

# 3 Questioning the notion of ‘professionalisation’: LANSOD contexts and the specific case of a musicology undergraduate programme

Aude Labetoulle<sup>1</sup>

---

## 1. Introduction

Most university degrees in France include languages as part of the curriculum. LANguages for Students of Other Disciplines (LANSOD) courses refer to language courses destined to students whose major is not languages, but another discipline such as musicology or chemistry. It is estimated about 90% of students enrolled in French higher education attend LANSOD classes (Causa & Derivry-Plard, 2013). At the same time, it is agreed that French universities should ‘professionalise’ students – that is, prepare them for their future professional lives. LANSOD courses should be no exception and should be included in this process, yet French universities appear to struggle with the design of language courses that are relevant to the future professional needs of learners.

This chapter aims at questioning the notion of professionalisation in the specific context of LANSOD university courses in France. To do so, I will first investigate how ‘professionalisation’ is commonly defined and how it is implemented in French universities, especially in LANSOD courses. The second part of this article will deal with the particular case of a LANSOD undergraduate course at the University of Lille; the point is to illustrate how complex it can be to design

---

1. Conservatoire National des Arts et Métiers (Cnam), FoAP (EA 7529), Paris, France; aude.labetoulle@lecnam.net; <https://orcid.org/0000-0001-7822-1557>

**How to cite this chapter:** Labetoulle, A. (2020). Questioning the notion of ‘professionalisation’: LANSOD contexts and the specific case of a musicology undergraduate programme. In B. Dupuy and M. Grosbois (Eds), *Language learning and professionalization in higher education: pathways to preparing learners and teachers in/for the 21st century* (pp. 71-98). Research-publishing.net. <https://doi.org/10.14705/rpnet.2020.44.1102>

a curriculum relevant to learners' future professional needs and to provide practitioners with tools that could prove useful in similar contexts for the design of professionalising LANSOD courses.

## **2. Context overview: professionalisation, French universities, and language courses**

### **2.1. 'Professionalisation' and French universities**

#### *2.1.1. Definitions and rationale behind 'professionalisation'*

The 'professionalisation' of objectives, courses, and students is now a key mission of French higher education (Bourdon, Giret, & Goudard, 2012; Stavrou, 2011; Van der Yeught, 2014). Yet it is only quite recently that the idea has started to take hold that French universities should be involved in training qualified staff for the private sector (Leroux, 2014). Until the 1960's, apart from a few faculties that provided students with vocational training, such as medicine and law (Gayraud, Simon-Zarca, & Soldano, 2011), the "sole idea of professionalisation [...] within general curriculum subjects met great hostility from part of the university world" (Renaut, 1995; as cited in Leroux, 2014, p. 95). Any interest in the active life (*vita activa*) over contemplative life (*vita contemplativa*) was mostly perceived as an obstacle to true disinterested knowledge and research (Van der Yeught, 2014). Besides, universities long put off professionalisation to the benefit of great schools (*grandes écoles*), which are separate from the public university system; they are aimed at educating the nation's administrative and technical elite (Leroux, 2014) and are characterised by competitive recruitment and technical and professionalised knowledge.

Yet European integration policies and the rising problem of graduate unemployment in the past four decades in France has spurred a continuous movement towards the professionalisation of university courses (Leroux, 2014). The Maastricht treaty and Amsterdam treaty (1993 and 1997), the Lisbon strategy (2002), and the Bologna declaration (1999) were key in

setting professional integration as a high-priority goal for Europe. In France more specifically, the creation of the University Technical Institutes (1966), the Faure law (1968), the Attali report (1998), the *Plan réussite en licence* (a national programme to support undergraduate education, 2007), and the Aghion report (2010) all contributed to putting the professionalisation of students on the agenda of French universities (Bourdon et al., 2012; Gachassin, Labbé, & Mias, 2013; Gayraud et al., 2011; Stavrou, 2011). In recent years, the number of vocational<sup>2</sup> undergraduate and postgraduate programmes has dramatically increased (Gayraud et al., 2011), and there is a clear trend towards giving vocational emphasis to all university courses (Leroux, 2014). This is made evident in university contracts, the description of degree courses, and the fact that university funding is now calculated in part on the employment rate of graduates (Leroux, 2014).

It is striking to note that the definitions of the key term ‘professionalisation’ in European and French directives either differ from one text to another or are rather vague (Doray, Tremblay, & Groleau, 2015; Stavrou, 2011). In its most general meaning, ‘professionalising’ university courses refers to a process whose aim is to “provide the productive system with a flow of highly skilled workers” (Leroux, 2014, p. 89). The main underlying argument is that the professionalisation of higher education would ease graduates’ integration into working life, thereby stimulating economic growth (Doray et al., 2015). To that end, there needs to be a proper fit between university education and the labour market, socio-economic demands, and job opportunities (Doray et al., 2015; Stavrou, 2011); it is the professional field that tends to dictate what should and should not be taught, and how (Stavrou, 2011). As such, ‘professionalisation’ is very much linked to ‘employability’, a notion that started to be in the spotlight in the 1990’s (Forrier & Sels, 2003). ‘Employability’ refers to

“the capacity to build, entertain and develop useful skills, adapted to the local market, while ensuring productivity, flexibility and mobility. Important elements of employability should be acquired during

---

2. In this article, the terms ‘occupational’, ‘vocational’, and ‘professional’ are used interchangeably. For a discussion on these various terms, see for example Wedekind (2018).

studies: a recognised qualification (degree), knowledge (general and professional), suitable business behaviours and adaptation capacities” (Leroux, 2014, pp. 96-97).

This broad interpretation of ‘employability’ reveals competing understandings as to what professionalising university courses should consist of. Should there be a strict match between a particular job and a particular course? Or should there be a focus on the acquisition of more general knowledge, skills, and existential competence that can be transferable from one distinct professional field to another (Doray et al., 2015; Stavrou, 2011)? These various interpretations then impact the design of courses differently.

### *2.1.2. Implementations of ‘professionalisation’ in French universities*

Together with Chirache and Vincens (1992), Leroux (2014) stressed that “all higher education courses have a vocational element, to a greater or lesser extent, in that they have a vocational purpose. This is still the situation because such courses generally lead to employment for most of the students” (p. 94). However, there is considerable variation in the degree of professionalisation of courses, so that together with Doray et al. (2015) and Gayraud et al. (2011), we argue that professionalisation can be viewed on a continuum. At one end of the continuum, courses lay emphasis on clearly defined professional purposes in preparation for jobs that require students to obtain specific university diplomas that then guarantee access to specific professions, such as in the medical field (Doray et al., 2015). At the other end of the continuum, degree courses purposefully lead to a wide range of professions (Gayraud et al., 2011); this is often the case for undergraduate studies that cover several fields without targeting specific jobs, such as most bachelor’s degrees in history and biology (Gayraud et al., 2011). There are many possible scenarios in between, including degree courses that depend on strict accreditation processes and frames of reference, but students in such programmes do not automatically get a position after graduation, and they benefit from a larger pool of job opportunities, as is the case with university engineering schools.

Apart from increasing the number of vocational courses, there are many other ways for universities to professionalise academic courses (Annoot et al., 2019; Doray et al., 2015; Gachassin et al., 2013; Gayraud et al., 2011; Stavrou, 2011). Curricula can be specifically designed to facilitate employment. Practical training can be set up in the form of internships, job placements, and practical courses. Professionals can intervene in the design of the course, during one-off interventions and in university-business forums. Teachers might decide to favour active learning grounded on the notion of ‘competence’, understood as either a specific or a transversal skill relevant to the job market, and propose individualised activities relevant to each learner’s professional objectives.

The second way to foster the employability of university students is to provide them with relevant information concerning the job market. For example, the BAIP (Career Support Centre) oversees the advertisement of internships and jobs in universities; the mission of the OFIVE (Student Affairs Office) is to produce data on academic success and on the job integration of former graduates. Last but not least, selective admission and the promotion of work experience through VAEs (Validation Of Acquired Experience leading to a certification) are other means to increase graduate employability.

## **2.2. ‘Professionalisation’ and language courses in French universities**

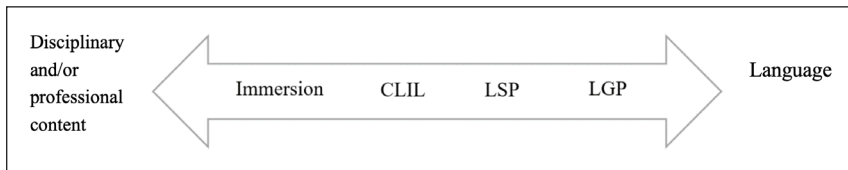
### *2.2.1. The emergence of LANSOD professionalising courses*

The fact that languages have progressively gained importance in curricula can be in part related to the professionalisation of courses in universities. Indeed, computer literacy, good analytical skills, and modern languages have started to be considered necessary transversal skills (Gayraud et al., 2011), and structural university reforms such as the *Plan réussite en licence* (plan to foster academic success in undergraduate programmes) have highlighted the importance of providing students with multidisciplinary skills that could be useful in all professions (Leroux, 2014).

This accounts for why, from the 1970's onwards, languages have started to appear systematically in higher education curricula. Language courses tended to be optional initially, before becoming more widely spread and compulsory (Van der Yeught, 2014). Progressively, the LANSOD sector took shape. The term LANSAD (LANGues pour Spécialistes d'Autres Disciplines) and its equivalent in English – LANSOD – were coined in 1993 and in 2016, respectively (Mémet, 2001; Van der Yeught, 2016). As was mentioned previously, the great majority of students enrolled in higher education in France are taught foreign languages in LANSOD courses; in other words, languages now seem well-established in curricula, especially English, which is the most studied foreign language by far (Braud, Millot, Sarre, & Wozniak, 2015).

LANSOD courses, just like degree courses more generally, can also be viewed on a continuum, from general and transversal courses to highly professionalising and specialised courses. A distinction that is commonly made is based on the weight given to disciplinary and/or professional content, as opposed to the L2 (Figure 1).

Figure 1. Continuum of programmes that integrate content and language (adapted from Thompson & McKinley, 2018)



In immersion programmes, learners benefit from an important amount of subject instruction in a sheltered classroom environment via the L2; the assumption is that the L2 will be acquired via exposure to comprehensible input (Thompson & McKinley, 2018). In content and language integrated learning, students generally receive both content and language classes, and the content class is primarily carried out in the L2 by content-trained instructors (Thompson & McKinley, 2018). Languages for Specific Purposes (LSP) are more focussed on language

learning but give great importance to the discipline/profession of the learners, while languages for general purposes focus on the language without making specific reference to a discipline/profession. The most common types of courses in LANSOD contexts are LSP classes and general language classes; therefore, they will remain the focus from here on.

Many researchers advocate a strong integration of disciplinary and professional components in LANSOD courses (Brudermann, Mattioli, Roussel, & Sarré, 2016; Sarré, Millot, Wozniak, & Braud, 2017; Sarré & Whyte, 2016; Wozniak & Millot, 2016). For example, Hardy (2013a) argued that “it is [...] part of [the] mission [of LANSOD teachers] to help their learners acquire the keys to the language-culture of a specific professional environment”<sup>3</sup> (para. 1). For Van der Yeught (2014), all LANSOD students “should be taught to communicate in foreign languages in the professional perspective which they chose, that is that they should study the language for specific purposes related to their disciplinary training” (para. 52). LSPs are particularly relevant because they aim at “making learners operational in oral and written communication situations in particular professional contexts”<sup>4</sup> (Hardy, 2013b, para. 1). Moreover, several studies have indicated that specialised language courses trigger learner motivation (e.g. Toffoli & Speranza, 2016; Wozniak & Millot, 2016). Sarré (personal communication, December 13, 2018) has advocated a gradual integration of specialised and professionalising content over the course of the LANSOD training programme (Figure 2 below). He differentiated general and specific purposes, as well as academic, professional, and occupational purposes.

To professionalise LANSOD courses, we may integrate content specific to a certain discipline (e.g. history, mathematics, or musicology), or a profession (e.g. archivist, statistician, or songwriter). Content can focus on terminology (Resche, 1996), phonetics (Péchou & Stenton, 2001), genre analysis (Swales, 2004), relevant intercultural knowledge (Narcy-Combes, 2003), case studies

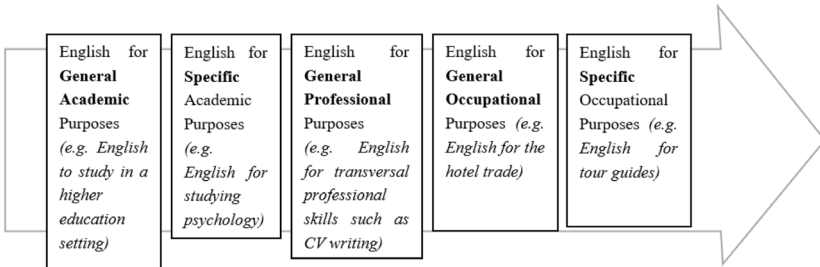
---

3. Translated from the French: “Faire acquérir à leurs apprenants les clés de la langue-culture d’un milieu professionnel fait donc partie de leur mission”.

4. Translated from the French: “L’enseignement d’une langue de spécialité vise à rendre l’apprenant opérationnel dans des situations de communication, orales ou écrites, dans un contexte professionnel particulier”.

(Van der Yeught, 2017), or activities based on professional experiences (such as professional reports). We can also rely on teaching and learning methodologies that aim at fostering general transferable skills and knowledge, to mention the distinction that was made earlier. Learner autonomy, defined as “the educational objective of progressively enabling students to manage their learning activities responsibly” (La Borderie, 1998, p. 14)<sup>5</sup>, and critical thinking have often become explicit objectives of LANSOD courses (Iglesias-Philippot, 2013; Macré, 2014; Toffoli & Speranza, 2016). In general, methodologies tend to favour active pedagogies (e.g. project-based or task-oriented; Whyte, 2013). The course can be tailored to individual needs (Deyrich, 2004), while group work can be used to favour the development of interpersonal skills.

Figure 2. What content for LANSOD courses? Progressive specialisation of content (adapted from Sarré, slide 16)



2.2.2. *The slow and problematic integration of ‘professionalisation’ in LANSOD courses*

Despite the importance the LANSOD sector has gained over the years, its emergence did not automatically constitute a decisive contribution to the professionalisation of learners. If language teaching and learning has become more communication oriented, this change has not necessarily been accompanied by the professionalisation of objectives, content, and methods (Van der Yeught,

5. Translated from the French: “objectif éducatif qui consiste à rendre progressivement les élèves capables de gérer, de manière responsable, leurs activités d’apprentissage”.



2014). Quite often, what is expected of a LANSOD course is still not explicit. The mission of LANSOD teachers is often presented as ‘foreign languages: two hours per week’ in the descriptions of courses, and they often have to find out the objectives, content, and teaching methods of the course on their own (Van der Yeught, 2014).

The assessment of whether and how disciplinary and professional content and methods should be integrated into the L2 course can be influenced by many factors (Brudermann et al., 2012). Based on a literature review, we identified several recurring solid obstacles to the professionalisation of LANSOD courses. First of all, few resources have been allocated to LANSOD courses, which tend to have a secondary status compared to disciplinary subjects in the curriculum (Van der Yeught, 2014). In undergraduate education especially, language classes involving several dozens of students of highly heterogeneous language proficiency levels in large amphitheatres are not rare, and lecture rooms often lack proper teaching equipment (such as projectors). Measures implemented these past 15 years to remedy these deficiencies have done little to improve the quality of learning and teaching (Fave-Bonnet, 2012).

Teaching and researching in the LANSOD sector are also poorly regarded. There are few permanent teaching positions, so many LANSOD courses are taught by temporary teachers who lack the means to properly structure courses in the long term, and when permanent teaching positions are available, 90% of candidates do not fit the profile (Van der Yeught, 2014). Although there is teacher training to teach languages in primary and secondary education, teachers are poorly trained in SLA (Whyte, 2016), and there is virtually no training for higher education, let alone for teaching LSP (Van der Yeught, 2014). Moreover, collaboration between language teachers and disciplinary teachers is not always possible or easy. In addition, there is little research investment in characterising LSP (e.g. English for the police, English for journalism) compared to the needs in the field. Researchers teaching in LANSOD courses are rare, and where they exist, their research is often not related to LANSOD issues. There are few doctoral theses investigating the field (Van der Yeught, 2014), and many areas have been left unexplored.

What is more, assessing the professional language needs of the learners in order to design a relevant syllabus is particularly challenging for several reasons. First, heterogeneous groups – in terms of language proficiency, disciplinary background, and professional objectives – tend to be the norm. For example, it is not uncommon for LANSOD courses to gather students from various disciplines together – such as Master’s students in music and philosophy – which makes it quite challenging for teachers to adapt the syllabus to everyone’s professional language needs. Second, teachers and programme supervisors often lack the time to conduct proper needs analyses with the aim of identifying the language that students will use in their target professional or vocational workplace or in their study areas in order to design relevant LANSOD courses (Basturkmen, 2010). Last but not least, some LANSOD courses are highly dependent on certification exams – such as the TOEIC for engineering students – however irrelevant that exam might be regarding their future professional needs (Van der Yeught, 2014).

In other words, the notion of ‘professionalisation’ applied to the LANSOD sector is problematic because it proves difficult to define and implement. The aim of the case study that follows is to exemplify the challenges that can be met, as well as to provide tools to help practitioners overcome some of these challenges.

### **3. Case study: professionalising a LANSOD course**

#### **3.1. Methodology of the study**

An action-research project was conducted over the course of four semesters between 2015 and 2018 at the University of Lille (France), with all undergraduate students in Year 1 and Year 3 studying musicology, as well as with dance students during the first semester. There were between 25 and more than 60 students in each group (two groups in Year 1 and one group in Year 3). The aim was to design a relevant English LANSOD course adapted to their needs. The project went through several steps.

The needs analysis aimed at identifying the problems in the existing course in order to design a new course. The methodology was based on recent reviews of language needs analyses and procedures of data collection (Serafini, Lake, & Long, 2015). An exploratory approach was favoured with the use of open-ended questionnaires (Q; see [supplementary materials](#)) and interviews (I). Data were obtained from five groups of participants: two language supervisors (Q+I), two content supervisors in charge of the undergraduate programmes (Q+I), four English teachers (Q+I), 43 current students of musicology (Q), and six former students of the undergraduate programme (Q)<sup>6</sup>.

The new course was evaluated at the end of each of the four semesters with questionnaires submitted to all the learners and the teachers ([supplementary materials](#)), and interviews were conducted with the teachers at the end of the fourth semester. In total, 347 student questionnaires and 12 teacher questionnaires were collected and analysed, and three interviews were conducted for the evaluation of the course.

For both the needs analysis and the evaluation procedure, Microsoft Excel (Version 14.0.7177.5000) and Alber's Sonal (Version 2.0.77) were used to filter and analyse the quantitative and qualitative data.

### **3.2. The difficulties met in identifying professional needs in English for the new LANSOD course**

The needs analysis was focussed on answering the following questions: What are the problems in the existing course? How much importance is given to professionalisation in this training context? How can it be defined based on the learners' needs and the job market? What could be a relevant syllabus?

At the University of Lille, though 'professionalisation' was a key word at the political and institutional levels, it seemed to have a limited impact on the field,

---

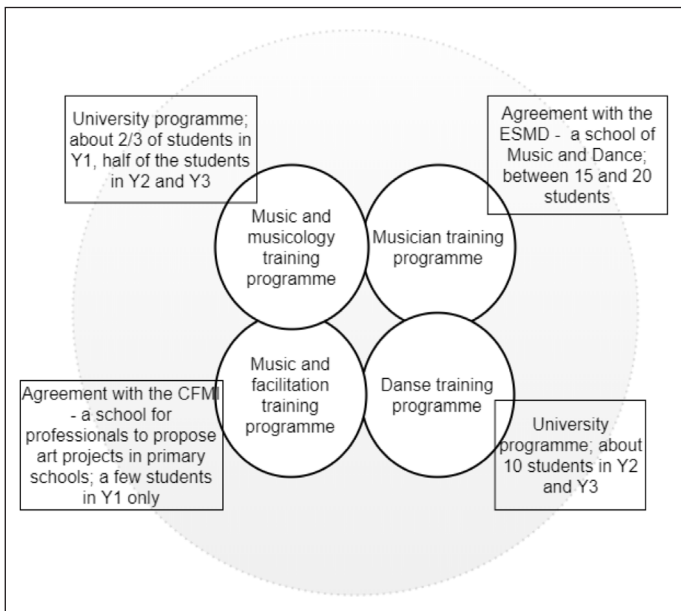
6. The needs analysis for dance students was not as in-depth as that of music students, as they were to leave the group after one semester. The data presented here is mostly focussed on music students and the class taught after they left the group.

and we met many obstacles when trying to define the relevant objectives of a professionalising English LANSOD course.

First of all, there were obstacles to the research process. There was no official student follow-up at the undergraduate level. The BAIP and the OFIVE only gathered information on the former students' study success rates, not on the jobs they took after studying. We could not get official access to the former students' email addresses via the administrative or IT departments for confidentiality reasons, which considerably restricted the number of people who could be reached.

The students in the English LANSOD classroom came from four distinct undergraduate programmes, which displayed various degrees of professionalisation (Figure 3).

Figure 3. The LANSOD classroom, which brings together students from four training programmes



We looked at the official descriptions of the four programmes to identify the official status given to professionalisation in each. The music and musicology and the dance undergraduate programmes (*parcours musique et musicologie* and *parcours études en danse*) did not lay a particular emphasis on professionalisation. Their objectives were to train students on subjects such as music analysis and aesthetics in the music programme and practical and theoretical knowledge of choreographic culture in the dance programme. Most students were encouraged to pursue further studies with Master's degrees. The musician training programme (*parcours de formation du musicien*) came across as much more professionalising as it was reserved for students who wanted to become professional musicians and music teachers in music schools, and classes took place both at the conservatory of music and at the university. Being a musician and a facilitator (*musicien intervenant*) consists in accompanying primary teachers in their artistic projects. The description of the programme was the most explicit when it came to professional objectives, defining the professional missions of the *musiciens intervenants*.

A further obstacle to the clear definition of the learners' professional needs in English was that the composition of the LANSOD group was about to change. Although dance students were mixed with music students when the needs analysis was carried out, they were meant to be put in separate groups one semester after the new course started. This made designing the new course quite challenging, as the course designer had to design the course when it included, then excluded, the dance students.

Moreover, there was no overall consensus as to what the objectives of the LANSOD course should be and how much importance should be given to professionalisation. When the teachers, the students, and the supervisors were asked what the purposes of the undergraduate LANSOD classes should be, the answers were quite diverse, ranging from a curt 'provide students with grades', to elaborate descriptions. However, 'professional objectives' and 'professionalisation' were not frequently mentioned, except by disciplinary supervisors, the LANSOD supervisor of the arts department, and a few students. Besides, there were several other considerations to take into account, which

downplayed the importance of specialisation and professionalisation, such as students being encouraged by the university to take a certification exam, the *Certificat en Langues de l'Enseignement Supérieur* (CLES), which focusses on general English for the lower levels.

When asked what their career plans were, music students gave quite varied answers, as can be seen in **Table 1** below. Although teaching was a common objective, it could take on many forms: teaching several subjects in primary school, teaching music in middle school, in a music school, at the conservatory of music, teaching private lessons, and others. In these different contexts, the students' professional needs in English were not the same. These data confirmed the statements of former students, who in 2015-2016 were music teachers in secondary school (3/6) or in primary school (1/6), a cultural mediator (1/6) and a composer and sound designer (1/6). All of the former students stressed the importance of English, but to varying degrees and according to their professional field: the needs of a music teacher in a middle school in France were indeed very different from the needs of an instrumentalist working abroad.

Table 1. Career plans of undergraduate students of musicology at the University of Lille in 2015-2016

Occupations		Number of answers
Teacher	Unspecified	2
	Music teacher in middle or high school	3
	Instrumentalist and music teacher	3
	Primary school teacher	2
	Music teacher	2
	Teacher in a conservatory of music	1
Research		3.5 <sup>7</sup>
"Musicien intervenant"		2
Communications manager, cultural mediator		1
Instrumentalist		1.5
Music therapist		2

---

7. When students specified two professional objectives, their answer was counted as 0.5 + 0.5 so as to give equal weight to all the students' answers.

Instrument maker	1
Other profession related to music	2.5
Other profession not related to music	2
Sound engineer	0.5
No answer	6
An idea but not specified	4
No idea	4
Total	43

Learners had heterogenous English proficiency levels; language teachers and learners assessed their levels to range from A1/A2 to C2 on the Common European Framework of Reference for languages (CEFR). As stated before, the sizes of the groups varied greatly, ranging from 25 to more than 60 students.

As regards teachers, they had little training in LANSOD teaching. As described in [Labetoulle \(2017, p. 39\)](#), of the two teachers with tenure, two contract teachers, and four teaching assistants, five had little or no prior experience of teaching at university level. Their majors included English for Specific Purposes (ESP), literature, translation, and French, in France or abroad. They were generally interested in music, but very few (1/8) were familiar with the domain of musicology and dance, let alone ESP in this area. In addition, there was a high teacher turnover rate. Seven of the eight English teachers had not previously taught this class, and only two eventually continued teaching the following year.

The teachers could also not rely on published literature to define the content of the course, as there are very few studies conducted in the characterisation of ESP in the humanities, let alone in musicology. Of the 32 needs analyses studied by [Serafini et al. \(2015\)](#) between 1984 and 2014, only two relate to social sciences ([Sešek, 2007](#), on teaching, and [Gilabert, 2005](#), on journalism). Likewise, of the 508 articles, editorials, and reports published in the French journal *Asp*, which deals with ESP, less than ten were related to the humanities (such as [Baud, 2003](#), on cinema and [Gould, 2001](#), on art). To my knowledge, there have been only two studies on ESP related to musicology. A blended LANSOD course was set up at the Fryderyk Chopin University of Music (Warsaw) for future instrumentalists, and its content is described in a research article by [Lesiak-](#)

**Bielawska (2014).** As part of my Master’s degree research project, I tentatively offered a characterisation of ‘music English’ based on 15 research articles in musicology; however, this study was very limited in that only the authors’ stances and engagements were studied, and the results were never published. Overall then, a teacher wanting to set up a relevant professionalising LANSOD course had very little to start with.

Offering a coherent, ‘professionalising’ course thus appeared quite a challenge. Overall, this particular context appeared quite similar to the generic context that was described in the context overview, as I faced many constraints that were identified earlier (large groups with heterogeneous language proficiency levels and professional objectives, high teacher turnover rate, teachers with little training and experience in LANSOD courses, little research on the ESP of the particular domain, etc.). Let us now turn to how these obstacles were faced in designing a professionalising LANSOD course.

### **3.3. The definition, integration, and evaluation of ‘professionalisation’ in the new LANSOD course**

#### *3.3.1. The identification and integration of professionalising components in the LANSOD course*

Taking the various contextual elements into consideration and following the advice of researchers such as Sarré (personal communication, December 13, 2018), it was decided to specialise and professionalise content gradually, starting with more disciplinary components in Year 1 and working toward more professional content in Year 3. Thanks to the data gathered in the questionnaires and interviews with the learners, former students, and content supervisors, communication situations<sup>8</sup> and language activities that require English in professional settings were identified. The most frequently mentioned were a desire to:

---

8. These are defined here as “a unified set of components [consisting of] the same general topic, and involving the same participants, generally using the same language variety, maintaining the same tone or key and the same rules for interaction, in the same setting” (Saville-Troike, 2008, p. 23).



- get by abroad;
- talk about one's instrument and instrument practice;
- have satisfactory pronunciation when working on songs;
- understand lyrics of songs;
- give music classes in English;
- be convincing in a recruitment interview;
- write a résumé and cover letter;
- understand a foreign conductor;
- communicate in an orchestra;
- comment on a piece;
- read specialised articles;
- use specialised software;
- welcome companies, artists, and the audience.

Based on how frequently some communication situations were mentioned and the feasibility of transforming them into language learning objectives, the syllabus was organised around tasks. In Year 1, one semester was organised around the topic of music festivals. In groups, learners had to present a plan for a music festival to sponsors and write its programme. During the second semester, learners were invited to read, listen to, talk, and write about four topics linked to music, which also enabled them to study transversal themes requiring the expression of habits, emotions, and preference: “your routine when it comes to music”, “why I am a musician”, “music and feelings”, and “the best musician ever”. In Year 3, the main theme of Semester 1 was one's instrument; learners had to write an ad to sell their instrument, improvise when asked about their instrument and their practice, and read part of a score in English. In the second semester, more importance was given to professional topics with an introduction to CV and cover letter writing as well as job interviews. In addition, learners could decide between doing an oral analysis of a music piece or participating in a debate unrelated to their specialist domains.

Considering the diversity of the students' professional objectives and language proficiency levels highlighted in the needs analysis, the syllabus was meant

to be diversified and flexible. Thus, the language activities included listening, reading, writing, spoken interaction, and spoken production. Both individual and collective work was proposed. If many activities were strongly focussed on disciplinary and professionalising components, general topics were also studied, such as transhumanism, the news, and studying abroad. For the same reason, and because objectives deemed relevant by the learners and adapted to their needs were more likely to trigger motivation (Ellis, 2005; Narcy-Combes, 2005, p. 169), it was also decided to adapt the LANSOD course to individual needs as much as possible. Thus, a ‘personal projects’ activity was introduced, which relied on the principles of project-based learning (Bell, 2010). Learners individually chose which language activity they wanted to work on, whether it was linked to their discipline or future profession, devised a plan to work on that language activity, submitted their work to the teacher for feedback during the semester, and presented their work to the class at the end of the semester. This project enabled students to individualise the degree of professionalisation of the course according to their specific needs. Evaluations were also personalised to some extent, as learners could regularly choose which task they would be assessed on (e.g. oral analysis of a music piece or participation in a debate on transhumanism in Year 3).

In terms of more transferable skills, the LANSOD course laid emphasis on learner autonomy. Therefore, teaching methods and activities were selected with this goal in mind. Each semester, some time was spent exploring methods and tools for learning languages more autonomously (online dictionaries, language apps, news websites, etc.). One key aim of the personal project was also to develop learner autonomy, as the learners had to work on a project on their own over the course of a semester.

The course was a blended course, alternating face-to-face classes and online modules. This format encourages learners to be autonomous as “particularly when learning in a BL [blended learning] environment, students have to know when to take action and when they can hand over responsibility [... and they] have to be able to handle different degrees of responsibility over the process and the content of learning” (Neumeier, 2005, p. 175).

### 3.3.2. *Results from the evaluation of the course*

Before presenting the results of the evaluation of the course, some important limitations to this action-research project should be mentioned. Quite importantly, it was not possible to verify how relevant the new LANSOD course was as regards the professionalisation of students in the long term, since it is very difficult to keep track of students once they have left the university. Moreover, the author of this chapter was also the person who conducted the needs analysis, analysed the data, designed and evaluated the course, and was one of the teachers of the course.

However, the longitudinal evaluative procedure yielded much data in support of the idea that the course was relevant according to the various participants in the study. Indeed, overall, students and teachers were satisfied with this course compared to what had been set up before; it was given an average rating of 3.8 out of 5 on a Likert scale, as opposed to 2.3 previously. The disciplinary supervisors validated the syllabi, and the learners judged the course to be generally relevant to their needs, with an average of 3.9 out of 5. Students also declared having progressed more; 68% of them felt they had progressed, as opposed to 40% previously.

As regards specialising and professionalising components in the syllabus more specifically, the learners reported being quite satisfied. These elements were mentioned positively in 99 learner questionnaires (out of 347 questionnaires); 14 students would have wanted the course to be even more specialised and professional, and 11 students would have liked to talk more about topics not related to music. Some of them remarked:

“The content corresponded to what I expected, to my future professional needs”<sup>9</sup>.

“The course was in line with my needs as a musicology student”<sup>10</sup>.

---

9. Translated from the French: “Contenu adapté à mes attentes, à mon futur professionnel”.

10. Translated from the French: “Le cours était en phase avec mes besoins en tant qu’étudiante en musicologie”.

“Being able to work on our discipline was a very good exercise, I would really like to be able to continue this”<sup>11</sup>.

“I would have liked to go further on the musical themes”<sup>12</sup>.

“The LANSOD English course was too specialised: I would like to work on a wider variety of subjects than always music. Maybe on current events, or topics from everyday life”<sup>13</sup>.

The training was frequently described by learners as ‘complete’, ‘diversified’, or ‘varied’ (80 occurrences in all questionnaires). The learners were very satisfied with the language activities (4.1/5 on average). The efforts made to meet the needs of each individual were acknowledged (45 occurrences). Personal projects were frequently deemed the most useful learning activity of the course (89 occurrences, or 31% of responses to the question). The learners argued that this component of the course allowed them to progress because they could choose what to work on according to their weaknesses and desires, it triggered pleasure and commitment, and it allowed for greater learning autonomy. To finish, 75% of respondents considered they were more autonomous when learning English than before.

## 4. Discussion

The case study confirmed the observations made in the context overview: ‘professionalisation’ was a challenging concept to define, and there were considerable obstacles when trying to set up a more professionalising LANSOD course. Yet, the results of the new LANSOD course tend to indicate that we managed to design a relevant professionalising LANSOD course, and therefore,

---

11. Translated from the French: “Pouvoir travailler sur notre discipline était un très bon exercice, j’aimerais vraiment pouvoir continuer cela”.

12. Translated from the French: “J’aurais voulu aller plus loin sur les thèmes musicaux”.

13. Translated from the French: “Trop de spécialité dans la formation d’anglais LANSAD : j’aimerais travailler sur des sujets plus variés que toujours la musique. Peut-être sur l’actualité, ou des sujets de la vie quotidienne”.

that many challenges can be overcome. An obstacle that is quite difficult to surmount, however, is the lack of proper training for LANSOD teachers, on which we wish to elaborate now.

Zourou and Torresin (2019) have shed light on “the absence of appropriate training during university studies and initial [...] education” (p. 41) of LANSOD teachers in Europe, and therefore call for “more sustainable and more professional LSP training opportunities” (p. 27). In this regard, we argue that practitioners should be presented with practical tools to conduct needs analysis and design professionalising training courses. The case study provided an example of a possible method to define the concept of ‘professionalisation’ and design a syllabus in a LANSOD setting. The method yielded satisfying results, and we argue that each step was instrumental in the overall success of the course. The needs analysis aimed at addressing key questions focussed on defining the notion of ‘professionalisation’ and its impact on the content and methodology of the L2 course. Many participants took part in the study, which strengthened its reliability, and the design of the course relied on current Second Language Acquisition (SLA) and ESP research. The questionnaires and the interviews helped me gain an insider’s view of what ‘professionalisation’ could mean in that context. Communication situations and language activities that require English in professional settings were identified, which then underpinned the language tasks around which the syllabi were centred. The evaluation of the course based on another set of questionnaires and interviews was key in the general process, helping me measure how relevant the definition and the implementation of ‘professionalisation’ ultimately were.

From a practical point of view, however, there are limits to this method: it was complex and time-consuming. There were different sets of questionnaires and interviews, different tools were needed for analysing quantitative and qualitative data, and the results are not directly transferable, as the way of defining professionalisation and setting up a LANSOD professionalising course should be adapted to each context. The researcher who conducted this study was also trained in ESP and SLA and was very familiar with needs analysis and course design. That is why an ongoing project consists in testing some of the tools

and methods used in this study in other LANSOD contexts to make them more user-friendly and transferable. As far as LSP training is concerned, a recent collaborative European project called CATAPULT aims to “offer training and tools to language teachers teaching [LSP] in adult and higher education, and to therefore make sure they are equipped with the necessary professional skills to train LSP learners in the digital era” (CATAPULT, 2020, para 1). As of May 2020, the consortium had published the results of a situational survey, developed a common competence framework, and set up a massive open online course.

To conclude, the case study highlights that LANSOD classes can have an important role to play in professionalising learners. This point is regularly made by the French ESP community and LSP communities more generally, who reflect on the objectives of LANSOD courses (Sarré & Whyte, 2016; Van der Yeught, 2014) and characterise specialising and professionalising components to introduce them in LANSOD courses. Together with the practitioners and researchers in the field, we argue that the notion of professionalisation should be debated on a more systematic scale and on a broader stage, and practitioners should be encouraged to thoroughly define ‘professionalisation’ as regards each specific context. This is all the more important at a time when university language education is being reshaped in France, as in April 2020 a ministerial decision imposed that all undergraduate students must take an English certification exam in order to get their diploma<sup>14</sup>. This decision was widely criticised by language experts, who fear that French universities will turn to private certification companies and that language courses will become more standardised (SAES, 2020).

## 5. Conclusion

The aim of this chapter was to question the notion of ‘professionalisation’ in the specific context of LANSOD university courses in France. It appeared as a problematic concept and a recent, polymorphous development. Indeed, although

---

14. Arrêté du 3 avril 2020 relatif à la certification en langue anglaise, 2020: <https://www.legifrance.gouv.fr/eli/arrete/2020/4/3/ESRS1922076A/fo/texte>

‘professionalisation’ is now a key mission of French universities, its definition is not always clear, and it is integrated and implemented in varying ways and to varying degrees. Supervisors and teachers of LANSOD courses are still struggling to define appropriate objectives and content linked to the language that the students will use in their target professional workplace, so courses are not always relevant in that respect.

The case study conducted at the University of Lille demonstrated how complex the training environment could be. It accounted for why providing learners with relevant LANSOD professionalising courses can indeed be quite challenging. In this particular context, it was argued that professionalising the language course meant specialising content progressively by focussing initially more on disciplinary components, then on professional components, based on communication situations and language activities identified in a needs analysis. The other keywords for the design of the new course were flexibility and diversity in terms of content and teaching and learning methodologies so as to adapt the course to the diversity of the learners’ various future professional needs, and autonomy, understood as a transversal competence.

The case study showed that LANSOD courses can be relevant for professionalising learners. Therefore, I have argued that the notion of ‘professionalisation’ should be debated on a more systematic scale and on a broader stage, whether it applies to the LANSOD courses or to LANSOD teacher training, especially at a time when undergraduate language education is being reshaped in France. To facilitate the design of professionalising LANSOD courses, I believe LANSOD teachers should be presented with ready-to-use tools. The case study provided an example of a procedure for setting up a professionalising LANSOD course, which could be replicated in similar contexts once the tools and methods are tested in other LANSOD contexts to ensure they are user-friendly and less time-consuming.

## **6. Supplementary materials**

<https://research-publishing.box.com/s/w8f5hru6fb8kspbi3mchubakjhsewysf>

## References

- Annoot, E., Bobineau, C., Daverne-Bailly, C., Dubois, E., Piot, T., & Vari, J. (2019). *Politiques, pratiques et dispositifs d'aide à la réussite pour les étudiants des premiers cycles à l'université : bilan et perspectives* [Report]. CNESCO.
- Basturkmen, H. (2010). *Developing courses in English for specific purposes*. Springer.
- Baud, D. (2003). Analyse de genre : la critique de cinéma dans la presse quotidienne britannique. *ASp, la revue du GERAS*, 39-40, 37-45. <https://doi.org/10.4000/asp.1282>
- Bell, S. (2010). Project-based learning for the 21st century: skills for the future. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 83(2), 39-43, <https://doi.org/10.1080/00098650903505415>
- Bourdon, J., Giret, J.-F., & Goudard, M. (2012). Peut-on classer les universités à l'aune de leur performance d'insertion ? *Formation Emploi. Revue Française de Sciences Sociales*, 117, 89-110.
- Braud, V., Millot, P., Sarré, C., & Wozniak, S. (2015). « You say you want a revolution... » Contribution à la réflexion pour une politique des langues adaptée au secteur LANSAD. *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Apliu*, 34(1), 46-66. <https://doi.org/10.4000/apliut.5020>
- Brudermann, C., Demaison, C., & Benderdouché, F. (2012). Le CECRL : un outil pour construire une politique des langues ? Retour d'expérience sur l'évaluation et la certification à l'UPMC (2009/2011). *Recherche et pratiques pédagogiques en langues de spécialité – Cahiers de l'APLIUT*, 31(3), 31-41. <https://doi.org/10.4000/apliut.3033>
- Brudermann, C., Mattioli, M.-A., Roussel, A.-M., & Sarré, C. (2016). Le secteur des langues pour spécialistes d'autres disciplines dans les universités françaises : résultats d'une enquête nationale menée par la SAES. *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Apliu*, 35(spécial 1). <https://doi.org/10.4000/apliut.5564>
- CATAPULT. (2020). *What's CATAPULT?* <http://catapult-project.eu/>
- Causa, M., & Derivry-Plard, M. (2013). Un paradoxe de l'enseignement des langues dans le supérieur : diversification des cours pour les étudiants et absence de formation appropriée pour les enseignants. In M. Derivry-Plard, P. Faure & C. Brudermann (Eds), *Apprendre les langues à l'université au 21e siècle*. Riveneuve Éditions.
- Chirache, S., & Vincens, J. (1992). *Rapport de la commission professionnalisation des enseignements supérieurs*. HCEE.



- Deyrich, M.-C. (2004). Exploration didactique de la langue du milieu professionnel à l'université : quel apport pour la définition de tâches d'enseignement-apprentissage? *ASp. La Revue Du GERAS*, 43-44, 125-134. <https://doi.org/10.4000/asp.1106>
- Doray, P., Tremblay, E., & Groleau, A. (2015). Quelle professionnalisation dans les universités québécoises ? *Formation Emploi. Revue Française de Sciences Sociales*, 129, 47-64.
- Ellis, R. (2005). Principles of instructed language learning. *System*, 33(2), 209-224. <https://doi.org/10.1016/j.system.2004.12.006>
- Fave-Bonnet, M.-F. (2012). Postface : des étudiants en quête d'avenir. *Formation Emploi. Revue Française de Sciences Sociales*, 117, 111-115.
- Forrier, A., & Sels, L. (2003). The concept employability: Aa complex mosaic. *International Journal of Human Resources Development and Management*, 3(1), 102-124. <https://doi.org/10.1504/ijhrdm.2003.002414>
- Gachassin, B., Labbé, S., & Mias, C. (2013). Les étudiants face à la professionnalisation à l'université. Exemple en sciences de l'éducation. *Recherche & formation*, 73(2), 37-56. <https://doi.org/10.4000/rechercheformation.2087>
- Gayraud, L., Simon-Zarca, G., & Soldano, C. (2011). Université : les défis de la professionnalisation. *Notes, Emploi, Formation (Céreq)*, 46, 36.
- Gilbert, R. (2005). Evaluating the use of multiple sources and methods in needs analysis: a case study of journalists in the Autonomous Community of Catalonia (Spain). In M. H. Long (Ed.), *Second language needs analysis* (pp. 182-199). Cambridge University Press. <https://doi.org/10.1017/cbo9780511667299.007>
- Gould, C. (2001). L'Art Internet ou la médiation esthétisée : contribution à la réflexion sur l'anglais dans les filières artistiques. *ASp, la revue du GERAS*, 31-33. <https://doi.org/10.4000/asp.1884>
- Hardy, M. (2013a). Editorial. *Recherche et Pratiques Pédagogiques En Langues de Spécialité : Cahiers de l'APLIUT*, 32(1). <http://journals.openedition.org/apliut/3535>
- Hardy, M. (2013b). Editorial. *Recherche et Pratiques Pédagogiques En Langues de Spécialité : Cahiers de l'APLIUT*, 32(2). <https://journals.openedition.org/apliut/3754>
- Iglesias-Philippot, Y. (2013). L'éthique dans l'enseignement-apprentissage des langues de spécialité : le cas de l'espagnol en Économie. *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Apliut*, 32(2), 82-103. <https://doi.org/10.4000/apliut.3782>
- La Borderie, R. (1998). *Lexique de l'éducation*. Nathan.

- Labetoulle, A. (2017). Dynamic and complex system approach to needs analysis, course development and evaluation of LANSOD courses in a French musicology undergraduate programme. In C. Sarré & S. Whyte (Eds), *New developments in ESP teaching and learning research* (pp. 31-50). Research-publishing.net. <https://doi.org/10.14705/rpnet.2017.cssw2017.744>
- Leroux, J.-Y. (2014). The professionalisation of degree courses in France. *Higher Education Management and Policy*, 24(3), 87-105. <https://doi.org/10.1787/hemp-24-5jz8tqsdn4s1>
- Lesiak-Bielawska, E. (2014). English for instrumentalists: designing and evaluating an ESP course. *English for Specific Purposes World*, 15(43), 1-32.
- Macré, N. (2014). Les apprenants LANSAD de niveau A2/B1 en première année d'anglais en autonomie accompagnée médiatisée : quels besoins? *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Apliu*, 33(2), 118-142. <https://doi.org/10.4000/apliut.5053>
- Mémet, M. (2001). Bref historique de l'enseignement et de la recherche en anglais de spécialité en France : de l'anglais pour non-spécialistes à l'anglistique du secteur LANSAD. In M. Mémet & M. Perrin (Eds), *L'anglais de spécialité en France, mélanges en l'honneur de Michel Perrin* (pp. 309-319). GERAS.
- Narcy-Combes, M.-F. (2003). La communication interculturelle en anglais des affaires : transfert ou conflit d'interprétation? Analyse d'une pratique d'enseignement en LEA. *ASp. La Revue Du GERAS*, 39-40, 119-129. <https://doi.org/10.4000/asp.1341>
- Narcy-Combes, J.-P. (2005). *Didactique des langues et TIC : vers une recherche-action responsable*. Ophrys.
- Neumeier, P. (2005). A closer look at blended learning—parameters for designing a blended learning environment for language teaching and learning. *ReCALL*, 17(2), 163-178. <https://doi.org/10.1017/s0958344005000224>
- Péchou, A., & Stenton, A. (2001). Encadrer la médiation : le cas de la prononciation. *ASp. La Revue Du GERAS*, 31-33, 153-162. <https://doi.org/10.4000/apliut.3470>
- Renaut, A. (1995). *Les révolutions de l'université : essai sur la modernisation de la culture*. Calmann-Lévy.
- Resche, C. (1996). La terminologie comparée au service de l'enseignement en langue de spécialité en 3e cycle DEA Monnaie-Finance-Banque. *ASp. La Revue Du GERAS*, 11-14, 195-205. <https://doi.org/10.4000/asp.3501>
- SAES. (2020, April 9). Société des anglicistes de l'enseignement supérieur. *Communiqué de la SAES*, 9 avril 2020. <http://saesfrance.org/wp-content/uploads/2020/04/Communiqu%C3%A9-de-la-SAES-9-avril-2020.pdf>

- Sarré, C., Millot, P., Wozniak, S., & Braud, V. (2017, May 8). « Non, Brian n'est pas dans la cuisine, il est au boulot » : quelle formation linguistique pour les étudiants non-linguistes ? *The Conversation*. [www.theconversation.com/non-brian-nest-pas-dans-la-cuisine-il-est-au-boulot-quelle-formation-linguistique-pour-les-etudiants-non-linguistes-75671](http://www.theconversation.com/non-brian-nest-pas-dans-la-cuisine-il-est-au-boulot-quelle-formation-linguistique-pour-les-etudiants-non-linguistes-75671)
- Sarré, C., & Whyte, S. (2016). Research in ESP teaching and learning in French higher education: developing the construct of ESP didactics. *ASP. La Revue Du GERAS*, 69, 139-164. <https://doi.org/10.4000/asp.4834>
- Saville-Troike, M. (2008). *The ethnography of communication: an introduction* (vol. 14). John Wiley & Sons.
- Serafini, E. J., Lake, J. B., & Long, M. H. (2015). Needs analysis for specialized learner populations: essential methodological improvements. *English for Specific Purposes*, 40, 11-26. <https://doi.org/10.1016/j.esp.2015.05.002>
- Sešek, U. (2007). English for teachers of EFL—toward a holistic description. *English for Specific Purposes*, 26(4), 411-427. <https://doi.org/10.1016/j.esp.2006.11.001>
- Stavrou, S. (2011). La « professionnalisation » comme catégorie de réforme à l'université en France. De l'expertise aux effets curriculaires. *Cahiers de La Recherche Sur l'éducation et Les Savoirs, Hors-série n° 3*, 93-109.
- Swales, J. M. (2004). *Research genres: explorations and applications*. Cambridge University Press.
- Thompson, G., & McKinley, J. (2018). Integration of content and language learning. In J. I. Lontas, M. DelliCarpini, & S. Abrar-ul-Hassan (Eds), *The TESOL encyclopedia of English language teaching* (pp. 1-13). Wiley. <https://doi.org/10.1002/9781118784235>
- Toffoli, D., & Speranza, L. (2016). L'autonomie comme facteur déterminant dans la réussite d'un enseignement Lansad en sciences historiques. *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Apliu*, 35(Spécial 1). <https://doi.org/10.4000/apliut.5505>
- Van der Yeught, M. (2014). Développer les langues de spécialité dans le secteur LANSAD – scénarios possibles et parcours recommandé pour contribuer à la professionnalisation des formations. *Recherche et pratiques pédagogiques en langues de spécialité. Cahiers de l'Apliu*, 33(1), 12-32. <https://doi.org/10.4000/apliut.4153>
- Van der Yeught, M. (2016, August 23). *Developing English for specific purposes (ESP) in Europe: mainstream approaches and complementary advances* [Sub-plenary lecture]. ESSE Conference, Galway, Ireland.

- Van der Yeught, M. (2017). L'étude de cas en anglais financier et ses fondements théoriques. *Les Langues Modernes, Association Des Professeurs de Langues Vivantes*. <https://hal.archives-ouvertes.fr/hal-01632980/document>
- Wedekind, V. (2018). Vocational versus occupational qualifications: is there a difference, and does it make a difference? [transcription of the Chairperson's Lecture]. <https://doi.org/10.13140/RG.2.2.16681.70241>
- Whyte, S. (2013). Teaching ESP: a task-based framework for French graduate courses. *ASp. La Revue Du GERAS*, 63, 5-30. <https://doi.org/10.4000/asp.3280>
- Whyte, S. (2016). Who are the specialists? Teaching and learning specialized language in French educational contexts. *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Aplut*, 35(Spécial 1). <https://doi.org/10.4000/apliut.5487>
- Wozniak, S., & Millot, P. (2016). La langue de spécialité en dispute. Quel objet de connaissance pour le secteur Lansad ? *Recherche et Pratiques Pédagogiques En Langues de Spécialité. Cahiers de l'Aplut*, 35(spécial 1). <https://doi.org/10.4000/apliut.5496>
- Zourou, K., & Torresin, G. (2019). *CATAPULT - Situational Survey: LSP teachers' needs for skills and training*. CATAPULT consortium. [http://catapult-project.eu/wp-content/uploads/2019/05/O1\\_Full\\_Report\\_Final\\_CATAPULT.pdf](http://catapult-project.eu/wp-content/uploads/2019/05/O1_Full_Report_Final_CATAPULT.pdf)



Published by Research-publishing.net, a not-for-profit association  
Contact: [info@research-publishing.net](mailto:info@research-publishing.net)

© 2020 by Editors (collective work)  
© 2020 by Authors (individual work)

**Language learning and professionalization in higher education: pathways to preparing learners and teachers in/for the 21st century**  
**Edited by Béatrice Dupuy and Muriel Grosbois**

**Publication date:** 2020/11/16

**Rights:** the whole volume is published under the Attribution-NonCommercial-NoDerivatives International (CC BY-NC-ND) licence; **individual articles may have a different licence.** Under the CC BY-NC-ND licence, the volume is freely available online (<https://doi.org/10.14705/rpnet.2020.44.9782490057757>) for anybody to read, download, copy, and redistribute provided that the author(s), editorial team, and publisher are properly cited. Commercial use and derivative works are, however, not permitted.

**Disclaimer:** Research-publishing.net does not take any responsibility for the content of the pages written by the authors of this book. The authors have recognised that the work described was not published before, or that it was not under consideration for publication elsewhere. While the information in this book is believed to be true and accurate on the date of its going to press, neither the editorial team nor the publisher can accept any legal responsibility for any errors or omissions. The publisher makes no warranty, expressed or implied, with respect to the material contained herein. While Research-publishing.net is committed to publishing works of integrity, the words are the authors' alone.

**Trademark notice:** product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

**Copyrighted material:** every effort has been made by the editorial team to trace copyright holders and to obtain their permission for the use of copyrighted material in this book. In the event of errors or omissions, please notify the publisher of any corrections that will need to be incorporated in future editions of this book.

Typeset by Research-publishing.net  
Cover photo by [Linus Nylund on Unsplash](#) (<https://unsplash.com/license>)  
Cover layout by © 2020 Raphaël Savina ([raphael@savina.net](mailto:raphael@savina.net))

ISBN13: 978-2-490057-75-7 (Ebook, PDF, colour)  
ISBN13: 978-2-490057-76-4 (Ebook, EPUB, colour)  
ISBN13: 978-2-490057-74-0 (Paperback - Print on demand, black and white)  
Print on demand technology is a high-quality, innovative and ecological printing method; with which the book is never 'out of stock' or 'out of print'.

British Library Cataloguing-in-Publication Data.  
A cataloguing record for this book is available from the British Library.

**Legal deposit, France:** Bibliothèque Nationale de France - Dépôt légal: novembre 2020.

---