

# Voice of Trainee Teachers Regarding Their Advances in Communicative and Digital Competences with “Affective E-Learning+”<sup>1</sup>

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Voz de los estudiantes de magisterio respecto a  
sus avances en las competencias comunicativa y  
digital con “Affective e-learning+”

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## Abstract:

INTRODUCTION. The literature review conducted evidenced a lack of congruence between the expectations of the European Space for Higher Education and the achievements reached. This was as much the case for communicative competence as it was for digital competence and was mostly due to the lack of prior instruction in transversal skills, both in educational

## Resumen:

INTRODUCCIÓN. La revisión bibliográfica evidencia el desfase entre las expectativas del Espacio Europeo de Educación Superior y los logros alcanzados, tanto en la competencia comunicativa como digital, sobre todo por la ausencia de una formación previa de tipo transversal, tanto en los centros educativos como en línea. MÉTODO. Se parte de cuarenta y seis nar-

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centers and online. **METHOD.** A process of inductive analysis based on forty-six autobiographical narratives of students enrolled on the program, produced two meta-categories: "evaluation of program development" and "achievements of the program". To achieve these outcomes "grounded theory" and the information software NVivo-12Plus were used. **RESULTS.** Results suggest that the program led to interaction among participating students. They highlighted the interest of the experience based on the knowledge they acquired and the interaction in the development of communicative and digital competences. In the same way, results show the transversality of the proposed activities, especially: "design and maintenance of a blog" and "design of a video about privacy online", which had an impact on, respectively, 7 and 6 of the proposed competence units. Further influences were found on course flexibility and overcoming time and space problems. **DISCUSSION.** Students rated the course as a "positive experience", alluding to affective aspects which had enhanced their inclination towards learning and interaction.

**Key words:**

Communicative competence; digital competence; online teacher training; learning difficulties.

rativas autobiográficas de los estudiantes que cursaron el programa, utilizando un proceso de análisis inductivo que generó dos metacategorías: "valoración del desarrollo del programa" y logros alcanzados en el mismo". Para ello se utilizó la "Teoría fundamentada" y el software informática NVivo-12Plus. **RESULTADOS.** Los resultados muestran que el programa ha generado interacción entre los estudiantes participantes, calificando la experiencia de interesante por lo aprendido y la interacción en el desarrollo de la competencia comunicativa y digital. Del mismo modo, ponen de manifiesto la transversalidad de las actividades propuestas, especialmente: "creación y mantenimiento de un blog" y "realización de un video sobre privacidad en la red", que incidieron, respectivamente en 7 y 6 de las unidades de competencia propuestas, así como la flexibilidad del curso, superando los problemas de espacio y tiempo. **DISCUSIÓN.** Los estudiantes valoran el curso como "experiencia positiva", aludiendo a que los aspectos afectivos han potenciado su orientación al aprendizaje y a la interacción.

**Palabras clave:**

Competencia comunicativa; competencia digital; formación de maestros en línea; dificultades de aprendizaje.

**Résumé:**

**INTRODUCTION.** La révision bibliographique montre l'écart entre les attentes de l'Espace européen de l'enseignement supérieur et les résultats obtenus, tant dans le domaine de la compétence communicative que de la compétence digitale, principalement en raison de l'absence de formation préalable de nature transversale, tant dans les centres éducatifs que sur Internet. **MÉTHODE.** Elle est basée sur quarante-six récits autobiographiques d'étudiants qui ont suivi le programme, en utilisant un processus d'analyse inductive qui a généré deux méta-catégories : «évaluation du développement du programme» et des résultats obtenus». La "Grounded Theory" et le software NVivo-12Plus ont été utilisés à cette fin. **RESULTATS.** Ils montrent que le programme a généré une interaction entre les étudiants participants, qualifiant l'expérience comme intéressante pour ce qui a été appris et l'interaction dans le développement de la compétence communicative et digitale. Elles montrent également la transversalité des activités proposées, notamment : «création et maintenance d'un blog» et «faire une vidéo sur la vie privée sur le net», qui ont touché, respectivement, 7 et 6 des unités de compétence proposées, tableau 1, ainsi que la flexibilité du cours, en surmontant les problèmes d'espace et de temps. **DISCUSSION.** Les étudiants apprécient le cours comme une "expérience positive", évoquant le fait que les aspects affectifs ont renforcé leur orientation vers l'apprentissage et l'interaction.

**Mots clés:**

Compétence communicative; compétence digitale; formation en ligne des enseignants; difficultés d'apprentissage.

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## **Introduction**

The year 2010 was the beginning of a new form of conceiving and training at the university, with the European Space for Higher Education, referred to hereon as EEES, coming into force. However, existence of no less than cultural inertia secularly defined as a way of training, identified exclusively by a unidirectional transmission of information from the teacher to the student has slowed down the process of change. This is urged by the need to “[...] “carry out a profound reorganisation of methodologies and practices that will make more effective development possible” (Neira, Sierra-Arizmendiarieta and Pérez-Ferra, 2018, p. 882). With regards to communicative and digital competencies, the present work is concerned with future teachers whose level of mastery is not presently sufficient (Pascual, Ortega.Carrillo, Pérez-Ferra y Fombona, 2019).

It is relevant that information is only valuable to those who know how to manage it. This includes where to find it, with which criteria it should be selected, and how to associate it with previously received information and conceptualise it with the aim of using it later (Pérez Ferra, Quijano and Ocaña Moral, 2013). Within this academic-institutional framework, transversal communicative and digital competencies are valuable in the training of future teachers. This is because they are transferable to “knowing how to be” and, as a result, to the future teaching activity of current students enrolled on a teaching degree (Núñez, Ávila and Olivares, 2018).

Various studies proposed by the Common European Reference Framework for Languages (Consejo de Europa, 2002) (MCERL), provide a reference from which online programs can be based, in order to improve training of students of the communicative competence. Alternatively, the Teacher’s Digital Competence Framework (INTEF, 2017), also contributes a basis from which epistemological frameworks can be developed, from which digital competences crucial for future teachers can be structured and evaluated.

## Theoretical framework

### Towards a communicative orientation for digital competence

The fact that both competences develop and are exercised through required interactive processes in order to seek, structure and conceptualise knowledge, corroborates the idea that digital literacy together with technological information software includes communicative aspects which are sought after in the design and delivery of the online “Affective e-learning+” program. Using this consideration of the interaction between communicative and digital competence, authors such as (Amor, and Serrano-Rodríguez, 2018), argue that training is not imparted through the technical dimension of the used platform but through teaching staff, students, the communication process, etc. Other authors go further, alluding to the training of future teachers as something that transcends the acquisition of technological skills and is inscribed into the teaching they carry out (Blau and Shamir-Inbal, 2017).

The foundation of what is written, with respect to the integration and structuring of digital and communicative content, must be focused on perfecting abilities through greater involvement of the person in terms of creation, evaluation and analysis. This reaffirms the need to promote an active role of learning groups. Abilities relate to an individual’s capacity to understand and implement “a use of tools in a productive way, that goes beyond a strictly operational use” (Gisbert and Esteve, 2011, p.55), structuring and presenting content in a dynamic and flexible way. They respond to different learning styles and formative needs, though for that to be possible it will be necessary to “readjust the direction of one’s own training to go in the same direction as their professional development, as much through initial training as through ongoing training” (Tejada and Pozos, 2018, p. 28).

From a normative communicative point of view, adaptation to socio-cultural norms allows teaching and learning processes to be carried out, as well as relationships to be developed both with and within families, institutions and teaching staff (Sierra- Arizmendiarría, Méndez and Mañas-Rodríguez, 2013). Of further vital importance to teaching exercises are activities that support students to talk with more assuredness, express themselves without rushing, improve the intonation of oral expressions, perfect vocalisation, modulate their

voice and present more persuasively. These aspects are linked with the development, integration and structuring of content that is typical of digital competence. They can be developed through "scripting" or reciting video content, or by optimising search information entered into forums and blogs (Fichten, Oenik-Shemest, Asunción, Jorgensen, Colwell, 2020).

Activities that allow the development of the linguistic register are of vital importance for communication in the classroom, with families and with work colleagues (Pantoja-Gallero, 2019). The creation of videos is significant in achieving improvements with regards to adequate use of the linguistic register, navigation and resolution of technical problems, knowledge of the types and layouts of licences, interaction through digital means, and management of digital identity (Prats, Oberst, Rodríguez-Torres and Carbonell, 2018).

Writing essays on plagiarism or creating a blog are also transversal and effective activities that help improve "the academic register, punctuation and accentuation" (Castelló, 2006). Equally, they are of importance for the adequate use of the linguistic register which enables individuals to communicate in different cultural spaces and to use academic language (Pérez-Ferra, 2019). The aforementioned activities also indicate that the practical use of Morphosyntax is useful (Martínez-Celis, 2012). This is specifically helpful in the adequate use of predispositions, the improvement of redaction, verbal form use, the adaptation of synonyms to the texts used (pragmatic), navigation for the resolution of technical problems and management of digital identity (González-Cutiva, 2015).

The referred to activities are also appropriate for the "development, integration and structuring of content", through information searches in forums and blogs (Harris, Mishra and Kiehler, 2014). In the same way, the "development of legal provisions, author rights and licenses", produce favourable changes in students in the sense that they lead to the creation of blogs and videos about privacy online. They may also use "Creative Commons" (Kim, 2007), which tend to incorporate users who "create and share creative content on digital platforms, contributing to open source projects and wikis for personal over commercial gain" (Appl and Homar, 2018, p. 191).

In any case, the advances that can be generated by online programs, with regards to the acquisition of basic notions about author's rights and

licences, the conviction towards avoiding plagiarism and the protection of digital identity, are largely determined by the students themselves. Their own moral judgement, implementation of their own will in one sense or another, and the deficiencies they possess for certain abilities, all have their part to play (Tella and Oyeyemi, 2017).

In arriving to this point, the advanced scientific literature review enables it to be concluded that there is an association between communicative and digital competences. This can be seen as much in the development undergone by students as in their use of practices which favour advanced multi-model communication throughout ICT (Rodríguez-Illera and Londoño, 2009).

### **Description of the "Affective e-learning+" program**

Application of the proposed program orientated towards addressing the contextual reality of students designated to an experimental group. This involves addressing observed deficiencies in the initial descriptive study with respect to communicative and digital competencies, in addition to aspects of an affective nature which relate to interpersonal development (Ortega-Carrillo, 2015).

The program arises from continuous action-research dynamics, which have evolved from multidisciplinary to interdisciplinary (Souza da Costa and Cerdeira, 2012). It is epistemologically structured to an eclectic synthesis of socio-constructivism and psycho-pedagogical cognitivism, rooted in emotional flows, catalysts for online learning, including contextual, environmental, and interpersonal development-related factors in their activities (Treviño, 2011).

El program lasted for 2 months, defined by 4 macro-activities: a) recitation and recording of a poem; b) conducting an essay on plagiarism; c) development of a video about privacy; d) on the net and creating a blog.

The students received feedback from fourteen tutors, whose intervention was vital, since there were initial dropouts due to the lack of habits towards this type of training.

## Empirical framework

### Study objectives

A qualitative descriptive-analytical study was conducted with the aim of analysing the comments of surveyed students about their perceptions relating to the administered online course. The analysis was based on the following objectives:

- To learn student perceptions about the achievements reached with regards to communicative and digital competences, following the administration of an online course.
- To determine the overall impact of the proposed activities on communicative and digital competences.
- To identify student evaluations of the received training action.

### Methodological procedure

The process of investigation consists of two phases; collection and analysis of data. In the first phase, biographical-narrative data was used which came from narratives of the experiences lived by students (Arias and Alvarado, 2015). Students rated the formative actions they had received, basing their responses on four macro-activities of learning.

The resulting narratives pertained to two meta-categories: "evaluation of the program's training action" and "impact of the proposed activities on the interactive development of communicative and digital competences". These actions facilitated the initiation of students into learnings related with didactic methodologies and orientated towards the development of communicative-digital processes for use in their future teaching practice.

In the second phase, fifteen narratives were selected from a total of forty six participants. Selection was based on quality criteria of the responses. A process of interpretive inductive analysis was carried out using "grounded theory" (Hernández-Carrera, 2014; Osses, Sánchez-Tapia and Ibáñez-Mansilla, 2018), which enabled understanding of the meaning of the qualitative data. Analysis was conducted using the information software NVivo-12. Open coding allowed the narratives to be analysed according to a flexible process capable of identifying the main categories and to describe their processes, conditions, dimensions and consequences (Soriano and Trinidad-Requena, 2014).

A pattern that repeated frequently in the data was the presence of main central categories with other categories incorporated within them. The coding matrix enabled categories to be related due to the similarity of coding. This had the purpose of establishing explanatory proposals which are detailed in the results collected throughout the process.

## Results and Discussion

### Evaluation of the program's formative action

#### A) POSITIVE ASPECTS:

Formative action was rated positively, being classified as *"interesting"* (Inf. 6), in that it allowed the development of a *"positive learning experience"* (Inf. 13; 15), that was also *"productive"* (Inf. 6). There was an *"impact on university studies and their professional future"* (Inf. 13), *"whose acquired learnings had been of great use in training for my future professional work"* (Inf. 10) in the context of a digital society (Inf. 4).

Participants describe the advantages of online training as having aided training in a flexible way (Inf.4; 12; 13), adapting rhythms and times to available timetables (Inf. 13). Participants highlight the involvement and availability of the tutorial team (Inf. 4; 13), which had offered feedback to students to help them achieve learning objectives, providing the didactic resources necessary. Video-tutorials were mentioned (Inf. 12) as especially facilitating autonomous working.

The learning experience shared during the developed course was summarised:

*"What seemed interesting to me was the interaction with colleagues from another university using digital media, collaborative work forums and social networks, which enabled me to share opinions and experiences with colleagues."* (Inf. 7).

The exchange offered by the online course helped to create a positive working environment which had a strong impact on maintaining motivation and participant engagement (Inf. 5; 9; 13).

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## B) NEGATIVE ASPECTS

The large investment of time required to complete learning tasks was alluded to (Inf. 2; 6; 9; 11; 13), as was the high effort needed to meet demands of the degree being studied (Inf. 13). Although feedback from tutors was constant, it was noted as not being as immediate as that received in a face-to-face training model (Inf, 4; 5; 12).

### **Impact of the activities proposed on the interactive development of communicative and digital competences**

There was an impact of the online program on the development of communicative and digital competences, with the association between both and between their competence units being described

*"The course has been of great use to me, not only for the improvement of some aspects of my communicative and digital competences; for example, the possibility of linking the development, integration and structuring of content through digital competence and its link with aspects of communicative competence, related with syntactic construction of texts."* (Inf. 7).

The four proposed learning tasks or activities were rated by the students as being "innovative" (Inf. 2; 4; 5; 8) and "novel" (Inf. 1; 4; 7; 8; 11; 12), and as having enabled different dimensions of communicative and digital competence to be developed.

## A) TO RECITE A POEM AND RECORD IT

The poem "Don't stop" by Walt Whitman was recited and recorded. This activity was rated positively as influencing the development of abilities needed for oral communication: improvement of oral displays (Inf. 1; 3; 4; 5; 8; 9), persuasion capacity (Inf. 7), communicative assuredness (Inf. 2; 4; 6, 7 y 8), talking slowly (Inf. 1; 2; 4; 5; 10; 9), taking care of intonation (Inf. 1; 2; 3; 4; 6; 10) and vocalisation (Inf. 1; 3; 4; 9; 15).

*"I have improved in communicative competence, in general, as my normal way of talking is faster than the rest and in order to do poetry I had to talk slower, vocalising it and giving it tone"* (Inf. 1).

The recording and recital of the poem enabled simple technical problems of the computer equipment to be identified and resolved autonomously (Inf. 3; 6; 7), looking for information in internet forums (Inf. 3; 7; 8; 13).

#### B) PLAGIARISM ESSAY

This facilitated use of the academic register, punctuation and accentuation in written text (Inf. 1; 4; 6; 7; 13).

*"(...) At the time of completing written texts, I have improved my use of punctuation marks and prepositions, and better adapt written texts to the interlocutors" (Inf. 9).*

Improvement was based on the various dimensions of communicative competence: appropriate use of academic language (Inf. 2), knowledge of the characteristics of formal language (Inf. 2) and development of abilities to make registry changes when required (Inf. 5; 6; 10).

Further, there were improvements in the appropriate use of punctuation marks (Inf. 2; 3; 5; 7; 8), orthographic norms (Inf. 2; 7; 11; 13) and accentuation (Inf. 2; 5; 7; 9; 10; 11; 12; 13). Lexical richness was improved (Inf. 13) thanks to the use of synonyms and antonyms (Inf. 1; 5; 7; 11, 12) avoiding repetitive speech (Inf. 2).

*"I use more synonyms when completing any type of work in order to avoid repetition of words. If I don't know words I look them up in the dictionary of the Spanish Royal Academy of Language" (Inf 4).*

Lexical enrichment is linked to dictionary use (Inf. 6; 8) and leads to re-evaluation of reading (Inf. 3; 4; 5; 6; 7; 9; 11) such as *"a road that leads to the improvement of written expression"* (Inf.7).

The activity "plagiarism essay" contributed to developing digital competence, refining the information search engine within a blog (Inf. 3; 5; 8) and in specialised forums (Inf. 3; 4; 5; 8). It led to the acquisition of basic notions of author rights (Inf. 2; 3; 5; 6; 12) and their implications for work preparation, correctly using network information (Inf 3), referencing it and using APA norms (Inf. 5; 6; 12) to avoid plagiarism (Inf. 4; 11).

### C) MAKING A VIDEO ABOUT PRIVACY ONLINE

This affected the sociolinguistic dimension, as was the case in the "recital and recording of a poem". The act of making the video contributed to improvements in oral presentations (Inf. 1; 3; 4; 5; 8; 9), taking more care of the rhythm of expression (Inf. 1; 2; 4; 5; 10; 9), intonation (Inf. 1; 2; 3; 4; 6; 10) and vocalisation (Inf. 1; 3; 4; 9; 15).

With regards to the digital competence, aspects linked to the identification and resolution of simple technical problems with computer equipment (Inf. 3; 6; 7) and searching for information in internet forums in order to resolve technical problems (Inf. 3; 7; 8; 13) are repeated.

Students state having developed abilities for the production and editing of digital videos (Inf. 2; 4). On some occasions they had to draw on information searches conducted in specialised blogs and forums (Inf. 3; 4; 5; 8).

The students referred to aspects linked to preserving digital identity (Inf. 2; 9; 10) privacy (Inf. 7) and the development of their engagement at the time of sharing information on the network (Inf. 3; 5; 6; 7).

*"I have taken care of my digital identity, before I used to upload to Facebook, Twitter or any other thing, without thinking that there would be any repercussion on the image that others would have of me." (Inf. 15).*

### D) CREATION AND MAINTENANCE OF A BLOG

This enabled students to improve their appropriate use of the linguistic register, punctuation and accentuation of texts, directing towards those to whom the message was intended and the pragmatic aspects of language (Inf. 3; 4; 5; 8).

*"Before I used to write a blog without stopping to check if I had used full stops or commas, or if I had emphasised words well. Nor did I take into consideration register changes according to who messages were directed towards. Now I do".*

Morphosyntax also evidenced improvement. One student affirms:

*"Although I had worked on this theme in language classes, this had always been in a very theoretical way. This has helped me, but the practical activities have made me improve" (Inf. 9).*

Table 1

*Communicative and digital dimensions in relation to the activities carried out in the "Affective e-learning+" program*

Learning activity	Communicative Competence				Digital competence			
	SCL	RPA	MST	PRM	NRP	DIC	DDL	IDI
Recite and record poem	35	0	0	0	13	8	0	0
Plagiarism essay	0	32	22	15	0	7	22	0
Make a video on network privacy	42	4	0	0	39	16	14	19
Creation and maintena	0	27	6	15	24	13	13	19

(SCL=Sociolingüística), (RPA = Academic register, punctuation and accentuation), (MST=Morphosyntax), (PRM=Pragmatic), (NRP=Navigation and resolution of technical problems), (DIC=Development, integration and structuring of content), (DDL=Legal provisions, author rights and licences), (IDI=. Interaction through digital media and management of digital identity).

The network graphic evidences that the "creation and maintenance of a blog" influences the largest number of competence units. Specifically, influences were found on "adaptation of the linguistic register to the interlocutor", "navigation and resolution of technical problems" and "interaction through digital media and appropriate management of digital identity". Although with less intensity, there were also positive consequences for "pragmatic", "development, integration and structuring of content" and "legal provisions, author rights and licences". The impact of the activity was weakest in relation to "morphosyntax" aspects, possibly because more work was done in formal education but was then reduced to a theoretical, formal and memory analysis (Calderón, 2011).

It can be distinguished from the narratives of the students that the "creation and maintenance of a blog" facilitates the understanding and transformation of information.

"Making a video about privacy when using online networks" influenced the development of sociolinguistic processes, facilitating interactions between the empirical communicative modes and the meanings generated by speakers (Pirhonen and Rasi, 2016). "Navigation and resolution of technical problems" also improved. The development of 3 other competence units was moderately favoured: "interaction through digital media and management of identity", "development, integration and structuring of content" and "legal provisions, author rights and licences", in this order.

The "plagiarism essay" favoured development of the "academic register, punctuation and accentuation" and "morphosyntax", in addition to "legal provisions, author rights and licences". "Pragmatic development" (application of language to the context) was more moderately influenced, as was "development, integration and structuring of content". Cortés, Guevara and Mariscal (2008) argue that: "(...) besides knowing the informative needs, proposing successful search strategies, recovering relevant information, evaluating it and integrating it (...), the student should know how to present the results" (p. 8).

The "recital and recording of poems" was very effective for the development of the "sociolinguistic" unit of competence, which deals with the use of language in different social contexts. It was less impactful upon navigation and resolution of technical problems. This activity "gives meaning to linguistic expression and promotes communication" (Gudamillas, 2014, p. 103).

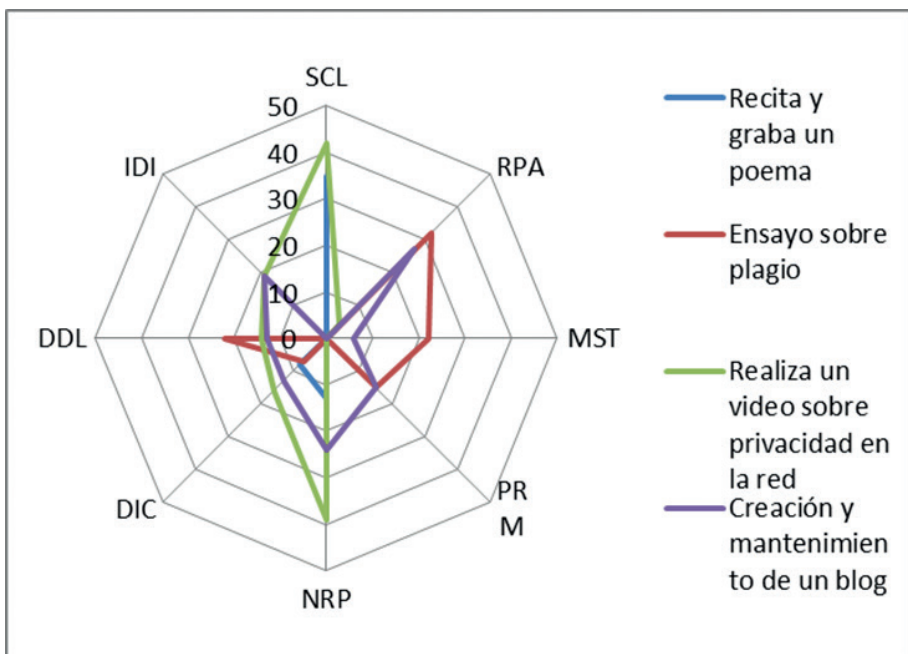


Figure 1. Network map of the impact of the proposed activities on development of communicative and digital competence.

## Discussion and Conclusions

Attending to the association between the theoretical framework, the activities proposed by the applied program and the objectives defined in the research, the most significant results and their interpretation are addressed. These concern how the students perceived the impact of the online program on their progress, relative to two reference competences.

Students most positively rated the advantages of online training in the sense of overcoming the problems of physical distance and time, and its role in making training actions more flexible (Inf. 4; 12; 13). In linking the discussed reality with the availability of the tutorial team, feedback was offered and materials and teaching resources were provided through video-tutorials which facilitate autonomous working. Students very positively rated being able to interact with students from another university, stating that their learning was enriched by hearing other viewpoints. Participants pointed out that the technical dimension was transcended and many strengths of the program were experienced.

These included feedback offered by the tutorial team, presentation of content, and generation of an interactive action by the teacher and its contribution to the development of teaching practice (Cabero, 2006). This being said, students indicated that feedback from the tutorial team was not immediate, as it had been in face-to-face teaching. Further, the program had demanded from them a considerable additional effort during the additional time dedicated to the course, sometimes, above and beyond that invested in their usual studies.

The "recital and recording of a poem" had an important influence upon the "sociolinguistic" unit of competence, facilitating associations between linguistic phenomena's and different sociocultural realities (Jiménez-Sola, 2017). This impact diminished when considering "navigation and resolution of technical problems" in its totality, although navigation when perusing blogs and the web in order to know how to "record and upload a poem to the online network" and "to investigate how to solve technical problems" did improve (López, 2018).

Through the developed tasks, the proposed activity favoured overall interactions between the competence units of "sociolinguistics", with "navigation and resolution of technical problems", and "development, integration and structuring of content and the use of language in different

cultural ambits. Secondly, it proposes the development, integration and structuring of content due to "recording and reciting a poem".

The activity "plagiarism essay" evidenced considerable transversal development in that it influenced 5 units of competence, promoting to a large extent "academic register, punctuation and accentuation", "morphosyntactic aspects" and "legal provisions, author rights and licences". The activity strongly influences these three units of competence, given that completion of the test demands appropriate application of the linguistic register to the cultural reality of those reading the text (Castelló, 2006). However, indicate that the feedback from the team was not immediate as in the face.to.face teaching, or that the extra time spent on the course and sometimes subtracted from your regular studies has taken considerable effort.

Further, it urges individuals to write correctly and appropriately place punctuation marks (Neira, Sierra-Arizmendiarieta and Pérez-Ferra, 2018). In the same way, the writing of texts within the essay encouraged the application of practical aspects of morphosyntax and of the development, integration and structuring of content. The latter unit of competence is assigned to the digital ambit. However, it demands the development of practical morphosyntax, when having to describe the grammatical structures and their practical usage (Merino, 2017) or the pragmatic aspects of language. It studies the influence of context on the meaning of written and oral language, in addition to the appropriate use of synonyms in text (González-Cutiva, 2015). It impacted to a lesser extent upon "pragmatic" and "navigation and resolution of technical problems".

The "making of a video about privacy when using the online network", facilitated protection of the students' public digital profile by controlling the information shared by them and making available secure passwords, amongst other things. The activity influences to a large extent the "real use of language" and closes the gap between teaching of grammatical norms and the real use of language in communicative contexts (Calderón, 2011) "Sociolingüistics". Impact was also demonstrated in the "navigation and resolution of technical problems" (Appl and Homer, 2018) and in the "development, integration and structuring of content", in that the "scripting" of videos demands the use of practical morphosyntax in order to reinforce student knowledge about structuring speech. For this same reason, video-tutorials favour learning through ICT (Arévalo, Vicente del Rey, García-Morales and Rivas, 2020).

The activity had less impact with respect to the development of "legal provisions, author rights and licences". This can be explained because given that besides acquiring basic notions about the theme, other variables were also influenced such as development of specific capabilities and the exercise of moral judgement, effects which were also found in other dimensions (Tella and Oyeyemi, 2017).

Without a doubt, "creation and maintenance of a blog" was the activity with the greatest transversality, notably favouring adequate use of the "academic register, punctuation and accentuation" (Castelló, 2006), and "navigation and resolution of technical problems" (Valdellón, 2017). It also favoured "interaction through digital media and management of digital identity", although to a lesser extent. This may be given to the fact that the blog is a resource that identifies the digital user in the network (Omatos, 2016). To a much lesser extent the activity impacted upon the study of language in its relation to the user and the circumstances of communication, "pragmatic". It impacted in an almost testimonial way, only 6 frequencies relating to the "morphosyntactic" aspect. This is possibly due to recipients "(...) having worked more in formal teaching, but with this being reduced to a theoretical and memory analysis" (Calderón, 2011, p. 13). However, the students' narratives indicate that this activity facilitates understanding and transformation of information, in addition to navigation and resolution of technical problems, knowledge of the layout and types of licences, and interaction through digital media and management of digital identity (González-Cutiva, 2015).

It can be confirmed from the narratives that the students valued the large extent of transversality in the activities, particularly in the "creation and maintenance of a blog" and "to make a video about privacy in the online network", and to a moderate and small extent in the "plagiarism essay" and "recite and record poems" units, respectively. This affirms the fact that the program has evolved towards taking an inter-disciplinary approach (Souza da Cosa and Cerdeira, 2012).

Analysis of the reflexions presented through students' narratives earlier in this paper provides confirmation of how the highlighted aspects are perceived. These include aspects relating to the qualities of the applied program, with students in this sense alluding to their liking of the interactive action between students, "*Interaction with peers from another university has seemed interesting to me...*" (Inf. 7). In addition to aspects relating to the development of both competences. This is corroborated



by statements that the collaborative resolution of problems online favours interaction between the digital actors involved (Amor, and Serrano-Rodríguez, 2018).

In the same way, notable transversality was caused by activities targeting the development of the competences and high frequency indices. This was observed in the allusions present in the narratives about the development of the competence units: "Sociolinguistic", "academic register, punctuation and accentuation" and "navigation and resolution of technical problems", in this order. All of this proposes that, not only can different competence units be developed together, but that the exercise of these units themselves also occurs, on many occasions, jointly.

The results show the convenience of higher levels of interdisciplinary in the subjects taught in teaching centers. To make progress in the incorporation of new methods, both in the suppression or minimization of analytical processes in the study of language, and in the orientation of ICT training in an instrumental sense, is necessary too. These aspects will favor a more harmonious development in the structure of the referred competences (communicative and digital) and in the interaction and reciprocal demands that they entail, as well as in the way of optimizing the didactic performance of both of them.

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