

CLIL in Portuguese Higher Education - building a community of practice and learning

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Resumo

O capítulo reporta os resultados de um projeto, em desenvolvimento, sobre o estudo paralelo e comparativo da utilização de CLIL (abordagem integrada de conteúdo e língua) em cinco institutos politécnicos portugueses, objeto de uma subvenção da FCT, durante sete meses, para Partilha e Divulgação de Experiências em Inovação Didática no Ensino Superior Português. O estudo, que decorre desde 2013, subdivide-se em três etapas de investigação: a primeira, que decorreu em 2013-2014, consistiu num levantamento de necessidades em diversas instituições do ensino superior de modo a perceber a receptividade das mesmas para aceitação de modalidades de ESP (ensino de inglês para fins específicos), EMI (utilização do inglês como língua de ensino) ou abordagens CLIL, como estratégias de apoio à sua internacionalização. Durante a segunda etapa de investigação, que decorreu em 2014-2015, construiu-se uma comunidade de prática entre as diversas instituições de ensino superior politécnico envolvidas no projeto. O capítulo relata essencialmente como se constituiu esta comunidade, como foi apoiada e desenvolvida, os recursos criados e partilhados, as linhas de orientação que apoiaram o trabalho interativo e colaborativo de um grupo de professores de língua estrangeira e de professores de outras áreas científicas no desenvolvimento de módulos CLIL. Descrevem-se outras ações concomitantes ao desenvolvimento da comunidade de aprendizagem CLIL, como sejam a escrita colaborativa de um Guia de Formação de Formadores CLIL por um grupo de professores de língua estrangeira, para apoiar os cursos de formação implementados em cada instituto politécnico; a investigação aplicada decorrente deste processo que sublinhou: a importância da constituição de comunidades de prática CLIL locais, apoiadas na ReCLES (Associação em Rede dos Centros de Línguas do Ensino Superior) enquanto comunidade de prática mais alargada, à escala nacional; a importância de técnicas de *scaffolding* no ensino superior por oposição ao *scaffolding* proposto para outros níveis de ensino; e a utilização de estratégias de identificação de terminologia no contexto de práticas de CLIL ou TerminoCLIL. O capítulo inclui ainda alguns dados recolhidos na terceira etapa do projeto (2015-2016), durante a qual se implementaram módulos CLIL piloto; os dados foram recolhidos tanto junto dos professores que os lecionaram, como junto dos alunos, e incidiram sobre a recolha das suas reações e perceções aos módulos CLIL implementados. Estes são apresentados sob a forma de estudos de caso em cada instituição de forma a evidenciar as perspetivas dos sujeitos envolvidos.

Palavras-chave: CLIL (aprendizagem integrada de língua e conteúdo) no ensino superior, comunidades de prática, técnicas de *scaffolding*, terminologia em CLIL/ICLHE

Abstract

This report is the result of an ongoing project on the parallel and comparative study of the use of CLIL in five Higher Education Polytechnic Institutes in Portugal that received support from FCT for a seven-month period as potential best practice in higher education. The study was developed over a two-year period (2013-2015) and comprised three different research stages. The first stage (2013-2014) focused on needs across HE institutions to assess the readiness of institutions to engage with ESP, EMI or CLIL /ICL approaches to meet their internationalization strategy. During the second stage, the emphasis was on the development of a CLIL community of practice across higher education institutions (HEI) in Portugal. This article reports on how this community was created and nurtured, the resources used and shared, guidelines offered through the interaction and collaborative work of HE content and language lecturers. Comments are offered on the Training Guide written collaboratively by a number of language teachers across the Institutes and about the CLIL training courses developed in each institute; the applied research that highlighted the importance of building local CLIL communities of practice that were supported by ReCLes (Associação em Rede dos Centros de Línguas do Ensino Superior) as a wider CLIL community of practice, understanding scaffolding in higher education as opposed to what is advised for secondary education, and using terminology-based CLIL or TerminoCLIL. Insights are also offered on the third stage where CLIL pilot sessions or modules were put into practice by subject teachers' and on their students' reactions and perceptions on the implementation of CLIL through a series of case studies at each HEI as a way to highlight the perspectives of content teachers in HE.

Keywords: CLIL in higher education, communities of practice, scaffolding, terminology in CLIL/ICLHE

1. INTRODUCTION TO THE CLIL- RECLLES.PT PROJECT

The CLIL-ReCLes.pt project, involving ongoing applied research in a parallel and comparative study of the use of Content and Language Integrated Learning (CLIL) in six higher education (HE) polytechnic institutes in Portugal, represents an innovative approach within the Portuguese context. Through training HE teachers to teach and communicate through English confidently and effectively, Portuguese HE may be better equipped to respond to the multiple challenges of plurilingualism, internationalization and interculturalism. The project covers the needs assessment, materials development, and design and implementation of Communities of learning and practice (CoP) at each participating polytechnic which aim to join teachers, at least one English language teaching specialist with four to ten subject specialists, based on a training manual written collaboratively by the researchers to be tested in

this pilot phase. Participants should develop competences to teach confidently and effectively in English and, following their training, assisted planning and preparation of appropriate materials, they carry out individual CLIL modules with their own students and with the constant support and monitoring of their respective English language teaching specialist. The project received support from FCT for a seven-month period as potential best practice in higher education in the third and final research phase of the three-year project (2013-2015), which gained momentum through participating researchers of the member institutions of the Association of Language Centers in Higher Education in Portugal (ReCLes.pt).

1.1. THE DISTINCT PHASES OF THE STUDY

The particular HE Portuguese contexts influenced by their respective linguistic policies, informed the general research design which began the year-long nationwide needs assessment across HE institutions in 2012-2013 to assess the urgency of engaging in the integration of language and content approaches to meet their internationalization strategy. In this first stage, results from questionnaires and recorded interviews with the teachers and governing bodies explored the existing linguistic policy, if any, and how foreign languages were generally taught in HE. The results of this reflection exposed their perceptions of the FL needs for studying, for teaching, and for the job market, which clearly supported stronger plurilingual training for teachers and students, with special emphasis on English as the international language, and sparked debate about the best ways to teach and learn in and through English.

The second phase of the project (July 2013 to September 2014) was designated for collaborative building of the theoretical/practical backbone of a national project that would provide the required training for subject specialist teachers and English language teaching specialists who would meet in CoP to fulfill the language learning and teaching objectives determined in the first phase. To effectively promote an integrated approach to acquiring competences in both language and specialty studies, a review of the literature on CLIL revealed it to be an innovative area for higher education, particularly in Portugal, lending further urgency to the creation of a well-informed training manual and a guiding philosophy for promoting the CoP at each participating HEI. The working draft of the *ReCLes.pt CLIL Training Guide – Creating a CLIL Learning Community in Higher Education*, now published at the end of the third phase of research, aims at facilitating the creation of CLIL modules and materials adapted to each particular course area and preferred collaborative modes

of each of the participating HEIs. The training manual also serves as a guide for each of the local 10-hour training courses and provides myriad examples to support another 20 hours dedicated to assisted preparation in the 1st semester of 2014-15 to enable the subject specialists to gain competences in using cognitive and socio-constructive educational strategies to later implement a CLIL module with their own students.

In the third phase (September 2014 to March 2015) the pilot study subject teachers were trained to implement their CLIL modules with their own students, creating the dual role of participant in community of learning and practice dedicated to promoting CLIL pedagogy in higher education and subsequent materials design followed by implementation of their own modules, which were observed and monitored by the language teaching specialists.

2. LITERATURE REVIEW: CLIL, COMMUNITIES OF PRACTICE, SCAFFOLDING AND TERMINOLOGY-BASED CLIL — THE CHALLENGES OF CLIL

Considering the new European educational context derived from the Bologna Process, the urgency of enabling university students with Foreign Language (FL) competences, the unsatisfactory results of present-day methodological approaches to FL teaching and learning, and resounding international objectives are a ripe ground for new perspectives in this area. The ReCLes.pt CLIL approach responds to these needs with its coherent strategy to create CoP in each HEI and across them, in the six polytechnic institutes that worked cooperatively; its focus on scaffolding techniques that are suitable for HE teaching and learning environments and adequate for specific content and language integrated learning in HE; as well as its emphasis on a terminology-based approach to CLIL. Since learning the terminology of a field of knowledge is the foundation for gaining access to it, this TerminoCLIL approach aims to be more content oriented, meaningfully integrating language and content to more effectively meet plurilingual learning outcomes and acquire subject specialty competences.

Since CLIL is also based on a new paradigm: that of the *language user*, rather than the *language learner* (Moore & Dooly 2010 cit. in Morgado & Coelho, 2013; Arau Ribeiro, 2015), strategies are applied to base teaching on prior knowledge and needs of the language user. This interdisciplinary and collaborative emphasis on FL use for communication and learning through specific subject content requires that skills be acquired to foster the communication and cultural discourses needed by students,

lecturers and researchers in particular academic, professional and scientific contexts. CLIL is widely recognized for its 4 Cs (content, cognition, communication, culture) (Coyle, 1999; Coyle, 2008; Coyle, Hood & Marsh, 2010) which suggest what is required of the foreign language, who can manage content-oriented information, can make use of that information by using cognitive skills, can communicate effectively, and can do so across cultures.

Introducing CLIL further carries implications for the professional identities of language teachers (Byram, 2008) and eventually to subject teachers that will need to look at the foreign language as integrated in the subjects they teach and to learn how to cooperate effectively with the FL teacher.

The integration of content and language was supported through three central concepts that are discussed below: communities of practice, scaffolding, and terminology. The first addresses the concern with shared meaning-making and a common CLIL language among researchers and practitioners while the other two address the fact that language skills cannot be unproblematically transferred from one content area to the other and offer learning theories and pedagogies to be negotiated and adapted to particular contexts.

2.1 COMMUNITIES OF PRACTICE (COP)

The ReCLes.pt CLIL approach to FL proficiency and pluricultural learning outcomes is driven by its commitment to the interactive creation of CoP (Wenger, 1998), which provide the ideal conditions for the promotion of social and shared meaning-making among all of the agents in CLIL in HE, from the language teaching specialists to specialist teachers to the students themselves (Moore & Dooly, 2010; Moate, 2010).

The creation of CoP highlights learning as a fundamentally social situation that has to be taken into consideration when implementing CLIL in HE (Moates, 2010). CLIL in HE brings together several CoPs: English teachers and lecturers trained in a variety of language teaching/learning strategies; teachers and lecturers of one or more content subjects. The former needs to relate to the subject discourses and terminology, while the latter needs to not only learn more about the target foreign language but also consider strategies for empowering students for optimal study conditions in this language.

This innovative approach to teacher training in higher education aimed to bring together language and subject specialists in a resoundingly collaborative approach to learning, which had been practiced in writing the *ReCLes.pt CLIL Training Guide* –

Creating a CLIL Learning Community in Higher Education, complete with best practices, teaching tips, and data collection tools.

2.2. SCAFFOLDING

Scaffolding is the building metaphor used in the CLIL context for describing the cognitive and socio constructivist learning process through which teachers (or more competent peers) provide temporary support to help language users to move forward in their knowledge and to facilitate their understanding and production of language or content. In general terms, scaffolding aims at empowerment and application of these strategies and skills autonomously and helps learners to “feel more confident about their foreign language skills and adopt a more communicative approach to language learning” (Girbau & Welsh, 2012, 12). Gradually withdrawing scaffolds as learners begin to demonstrate mastery of language and content, the teacher is also assisting students to become more independent in the classroom and shifting the responsibility for learning from themselves to the students.

Sharpe (2001; 2005) identifies scaffolding as either prepared in advance or improvised during class time to develop key concepts and extend student understanding by asking questions and using learner responses to trace a line of thought to redefine their thinking and consolidate vocabulary through repetition, reformulation and elaborating.

Scaffolding works best when the teacher focuses on building on existing student knowledge, skills, attitudes, interests and experience; repackaging information in user-friendly manageable chunks; responding to different learning styles; fostering creative and critical thinking; and challenging students to take another step forward and not just coast in comfort (Mehisto, Frigols & Marsh, 2008, 29).

Although this review of the learning pedagogy theory is from the perspective of language specialists, scaffolding may be incorporated into the formal structures of knowledge and practices used by specialist teachers to register language and image combinations, materials and resources, or abstract conceptualizations and technical detail. Acquisition of competences for planning, monitoring, and self-assessing are the benefits of scaffolding activities, which serve as tools to reach these objectives that so clearly serve the Bologna model aiming for autonomy.

2.3. TERMINOCLIL – A TERMINOLOGY-BASED APPROACH TO CLIL

The critical role of terminology in the development of communication processes as well as in information and knowledge-sharing was at the root of the creation and adaptation of a terminology-based approach to CLIL – or TerminoCLIL (Silva & Albuquerque, 2014). By enhancing the mutually beneficial dialogical relation between CLIL and Terminology, TerminoCLIL is a valuable approach to link the key dimensions of language (discourse on the knowledge) and knowledge/competences (concepts and expertise), to organize, structure, and classify discourse and knowledge.

The terminology-based approach to CLIL is a scaffolded learning process divided in three stages: retrieval/organization, application, and visualization of knowledge, integration of contributions from knowledge management, terminology work and learning objectives as defined by Bloom (1956). To better scaffold selected specialist texts, a Learning Activity Plan breaks the different tasks into four clear categories – Actions, Outcomes, Questions, and Tools – for each of the stages.

The Knowledge Retrieval/Organization stage involves recalling information, observing reality in the field of knowledge and finding/extracting information in/from texts. When given specialized source texts, students will try to recognize both known and new concepts to understand the new domain better. However, when the specialized subject field is initially presented, their first contact with this reality will be through terms that the students hear or read about in texts. To begin to subsequently recognize and organize these terms in a meaningful way, students can initially be taught to use an extraction tool (like TermoStat Web) and then refine their search and gather more information. Through the activities of extracting and listing of possible terms, definitions, and other relevant terminological information from the texts, relations between domain concepts can be identified and organized, with the help of the expert/teacher, to make sense out of the new domain and to structure this new knowledge in a semi-formal manner.

In the subsequent Knowledge Application stage, students will use previous knowledge to examine a new situation in detail, especially to become more aware of the knowledge field and begin to be able to link terms with their associated concepts. Awareness of synonyms, polysemy, and levels of language will be heightened with the discovery of the use of terms in context, whether by approaching the task by focusing on a specific author or speaker, the degree of expertise or the purpose of any given communication. TerminoCLIL scaffolds explanations of the differences in

language, culture and conceptualization with images, as language-independent frameworks of information that may be followed by the activity of building a multilingual term base/glossary, not only to organize their knowledge with cultural awareness but also to help define terms and correctly present specialized information in multilingual contexts.

At the final stage - Visualizing Knowledge -, students are expected to understand reality from an expert point of view; as a result, texts will be an outcome instead of simply a starting point (as in stage 1) or a bottom-up method to access knowledge. Since most of the relations between concepts have been refined and validated with the CLIL teacher (expert), students will be able to represent domain knowledge (top-down) through the building of glossaries and concept maps to analyze, structure, and describe their specialized knowledge and to observe nuances of meaning, to organize their thinking, and/or to summarize. This support for knowledge representation, constructed either individually or collaboratively, promotes a visual and graphic form to access, represent, and share domain-specific information, knowledge, and competencies. As the backbone of a discovery-learning environment, supported by a coherent framework for peer work and constructive criticism, these TerminoCLIL activities contribute to identifying misunderstandings and restructuring the information with the help/validation of the CLIL teachers, who resolve conceptual, linguistic, and pragmatic questions.

In general, the starting point for TerminoCLIL is the carefully prepared or selected CLIL material; these texts provide a stepping stone in a bottom-up learning approach rather than casting the CLIL teacher as the expert who must validate all knowledge acquisition at every stage.

3. METHODOLOGY

The pilot teacher training courses and subsequent preparation and implementation of CLIL modules in each participating HEI derived considerable strength and impetus through some guiding questions, especially due to its novelty in the Portuguese HE system, namely: How do participants (students and subject specialists) perceive the implementation of CLIL methodology and strategies? What (dis)advantages do they recognize when using CLIL methodology? How have their attitudes and perceptions changed during the training and implementation process?

The local CLIL CoP were sustained by joint research and best practice articulated through the training guide, which provides practical examples of interactive and

student-centered methodologies, a focus on oral interaction and critical dialogue, suggested activities, and the key points for organizing a successful CLIL module in HEI. As orientation in the successful design, preparation, and implementation of a CLIL module, the guide emphasizes scaffolding and its application to activate prior knowledge, which includes creating or selecting and adapting appropriate scaffolding materials and using electronic media and a terminology-based approach.

3.1. CLIL TRAINING COURSES

The six 10-hour training courses across the country included up to 20 additional hours dedicated to assisted preparation of pilot CLIL modules to be implemented by the subject specialists. Of the 4 to 10 participants in each HEI, some were invited to take part in the training course, others volunteered, but participation was contingent on either knowledge or assessment of their English CEFR level (B2 or higher) or even reserved exclusively for teachers whose classes are regularly attended by incoming ERASMUS⁺ students. Six of the English language teaching specialists were also CLIL specialists and an additional four English language lecturers were included in one case to pair up with subject specialist with the community of learning and practice.

Results of the training period were drawn on not only the CEFR self-assessment grid but also pre- and post-training questionnaires, which focus on participants' attitudes to language learning, perceptions of their level of English language competences required for teaching CLIL, and other teaching competences needed to develop the pilot CLIL module. An additional final assessment grid contextualized CLIL in the big picture, with the constant presence of teaching and learning logs for both the subject and language specialists, which provided a forum to summarize their thoughts in a one-paragraph entry regarding the experience after each training session, covering reactions, attitudes, suggestions and comments.

3.2. PILOT CLIL MODULES

In their preparation and planning, written collaboratively with the English language teaching specialists, the subject specialists were asked to identify the title and duration of their pilot CLIL module, the resources to be used, teaching, language and content aims, learning outcomes for students, resources and how they would be adapted and used, the types of interactivity with students that would be promoted, monitoring strategies, and how students were expected to engage in specific activities. The support needed from the English language teaching specialist during

CLIL module preparation and implementation was also scheduled for original materials design or translation, adaptation, and/or assessment of materials to determine adequate language levels. Another option was to invite the English specialists to interact with the students during the CLIL module, acting as more than researcher/observer, for example, in role plays or simulations, as a language and culture consultant, or as a collaborative participant in the classroom activities to offer more individualized scaffolding.

Data collection tools for the pilot CLIL modules aimed to assess the perceptions of subject teachers and students on the CLIL experience through interviews, questionnaires, and observation notes. Additional feedback was solicited when the more recent views clashed with their previously professed beliefs.

4. RESULTS AND DISCUSSION

At every juncture over the three years of the CLIL- ReCLes.pt study, the research team has been committed to publishing and disseminating their results, in both international and national forums and articles published in peer-reviewed academic journals.

The training courses identified the challenges of CLIL for subject/language teachers and students alike. In addition to finding the effective balance of content and language to student reactions to CLIL, student motivation and time management for preparing CLIL classes for the student-centered and interactive CLIL pedagogy were explored for their potential regarding a number of issues. These include assessment concerns, students' heterogeneous skills in the English language, a focus on the terminology of a particular subject area, scaffolding and adapting resources and materials, and discovering the appropriate classroom instruction style in English.

The 33 CLIL modules that have been/will be implemented according to their representativeness within the CoP are in the areas of Business (15, or 46%), Engineering (6, 18%), Food Sciences and Hospitality (4, 12%), Computer Science (4, 12%), Education (2, 6%), and Humanities and Social Sciences (2, 6%). The most recent data collected covers the implementation of 11 of these pilot CLIL modules, with data collected through teaching and learning logs, observations, questionnaires and interviews, has revealed positive perceptions and attitudes of both students, subject teachers, and English language teaching specialists.

Despite the various subject areas and repertoires of experience with teaching in English, subject teachers assigned significant value to CLIL strategies and teaching

competences learned first through the community practice and then through hands-on experience in preparing/teaching the CLIL modules. They emphasize the urgency of rethinking their own teaching material and teaching methods, the students' needs and student-centered approaches. Many highlight specific domain terminology as a cornerstone in their class preparation and the resources that strengthen and reinforce this knowledge. Designing and preparing appropriate scaffolding materials were valued for their intrinsic motivation in student-centered interactive CLIL classes and especially for increasing their own self-assurance in teaching through English. The language specialist was recognized as a reliable co-teacher, team teacher or valued helper during the class preparation stage and as an observer, lending confidence throughout the implementation of the pilot module.

However, preparing CLIL classes was noted as a time-consuming task and it became clear that, to teach through CLIL, the learning objectives must be more strictly selected since the dual goal of acquiring competences in the specialty subject and developing the language competence means that less content will be covered than through the mother tongue. Despite these sacrifices, teachers felt comfortable working with students in their CLIL modules, demonstrating elevated confidence levels in both their teaching and language skills.

Students registered the gamut from initial rejection of the unknown and surprise to venturing enthusiasm and full engagement in learning in and through English to better contribute to their education, to being able to work and study in international environments and to develop their intercultural awareness. Regardless of their English level, the overwhelming majority claimed that they would like to continue to meet the challenge of studying through CLIL modules, especially with the help of scaffolded materials.

Student needs and expectations were taken into consideration as was assessment of their level of English and situated knowledge. An important finding in terms of their perceptions is that student English levels are actually higher than what they report in self-assessment. The CLIL scaffolding techniques and interactivity planned into the classroom seem to account for this enhanced student understanding of content through and in English and other issues related to intercultural awareness and plurilingualism may be involved.

An important lesson for future CLIL planning and training for teachers is that student receptivity to the pilot CLIL modules varies with the way the CLIL model is initially presented; the most effective introductions involve either clearly including

themselves in the challenge of learning, teaching, assessing English and the subject through the CLIL method or emphasizing the pride derived from the participation in an innovative and challenging national HE project. The strength of conviction for these presentation styles followed naturally from the respect and common ground negotiated between subject teachers and language teaching specialists within the communities of learning where the emphasis was on practice over theory (Jacobs, 2015, 26).

To conclude, it is important to note that the results for this extensive parallel and comparative study, obtained through careful cross-examination of the data collected throughout the pilot training courses and the process of implementation of the specialists' individual CLIL modules, simultaneously considered the multiple perspectives of the participants: i) the subject specialists who first received training in their local CoP then went on to teach their students through CLIL; ii) the HE students participating for the first time in a CLIL module; and iii) the English language teaching specialists, who had initially participated in their own learning community to collaboratively research and write the training guide and then led the pioneering CoP, assisted in the design of materials for the CLIL modules, and finally observed and monitored the CLIL module experiences. The assessment of these CLIL agents in their varying roles has implied a great deal of qualitative and quantitative data that is still being processed and will surely provide additional significant insight on the strengths and limitations of the project.

5. CONCLUSIONS

The challenges to the future implementation of CLIL in Portuguese HE reside primarily at the institutional macro level since a clear definition of language and internationalization policies in HE must provide the necessary framework for CLIL to thrive and, simultaneously, contribute to the success of these policies.

At this juncture, the groundbreaking ReCLes.pt implementation of CLIL in Portuguese HE has designed a road map for other education institutions to implement a similar project on their own.

The results of this extensive study suggest that policy could be based on the following aspects: i) the essential conditions for maintaining CLIL CoP; ii) the specific goals, benefits and challenges for implementing CLIL (for the HEI themselves, for staff and for students); iii) the form of needs analysis to be undertaken (e.g. student FL level, student motivation, subject specific goals and learning outcomes); iv)

selection and justification of which subjects to offer through CLIL; v) simultaneous accommodation of the needs of students who may choose not to be taught through CLIL; vi) the number of students per CLIL group/class; vii) the changes to be implemented in course syllabi to accommodate student-centered methodologies that promote collaborative work, oral interaction, and critical thinking; viii) (in)formal assessment in CLIL; ix) the monitoring of the CLIL teaching and learning experience.

The initial collaborative research and learning among the language specialists across ReCLES.pt to share research, best practice, and results was a precursor to the creation of CLIL CoP in each HEI. This successful and innovative strategic activity fostered skills for teaching in English among subject teachers in HEI, developed cooperative work among subject and FL teachers, and contributed to creating a sustainable international environment in HE with conditions for an effectively integrated and balanced representation of language and content through the publication of the training guide. On a cultural level, the CoP created within this ReCLES.pt CLIL pilot study would appear to represent the first step toward bridging the status inequalities that exist between language specialists and subject specialists within HEIs, moving towards a cooperative model which requires further research in its multiple models in tandem teaching and support teaching, among others.

Nationally, ReCLES.pt will continue to foster collaborative work on CLIL in HE, sharing these findings locally among the language and subject teachers of its 16 national members.

Internationally, the ReCLES.pt CLIL research team will foster further collaboration between language teachers and content specialists in HE contexts through ERASMUS+ teacher mobility and European projects with the 321 university network partners in CercleS (the European Confederation of Language Centers in Higher Education).

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