*.

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[56] In the sense that historians speak of "primary sources", or "first-hand documents", which are documents of the period to be analyzed and interpreted by the researcher himself, as opposed to documents that are based in whole or in part on analyses and interpretations already carried out. The expressions "second documents" and "third documents" in the following lines are personal.

[57] The "class journal" is also used in teacher training (see for example the article by Marie BERCHOUD, "Le 'journal d'apprentissage' : analyse et résultats d'une pratique de formation de futurs enseignants", *Recherche et formation* n° 39, Été 2002, pp. 143-158. It can also be used by a researcher experimenting in his or her own classes.

Crossover is therefore the key concept of this chapter 5, and *crossover is* the primary requirement that the student researcher must keep in mind: crossover of types of research, research methods, and sources of information.

To return to the theme of this second part, research methods, it is imperative that they be presented to the supervisor as soon as possible and that they be agreed upon. They should also be mentioned in the general introduction of the thesis, and each of them should be discussed in *sufficient detail* in the body of the research, at the time when their implementation is discussed.

"Sufficiently detailed" means that one must indicate to one's readers (I remind you that these are by convention the members of the defense jury), if necessary by giving the references of the books on research methodology that one has consulted, all the information that will allow them to understand - and if possible to admit... - why one has chosen such and such a method, what each of them consists of, how they have been implemented, articulated and/or combined, by justifying the treatment that has been given to the data thus collected. We must avoid, for example, the criticism that I recently addressed to a student researcher in a thesis jury report:

> *It would have required the candidate to reflect on her own methods used, which are very different (questionnaires, interviews, evaluated teaching sequences, personal recollections), which have very different statuses, and which provide data that cannot simply be added to each other.*

I have also noted in a previous chapter of this course[58] that some authors consider methods as constitutive elements of the research problem. In any case, it is certain that among the criteria for evaluating a dissertation or a thesis, the appropriateness of the methods to the research project and their mastery are important.

I will end this second part by giving the floor to A. Michael HUBERMAN and MATTHEW B. MILES, who are among my reference authors in terms of DLC research methodology: I am in fact taking over, for this Part 5 of this course, what they say in their book *Analysis of Qualitative Data* (1991), and for all DLC student-researchers what they say about "qualitative researchers":

> *The fundamental message of this book is not that the suggested methods should be strictly applied, but that the creation, testing, and revision of practical and effective methods of analysis should be a top priority for qualitative researchers* (p. 26)*.*

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[58] In the chapter, "Developing Your Research Problem" (www.christianpuren.com/cours-méthodologie-de-la-recherche-en-dlc/chapitre-4-élaborer-sa-problématique-de-recherche/), in section 1.2.2, "Average Design of the Research Problem," p. 7

General conclusion. The horizon of any research project: "research and development"

I noted above (in <u>chap. 1.6.2</u> that "the experiments that a student researcher can carry out are always limited in space and time, so that the validation of his or her hypotheses is always subject to reservations [...]." Now, even if this cannot be the objective of most research, all of them must nevertheless have as their "horizon", as their ultimate perspective, what I have been calling until now "the generalization over time" of the proposed innovations, and what SOURY-LAVERGNE S. *et al.* (2013, p. 16) call, in a more modest and undoubtedly realistic way, "the diffusion and stabilization". The term "stabilization" being ambiguous (one can understand the stabilization of the innovation model, while its diffusion can, on the contrary, lead it to diversify), I will speak here of "diffusion" and "perpetuation".

These are the two objectives of a final type of research, "research and development". I have not discussed it so far, because the time available for master's theses and even for dissertations, as well as the means at the disposal of an individual researcher, do not reasonably allow it to be considered in the framework of IAR.

Research and development seek to test and study the conditions and effects of the dissemination (in space, therefore, among the actors and in the classes) and of the sustainability (over time) of the intervention model developed in previous research. In the case of the research synthesis cited above, it is a continuing education device for primary school teachers combining the implementation of the following five principles: "the integration of digital technology as a natural work environment, the pooling of trainers' expertise to design common paths, collaboration between trainees throughout the training, back and forth from work between trainees to work in the classroom, and reflective feedback, both individual and collective" (SOURY-LAVERGNE S. *et al.* 2013 , p. 8).

Research and development can be defined as a hybrid mode combining research-application and research-experimentation, insofar as it is the application of the intervention model that is itself the subject of experimentation under conditions different from those of its initial development. In particular, this involves,

1) to identify the difficulties of implementing innovation by different teachers in diverse environments;
2) to develop ways to adapt to these diverse environments;
3) design and develop materials, aids, guides and training programs for teachers;
4) to improve the initial intervention model itself;
5) to formulate and validate, if necessary, additional hypotheses;
6) to reinforce the initial theoretical support as needed.

Research and development, a combination of research-application and research-experimentation, also incorporates:

–research-production: see point 3 in the list above;
–action research: this involves involving all the actors in the field in a collective research project, as specified by the authors of the research summary cited *above*:

*The development of Pair-Ifé [*i.e. *the research project] was conceived from a design experiment perspective (Cobb* et al*. 2003), involving researchers, trainers and teachers at all stages of the research: the researchers participated in the design of the pathways, the pathway designers participated in the implementation of the training sessions, either directly (the designers implementing their own pathways) or crosswise (the designers of pathway A implementing pathway B, and vice versa). The long duration has supported*

the emergence of real communities of practice (Wenger 1998), within Pair-Ifé, allowing a fruitful interplay between participation in the project and reification, i.e. *the production of common resources by and for the development of the project.* (SOURY-LAVERGNE S. *et al.*, 2013, p. 9)[59]

–research-experienciation, like all action-research, strongly based on the reflection of actors on their own experience:

For the "internal" monitoring, we used a reflective investigation methodology (Gueudet and Trouche 2010), which consists in relying on the way the actors look at their own activity. From this point of view, the logbook was a key element of this methodology: it allows the trainer to note, as he/she goes along, his/her activities, the resources he/she uses, the interest of these resources, the possible modifications he/she makes, and the missing resources. In particular, it makes it possible to organize and structure the feedback from the trainers to the designers, but it also supports the activity of the trainer and gives observation and analysis tools to the researcher. (SOURY-LAVERGNE S. *et al.* 2013, p. 11)[60]

The research of the didactic researcher thus feeds the research of all the actors in the teaching-learning process, which in turn feeds the former. This is undoubtedly the most coherent and systematic way of implementing, in DLC research, the seven major disciplinary "approaches" that I presented in my 2003b manifesto, and that I recalled in the General introduction to this article), namely the comprehensive, environmentalist, qualitative, pragmatist, complex, constructivist and comparative approaches.

One can certainly not require a student-researcher to implement such an approach in the context of an IAR, because he or she is not supposed to have had the time, the means or the skills to do so. On the other hand, one can ask him to consider it for the rest of his career: it is surely the best way for him to finish the "general conclusion" of his dissertation or thesis, as good academic rhetoric requires, to open up the possible development of his research.

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[59] References cited in this passage: COBB, P., CONFREY, J., DE SESSA, A., LEHRER, R., & SCHAUBLE, L. 2003. *Design experiments in educational research. Educational Researcher*. WENGER, E. 1998. *Communities of Practice: Learning, Meaning, and Identity*. Cambridge University Press.
[60] Bibliographic reference cited: GUEUDET, G., TROUCHE, L. (eds.). 2010. *Ressources vives. La documentation des professeurs en mathématiques.* Rennes: PUR and INRP.

Bibliography

Nota bene

This bibliography does not include the articles and books cited only in chapter 2.1 of this text ("The Documentary Method"), nor the documents cited that are in the Working Library of my site, nor the other parts of my online courses "Méthodologie de la recherche en DCL" and "La DLC comme domaine de recherche").

– BARBIER Jean-Marie. 1996. *Savoirs théoriques et savoirs d'action*, Paris : PUF, 305 p.

– BLANCHET Philippe & CHARDENET Patrick (dir.). 2011. *Guide pour la recherche en didactique des langues et des cultures. Approches contextualisées, Paris :* AUF-Éditions des archives contemporaines, 512 p. Cet ouvrage dispose d'un site compagnon : « Ressources pour la recherche en didactique des langues »,
www.aidenligne-francais-universite.auf.org/spip.php?page=sommaire_rrdl.

– COQUIDÉ Maryline. 1998. « Les pratiques expérimentales : propos d'enseignants et conceptions officielles », revue *Aster* n° 26, 1998, Paris : INRP, pp. 109-132,
https://ife.ens-lyon.fr/publications/edition-electronique/aster/RA026-06.pdf. [Depuis janvier 2010, cette revue s'appelle *Recherches en didactiques des sciences et des technologies*. Actuellement (juillet 2013), tous les numéros de la revue de 1985 à 2009 sont consultables en ligne à l'adresse https://ife.ens-lyon.fr/edition-electronique/archives/aster/web/.]
– 2000. « À propos des "parcours sciences expérimentales et technologiques" », communication à la journée « Parcours sciences expérimentales et technologiques », IUFM et Université de Rouen, Paris, 29 novembre,
https://francois.muller.free.fr/diversifier/pratiques_experimentales.htm#debut consulté 21 juin 2013.
– 2003. « Face à l'expérimental scolaire », pp. 153-180 *in* : ASTOLFI Jean-Pierre (dir.), *Éducation, formation : nouvelles questions, nouveaux métiers*, Paris : ESF, 2003, 342 p. En ligne (consulté 21 juin 2013) :
https://halshs.archives-ouvertes.fr/docs/00/52/61/23/PDF/CoquidA_Maryline_Face_A_l_expA_rimental_scolaire_2003_.pdf.

– COURTILLON Janine. 2002. *Élaborer un cours de FLE*, Paris : Hachette, 2002, 159 p.

– CYR Paul. 1996. *Les stratégies d'apprentissage*. Paris : CLE international, coll. « Didactique des langues étrangères », 1998 [1e éd. 1996], 182 p.

– HUBERMAN A. Michael, MILES MATTHEW B. 1991. *Analyse des données qualitatives*, trad. fr. De Boeck-Wesmael s.a. (coll. « Pédagogies en développement. Méthodologie de la recherche »), Bruxelles, 480 p.

– LATOUR Bruno. 1987. *La science en action*, trad. fr. Paris : Gallimard, 1995 [1e éd. Harvard University Press, Cambridge, Massachusetts, 1987], 663 p.
– 1991. *Nous n'avons jamais été modernes. Essai d'anthropologie symétrique*, Paris : Éditions La Découverte, 213 p.

– LE MOIGNE Jean-Louis. 1990, *La modélisation des systèmes complexes*, Paris : Dunod, 1990, 178 p.
– 2005. « Les enjeux éthiques de la didactique des langues et des cultures n'appellent-ils pas un *Nouveau discours sur la méthode des études de notre temps* ? », *ÉLA revue de didactologie des langues-cultures et de lexiculturologie*, n° 140, oct.-déc. 2005, pp. 421-433. [Actes du Premier Colloque International sur la didactique comparée des langues-cultures, «Interdidacticité et interculturalité», Université de Saint-Étienne, 17-18 février 2005]

LISRA (Laboratoire d'Innovation Sociale par la Recherche-Action). 2013a. « Recherche-action & laboratoire social », https://recherche-action.fr/download/Méthodologie/RA_labo.pdf [non daté : date dernière consultation, juillet 2013].

– 2013b. « Questions fréquentes sur la recherche-action », https://recherche-action.fr/download/Méthodologie/Questions-en-recherche-action.pdf. [non daté : date de dernière consultation, juillet 2013]

MOLES Abraham A. 1990. *Les sciences de l'imprécis*. Paris : Seuil, 1990, 254 p.

PUREN Christian. 1988a. *Histoire des méthodologies de l'enseignement des langues*, Paris, Nathan-CLE international (coll. « Didactique des Langues Étrangères »), 1988, 448 p. www.christianpuren.com/1988a/.

– 1994d. « Psychopédagogie et didactique des langues. À propos d'observation formative des pratiques de classe », *Revue Française de Pédagogie*, n° 108, juil.-août-sept. 1994, pp. 13-24. Paris : INRP. www.christianpuren.com/1994d/.

– 1994e. *La didactique des langues à la croisée des méthodes. Essai sur l'éclectisme*. Paris: CRÉDIF-Didier, coll. « Essais », 217 p. http://www.christianpuren.com/1994e/.

– 1997b. « Concepts et conceptualisation en didactique des langues : pour une épistémologie disciplinaire ». *Études de Linguistique Appliquée*, n° 105, janv.-mars 1997, pp. 111-125. Paris : Didier-Érudition. www.christianpuren.com/1997b/.

– 1998f. « Perspective objet et perspective sujet en didactique des langues-cultures », *ÉLA revue de didactologie des langues-cultures*, n° 109, janvier-mars 1998. Paris : Didier-Érudition, pp. 9-37. www.christianpuren.com/1998f/.

– 1999d. « Observation de classes et didactique des langues. En guise de présentation ». Présentation du n° 114 (avril-juin 1999) d'*Études de Linguistique Appliquée* sur « L'observation de classes », pp. 134-140. Paris : Didier-Érudition. http://www.christianpuren.com/1999d/².

– 1999h. *La formation en questions*. Chapitre 1, « Que faire des questions qu'on se pose dans sa pratique ? (la formation par la question) » – Chapitre 2, « Comment théoriser sa pratique ? (la formation des questions) » – Glossaire [extraits]. Parties rédigées par Christian PUREN dans cet ouvrage en collaboration avec Robert GALISSON (Paris : CLE international, 1999, 128 p.). www.christianpuren.com/1999h/.

– 2001a. « Processus et stratégies de formation à la recherche en didactique des langues-cultures », *ÉLA revue de didactologie des langues-cultures,* n° 123-124, juillet-décembre 2001 (« De la méthodologie à la didactologie. Hommage à Robert Galisson »). Paris : Didier-Érudition. www.christianpuren.com/2001a/.

– 2003b. « Pour une didactique comparée des langues-cultures », *Études de Linguistique Appliquée*, n° 129, janvier-mars 2003, pp. 121-126). Paris : Didier-Érudition. www.christianpuren.com/2003b/.

– 2004d. « Quels modèles didactiques pour la conception de dispositifs d'enseignement-apprentissage en environnement numérique ? », *Études de Linguistique appliquée*, n° 134, avril-juin 2004, pp. 235-249. Paris : Didier-Érudition. www.christianpuren.com/2004d/

– 2009f. « La didactique des langues-cultures en France entre maturité disciplinaire et dépendances multiples », pp. 213-226 *in* : Véronique Braun Dahlet (Coord.), Ciências da linguagem e didatica das linguas. Actes du Colloque international « Sciences du langage et didactique des langues : 30 ans de coopération franco-brésilienne », Université de São Paulo, Brésil, 19-21 octobre 2009. Sao Paulo : Humanitas/Fapesp, 2011, 392 p. www.christianpuren.com/2009f/.

– 2010a. « Architecture générale d'une formation universitaire à la didactique des langues-cultures », document de cours. www.christianpuren.com/2010a/.

– 2011a. « De l'approche communicative à la nouvelle perspective actionnelle : analyse critique d'une grille d'analyse de manuels des années 80 ». Analyse critique de : Maria Cecilia BERTOLETTI, « Manuels et matériels scolaires pour l'apprentissage du F.L.E. Ébauche d'une grille d'analyse ». *Le Français dans le Monde*, n° 186, juillet 1984, pp. 55-63. www.christianpuren.com/2011a/

– 2011k. « La "méthode", outil de base de l'analyse didactique », pp. 283-306 *in* : BLANCHET Philippe & CHARDENET Patrick (dir.) 2011. www.christianpuren.com/2011k/.

– 2012a. « Compte rendu de lecture... et de relectures personnelles : MAURER Bruno, E*nseignement des langues et construction européenne. Le plurilinguisme, nouvelle idéologie dominante*. Paris : Éditions des archives contemporaines, 2011, 156 p.
http://www.christianpuren.com/2012a/.

– 2012j. « Traitement didactique des documents authentiques et spécificités des textes littéraires : du modèle historique des tâches scolaires aux cinq logiques documentaires actuelles (avec quelques hypothèses pour des programmes de recherche) ».
www.christianpuren.com/2012j/.

– 2013a. « La formation à la recherche en didactique des langues-cultures entre exigence de conformité et exigence d'originalité : le cas des concepts ».
www.christianpuren.com/2013a/.

– 2013i. « Valeurs d'usage de l'histoire en didactique des langues-cultures ». Intervention le 28 juin 2013 au 2nd AHRC workshop, "Modern Language Education Histories in Europe: How National Traditions Differ and Correspond", University of Warwick, Coventry, 28th-29th June 2013.
http://www.christianpuren.com/2013i/.

PUREN Christian, BERTOCCHINI Paola, COSTANZO Edwige. 1998. *Se former en didactique des langues*, Paris : Ellipses, 206 p.

RORTY Richard. 1993. *Conséquences du pragmatisme. Essais : 1972-1980*, trad. fr. Paris, Seuil (coll. « L'ordre philosophique »), 1993 [1e éd. University of Minnesota, 1982], 414 p.

– 1995. *L'espoir au lieu du savoir. Introduction au pragmatisme*, trad. fr. Paris : Albin Michel (coll. « Bibliothèque internationale de philosophie »), 158 p.

– SOURY-LAVERGNE, Sophie, GUEUDET, Ghislaine, LOISY Catherine, TROUCHE Luc (coord.). 2013. *Le travail collectif et les pratiques réflexives au coeur des dispositifs hybrides de formation : de Pairform@nce à M@gistère*, EducTice-CREAD EA 3875, juillet,
https://eductice.ens-lyon.fr/EducTice/recherche/developpement-professionnel/pairformance/Rapport_IFE-Pairformance_2013.pdf (consulté 25 juillet 2013)

– VERRIER Christian. 1999. *Autodidaxie et autodidactes, l'infini des possibles*, Paris : Anthropos, 230 p.

– WALLISER Bernard. 1977. *Systèmes et modèles. Introduction critique à l'analyse de systèmes*, Paris : Seuil, 256 p.