

Professional paper

Hélène Butz ⁽¹⁾

(1) King's College London,
Strand, WC2R 2LS,
London
helene.butz@kcl.ac.uk

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Corresponding author
Hélène Butz
helene.butz@kcl.ac.uk

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E-Portfolios on Bioethical Questions in a French for Medics Blended Learning Context: A Tool for Developing Students' Reflexivity and Autonomy

Abstract: *Teaching languages for medics implies giving students linguistic tools to facilitate transposing their existing medical knowledge into another language. It also presupposes considering two caveats. Firstly, the timetable of medical students is dictated by clinical placements, thus limiting the amount of available time for them to spend in a language class. This prompts a key question: what would be the best way to offer students a full subject-specific language module under these circumstances? Secondly, becoming a doctor entails not only mastering knowledge and skills but also developing sound ethical principles. Can ethical reflection be meaningfully integrated into language learning? This paper presents a methodology that addresses both challenges using E-Portfolios (EP). The methodology was developed during the teaching of a Blended Learning French for Medics Stage 5 module, equivalent to level B2 of the Common European Framework of Reference for Languages (CEFRL), in which students were invited to complete an E-Portfolio on bioethical questions. A qualitative, retrospective analysis reveals how this approach fostered student motivation, autonomy, professional awareness, and employability. The module also demonstrated how online interactions between students and with the tutor enhanced assessment practices and gave the course renewed relevance. Finally, the paper offers a practical application for teachers and learners by outlining the chosen paradigm step by step, with illustrative examples.*

Key words: *E-Portfolios, Bioethics, Blended learning, French for Medics, Reflexivity, Learner autonomy*

1. Introduction

“Science without conscience is but the ruin of the soul”

More than being able to do their job in French, that is, to translate their skills and medical knowledge into a French-speaking setting, medical students learning French for professional purposes also need to conduct reflection. The timeless quote from Rabelais (1532) above brings together the theme of science with the theme of teaching and learning and is not only a philosophical warning against using science in a non-ethical way. Indeed, the website laphilosophie.com suggests that knowledge - or science - without reflection - or conscience - does not allow progression in learning. Antoine Compagnon (2012) further analyses this quote and links it with Montaigne’s vision of learning as transforming knowledge into the ability for judgement.

Even though this paper analyses E-Portfolios (EP) integrated in an interactive, dynamic learning environment inspired by socio-constructivist theories, this 16th-century quote remains particularly relevant, as the learners in question are future doctors. The quote links scientific skills and moral values and therefore directly applies to bioethics: moral issues raised by scientific research and breakthroughs. Furthermore, for Compagnon (2012) morality is the goal of every teaching.

So how can EP be an agent of this process? How can EP facilitate transforming knowledge into the ability for judgement, while also allowing medical students to learn to transpose their medical knowledge into French-speaking professional contexts? As importantly, how can medical students, whose available time to study a language module is dictated by their clinical placement, follow a full module?

This paper proposes answers by retrospectively and qualitatively analysing the work accomplished by Stage 5 French for Medics students. The scope and quality of work they produced on their EP and their engagement in it surpassed expectations and prompted a retrospective analysis of the mechanisms at play. This includes examining how EPs were implemented within a blended learning (BL) setting, how choosing a bioethical angle for the EP served as a motivational and vocational factor, and how this methodological approach helped maximise students’ critical thinking and offered opportunities for self-directed learning.

This approach aligns with Vygotskian socio-cultural theory, which emphasises the role of social interaction and cultural tools in cognitive development. It also resonates with Deci and Ryan’s self-determination theory, which highlights the importance of autonomy and intrinsic motivation in

learning. Furthermore, Littlewood's distinction between reactive and proactive autonomy offers a useful lens through which to interpret students' evolving engagement with the EP tasks.

2. Background

2.1. EP in a BL context

2.1.1. Course structure

This paper refers to the teaching of a French for medics stage 5 (B2) course, which evolved from a two-semester face-to-face module to a one-semester hybrid module two years previously. This change was made to accommodate medical students whose clinical placement prevents them from attending a two-semester course. The course, bearing 15 credits, is organised into a 3-hour face-to-face class and a 1-hour online component over 10 weeks, validated by a final written and oral examination. An EP was introduced to compensate for the absence of a second face-to-face semester.

2.1.2. Definition of the EP

An EP is a dynamic and evolving collection of student work in various formats, gathered in a digital, open, and interactive environment. This aligns with socio-constructivist theories of learning, which emphasize that learning occurs through interactions. There are several types of EPs; this paper focuses on a learning EP aimed at gaining knowledge and skills in a higher education setting. (MINES – DGESIP, 2013, p. 8). The EP also functions as a mediating tool, consistent with Vygotskian socio-cultural theory, which views learning as a socially situated process supported by structured tasks and peer engagement.

2.1.3. Initial aims of the EP

The EP was introduced to generate the equivalent degree of practice and reflection over several skills that an additional semester would have facilitated. It was designed around bioethical questions, guiding students to choose, discuss, and answer the question through a series of progressively reflective tasks. This approach supports both reactive and proactive autonomy (Littlewood, 1999), allowing students to follow structured guidance while also contributing to the design and direction of their own learning.

Inviting students to write an EP during the 1-hour online component enabled them to complete the 40-hour intensive module in one semester, maintaining sustained contact and continuous engagement throughout the week and semester, not only during class time.

To support students' writing process, a series of online writing tasks was set up, ensuring distance follow-up, formative assessment, and guidance through feedback from the tutor and fellow students. This established a "sharing community" on a socio-affective level (Boucher, Lameul, Pentecouteau, 2017). The tasks completed online were also further discussed in class, which encouraged task completion and built an atmosphere of respect and collaboration.

Although compulsory, the EP was not part of the final assessment. The web application Mahara, integrated into the Virtual Learning Environment, was used, allowing students direct access via Moodle to write their portfolio.

2.2. BL methodology

Practically, this meant alternating between two teaching and learning modes: an in-class programme based on weekly topics, practical skills, and grammar, articulated with an online set of tasks. Borrowing Nissen's (2016) terminology, the online component complements the dominant in-class programme. However, there are various degrees of interplay between the two modes. In this course, the online EP work in progress was integrated into classroom discussion activities, enhancing the reflective quality of in-class discussion on other topics. Both modes are interrelated, providing flexibility in the course structure. The online component, because of its key role in generating discussion and increasing critical reflection, could become the backbone of the course and be used as a lever for flipped classroom activities. Alternatively, the content of the dominant mode could be fully delivered online.

2.3. Interconnection between 2 structures

According to Soubrié (2005), it is the tension and the interconnection between a vertical structure, where the teacher has a strong role in the choice, creation, and use of content, and a horizontal structure, where the students are responsible for the choice, use, and creation of content, that fosters students' autonomy. The balance between freedom and guidance is crucial. The architecture of the course is adaptable and can be altered to find an optimal balance between these elements. This dual structure supports the development of autonomy as defined in both socio-

constructivist and self-determination frameworks (Deci & Ryan, 1985), where autonomy is not only about independence but also about meaningful engagement and ownership of learning.

3. Method

3.1. Choice of bioethical question

Students were given the freedom to choose the topic of their EP, which helped them make the course their own. To enhance the syllabus and to provide “guided freedom” (Linard, 2001), an initial list was created, covering a wide range of ethically sensitive medical themes such as genetic ethics, assisted reproduction, pregnancy and childbirth, paediatric and adolescent health, end-of-life issues, organ transplantation, pain management, animal experimentation, and ethical dilemmas in medical research. The list was inspired by a selection from Jean-Marie Mantz’s *L’éthique médicale en questions: 100 situations d’actualité* (2013) and updated annually to reflect current debates and student interests.

Among the available topics, the most frequently chosen were: “*Le don de sperme doit-il être anonyme ?*” (Should sperm donation be anonymous?), “*Quels sont les problèmes éthiques posés par les embryons congelés ?*” (What ethical issues are raised by frozen embryos?), “*Gestation pour autrui : pour ou contre ?*” (Surrogacy: for or against?), “*Faut-il supprimer l’accouchement sous X ?*” (Should anonymous childbirth be abolished?), “*Mutilations sexuelles féminines : que faut-il faire ?*” (Female genital mutilation: what should be done?), “*Faut-il légaliser le cannabis ?*” (Should cannabis be legalised?), “*Don d’organes : le recours aux donneurs vivants est-il éthique ?*” (Organ donation: is using living donors ethical?), “*L’expérimentation animale est-elle nécessaire ?*” (Is animal experimentation necessary?), and “*Perturbateurs endocriniens : quels problèmes éthiques ?*” (Endocrine disruptors: what ethical issues do they raise?).

Many students selected questions either because they had not considered the issue before, because it reflected a culturally different perspective on medicine, or because it connected with something they were already interested in.

These topics were chosen for their relevance to current medical debates and their potential to prompt reflection. Choosing a question that felt meaningful supported autonomy and encouraged deeper engagement with the ethical dimensions of medicine.

3.2. Collaborative design of the list of bioethical questions

This list was updated annually based on student suggestions, ensuring it reflected current interests and professional needs. For example, the ethical implications of medical mistakes and the use of artificial intelligence in diagnosis were proposed and later added.

Examples of student-suggested questions include: "*L'intelligence artificielle dans le diagnostic médical*" (Artificial intelligence in medical diagnosis) and "*Les erreurs médicales: comment les traiter éthiquement?*" (Medical mistakes: how should they be ethically addressed?).

These contributions were discussed in class and incorporated into the evolving list. This collaborative process encouraged students to take part in shaping the course content. Their suggestions were acknowledged and valued, which helped strengthen engagement and made the list more relevant to their future professional roles.

3.3. EP writing guidance

The rhythm imposed by the in-class and academic calendar, with one task per week, allowed for a sequencing and a breakdown of the main aim: critically assessing a bioethical issue.

With weekly task instructions, feedback, and feedforward, students were guided to select and compile resources, organise their work, structure their thoughts, and question several angles; moving gradually from description to argumentation and then to critical reflection. This progression was supported by a structured sequence of tasks.

Students began by selecting a topic from a list of bioethical questions and explaining their choice. This first task invited participation through personal motivation, reflecting professional outlooks such as forging an opinion on controversial topics and gaining knowledge on unknown subjects.

They then defined the key terms and concepts related to their topic, gathering the linguistic tools needed for searching and extracting information, and promoting responsibility in their learning.

Next, they explored why the topic raises issues in the medical world. This encouraged them to identify the medical problem behind the ethical question, fostering critical judgement. At this stage, feedback focused on rephrasing and clarification to support students' appropriation of the topic.

Students then provided an overview of the current situation, including the consensus, its rationale, and key researchers in the field. This task aimed to promote discovery and excitement. By confronting themselves with a variety of documents, students began to form an opinion. According to Albéro (2000), looking for, finding, and managing relevant information are activities at the root of “informational autonomy.” Students initially preferred finding their own sources, but links provided in comments were later explored.

They were then invited to give their opinion and recommendations, voicing an educated stance on the issue.

This was followed by peer review, where students read and commented on the portfolios of three classmates, asking questions about their topic and work. This encouraged them to engage with a wider range of ethical issues and to enter into dialogue and negotiation—what Albéro (2000) calls “social autonomy.” Formative dialogue and feedback from peers and the tutor motivated students to fulfil their responsibilities.

They then consulted three additional portfolios and reflected on whether they agreed with the arguments presented. This task reactivated the skills developed through the writing process, such as seeing both sides of an argument, developing critical thinking, and forming opinions about other topics. Students were very engaged at this stage, partly because failure to complete the task would hinder another student’s progress.

In the next phase, students explored portfolios they had not yet read and identified other bioethical questions of interest. This task was key to the collaborative design of the list of questions and to student engagement. It encouraged them to explore additional topics, fostering a broader understanding and interest in bioethical issues.

Finally, students concluded their work with a quote. This final task invited them to cast a last look at their EP and offer further reflections. Most students tended to make comparisons and projections rather than quoting directly. This task could also serve as an opportunity for students to advertise their chosen topic to future cohorts, enhancing the collaborative and reflective nature of the EP.

This sequence supported both linguistic development and ethical reflection, while promoting autonomy through structured progression. The use of peer review and formative feedback created a learning environment where students could reflect, revise, and deepen their understanding. This

structure also allowed for the development of metacognitive skills, as students became more aware of how they learn and how they construct knowledge.

4. Results

4.1. Professional outlook

During the process of collecting consent to use EPs and evaluations for a presentation, one student requested to include their EP work in their professional medical portfolio. The skills they demonstrated were extracted and highlighted, showing how the EP supported professional development. These skills included presenting and analysing a complex situation, suggesting solutions and developments, and supporting and encouraging collaborative work.

One extract from the student's professional medical portfolio reads:

"I became autonomous in searching, finding, analysing complex information, presenting, and suggesting solutions." [...] "I impacted positively on teamwork, highlighting issues and suggesting potential developments."

This example illustrates how the EP contributed to the development of transferable skills relevant to medical practice.

4.2. Pedagogical outcomes

A short survey was conducted at the end of the module to gather student feedback. Students reported that the weekly step-by-step instructions allowed them to complete the overall task easily. Their responses were grouped thematically to identify key pedagogical outcomes linked to the integration of EPs on bioethical questions. This thematic grouping was based on recurring ideas and expressions across the cohort, allowing for a qualitative interpretation of student experience.

Students highlighted how the EP enhanced the curriculum by introducing new perspectives:

"Gain knowledge on an unknown topic."

"Be up to date with current polemics."

"Expand my knowledge on something I had never heard about (e.g., endocrine disruptors)."

"A lot of newspapers do not discuss the controversies."

They also valued the opportunity to compare and contrast perspectives and sources:

“Look at how the French perspective was different to that of the English.”

“There was a lot of information on my topic and I had to select the most relevant.”

“I enjoyed looking at both sides of the controversy on anonymous childbirth.”

Several students reflected on how the EP helped them approach complex medical questions professionally:

“Being able to inform peers and patients.”

“Having the tools to decide in front of a dilemma.”

“This equipped me with the skills of making medical decisions and weighing up the arguments in ethical scenarios.”

Others emphasised the development of vocational reflexivity:

“Reflect on moral values.”

“Forge an opinion on a controversial topic.”

Students also reported becoming more independent learners:

“I can see what I learn and through which progression.”

“I see my progress using more vocabulary, how to use it.”

Finally, they noted how the EP helped them translate both scientific skills and reflective thinking into French:

“Easy to answer the final questions from other students as we could provide in-depth and specific answers.”

Most students saw the EP as evidence of their learning and reported that the most positive point of working on their EP was the opportunity to observe their progress week by week, as their language improved and they became more confident using new vocabulary. Several students noticed gaining ease at selecting relevant information among a wide range of resources. Other students reported being able to gain independence of thought because many medical ethical controversies are not discussed in mainstream articles.

As Poteaux (2015) notes, EP writing facilitates self-directed learning. Students produce new knowledge independently, act as agents of their own learning, and play a full role in its creation. This generates metacognitive awareness : knowledge about how they learn.

5. Conclusion

This paper presented a methodology integrating EP in a BL context tailored to the specific needs of medical students learning French. The direct application of this methodology was designed to promote reflexivity while enabling students to successfully translate their scientific knowledge into French, all while accommodating their clinical placement schedules and enhancing their professional outlook and employability. The approach yielded additional positive outcomes in terms of interaction and assessment opportunities, demonstrating that it can be adapted to other blended teaching and learning contexts. One of the key gains is the path to autonomy, both for learners and teachers.

Linard (2001) discusses mapping a territory where students can navigate freely within a structured universe, which precludes complete prescription while allowing for guided freedom. This raises important questions: What degree of guidance should be adopted? How much freedom should be left to the students?

Exploring the balance between freedom and direction creates a space for autonomy, not only for students, but also for educators. Indeed, Poteaux (2015) establishes a correlation between students' autonomy and teachers' autonomy, and the same can be said about reflexivity. This opens up further questions for teaching methods and the degree of guidance required.

The guidance provided to students was manageable for a group of 15 but would need to be adapted for larger groups. For example, additional sub-questions could be added to each step of the tasks; a self-correction checklist could be distributed. Providing guidance on using Artificial Intelligence as a tool for reflexivity rather than an answer generator would also be required. Maximising peer interaction and exchanges online, or setting up EP writing as a collaborative task, could serve as a springboard for further reflection and deeper insight.

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