**ALTRALANG Journal**
e-ISSN: 2710-8619 p-ISSN: 2710-7922
**Volume 8 Issue 1 / June 2026 pp. 184-198**

# Lecturers at the Crossroads of Englishisation: Perceptions of Flipped Learning and Open edX for EMI Preparation in Algeria

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**Received:** 26/02/2026, **Accepted:** 17/05/2026, **Published:** 05/06/2026

**ABSTRACT:** *The rapid expansion of English as a Medium of Instruction in Algerian higher education has intensified the need for coherent and sustainable teacher support. This study investigates university lecturers' perceptions of using a flipped learning approach to integrate Open edX based General English courses with face-to-face language centre provision for EMI preparation. Adopting an exploratory quantitative design, data were collected through a structured questionnaire administered to 47 EMI lecturers across three departments at Setif 01 and Setif 02 universities. Descriptive statistical analysis indicates strong overall support for flipped learning, with a large majority perceiving it as beneficial for teaching effectiveness and professional development. However, participation in Open edX was uneven, and substantial proportions of respondents expressed uncertainty about the alignment between online content and the communicative demands of EMI classroom practice. Findings suggest that lecturers value interactive, practice-oriented support and do not regard online provision alone as sufficient. The study argues that flipped learning can serve as an alignment framework in which online input is deliberately connected to guided rehearsal of authentic EMI teaching tasks. It concludes that sustainable EMI implementation depends less on the availability of digital courses and more on institutional coherence, differentiated pathways, and performance focused professional development that supports transfer from online study to classroom practice.*

**KEYWORDS:** Algeria HE, Englishisation, lecturer perceptions, flipped learning, Open edX, EMI preparation.

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## Introduction

The expansion of EMI has become a central feature of higher education reform across many non-Anglophone contexts (Rouaghe, Idri, & Assassi, 2025). In Algeria, recent policy shifts towards Englishisation have required lecturers who were trained and have long taught in Arabic or French to deliver disciplinary content in English (Rouaghe, Assassi, & Rahnama, 2025). While this transition is often framed as a strategic move towards internationalisation and global academic participation, it also places considerable linguistic and pedagogic demands on lecturers. EMI teaching requires not only adequate general proficiency, but also the ability to explain complex concepts, manage interaction, respond to questions, and scaffold comprehension in a second language. In response, universities have introduced English support through language centre courses and online provision delivered via platforms such as Open edX. However, research on blended professional development suggests that access to online input does not automatically translate into improved workplace performance. When online modules operate separately from local training, lecturers may experience fragmented learning and struggle to connect general language study with the communicative realities of EMI classrooms. Flipped learning offers a possible solution to this problem of misalignment. By allocating online study to structured input and reserving face to face time for guided practice and feedback, a flipped model can potentially bridge the gap between theory and performance. The present study therefore examines lecturers' perceptions of flipped learning as a strategy for integrating Open edX based English training with language centre support. It seeks to clarify whether such an approach is viewed as feasible, useful, and capable of strengthening EMI implementation in the Algerian university context.

## 1. Flipped Learning: A Pedagogical Model for EMI

Flipped learning, a pedagogical model in which traditional lecture content is delivered outside of class via online resources, allows class time to be used for active learning, discussion, and application of knowledge (Bergmann & Sams, 2012; Abeysekera & Dawson, 2015). This model emphasizes student-centred learning and active engagement, which can enhance student comprehension, interaction, and critical thinking skills (Sams & Bergmann, 2012). In the context of EMI, flipped learning offers a solution to some of the challenges posed by teaching in a second language. By allowing students to engage with content at their own pace before class, flipped learning gives them the opportunity to familiarize themselves with complex academic vocabulary and concepts in English, thus making them better prepared for interactive class activities (Kachka, 2012).

The flipped learning model has been shown to enhance students' learning outcomes in various academic disciplines, including language education. Research has demonstrated that when students engage with online content before class, face-to-face time can be more effectively utilized for interactive tasks, such as discussions, problem-solving, and practice of language skills (Pettis, 2014). For EMI, this is particularly important, as it allows lecturers to use class time for essential language skills practice, such as explaining concepts, managing classroom interactions, and reinforcing comprehension—all of which are critical for successful EMI teaching (Kyukin et al., 2014).

Flipped learning can address these challenges by providing lecturers with structured language input outside the classroom, allowing them to focus face-to-face time on language application and teaching practice. This model enables teachers to better manage EMI teaching tasks by preparing them for real classroom interactions (Yang & Chano, 2025). Yet, for flipped learning to be truly effective in the Algerian EMI context, there needs to be a clearer connection between the online content provided and the practical classroom tasks expected of lecturers (Le & Ho, 2025). This suggests that while the flipped model is seen as beneficial, its success depends on ensuring that online learning directly feeds into the classroom practice required for effective EMI delivery.

## 2. Challenges and Opportunities in Implementing Flipped Learning for EMI

One of the central challenges in implementing flipped learning for EMI is the misalignment between online content and in-class activities. While platforms like Open edX offer valuable general English training, they often fail to address the specific language and pedagogical needs of EMI teaching, such as academic discourse and classroom interaction in English (Jerin & Smitha, 2025). Furthermore, many lecturers in Algeria are unfamiliar with flipped learning and face resistance to adopting this pedagogical model, often due to time constraints, lack of technological infrastructure, or a preference for traditional teaching methods (Soylu, 2025).

Despite these challenges, flipped learning presents significant opportunities for enhancing EMI teaching. When designed effectively, flipped learning can bridge the gap between online content and classroom practice by focusing pre-class time on theoretical knowledge and in-class time on practical language use. This model not only enhances language skills but also fosters a more interactive and engaging classroom environment (Le & Ho, 2025). Moreover, flipped learning allows lecturers to better support diverse student needs, enabling more personalized learning and providing students with the flexibility to engage with content at their own pace (Wagner, 2020).

In the Algerian context, flipped learning offers an ideal solution to the challenges of EMI implementation by enabling teachers to combine the advantages of digital learning with the interactivity and engagement of face-to-face instruction. However, for this approach to succeed, institutions must ensure that online content is closely aligned with the specific language and pedagogical needs of EMI classrooms, and that teachers are adequately trained and supported in using flipped learning effectively (Soylu, 2025; Nguyen et al., 2025).

## 3. Open Edx Platform

Open edX is an open-source learning management and MOOC platform that enables institutions to design, host, and deliver online courses (e.g., videos, readings, quizzes, and discussion activities) to large numbers of learners, and to track participation and progress. (Source: Open edX site content)

In this study, Open edX functions as the pre-class input space (General English modules), which can be pedagogically aligned with in-class practice through a flipped-learning model.

## 4. English as a Medium of Instruction and the Question of Teacher Readiness

Across many higher education systems, English as a Medium of Instruction has expanded quickly as part of internationalisation agendas and labour market pressures. While this shift can widen access to global knowledge and publication networks, it also places new linguistic and pedagogic demands on lecturers who were trained and have taught for years in other languages. Recent evidence from EMI professional development research shows that lecturers often experience a double challenge: developing sufficient English for classroom interaction while also redesigning teaching practices for student engagement and comprehension in English (Deniz et al., 2025). In Algeria, this challenge has become particularly visible following the 2022 move towards Englishisation in parts of higher education, where early reports point to uneven readiness and a strong need for coherent support for lecturers expected to teach disciplinary content through English (Bellal, 2025).

## 5. Digital English support and the problem of misalignment

To respond to the policy shift, universities increasingly rely on digital provision alongside local language centre training. One widely adopted approach is to enrol lecturers on online English courses delivered through learning platforms that can scale quickly, track participation, and provide structured sequences of input and practice tasks. Open edX is one such platform: an open-source course delivery system originally associated with large scale online courses and now used by higher education institutions and public organisations for flexible training programmes (Open edX, n.d.). However, research on blended models that integrate online courses into campus teaching repeatedly highlights a key risk: when online materials

are not aligned with local teaching aims, learners may complete modules without developing the specific competencies required for their real academic or professional tasks (Jerin & Smitha, 2025; Le & Ho, 2025). In other words, access to online input alone does not guarantee transfer to workplace performance, particularly when the target performance involves authentic classroom interaction, explanation, questioning, and managing student participation in English.

This concern is central to the Algerian EMI context addressed in the present study. Lecturers are required to attend English courses at university language centres while also enrolling in General English courses delivered online through an Open edX environment. Yet lecturers often perceive little connection between what is covered online and what they practise in face-to-face sessions, leading to fragmented learning experiences and limited opportunities to convert online input into EMI teaching competence. This type of theory practice gap is consistent with broader findings in the literature on digital professional learning, where success depends less on the presence of technology and more on instructional coherence and purposeful integration (Nguyen et al., 2025).

## 6. Flipped Learning as an Alignment Strategy for EMI Preparation

Flipped learning offers a practical way to address misalignment because it is built around a deliberate division of labour between settings. In a flipped design, online study time is used for input and initial comprehension, while classroom time is reserved for guided practice, feedback, and active use of knowledge (Soylu, 2025). Recent reviews in language education and higher education report that flipped approaches can improve engagement and performance when learners complete structured pre class preparation and then use face to face time for interaction and task-based application (Yang & Chano, 2025). Importantly for EMI teacher development, flipped learning can be designed so that online modules provide targeted language input and models of academic discourse, while in person sessions focus on rehearsal of real EMI tasks such as explaining concepts, signalling structure, responding to questions, and supporting comprehension. Studies that integrate online course content with classroom mentoring also suggest that perceived value increases when participants see a clear link between what they do online and what they are asked to perform in class (Le & Ho, 2025; Nguyen et al., 2025).

## 7. Purpose of the Study and its Contribution

Building on this rationale, the present study explores university lecturers' perceptions of using a flipped learning approach to integrate Open edX based General English training with face-to-face language centre support for EMI. By focusing on alignment, the study contributes to current debates on how EMI professional development can move beyond general language provision towards coherent pathways that connect online input to classroom performance (Deniz et al., 2025). Specifically, it examines whether lecturers view a flipped model as a feasible and useful mechanism for ensuring that Open edX learning feeds directly into practice opportunities that mirror the communicative demands of EMI teaching in Algerian higher education (Bellal, 2025; Open edX, n.d.). The study is guided by research questions that address lecturers' perceptions of flipped learning for EMI support, their evaluations of current online and face to face provision, and their readiness to implement an integrated model.

## 8. Research Gap

Recent work on EMI in higher education shows that lecturers often need sustained language and pedagogy support when they shift from teaching in other languages to teaching through English (Deniz et al., 2025). In Algeria, early evidence suggests that readiness for Englishisation is uneven, and that lecturers' support needs remain substantial during EMI implementation (Bellal, 2025). Recent scholarship also highlights the intersection between EMI and English for Academic Purposes (EAP), showing that EMI support needs to address academic literacy, disciplinary communication, and classroom discourse across both Global North and Global South higher education contexts (Rouaghe et al., 2026). At the same time, universities

increasingly use scalable online provision through platforms such as Open edX, which is designed to deliver structured online courses and track learner participation (Open edX, n.d.). Research on MOOCs and blended professional learning also indicates that perceived value depends strongly on purposeful integration and clear links between online input and local practice (Le & Ho, 2025; Nguyen et al., 2025).

However, three gaps remain clear in the literature:

**a. Alignment gap:** Studies often discuss online courses or face to face support separately, with limited empirical focus on the specific problem of misalignment between what teachers study online and what they practise in local training for EMI teaching tasks (Le & Ho, 2025; Nguyen et al., 2025).

**b. Design gap:** Flipped learning is widely discussed as an effective pedagogical model in language and higher education, but there is limited research on its use as a structured alignment strategy for EMI teacher support that links an online platform curriculum to practical classroom language work (Soylu, 2025; Yang & Chano, 2025).

**c. Context gap:** Evidence from Algeria on how lecturers perceive integrated support models for EMI, particularly models combining Open edX style online English learning with language centre practice, remains scarce (Bellal, 2025).

## 9. Problem Statement

In Algerian higher education, the move towards EMI has required many lecturers who previously taught in Arabic and French to teach disciplinary content in English. Universities have responded by offering English support through language centre courses and by enrolling lecturers in General English courses delivered via Open edX. Yet these two routes often operate in parallel, creating a misalignment between online content and face to face practice. When online study is not deliberately connected to the communicative demands of EMI teaching, lecturers may complete modules without developing the classroom language, interactional routines, and confidence needed for real EMI delivery. This fragmentation risks reducing the effectiveness of professional development and slowing the quality of EMI implementation. A flipped learning approach may address this problem by positioning Open edX as structured pre class input and using language centre time for guided, EMI relevant practice, feedback, and transfer to lecturers' actual teaching tasks (Open edX, n.d.; Soylu, 2025; Yang & Chano, 2025).

## 10. Research Questions

1. What are Algerian university lecturers' perceptions of EMI related professional development needs during the transition to teaching through English?
2. How do lecturers evaluate the current English support provision, specifically the perceived alignment between Open edX General English courses and university language centre training?
3. To what extent do lecturers perceive flipped learning as a feasible approach for integrating Open edX based learning with face-to-face practice for EMI teaching tasks?
4. What opportunities and challenges do lecturers anticipate when implementing an Open edX supported flipped learning model for EMI preparation?

## 11. Methodology

### 11.1. Research design

This study adopted an exploratory quantitative design in order to examine university teachers' perceptions of using flipped learning to support English as a Medium of Instruction and to explore views about Open edX as a component of that support. A quantitative approach was selected because it enables the collection of standardised, comparable responses from a group of participants and supports the use of descriptive statistical techniques to summarise trends across variables (Gay et al., 2009;

Creswell, 2012, 2013). In line with the aim of capturing a broad picture of teachers' experiences and attitudes, the study used a structured questionnaire as the principal data collection instrument, as indicated in the manuscript methodology section.

**11.2. Research setting**

The study was conducted at Setif 01 and Setif 02 universities, namely Farhat Abbas University and Mohamed Lamine Debaghine University, during the academic year 2023 to 2024. These institutions represent an important context for examining the practical realities of EMI implementation because teachers from different departments have been required to transition towards teaching disciplinary content through English, while also engaging in language support provision delivered through university language centres and online courses hosted via Open edX.

**11.3. Population and sampling**

The target population comprised 85 EMI teachers from the departments of Natural and Life Sciences, Economic Sciences, and French Language and Literature across Setif 01 and Setif 02 universities. Given the manageable size of this population and access constraints, the study employed a convenience purposive sampling strategy, selecting teachers who were available and willing to participate. The final sample consisted of 47 EMI teachers. In the manuscript, the sample is described as sufficient to provide a meaningful snapshot of teacher perceptions within these departments. To improve methodological precision for publication, it is more appropriate to describe the sample as adequate for descriptive analysis of perceptions within the study setting, rather than using qualitative concepts such as data saturation.

**11.4. Instrumentation**

Data were gathered through a structured questionnaire designed to obtain detailed information about teachers' backgrounds, professional experiences, and perceptions of flipped learning and Open edX. The questionnaire was organised into four sections, reflecting the focus of the study:

a. **Background information**: items addressing demographic and academic characteristics such as age, gender, and qualifications.

b. **Teaching experience and specialisation**: items concerning teachers' disciplinary areas, modules taught, and self-assessed English proficiency.

c. **Preparedness for implementing flipped learning strategies**: items examining familiarity with flipped learning, enrolment in Open edX courses, and perceived effectiveness of flipped learning as a support strategy for EMI.

d. **Usefulness of Open edX platform**: items focusing on teachers' evaluations of Open edX and its perceived role in supporting flipped learning and EMI teaching.

The questionnaire included closed ended items and Likert scale statements, as well as one open ended question to allow participants to add brief comments beyond the fixed response options. In the manuscript, there is a minor inconsistency about the total number of questions, with one section referring to 33 questions, while the reliability table reports 31 items. For clarity in the revised manuscript, this can be expressed as follows: the questionnaire comprised background and factual items alongside 31 scaled perception statements used for reliability analysis, with additional items bringing the overall total to 33.

**11.5. Data collection procedure**

To maximise participation and accommodate teachers' availability, the questionnaire was distributed using two complementary modes. First, paper copies were distributed in person to teachers in the Natural and Life Sciences department, allowing the researchers to explain the purpose of the study and clarify any questions about the instrument. Second, an electronic version was shared with teachers in Economic Sciences and French Language and Literature using email and Google Forms. This blended distribution

strategy was intended to increase reach across departments and reduce non response caused by timetable constraints or limited opportunities for in person contact.

To ensure consistency, participants received brief information about the aims of the study and were asked to respond independently. The questionnaire items were presented in a clear sequence aligned with the four sections listed above, moving from background information to professional experience, then to perceptions of flipped learning and Open edX. After collection, completed paper questionnaires were compiled, and electronic responses were exported for analysis alongside the paper-based data.

### 11.6. Ethical considerations

Ethical safeguards were applied throughout the study. The manuscript indicates that the researchers obtained permission from relevant authorities, informed participants about the study objectives, ensured that participation was voluntary, and maintained confidentiality and anonymity of responses. For publication, this section can be expanded slightly to state that no identifying information was reported, data were stored securely, and participants could decline or withdraw without penalty. Where applicable, the manuscript should also clarify whether formal institutional ethical approval was required and obtained, depending on university policy.

## 12. Data Handling and Analysis

Following data collection, responses were entered into SPSS and Microsoft Excel for quantitative analysis. Data preparation involved coding responses, checking datasets for completeness, and verifying accuracy before generating statistical outputs. Because the purpose of the study was to describe perceptions and identify overall trends, descriptive statistics were used as the main analytic approach, including frequencies, percentages, means, and standard deviations.

In the manuscript results section, descriptive statistics are presented across questionnaire items for the 47 respondents, demonstrating that the sample size remained constant across items and allowing direct comparison of response distributions. For publication readiness, the revised methodology should state explicitly that descriptive statistics were used to answer the research questions by summarising teachers' agreement levels and central tendency across the constructs of interest, namely perceived usefulness of flipped learning, perceived suitability of training content for EMI, perceived preparedness to implement flipped strategies, and perceived usefulness of Open edX.

The manuscript also notes that inferential statistics may be employed to explore relationships and test hypotheses. To maintain full alignment between methodology and reported findings, the revised manuscript should specify only the analyses actually conducted. If correlation analysis is retained, it should be reported as an exploratory check of associations between selected items. However, it is advisable to strengthen this part by either explaining the rationale for the selected correlation or focusing on internal consistency and descriptive reporting as the core analytic strategy.

| | | **Q1** | **Q4** |
|---|---|---|---|
| **Q1** | Pearson Correlation | 1 | ,566** |
| | Sig. (bilateral) | | ,000 |
| | N | 47 | 47 |
| **Q4** | Pearson Correlation | ,566** | 1 |
| | Sig. (bilateral) | ,000 | |
| | N | 47 | 47 |

Table 1. The Correlation Is Significant at Level 0.01 (bilateral).

The statistical metric known as Pearson Correlation is used to quantify the direction and strength of a linear relationship between two variables. It shows the extent to which the answers to questions Q1 and Q4 are related in this context. The result points to a moderately positive and statistically significant association between the teachers' questionnaire questions Q1 and Q4. This conclusion can be helpful in confirming the questionnaire's framework and comprehending how various topics covered by these questions are related to one another.

| Cronbach Alpha | Questions Number |
|---|---|
| ,911 | 31 |

Table 2. Teachers' Questionnaire Reliability

Cronbach Alpha is a statistical metric that evaluates a set of questionnaire items' internal consistency. Higher values on the scale of 0 to 1 denote increased reliability. Therefore, Teachers' questionnaire's items appear to have a positive degree of internal consistency, as indicated by the Cronbach's alpha of 0.911. The teachers' questionnaire has good reliability, as evidenced by its Cronbach's alpha of 0.911. This implies that the items on the questionnaire measure the intended constructs or domains in an effective manner, giving rise to trust in the questionnaire's overall validity as well as the consistency of results.

**Background Information**

- Age Range: The majority of teachers fall within the 36-45 age range (38.3%), followed by those aged 26-35 and 46-55, each constituting 23.4%. Teachers aged 56 and above represent 14.9%.
- Gender: There is a significant gender imbalance with 66% female teachers and 34% male teachers participating in the study.
- Degree Held: A predominant 80.9% of the teachers hold doctorate degrees, 17% have master's degrees, and a small 2.1% hold magister degrees.

**Teaching Experience and Specialisation**

- Specialty: Most teachers (89.4%) specialize in biology, with smaller percentages in economics (4.3%) and French (6.4%).
- English Proficiency (Self-rated): A significant portion of teachers rate their English proficiency as good (51.1%) or very good (17%). 29.8% rate their proficiency as average, and only 2.1% consider it poor.
- English Proficiency (Placement Test): The majority fall into the B1 (36.2%) and B2 (31.9%) levels of the Common European Framework of Reference for languages, with smaller percentages at A1 (6.4%), A2 (12.8%), and C1 (12.8%).

**Preparedness for Implementing Flipped Learning Strategies**

- Enrolment in EdX Platform: 42.6% of teachers are enrolled in the EdX platform, while 57.4% are not.
- Type of English Learned: 63.8% of teachers have learned General English, and 36.2% have learned Specific (specialism) English.
- Online Resource Adequacy: 61.7% of teachers believe that online resources are sufficient to begin teaching in English, while 38.3% do not. Those who agree highlight the convenience and accessibility of online materials, while those who disagree emphasize the need for in-person courses and interactive learning.
- Support for Flipped Learning: A strong majority (87.2%) support the idea of flipped learning, indicating a high level of acceptance for this instructional approach.

**Usefulness of EdX Platform:**

- Effectiveness of Flipped Learning: 76.6% of teachers agree, and 4.3% strongly agree that flipped learning enhances their effectiveness as EMI teachers. Only 8.5% are undecided, and a small percentage disagree (8.5%) or strongly disagree (2.1%).
- Professional Development: A similar majority (76.6%) find flipped learning strategies highly beneficial for their professional development in EMI.

These findings indicate a generally positive perception of flipped learning and its potential to enhance EMI in higher education. Teachers recognize the benefits of flipped learning for their instructional practices and professional development, despite some concerns about the adequacy of online resources and the need for additional support and training. The EdX platform is seen as a valuable tool, though there is room for increasing its adoption and effectiveness.

| Questions | N | Minimum | Maximum | Mean | Standard Deviation |
|---|---|---|---|---|---|
| **Q1** | 47 | 1 | 4 | 2,30 | ,998 |
| **Q2** | 47 | 1 | 2 | 1,66 | ,479 |
| **Q3** | 47 | 1 | 3 | 2,64 | ,764 |
| **Q4** | 47 | 1 | 3 | 1,17 | ,524 |
| **Q5** | 47 | 1 | 4 | 2,83 | ,732 |
| **Q6** | 47 | 1 | 5 | 3,32 | 1,065 |
| **Q7** | 47 | 1 | 2 | 1,57 | ,500 |
| **Q8** | 47 | 1 | 2 | 1,36 | ,486 |
| **Q9** | 47 | 1 | 2 | 1,38 | ,491 |
| **Q10** | 47 | 1 | 2 | 1,13 | ,337 |
| **Q11** | 47 | 1 | 5 | 3,72 | ,772 |
| **Q12** | 47 | 1 | 5 | 3,74 | ,765 |
| **Q13** | 47 | 1 | 5 | 3,64 | 1,009 |
| **Q14** | 47 | 2 | 5 | 3,57 | ,683 |
| **Q15** | 47 | 2 | 5 | 3,79 | ,750 |
| **Q16** | 47 | 2 | 5 | 3,72 | ,713 |
| **Q17** | 47 | 1 | 5 | 3,55 | ,829 |
| **Q18** | 47 | 2 | 5 | 3,70 | ,778 |
| **Q19** | 47 | 2 | 5 | 3,53 | ,687 |
| **Q20** | 47 | 2 | 5 | 3,57 | ,773 |
| **Q21** | 47 | 2 | 5 | 3,47 | ,804 |
| **Q22** | 47 | 2 | 5 | 3,96 | ,833 |
| **Q23** | 47 | 1 | 5 | 3,70 | ,832 |
| **Q24** | 47 | 2 | 5 | 3,85 | ,780 |
| **Q25** | 47 | 2 | 5 | 3,45 | ,717 |
| **Q26** | 47 | 2 | 5 | 3,45 | ,717 |
| **Q27** | 47 | 2 | 5 | 3,60 | ,742 |
| **Q28** | 47 | 2 | 5 | 3,55 | ,746 |
| **Q29** | 47 | 2 | 5 | 3,81 | ,876 |
| **Q30** | 47 | 2 | 5 | 3,60 | ,825 |
| **Q31** | 47 | 2 | 5 | 3,66 | ,788 |
| **N valid (listwise)** | 47 | | | | |

Table 3. Questionnaire Descriptive Statistics

With the help of descriptive statistics, Table 3 provides a thorough analysis of the teachers' questionnaire and provides insight into how responses to different topics were distributed. When we look at the data, we see that there are 47 respondents for every question, which means that the sample size for analysis is consistent. With respect to the response spectrum, the lowest and greatest values offer an insight into the variety of perceptions held by the teachers involved. The range, for example, goes from 1 to 4 and

1 to 5, respectively, for questions like Q1 and Q5, which are related to distinct facets of teaching or educational processes. This shows a moderate degree of answer variability, indicating that different teachers have different perspectives on these subjects.

The mean values provide additional information about the respondents' average attitude or impression in relation to each question. For example, the mean scores for questions Q6 and Q11, which deal with more specialised elements of teaching methodology or pedagogical strategies, are 3.32 and 3.72, respectively. These very high mean scores indicate that teachers generally have positive perceptions regarding these specific areas of instruction. Furthermore, the standard deviation figures offer an indicator of the variability or dispersion in each question's responses. Greater variation in the respondents' perspectives or experiences is indicated by higher standard deviations, such as those seen in questions Q22 and Q23, which had standard deviation values of 0.833 and 0.832, respectively

## 13. Findings

This study explored content teachers' perceptions of using flipped learning to enhance the implementation of English as a Medium of Instruction at Setif 01 and Setif 02 universities. Data were collected from 47 EMI teachers across Natural and Life Sciences, Economic Sciences, and French Language and Literature using a structured questionnaire. The sample was predominantly female (66 percent) and largely composed of doctorate holders (80.9 percent), indicating a highly qualified teaching workforce engaging with the EMI transition. Most participants specialised in biology (89.4 percent), with smaller representation from economics (4.3 percent) and French studies (6.4 percent).

In terms of English proficiency, teachers reported heterogeneous profiles. Self-ratings show that 51.1 percent perceived their English as good and 17 percent as very good, while 29.8 percent reported average proficiency and 2.1 percent reported poor proficiency. Placement test levels were concentrated around B1 (36.2 percent) and B2 (31.9 percent), with smaller groups at A1 (6.4 percent), A2 (12.8 percent), and C1 (12.8 percent). This distribution suggests that while many teachers may manage prepared classroom delivery, a substantial proportion may still face difficulties with spontaneous interaction, reformulation, and managing questions in English, all of which are central to EMI teaching.

### Research question 1: Teachers' perceptions of flipped learning and teaching effectiveness

Teachers expressed strong overall support for flipped learning as a pedagogical approach, with 87.2 percent indicating support for the idea of flipped learning. Perceptions of effectiveness were also strongly positive. A total of 76.6 percent agreed and 4.3 percent strongly agreed that flipped learning enhances their effectiveness as EMI teachers, while 8.5 percent were undecided, 8.5 percent disagreed, and 2.1 percent strongly disagreed. In addition, 76.6 percent of respondents viewed flipped learning strategies as highly beneficial for their professional development in EMI. Taken together, these results indicate that teachers largely associate flipped learning with improved teaching practice and professional growth in EMI contexts.

### Research question 2: Perceived suitability of the English content for EMI classes

The manuscript reports a generally favourable perception of the English content provided for EMI support. Specifically, 72 percent of respondents stated that the English content satisfies their professional demands. At the same time, perceptions of relevance and level of challenge appear more mixed: 57.4 percent agreed that the course materials are appropriately difficult and pertinent, yet a sizeable proportion remained undecided. This combination suggests that teachers may recognise the general value of English training while remaining uncertain about how consistently it matches the specific linguistic routines required for EMI classroom delivery.

### Research question 3: Perceived preparedness to implement flipped learning strategies

Findings show that 66 percent of respondents reported being prepared to use flipped learning strategies, but readiness was not universal. About 21.3 percent were undecided, indicating the need for additional guidance or support, and 12.8 percent disagreed, suggesting that a minority may require substantial assistance or

resources to adopt flipped learning confidently. This pattern is important for implementation planning because it distinguishes positive attitudes towards flipped learning from actual preparedness to enact it.

**Research question 4: Teachers' perceptions of Open edX usefulness in supporting flipped learning for EMI**

Responses regarding Open edX were more cautious and characterised by uncertainty. Participation itself was limited: 42.6 percent of teachers reported being enrolled on the platform, while 57.4 percent were not. Attitudinally, 63.8 percent stated they would recommend the platform to other EMI teachers, but 29.8 percent were not sure. Similarly, while 49 percent agreed that the platform offers beneficial tools for improving English teaching abilities, 42.6 percent expressed indecision. These results suggest that the platform is not rejected in principle, but many teachers are either not using it or not sufficiently convinced that it supports EMI relevant practice in its current form.

Finally, teachers were divided on whether online resources alone are sufficient to begin teaching in English. A majority (61.7 percent) believed online resources are sufficient, while a substantial minority (38.3 percent) disagreed, emphasising the need for in person courses and interactive learning. This split is significant because it indicates that an online only approach may not meet the needs of all EMI teachers, particularly those who require guided practice, feedback, and confidence building.

## 14. Discussion

This study makes a practical contribution by showing that EMI teachers at Setif universities are largely receptive to flipped learning as a strategy for improving EMI teaching, yet less certain about the role and value of Open edX within their support ecosystem. For reviewers, the value of the Discussion is not to restate percentages, but to interpret what the pattern means for EMI implementation, professional development design, and the coherence of blended support.

**Flipped learning is accepted because it promises a structure for coping with EMI demands**

The first and most consistent pattern is teachers' strong endorsement of flipped learning. The fact that 87.2 percent support flipped learning and that over four fifths believe it enhances their effectiveness (agree plus strongly agree) suggests that teachers see flipped learning as more than an innovation trend. Rather, they perceive it as a workable response to the pressures of EMI teaching, especially in contexts where teachers are transitioning from Arabic or French medium instruction and need mechanisms to manage time, coverage, and student engagement while developing English mediated classroom discourse.

From an implementation perspective, this matters because resistance to pedagogic change is often a limiting factor in reform contexts. Here, however, the results suggest that the principal barrier is not willingness but operationalisation. Teachers already recognise potential benefits such as active learning and deeper engagement, which the manuscript itself notes as reasons that teachers value flipped learning. This provides a strong basis for proposing flipped learning as an institutional support model in EMI, not simply as an individual teacher choice.

**Professional development is the missing bridge between positive beliefs and confident practice**

While teachers largely endorse flipped learning, only 66 percent report preparedness to implement it, and a combined 34.1 percent are either undecided or not ready. Reviewers are likely to focus on this gap, and it can be interpreted in a constructive way: it provides evidence that positive attitudes do not automatically produce implementation capacity.

The undecided group (21.3 percent) is particularly informative. It likely reflects teachers who see value but lack one or more enabling conditions, such as training in lesson design, practical models of how to align online work with class time, confidence in English mediated facilitation, or time to prepare materials. The smaller dissenting group (12.8 percent) suggests that a minority may face stronger constraints, such as limited language confidence, limited digital familiarity, or workload pressures that make innovation difficult. Therefore, the results support a staged professional development approach, where readiness is not assumed and where teachers receive targeted support according to their starting point.

This argument is strengthened by the heterogeneous language profiles in the sample. Teachers cluster around B1 and B2 levels, with notable minority representation at lower levels. EMI requires spontaneous interactive competence, and this competence is not evenly distributed across the sample. Thus, professional development should not only cover flipped learning mechanics but also the classroom language routines that allow teachers to manage questions, rephrase, and check understanding. In other words, the findings suggest that flipped learning will only improve EMI teaching if teachers are supported to turn it into structured rehearsal and feedback, not simply a redistribution of content delivery.

**The content is seen as useful, but uncertainty indicates a fit for purpose issue**

Teachers generally report that the English content satisfies professional needs (72 percent), yet a smaller proportion (57.4 percent) agree that materials are appropriately difficult and relevant, with a sizeable undecided group. This difference is important because it signals a potential mismatch between general language provision and the specialised discourse demands of EMI teaching.

A plausible interpretation is that teachers may experience the content as beneficial for general improvement while being uncertain about direct classroom applicability. EMI teaching requires functions such as defining key terms, structuring explanations, using signposting language, describing diagrams, scaffolding comprehension, and managing classroom interaction. If English support focuses mainly on general language development without systematic connection to these functions, teachers may not clearly perceive relevance even when they recognise overall usefulness. Reviewers often critique EMI training studies for failing to specify what kind of English competence is targeted. Your results provide a pathway to address that critique: they justify shifting the training emphasis from general competence alone towards EMI specific communicative performance.

**Open edX appears to be accepted in principle, but weak uptake and indecision point to integration failure**

The most striking contrast in the findings is that teachers strongly support flipped learning but show mixed engagement with Open edX. Participation is limited: 57.4 percent are not enrolled. At the same time, many are open to the platform's potential: 63.8 percent would recommend it, but nearly one third are unsure, and 42.6 percent are undecided about whether it offers beneficial tools.

This combination is best interpreted as an integration problem rather than a simple attitude problem. If most teachers are not enrolled, then many cannot evaluate the platform from sustained experience, which plausibly contributes to indecision. More importantly, even among those who use it, the platform may be experienced as a parallel requirement rather than a meaningful input linked to face-to-face practice. In blended and flipped models, the online component becomes valuable when it is clearly positioned as preparation for specific in class tasks, and when teachers can see direct transfer from online study to classroom performance. Your results suggest that this transfer is not yet consistently visible to teachers, hence the uncertainty.

This interpretation aligns with the broader problem motivating the study: the lack of connection between online learning and classroom training. Your findings provide empirical support for that concern by showing a clear difference between high endorsement of flipped learning as a concept and lower clarity about the platform used to support it. In practical terms, this means that strengthening Open edX adoption is less about persuading teachers that online learning is good and more about designing an aligned pathway that makes its usefulness self-evident.

**Online resources alone are not enough for a substantial minority, so a blended design is not optional**

A further point that reviewers will consider important is the split view on online resource adequacy. While 61.7 percent believe online resources are sufficient to begin teaching in English, 38.3 percent disagree and highlight the need for in person courses and interactive learning. This result cautions against treating online provision as a complete solution. If over one third of teachers believe online resources are insufficient, then an online only approach risks leaving a significant portion of EMI teachers under supported, which may undermine teaching quality and contribute to stress and dissatisfaction.

Here, flipped learning can be reframed as a compromise that respects both perspectives. It maintains the flexibility and accessibility of online learning while reserving face to face time for exactly what online courses cannot provide effectively on their own: interactive practice, feedback, and confidence building. In a teacher development context, this matters because feedback on classroom discourse, rehearsal of explanations, and peer modelling are often decisive for translating input into performance. Therefore, the results provide a strong rationale for an Open edX supported flipped model where online learning is necessary but not sufficient, and where face to face sessions are redesigned as practice-oriented workshops rather than content repetition.

## 15. Limitations

Research limitations are the aspects that could influence a study's results, conclusions, and overall generalizability. These constraints can come from multiple areas, including the study design, sampling approaches, measurement instruments, and the restrictions of data analysis methods. Limitations may also encompass deficiencies within the study or external elements beyond the researcher's control, potentially impacting the final outcomes. Accordingly, this study has the following limitations:

The first limitation is the total population is fairly limited, leading to a smaller sample size. And since there were no pre-existing questionnaires relevant to the study's content, we created a custom questionnaire for this research. However, we had some challenges with the teachers regarding their proficiency in English, requiring us to spend considerable time with them to clarify the questionnaire. And, the results of this study may be generalized only to EMI teachers from just three departments at Setif Universities. The second limitation concerns resource availability. We had to rely extensively on secondary sources to obtain the precise information required, owing to the scarcity of primary research papers in this particular field.

## 16. Implications

The findings of this study have several implications for policy makers, university leaders, language centres, and lecturers working through the transition to English as a Medium of Instruction in Algerian higher education. Overall, the results suggest that lecturers are broadly supportive of flipped learning as a professional development strategy, yet they also reveal uneven participation in Open edX and significant uncertainty about whether current online provision is sufficiently connected to the actual communicative demands of EMI teaching. These patterns point to one central implication: EMI implementation will be more sustainable when teacher support is treated as a coherent programme with deliberate alignment between online input and face to face practice, rather than as separate and parallel requirements.

a. **Treat EMI as long-term institutional change, not a one-off language requirement.** Universities should position EMI as a staged development process supported by continuing professional development that builds classroom discourse, interactional confidence, and practical teaching routines alongside language improvement.
b. **Create one coherent support pathway by aligning Open edX with language centre work.** Online modules and face to face sessions should not run in parallel as separate requirements. Instead, they should be selected and sequenced as one route where online preparation feeds directly into classroom practice, feedback, and follow up.
c. **Differentiate support so that lecturers progress through suitable levels.** A uniform programme will likely widen gaps between confident lecturers and those who are undecided or not ready. Tiered pathways can support varied starting points, from foundational classroom English routines to advanced discipline discourse and assessment language.
d. **Use flipped learning to clarify roles: Open edX for input, face to face time for performance and transfer.** Open edX can provide structured pre class learning, while language centre sessions

should focus on rehearsing authentic EMI teaching tasks such as explaining concepts, signposting, checking comprehension, and managing questions.

e. **Strengthen engagement and accountability through practical support, performance-based assessment, and meaningful evaluation.** Uptake of Open edX is more likely to improve through local mentoring, clear weekly goals, and basic digital orientation rather than enforcement. Progress should be judged by evidence of transfer to EMI teaching, using low stakes performance tasks and indicators that capture confidence, alignment, and classroom impact, not only enrolment or completion.

## Conclusion

This study set out to examine whether a flipped learning approach could provide a coherent framework for integrating online English provision with face-to-face support for EMI lecturers at Setif universities Flipped paper. The findings reveal a clear and encouraging pattern: lecturers are broadly receptive to flipped learning and perceive it as beneficial for their teaching effectiveness and professional growth. At the same time, engagement with Open edX remains uneven, and many lecturers are uncertain about the direct relevance of online content to the practical demands of EMI teaching. This contrast is significant. It indicates that the central challenge in the Algerian context is not resistance to innovation, but rather the absence of strong alignment between online study and classroom performance. Lecturers appear to value interactive practice, rehearsal, and feedback, and a substantial minority do not consider online resources alone sufficient for EMI readiness. These perceptions underscore the importance of treating EMI not as a short-term language requirement, but as an ongoing professional development process that integrates language and pedagogy.A flipped model offers a practical way forward. By positioning Open edX as a structured input space and redesigning language centre sessions as workshops focused on authentic EMI tasks, universities can make the relationship between online preparation and classroom transfer more explicit. Such an approach would also allow for differentiated pathways that respond to varied language profiles and levels of readiness within the teaching workforce.Ultimately, sustainable EMI implementation depends on coherence. Digital platforms, language centres, and institutional policy must operate as parts of a single support pathway rather than parallel requirements. When professional development is designed around alignment, guided practice, and measurable transfer to classroom performance, lecturers are more likely to develop the confidence and communicative competence necessary to deliver high quality EMI teaching in Algerian higher education.

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