Training Teachers in University Teaching in France: What Systems and What Tools?

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──＜Abstract＞──────────────────

　　In the context of the decree of 9 May 2017 which makes teacher training compulsory for associate professors in France during their first year of recruitment, by combining it with a discharge in the education service, French universities are embarking on a new era where the importance of learning to teach is recognised. This a major change in an environment where career access and promotion are primarily dependent on the research file and without established teacher training. The question arises of training systems suited to the reality of the professional conditions of the university teachers and the resources of the Higher Education establishments. In this regard, the French Ministry of Higher Education, Research and Innovation has piloted the design of a training system structured around a national MOOC and local events led by the educational support services of the universities. This article presents the background to this initiative, the objectives and choices of the designers and the principal results of an evaluative survey conducted in 2018 with the MOOC users.

1. Introduction

　In France, most university teachers are state-employed research professors; their recruitment and career are governed by national provisions and they are recruited by competitive examination. Assistant

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professors are appointed by ministerial decree and professors by the President of the Republic and they benefit from employment throughout their professional life [1]. After recruitment, access to permanent tenure is defined by a year's training which, in practice, is still a formality [2]. However, the imposition of compulsory teacher training during this first year, changes the boundaries somewhat (Paivandi and Younes 2019).

Indeed, until now, there was no tradition of initial and continuing teacher training in universities, as was the case for teachers in primary and secondary schools. University culture is strongly influenced by a medieval founding myth that has stood the test of time and been reinforced by the Humboldtian model since the early 19th century. According to this myth, being a scholar is a necessary and sufficient condition for passing on your knowledge. This justifies the fact that the research file is still the principal basis for recruitment and promotion at universities.

The relevance of teacher training for research professors has painstakingly become a subject of debate in France through the opening up of higher education to the masses. The end of the elitist university and the mass arrival of "new students" has revealed the limits of educational practices mainly focused on knowledge and the teacher. The correlation between excellence in research and excellence in teaching is being questioned in the university culture. During the National Union of Higher Education Congress in 1967, delegates voted for a motion on university teaching, reflecting that the teacher was too often thought of as a "master" dispensing their knowledge to their disciples; tending to consider their teaching function as secondary to their work. The motion recognised that teaching is not a gift or a favour, but a technique that must be used for rational learning [3]. Publications in French aiming to promote teaching at university and in favour of a "learning profession" (for examples, Bireaud 1990, 1996, Donnay and Romainville 1996, De Ketele 1998, Rege Colet and Berthiaume 2014) have also increased since the 1980s. More than a quarter of a century after the first publications, it must be recognised that the issues raised by the authors and the actions they propose with regards teacher training for higher education teachers are still valid. While on this

subject France holds the sad record of PhD students (51%) who consider that their teaching skills are weak or very weak according to a European study (European Commission (EACEA/Eurydice) 2017). The same European Commission makes the observation of a general need to improve the status and quality[4] of higher education making "professional teaching ever more urgent. Teachers need to be well prepared and trained for being able to cater for students with diverse backgrounds, expectations and needs" (European Commission 2016: 7).

This is the context in which the French Ministry of Higher Education, Research and Innovation has made teacher training compulsory for all newly recruited associate professors from the start of the 2018 academic year and established the right to continuing training over the next five years[5]. This obligation concerns approximately 1,100 new individuals every year, across 72 universities and 65 schools (2017 data). In the decree of February 2018, the ministry responsible for higher education did not specify the format nor the content of the training to be provided, preferring to give the establishments free reign, given the large disparity of local situations. A 2015 survey of 262 establishments revealed that only 49% of respondents had a structure such as an educational support service or educational innovation support, involved in the training of research professors (Cosnefroy 2015). However, this value was probably overestimated because it relates to just the respondent establishments, which are by nature motivated by the teacher training of their research professors.

In this context, the Directorate General for Higher Education and Professional Insertion (DGESIP) wanted to provide a MOOC to the establishments, but also to individuals who wished to learn independently. Its design, managed by the Strategic Educational Advisor and MiPNES[6], was assigned to the university teaching service and ICT in teaching units (TICE/SUPTICE) of Rennes 1 university. Launched in November 2017, which was one year before the regulatory training obligation was introduced, the MOOC *Se former pour enseigner dans le supérieur* (Train to teach in higher education) was implemented on the national FUN-MOOC platform[7]. For its first 2017/2018 session, there were 13,724

subscribers. This article presents the objectives, design choices and an initial assessment of this system based on a quantitative and qualitative survey conducted in 2017/2018 with the MOOC's users and should make it possible to regulate the system.

2. The Choice of a Hybrid Teacher Training System

The challenge for the designers was to build a resource at the same time self-sufficient and integrated with the training provided by the educational support services where they exist.

Indeed, since the MOOC covers the basics of teaching in higher education, there was a risk that these support services would consider it as a parallel offer available to teachers and that it would remain disconnected from their actions (Delalande *et al.* 2019). In order to ensure consistency and acceptance, it was decided that the national MOOC would be combined with local proposals (workshops by the establishment's support service) in a hybrid system, coordinated nationally and designed using a collaborative approach by a team of experts belonging to several establishments.

3. Content of the MOOC

The MOOC's design team initially focused on identifying themes that are generally accepted as central to the teaching activity by education and training professionals. Five themes were identified:

- "Making students active": active teaching, feedback techniques, project-based learning, simulations and role play, group work, interactivity scenarios;
- "Motivating students": factors and levers for motivation, class activities likely to motivate, the neuroscience perspective on learning and motivation;
- "Building teaching/learning activities": constructive alignment, learning objectives, teaching structure and syllabus, programme

and skills-based approaches;

· "Assessing students' learning": assessment strategies, feedback, self-assessment methods (multiple choice questionnaires, portfolio, peer reviews);

· "Me and my environment": teacher attitude, working in an educational team, national and international context of higher education, professional development mapping.

The linear and modular structuring of resources and activities aims to make the learning pathway more flexible and more personal. Linearity, useful for understanding and navigating a distance learning system, is promoted by identical scripting for each theme of the MOOC: preamble, logbook, training resources, testimonial resources, themed debate, test, conclusion and a specific calendar showing the events and online tutorials. As for modularity, this is provided by giving access to all resources when the MOOC is opened (for "butterfly" type users or direct access to certain resources which the participant sees as more useful for example) and through a range of resources and activities (self-positioning, case studies, test, individual and collaborative productions, participation in themed debates, etc.). Offering these different forms of learning increases the sources of reflective questioning, opportunities for sharing and interaction between peers. As Berthiaume and Weston (2015) point out, this also enables each participant to enrich their knowledge base for teaching (elements, tools, techniques, beliefs... that make up all the teaching resources used by a teacher) and question their personal epistemology (beliefs with regards the knowledge, its construction and its evaluation).

Three pathways are offered to the participants, the "Discovery" pathway, the "Reflexive" pathway and the "Sharing and contributions" pathway (see *below*). Each one can be completed remotely in total autonomy, or be supported by meetings with educational coaches offering advice on individual productions, supplemented by classroom-based workshops (discussions about practices, debates, etc.) or even generate local collaborative productions and published online on the MOOC. In order to encourage the organisation and running of local actions, the

support services were given access to the entire MOOC a few months before its launch. Each theme was extended to two weeks in order to make it more flexible and facilitate the organisation of local events. There was also an experiment with one final form of hybridisation, "Subject books." In order to enhance the MOOC and create a direct link between the participants in establishments and those online, several conferences were broadcast live within the MOOC. Filmed and combined with chat windows, they are a form of synchronous hybridisation entirely supported by the establishment hosting the speaker.

4. Between xMOOC and cMOOC, the Design of the MOOC

Scientific literature generally differentiates between two categories of MOOC, even if these are the subject of growing debate (Mangenot 2014): transmissive xMOOCs and connectivist cMOOCs (Hollands and Tirthali 2014). The choice for the MOOC *Se former pour enseigner dans le supérieur* is more of a hybrid (Poellhuber, Roy, and Moukhachen 2017), both managed and open. Indeed, for the first two pathways offered to the learner (the "Discovery" and reflexive pathways), it initially proposes publishing a traditional course online with predefined content and exercises, using a more instructional approach. The MOOC has 5 themed sections, each covering several key concepts of university teaching (see *above*). For each one, the key transmissive content is provided by video clips recorded in a format which is often similar to classroom-based teaching (the teacher speaking and facing the camera or voice-over and broadcasting a slide show or documents), or in the format of an interview with an expert. Depending on the case, these are supplemented by links to online documents (scientific articles, online resources, examples of use) and by testimonial videos about the experiences in context, illustrating the implementation of the key concepts. On this point, the selected system confirms an omnipresent trend in the current MOOCs, with video clips as the dominant learning resource, repeating the old formats of educational television as highlighted by Peraya (2017). The course completion certificate for the MOOC is based on multiple choice type tests, which are

used to check the proper understanding of the content presented in this rather transmissive aspect of the system.

However, this MOOC also proposes giving the learner greater control over their learning by encouraging discussions between peers, the creation of links and the distribution of knowledge in a network (Gilliot, Grolleau, Morgan, and Vaufrey 2013: 2). To do so, it relies specifically on two teaching activities:

- a discussion forum about a deliberately divisive or provocative question on the 5 themes of the MOOC, in order to encourage debate between participants, for example, "Are teachers responsible for students' motivation?" or "Must there be a choice between knowledge transmission and skills development?";
- peer feedback, based on the shared analysis of a reflective activity conducted by volunteer participants in groups of 4 (each one giving their criterion-based opinion on the reflective activity of 3 other participants), for example, "Create a reliable and valid marking scheme" using a teaching situation recently experienced by each participant.

Finally, the third pathway proposed in the MOOC, called "Sharing and contributions", is dedicated entirely to this connectivist aspect, with a section based on the discussion and peer review of four types of contributions: a documentation tracker (on useful references or resources), an account of a reflexive experience (on an experiment with a teaching method), an analytical poster (on a current topic, "digital and learning" for example) or a methodological data sheet (formalising a reproducible working method). In this section, the activities are no longer regulated by the MOOC's teaching team, but by the participants themselves, sometimes assisted, if they wish, by the support service of their related establishment.

These design choices include the system selected to comply with the work on the professional development of teachers, as a complex process experienced form the stakeholder's perspective (Frenay, Jorro, and

Poumay, 2011), in relation to the individualisation, reflexivity and lifelong learning. Lameul, Peltier and Charlier define this as a "socially structured, individual process of changing practices and the gradual acquisition of skills recognised by the person themselves and by the professional community in which the individual plays an active part and is engaged" (Lameul, Peltier and Charlier 2014: 102). Internationally, since the 1990s, this concept has taken shape in particular through the *Scholarship of Teaching and Learning* (SoTL) which builds on the reflective analyses of the activity. Bedard (2014) identifies four stages for research professors: practitioner (experiential knowledge), reflective practitioner (reflecting on their practice), researcher practitioner (using theories or models to explain their practice) and educational researcher (produces and publishes knowledge on the subject). This MOOC falls within the first two by offering several case studies (video testimonials by peers about their practices, examples of application through online resources and documents) and reflective activities in particular. A specific pathway (called "reflective") is dedicated to them, which complements the transmissive approach described *above* through reflective activities conducted from a teaching or training situation, on which the participant wishes to work throughout the MOOC. As their pathway progresses, each participant can therefore complete an activity related to the five structuring themes (for example write the syllabus for their teaching), by answering targeted questions encouraging a critical and analytical step back and by gradually completing a personal logbook (in the form of open and closed questions). The objective is to make each participant document their practice and experience from analysis grids and document templates centred on the content set out in the MOOC and thus to explain, but also develop, their personal epistemology. Indeed, Poteaux (2017: 26) explains that "the different trends developed in the context of personal epistemology generally consider that belief systems are constituted in theories to guide the action of teachers." In particular, she cites Abric (2003), who considers that these beliefs fulfil several functions: epistemic (giving meaning to the experiences), identity (located in a socio-professional field), prescriptive (guiding behaviours, actions and

practices) and providing justification or self-defence (particularly for young teachers entering the role, faced with the difference between the imagined job and the actual job).

The feedback analysis on the 2017/2018 session of the MOOC, developed in the second part of this article, is used to compare these design choices with the reality of hybrid training practices, in both their collective and individual dimension.

5. The MOOC in the Real World: User Survey

In a context of comprehensive and prospective evaluation-regulation, a survey of the MOOC's users was commissioned by the MiPNES with the laboratoire ACTé (Younès *et al*, 2018). This was intended give the designers clarity on achieving the MOOC's objectives and provide them with useful elements for its development. It involved determining the profiles of the users, their motivations, what they learned through the MOOC, the uses and the conditions for understanding the favourable and unfavourable configurations for training development with such a hybrid system. The survey was completed using a mixed methodological design (Creswell and Plano-Clark 2007) combining qualitative and quantitative analysis. The collection of data from the MOOC's users was based on the construction and execution of seven questionnaires at different times during the training course, tracking activity on the platform and conducting interviews two to three months after the course. The analysis in this article is based primarily on the data from the seven questionnaires incorporated into the MOOC and clarified by the other analyses (tracking and interviews):

- the first "Profiles" questionnaire aims to identify users' sociological characteristics, their professional situation (professional category, level of education, experience in teaching), their experience with MOOCs and in education, their level of planned involvement and their motivations;
- the five end-of-topic questionnaires (five themes in total) and the

final questionnaire were designed to gather information on the use of the MOOC (selected pathway, time spent, proportion of course followed, content used), user satisfaction, what was learned and the contributions to their teaching practice.
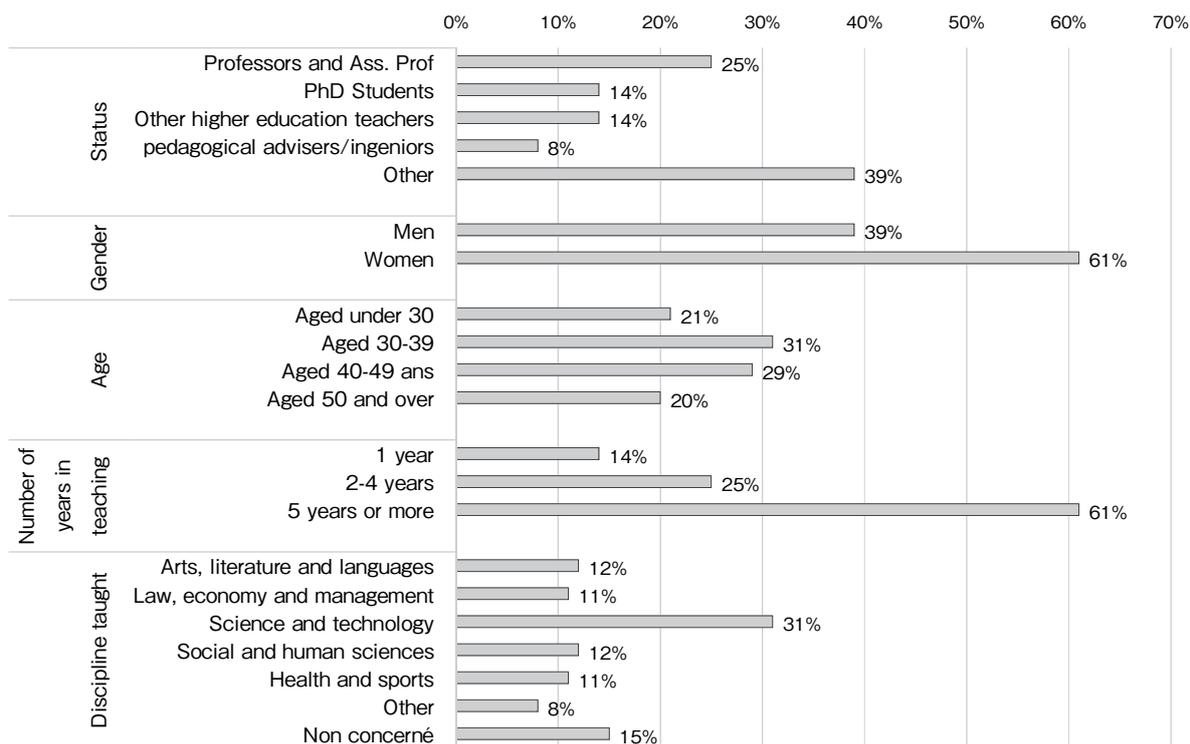
The answers to these questionnaires were subject to a descriptive analysis (breakdown of responses by percentage) and the variables characterising the respondents were cross-referenced (sex, age, status, etc.). The chi-squared test was used to test the significance, or lack thereof, of the link between these variables: a 5% significance threshold was selected. A multiple component analysis was also conducted to study the links between planned use, motivations and users' characteristics.

6. A Diversified Audience Somewhat Familiar with MOOCs

Of the population of the MOOC, 1,931 individuals answered the "Profiles" questionnaire, which is 14% of the 13,724 subscribers. The response rate progressively decreases which corresponds to the usual dropout rate of the MOOCs (Jordan 2015).

It was characterised by a great diversity between profiles, in terms of ages, disciplines, teaching and experience and teacher training as well as professional and geographical situations. The different audiences targeted by the designers were reached: research professors, teachers in higher education, PhD students and educational advisors/engineers in higher education represented 61% of the questionnaire's respondents which is 1,177 of the population studied[8] (see figure 1). In 2018, according to the data from the Evaluation, Forecasting and Performance Department (DEPP), in the overall population of higher education teachers, most were research professors (61% of the workforce). However, they only account for 25% of the survey sample.
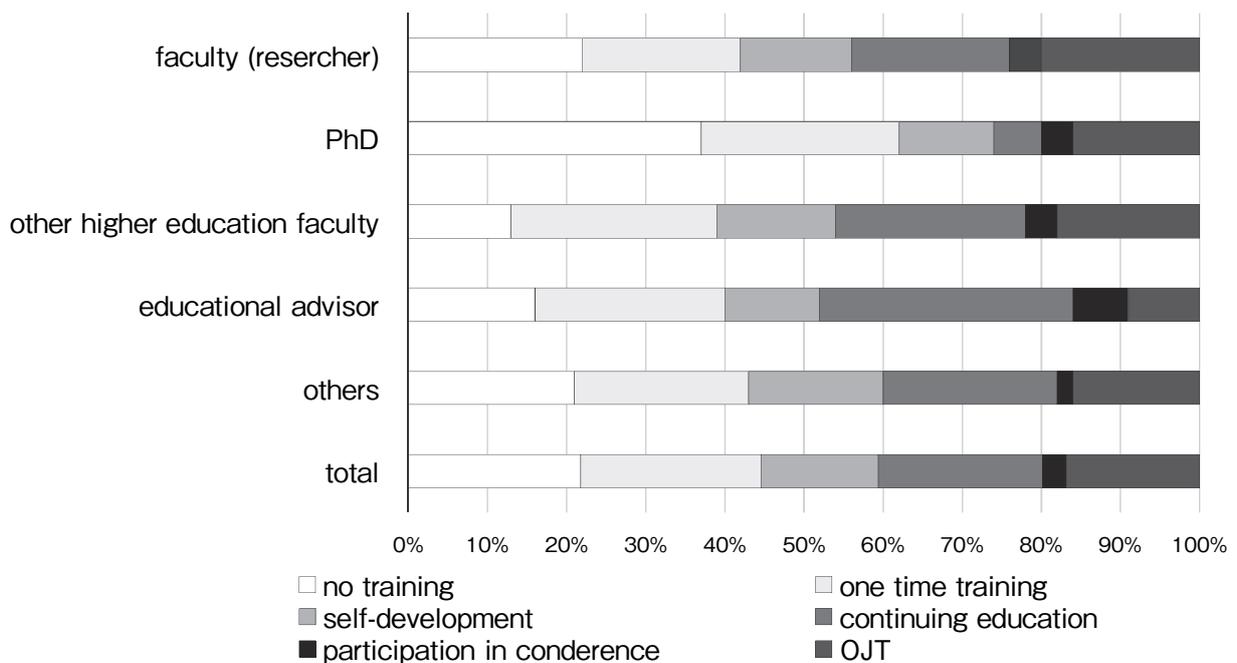
Source: Author

Figure 1　Main Characteristics of the Respondents

In addition to the data on users' status and the observation of the under-representation of research professors, the analysis of the age, gender and disciplinary attachment shows that the MOOC reaches all age ranges, all disciplines and that women are the main users of this resource. All ages are represented: 21% are aged under 30, and are mostly PhD students. 20% of those surveyed are aged over 50 (especially other university teachers). Those aged 30/39 and 40/49 are most represented with 31% and 29% of participants in each category. The average age is 39.6 years. Educational engineers and advisors are most often aged between 30 and 39. 72% of research professors are aged between 30 and 49 (the average age is 43). The breakdown by gender demonstrates the large proportion of women, all status categories included: 61% of respondents were women, although far fewer women then men pursue postgraduate studies (Boutillier and Laperche 2007) and have an academic career (60% of men and 40% of women amongst higher education teachers according to the ministry's #*dataESR* site [9]. Use of the MOOC is therefore much greater among female research professors and PhD students: 55%

compared with 45% of their male colleagues. The retrospective analysis of the non-responses could however reveal that fewer men than women answer questions about using the MOOC.

All discipline categories are represented, but in varying proportions. Science and technology teachers are the largest group (30% of the workforce). It is also observed that teachers in health and sport are relatively well represented, with 10% of the workforce [10]. They are also the youngest, compared with users from the artistic, legal and economic disciplines. Most state that they have already had teacher training: 43% through one or more training course(s), 15% self-taught, 17% report experiential learning and 22% are beginners. Participation in seminars is very low (only 3% of respondents). The oldest have had the most training. Research professors are trained more on the job than other categories. Other teachers report that they have taken part in initial and continuing training. For educational engineers and advisors, training methods through seminars and continuing training are more important. 37% of PhD students say that they have had no training (compared with 22% for the whole population).

Source: Author

Figure 2　Training According to Status

If we take into account just the three categories that are involved in teaching students in higher education (research professors, PhD students, other teachers), the figures are basically the same: 22% have no training, 23% say they have undertaken continuing training and 19% have learned on the job. While there is still some ambiguity in respondents' answers between self-taught, on-the-job training and no training, the qualitative analyses do give some insight. It is the reflective and formative relationship to the respondents' education which is in question. Self-teaching refers to a proactive approach of self-information through reading, discussions with colleagues etc. and a clearer awareness of educational development. On-the-job focuses instead on learning developed through experience although some stress the lack of teacher training, the relative isolation and routines that are subject to less examination.

Generally, the results reveal a fact already known in higher education regarding the weakness of initial and continuing teacher training and the use of information and communication technologies by higher education teachers in France (Ben Youssef and Hadhri 2009). Indeed, three quarters of respondents state that they have followed MOOCs previously, but 40% of them report that they have not followed them in their entirety. For a quarter of respondents, this was the first MOOC they had followed, which shows that the audience reached includes not only the population of normal users, but also an audience of novices in this training method. This reality is particularly true for research professors (41% starting their first MOOC) and even PhD students (33%). Novice teachers are not the largest group to follow the MOOC (on average 14%), even though more educational advisors/engineers declare using them for training or for information.

7.   A Wide Range of Motivations

1,211 people responded to one and/or other of the two open questions regarding motivations. Table 1 presents the percentage of responses in each of the 15 categories.

Table 1   Themes Identified Regarding Motivations (Open Questions)

Themes identified regarding motivations	%
Improving and developing practices (updating skills)	50%
Acquisition of knowledges and skills	37%
Understanding the student audience for greater student commitment (capture attention, student psychology, etc.)	22%
Specific need (digital tools, participation, innovation: flipped class, active teaching, cultural adaptation, specific project...)	19%
Preparing to teach at university (documentation preparation, students)	12%
Self assessment: reflecting on/analysing their practice, responsiveness	11%
Curiosity, intrinsic motivation (interesting topic, interest in the subject, desire to know more about the subject, it excites me, responds to my requirements, etc.)	11%
Professional development towards higher education or other (career change)	8%
Discussion (sharing, benefiting from others' experience, etc.)	5%
A better teaching experience (trust, pleasure, pathway process to be chosen, practice, curiosity)	4%
Discover a MOOC, a training via this MOOC format	4%
Enhancing the CV, extrinsic motivation: obtaining certificates, encouragement from the hierarchy/university, validating training hours	4%
Training of new research professors	3%
Training/advising students	3%
Leading an educational team (support)	2%

Source: Author

The sociological diversity of the MOOC audience is linked to the richness of the motivations expressed and their variety. Seniority has an impact; helping to develop professional practices is generally the most

common motivation among teachers, and is mostly expressed by the experienced research professors. However, the expectation of knowledge and help in everyday life is most chosen by the novices. Thus, the motivations expressed in the open questions vary considerably depending on the respondents' status:

- research professors mostly expressed the following motivations: improving and developing practices, training new research professors; a better teaching experience (confidence, pleasure, etc.); discussion (sharing, benefiting from others' experience); MOOC type training methods (format, pathway process, etc.);
- PhD students more often cited the fact of preparing for university and extrinsic motivations such as enhancing their CV, obtaining certification, etc. or goals pursued by the student and reflecting their ability for self-guidance (Pintrich 2003), their feeling of self-effectiveness (Bandura 2003) and their reference practices (Charlier, Nizet, and Van Dam 2006), i.e. the practices experienced or planned by the student for their future, and giving meaning to the training system (Charlier, Deschryver, and Peraya 2006);
- other higher education teachers are motivated by: self-assessment (reflecting on/analysing their practice); improving and developing practices; better understanding the student audience (capturing their attention, engaging them); a better teaching experience (confidence, pleasure, etc.); discussion (sharing, benefiting from others' experience);
- educational engineers/advisor are more interested in: knowledge acquisition (tools, resources, etc.); specific needs (digital, participation, innovation: flipped classroom, active teaching, etc.); leading an educational team; training and advising teachers;
- as for the other participants, they more often cited professional development towards higher education and curiosity, interest.
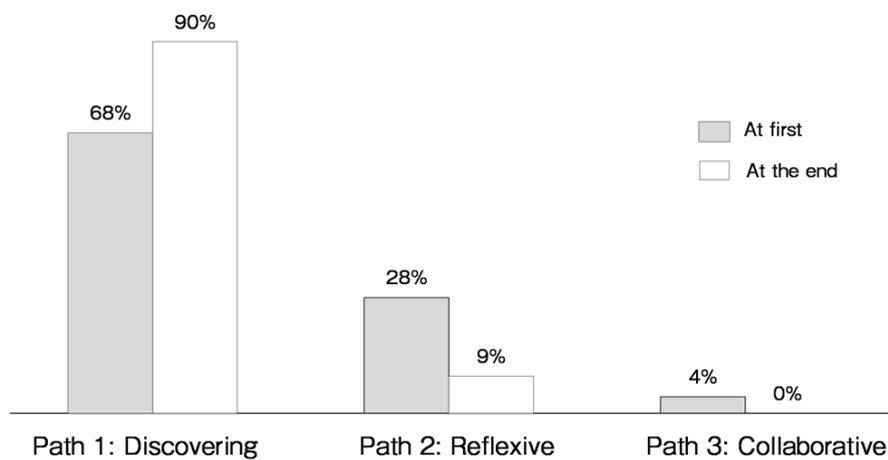
8. Following the MOOC in Their Spare Time

The large majority of respondents (79%) say that they intend to follow the MOOC in their spare time. Only 21% say that they want to do it during their working time. These results show fairly tight time management, forcing most people to follow it outside their working hours, regardless of the respondents' gender or seniority. The discipline and personal situation are differentiating variables. Indeed, a third of science teachers and a quarter of those in health and sport consider following the MOOC in their working hours, compared with 15% of teachers in other disciplines. Only one in three research professors manages to find time during their working day to follow the MOOC. The situation is even more difficult for PhD students (24%) and for other higher education teachers (13%). Educational advisors and engineers are those who manage to follow the MOOC best during their working hours (42%), but also those who think they dedicate less time to it. These results reveal the real difficulty for teachers in integrating teacher training into their working hours.

The most immediate expression of this difficulty refers to two main elements: the varying availability (or lack thereof) of the users and the actual training time, more substantial than the time indicated by the MOOC's team (and this, for the different themes proposed). Several requests ask for more time to be allowed for each theme. However, the analysis also reveals a long list of deadlines to be managed for users (start and end of themes, peer review, certifications, etc.). In this list, users in a different time zone to the MOOC team, have to manage their time difference by recalculating the entire timetable for the selected pathway. Although it seems important to re-calibrate the time organisation of the MOOC, by giving greater legibility and latitude to the different deadlines, each week and week on week, this analysis also shows the still unresolved difficulty of reconciling the timing for a training course open to all (regardless of availability, location, learning pace, training intention, collaboration between peers, etc.) and the personal timing of the individual learning of each user. In order to support personalised

learning in MOOCs, a freedom to adapt certain deadlines is one of the areas suggested by scientific literature (Bejaoui, Paquette, Basque, and Henri 2016).
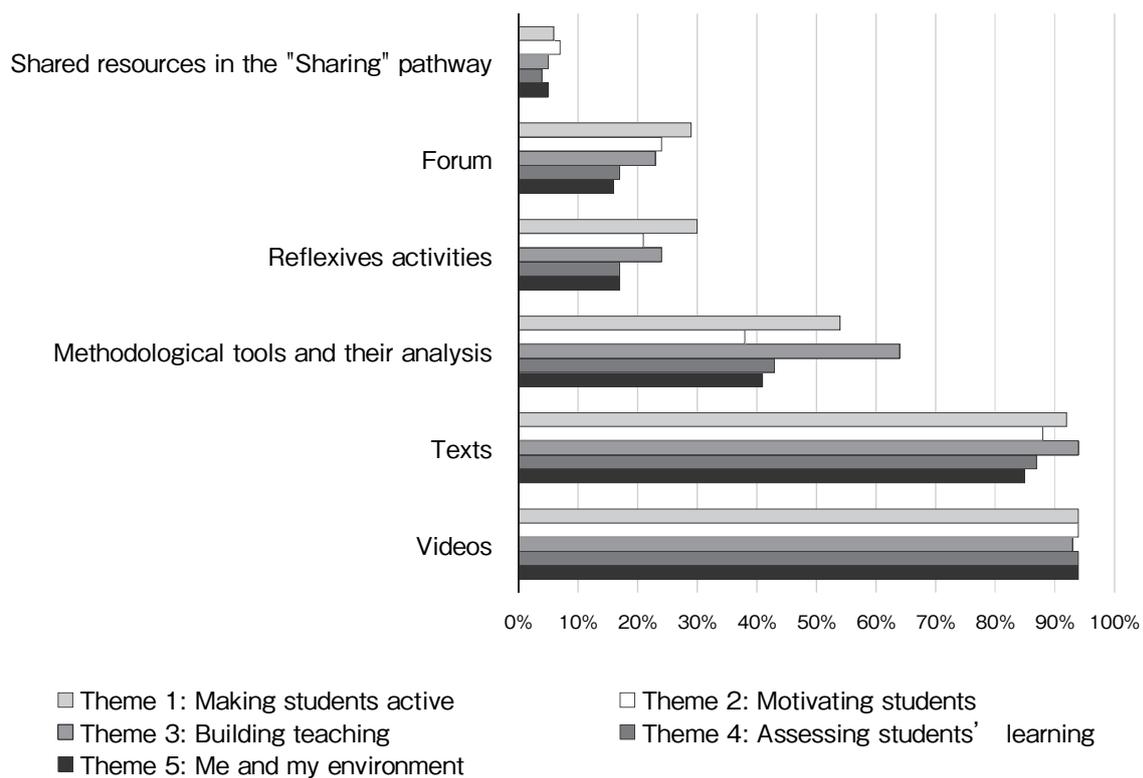
In terms of the choice of pathway, the proportion of participants who wish to follow the most comprehensive pathway (reflective pathway) remains steady, regardless of status. However, there is great interest in the "Discovery" pathway with 68% of respondents planning to follow it. More women than men plan to follow this pathway (71% compared to 64% for men). The initial proportion choosing this pathway increases over time: 79% after theme 1 and 90% after theme 5 (see figure 3). 28% of all respondents opt for the reflective pathway. More men than women gravitate towards this (31 % vs. 26 %) and it is chosen by more research professors and others involved in higher education (approximately a third). Unlike the "Discovery" pathway, the initial proportion in favour of this pathway decreases over time. It represents just 9% of respondents after the final theme (see figure 3). Finally, "Sharing and contributions" is in last place: 4% (n=75). More men opt for this pathway (6% compared to 3% for women).

Source: Author

Figure 3   Pathways chosen and completed

The analysis also shows great disparities between the resources consulted and, to a lesser extent, between the themes consulted (see figure 4).
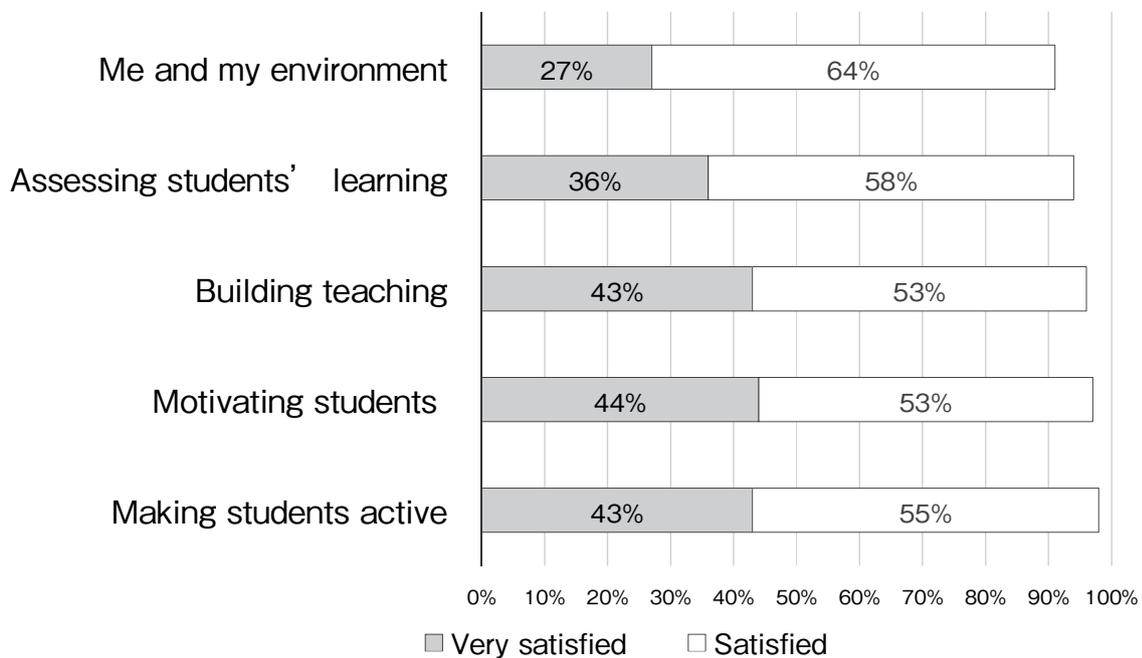
Source: Author

Figure 4   Resources Consulted According to the 5 Themes of the MOOC

Videos are reported as the most used resources, regardless of the theme. The percentage of respondents that say they have consulted them (94%) remains steady across the MOOC's five themes. However, this does not mean that all the videos were consulted, an observation that will also be valid for other resources, let alone that they had given rise to detailed work, nor were they consulted in their entirety. The usage monitoring supplied by the FUN-MOOC platform not allowing to know it. The texts are consulted almost as much; by 85% to 92% of respondents. However, the methodological tools for teaching and their analysis, generally used significantly less than the videos and texts, are used more or less depending on the themes. The reflective activities are not widely used, which corresponds with the choice of most people to follow the "Discovery" pathway, from which such activities are excluded. However, we see that they are consulted by more users (between 17% and 30%) than those who stated that they had followed the reflective pathway at the end of the

MOOC (9%) and that this varies depending on the themes. Even without contributing to it, some of the respondents consult the forums and liked that social interactions were available to watch in the videos. However, consultation of the forums gradually decreases over time, from 29% to 16%. These results match the observations of Rossi and Gnawali (2014), cited by Quentin and Condé (2016), who comment that forum posts, which are mainly the work of a few contributors, generally decrease after the first half of a course, regardless of the theme of the MOOC, its language and even its duration.

Source: Author

Figure 5　User Satisfaction According to Themes

While no causal link can be established between these variables, the conditions under which participants carry out the MOOC appear to have an impact on the type of training pathway chosen and undertaken, as well as the resources used, and hence the quality of learning achieved. Inclusion of the MOOC as a possible resource in the compulsory training of new lecturers, accounted for in the time budget opens up an avenue of research to be explored.

9. A Complex Connection between Collective Educational and Learning Dynamics

It is clear that there is a difference between the designers' intentions and how the MOOC is used. The connectivist ambition is generally not achieved in the context of an isolated use of the MOOC. However, when used as part of a local collective educational and/or support dynamic, there is greater support which raises the question of the importance and nature of the hybridisation required by the MOOC's designers (distance/presence, individual/collective). This once again highlights the weakness and importance of the collective educational dynamics related to the MOOC, and more broadly in the working contexts. Indeed, although the benefit of the interactions and the collaborative dimension generated by the MOOC through exchanges between participants, collective reflection and peer reviews are not disputed, the survey reveals that the activities with a reflective and collaborative aim are the least practised and that the shared resources are favoured very little by respondents. The peer review is almost non-existent. Associated with the reflective pathway, it concerns 30% of respondents in theme 1 (which is consistent with the choice of the reflective pathway), then it decreases (11% in the final theme). Obtaining feedback about the peer review is nearly impossible, due to the lack of the long-term involvement of participants. The collective work is difficult and the exchange of files between participants is prevented by the ergonomic limits of the platform. The data seems to indicate that, most participants are not looking for the collective dimension of the MOOC, although this often seems to be crucial for perseverance and learning. One research professor who was interviewed said that he preferred "to discuss it with colleagues from [his] university, than discuss it in writing in an online forum with people who [he] doesn't know". The surveys that are part of this system seem to favour a transmissive (especially among PhD students) and individualistic approach (Charlier, Bonamy, and Saunders 2003). Those who undertake the MOOC in a collective professional framework seem to persevere more and go further in their learning.

Through the different themes, five types of learning are frequently

highlighted: conceptualising the practice (objectify, explain, model), broadening the field of possibles, questioning and evaluating their practice, conceptualising the intervention areas, understanding the teaching-learning processes. In addition, three principal resources appear to be the most interesting elements in enhancing the practice, questioning it and conceptualising it. The first refers to testimonials from colleagues. These are understood as learning resources for the practice, particularly when they are supported by practical examples. A vicarious learning source, access to peer experience can be considered "exciting". Some comments also mention the benefit of testimonials from students and experts in the MOOC. The second is the search for usable tools for practical instruction. Some themes, perceived as less practical than others are also criticised. Finally, the third focuses on theoretical concepts and scientific contributions. Considered as useful for conceptualising, questioning and developing their own teaching practice, these resources are also considered as ways of understanding learning in students and the teaching-learning processes. The question of the link between the theory and practice of teaching was mentioned by participants as an important aspect of the training. However, their testimonials show that, too often, these theoretical concepts are insufficiently illustrated with practical examples of teaching practice, which, according to them, would help to give a better understanding of the theoretical concepts and improve their operational use in the field. The interviews and observations provide complementary elements. The scientific literature associated with the MOOC is infrequently or not used, either in individual self-study within the MOOC or in the related workshops. Making the structuring theoretical and scientific concepts more visible and showing how they can operate in the practice of teaching using practical examples or illustrations is an avenue to be explored.

Finally, participants assess the content differently depending on their profile (expert, beginner), professional situation, discipline or audience. So, can the MOOC be considered more or less suited to certain categories? Opinions differ on this subject; educational experts judge it more suited to beginners, beginners consider it targeted more towards experienced

teachers and some teachers or educational engineers deem it more suited to educational advisors than teachers. While some are impressed by its contributions, others can criticise its summary, even simplistic, nature. The demand for greater detail, or even more complexity, is a minority trend, but is nonetheless present in the comments. Depending on their discipline and professional situation, some teachers do not recognise themselves in the resources presented.

10. Conclusion

The survey can be used to establish a nuanced picture useful for the design and evaluation of the MOOC *Se former pour enseigner dans le supérieur*, but more generally for MOOCs related to the national FUN platform on which it is hosted. Incorporating the evaluation into the design means taking into account the limitations of the opportunities to analyse the platform's activity and devising systems that allow the collection of quantitative and qualitative data on the profiles and training pathways. Furthermore, data collection using questionnaires integrated into the MOOC can only be used to reach some of the relevant population; those subscribers who persevere with the training and respond to the questionnaires [11]. For this population, it clearly seems that the MOOC satisfies one or more needs and provides valued resources that are considered useful (fig. 5). On the other hand, the survey shows a certain number of difficulties, dissatisfactions and limits, which lead to a specific focus on certain watch points that include time management for individual training within a mass training system, the choice of resources and the content according to the specific features of the targeted audience. Distinctive features, in terms of the profiles highlighted in this survey, raise questions, particularly about the paradoxes generated by this hybrid system targeting several audiences simultaneously (research professors, higher education teachers, PhD students, etc.) and about the limits and rules set out by the diversity of the learners' individual pathways (professional experiences, seniority), their familiarity with the MOOC system, their availability, expectations and motivations. As we have seen,

these features sometimes stumble over certain initial design choices, focused on a professional development perspective for higher education teachers and based on several reflective and collaborative activities, even if the different procedures offered by a hybrid and open system make potential adjustments possible during the training.

In any case, they open up the opportunities to develop this MOOC to be better adapted to the level of educational expertise and the disciplines taught. This then provides a better response to the specific professional situations of the audiences actually affected, but also makes the collective aspect of the training in this MOOC a real asset. With the development of associated communities of practice and the now institutionalised validation of teacher training for research professors in France, 29 French higher education institutions have included this MOOC as a training resource for the 2018/2019 session (which began in November 2018), asking for the creation of groups specific to their teachers, so that they can monitor their learning pathways. Future research will have to study the training dynamics generated by these hybridisations.

Notes

1）According to sources from the French Ministry of National Education (Repères et références statistiques, 2015), 91,700 individuals taught in higher education in 2014-2015. Most were statutory research professors. University professors and lecturers made up 65% of the workforce, with 23% and 42% respectively. Secondary school teachers seconded to higher education and readers and foreign language teachers accounted for 15.3% of the workforce and temporary teaching and research assistants (ATER) and contractual PhD students 14.6%. From 1992 to 2015, the entire teaching personnel in higher education rose by nearly 70%. During this period, the number of professors increased by 39%, that of associate professors by 75% and the number of secondary school teachers grew by 56%. The number of ATER, instructors and contractual PhD students more than doubled. This observation is not specific to France. Internationally, part-time teaching jobs are being developed in increasingly private universities and the conditions

for an academic career are deteriorating (Altbach and Knight 2007).

2) While in other countries, "tenure" is reached after a probationary period of several years ("tenure track") during which effectiveness in research and teaching as assistant professors must be demonstrated (Collet-Sassere, Bigaut, Paquis, and Verhaeghe 2015: 5-6).

3) *Le Monde*, 3 May 1967, p. 9, quoted by Ardoino (1971, p.314).

4) See the press release from the Yerevan Ministerial Conference. (https://www.ehea.info/media.ehea.info/file/2015_Yerevan/70/7/YerevanC ommuniqueFinal_613707.pdf, 2019.7.18).

5) Decree 2017-854 of 9 May 2017 amending modified decree no. 84-431 of 6 June 1984 establishing the common statutory provisions applicable to research professors and covering the special status of university teaching and lecturing staff. Decree of 8 February 2018 establishing the national framework for training designed to enhance the teaching skills of trainee lecturers.

6) Teaching and digital mission for higher education, Training strategy and student life service within DGESIP.

7) "France université numérique" (FUN) is the French national platform to promote the use of massive open online courses (MOOCs). FUN is on line since 2013.

8) Remember, according to the *#dataESR* site of open data from the ministry, the total population of higher education teachers (both tenured and non-tenured: university professors, lecturers, secondary school teachers assigned to higher education, PhD students with teaching responsibilities, temporary teaching and research assistants) is 90,000 individuals in France (available at: (https://data.esr.gouv.fr/FR/T895/P567/tableau_des_enseignants_de_l_ens eignement_superieur_public_niveau_national_-_ressources_humaines, 2019.7.18).

9) (https://data.esr.gouv.fr/FR/T895/P567/tableau_des_enseignants_de_l_en seignement_superieur_public_niveau_national_-_ressources_humaines, 2019.7.18)).

10) *NB*: this proportion complies with their positioning in French higher education compared with the other disciplines taught (see link *above* to the *#dataESR* site).

11) On this point, this MOOC is no exception to the uses currently seen by other surveys of the same type.

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フランスにおける教授能力の形成
−その制度と方法−

ナタリー・ユネス

────＜要　旨＞──────────────────────

　本論文では、フランスの大学教員に対する教授能力形成のための研修の導入の背景や実施状況を明らかにする。

　2017 年 5 月 9 日付け政令により、フランスでは採用後 1 年以内の准教授に対して、教授能力形成のための研修を受講することが義務化された。受講に際しては、担当の授業時間を若干軽減する措置がとられている。

　フランスの大学では、教員の採用・昇格等にあたって伝統的に研究能力が重視されてきた。近年学生数が増加し多様な学生が入学する状況の中で、教育の重要性も次第に認識されるようになっている。いわば新たな時代を迎えようとしている。

　研修の実施にあたっては、大学教員の労働環境や大学のリソースを考慮しそれに適合させることが求められる。それをいかに実現するかが課題である。高等教育・研究省は、この課題にこたえるべく、全国レベルでは MOOC による研修プログラムの開発、各大学レベルでは各種研修の実施を提唱している。

　本稿では、このような研修の義務化の背景や研修プログラムの目的や内容、さらには MOOC 利用者を対象に 2018 年に実施した調査の主な結果を報告する。

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