

Definition of a self-reflection tool named Aurora for the assessment of university professors 'digital competence

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ABSTRACT

We are currently facing a historical moment in which educational practices are being transformed using technology. In this scenario, higher education institutions have a great responsibility towards the Digital Competence of University Professor (DCUP). The main objective of the study is to contribute to the improvement of the self-reflection of the DCUP. Therefore, a self-assessment tool called Aurora, based on the European Framework for the Digital Competence of Educators (DigCompEdu) model, is defined. Subsequently, the tool is applied, and the results are analysed. The methodology used is quantitative by means of an online survey. The sample consisted of 154 university professors from the University of Deusto (UD). On the one hand, through descriptive analysis it is highlighted that the Aurora questionnaire is an objective tool to measure the self-reflection of the DCUP. On the other hand, through the inferential analysis it is underlined that significant differences are found in the demographic data of professional category and age. It is also stressed that there are significant differences in the correlations. These results show that it is necessary to create a questionnaire that measures all the competences of the DigCompEdu model to be considering the DigCompEdu model.

KEYWORDS: DigCompEdu; Digital Competence; higher education; university professor; questionnaire

1 INTRODUCTION

In the 21st century, there has been an accelerated growth in the population with access to the Internet. Therefore, Barroso et al. (2007), indicate that the information and communication society puts an end to the industrial era and ushers in the digital era. Furthermore, Williamson et al. (2019) and Brugia & Zukersteinova (2019) point out that today's society is heading towards the fourth industrial revolution where future citizens will need DC.

Likewise, the European Parliament & the Council of the European Union (2006) point out eight basic competences that any citizen should have for lifelong learning, one of them being the Digital Competence (DC).

According to the National Institute of Educational Technologies and Teacher Training (INTEF, 2017), the DC can be defined as the creative, critical, and confident use of information and communication technologies.

To respond to the need to assess the Digital Competence of Professor (DCP) and DCUP, several global reference organisms define models and tools to assess them (Butcher, 2019; Department of Education, 2017; ETF, 2019a; INTEF, 2017; ISTE, 2021; Prendes et al., 2018).

With the need for a digitally competent European society, Ferrari leads the DigComp project of the European Commission's Joint Research Centre. This project defines the DC for Citizenship Framework (Ferrari, 2012, 2013). This framework, published in 2013 and revised in 2016 and 2017 (Caena & Redecker, 2019), gives rise to the European DC Framework for teachers, commonly known as DigCompEdu (Redecker & Punie, 2017). It aims to promote the development of DCP and foster innovation in European education. Subsequently, the European Commission (2022) presents a self-reflection tool called DigCompEdu Check-In, which is based on the DigCompEdu model. The tool aims to

encourage teachers' self-reflection on DC to point out strengths and needs. In fact, this tool is crucial for the realisation of the self-reflection tool for the evaluation of the DCUP (Redecker & Punie, 2017). It is the basis for guiding the discussion and organising the findings of the work described in this paper.

Similarly, the European Commission has developed a free, customizable, and easy-to-use SELFIE tool to help schools assess where they are in terms of learning in the digital age (European Commission, 2022).

Several authors highlight the need for continuous training of university professors through workshops, courses, conferences, and online symposia. Therefore, it is essential to create a permanent support service for university professors (Alexander et al., 2019; Arruti et al., 2020; Cabero-Almenara et al., 2020; Cabero-Almenara & Llorende-Cejudo, 2020; Ramírez-Montoya, 2020).

Hence, universities have the great challenge of changing the old educational paradigm and integrate the DC in their teaching and learning processes (Amador et al., 2017; Levis, 2011; Rengifo-Millan, 2015).

Due to this situation, as Gómez (2017) indicates, the Conference of Rectors of Spanish Universities establishes among its objectives the duty to provide support and introduce new technologies to help professors.

INTEF (2017) indicates that the technological competences of professors have been underdeveloped, as there was no common frame of reference for university professors.

In this context, higher education institutions have a great responsibility towards the DCUP. Hence, it is a priority to define an objective tool to assess the DCUP based on the DigCompEdu model, to identify the needs in the DC and to respond to the various specific needs of university professors through continuous training.

Along these lines, according to Cabero-Almenara & Palacios-Rodríguez (2020), the DigCompEdu Check-In tool assesses the most generic concept of each competence, and they state that it reduces the assessment of other important concepts. Along the same lines, the study carried out for this research shows that it is not sufficiently precise the DigCompEdu Check-In questionnaire for the DCUP. It is considered an extensive tool, which could be complicated to answer and generate some ambiguity.

The literature review corroborates the need to unify models, criteria and competences that analyse the DCUP considering the DigCompEdu model. In this way, the results would be comparable and training actions could be carried out at European level.

All this reinforces the idea that there is no self-reflection tool that analyses DCUP using the DigCompEdu model and helps to define the main objective of the present research "To contribute to the improvement of DCUP in the context of the EHEA".

Accordingly, this research identifies the four most relevant and least developed competences according to the literature review and the systematic reviews Bilbao-Aiastui et al. (2021) and Basilotta-Gómez-Pablos et al. (2022). Subsequently, the specific part of the four competences selected in the DigCompEdu model and the DigCompEdu Check-In tool are reviewed. Through the review, it is perceived that the tool is ambiguous, and an alternative tool called Aurora is proposed to assess the four selected competences.

For all these reasons, the main objective of this study is to contribute to the improvement of self-reflection of DCUP in the context of the EHEA. Three other specific research objectives are also highlighted: to define and design the self-assessment tool called Aurora based on the DigCompEdu model, to apply the DCUP self-reflection tool and to analyse the results obtained from the DCUP self-reflection tool.

The second section describes the methodological aspects of the study, and the third section shows the analysis of the results obtained in this research. Subsequently, the paper ends with the discussion and conclusion section.

2 METHOD

This study uses a non-experimental, quantitative methodology using the Aurora questionnaire, where data are observed in their natural context.

2.1 Participants

The population consists of 774 university professors who compose the Teaching and Research Staff of the UD of the faculties of Law, Psychology and Education, Deusto Business School (DBS), Social Sciences and Humanities, Engineering and Theology of the university campuses of Bilbao, San Sebastian, and Madrid during the academic year 2020-2021 (University of Deusto, 2020). Likewise, the significant sample number of the university is 170, assuming the relative tolerable error of 5% and the use of a Likert scale of 7 (Park & Jung, 2009).

The sample which information is collected is probabilistic and uses a random selection method (Galindo-Domínguez, 2020; Hernández et al., 2014).

To select the UD sample, stratified sampling is used in which specific variables are decided at the beginning of the research to create different segments, called strata. Thus, the sample is divided into homogeneous strata that possess certain characteristics. The selection is made by random selection from the Teaching and Research Staff lists of the UD.

Taking this information into account, table 1 presents the summarised data of the population and the sample of this research

UD professors	Population	%	Sample	%
All faculties	774	100%	170	21.96%

Table 1. Study population and sample

After the application of the Aurora questionnaire, it is noted that participation in the questionnaire is positive. A total of 154 university professors took part in the questionnaire. Therefore, it is emphasised that the sample obtained in this research has a 90% statistical significance or validity and a 5% error rate.

2.2 Instrument and variables

In this research, only 3 competence areas and 4 most relevant and least developed competences are selected according to the testimony of Christine Redecker, author of the model DigCompEdu, the literature review carried out, and the systematic review carried out Bilbao-Aiastui et al. (2021).

In the case of the selection of the first DCUP, the words of Christine Redecker in the Centre for Education and New Technologies of the Universitat Jaume I (CENT UJI, 2019) are taken into consideration. The following competences are also selected considering the main threads of the DigCompEdu model.

Table 2 shows the 3 selected areas and the 4 competences chosen with their 4 indicators and 4 corresponding assessment items from the DigCompEdu Check-In questionnaire.

Area	Competence	Indicator	Item
Area 1 Professional commitment	1.3 Reflective practice	Reflect individually and collectively on the personal digital pedagogical practice of one's own educational community, critically evaluate it and actively develop it	I actively develop my digital teaching competences
Area 3 Teaching learning	3.1 Teaching	Program and implement digital devices and resources in the teaching process to improve the effectiveness of teaching	I carefully consider how, when and why to use digital technologies in the classroom, to

		interventions. Manage and coordinate digital teaching interventions appropriately. Experiment with new formats and pedagogical methods for teaching and develop them	ensure that they add value
Area 4 Digital assessment	4.1 Assessment strategies	Use digital technologies for formative and summative assessment. Improve the diversity and appropriateness of assessment formats and approaches	Use of digital assessment tools to monitor student progress
	4.3 Feedback and planning	Use digital technologies to provide targeted and timely feedback to learners. Adapt teaching strategies and provide specific reinforcement based on the data generated by the digital technologies used. Empower students and parents to understand the evidence provided by digital technologies and to use it in decision-making	Using digital technologies to provide effective feedback

Table 2. Summary of the choice of DigCompEdu competences and their representation in the DigCompEdu Check-In questionnaire

The Aurora questionnaire is carried out in 4 phases: in the first phase, a first approximation of the questionnaire is made taking into account the DigCompEdu model. In the second phase, the items of the questionnaire were adapted with the observations and considerations of 2 professors from the disciplines of Education and Engineering with more than twenty years of teaching experience in the university environment. In the third phase, a new adaptation of the Aurora questionnaire is carried out in relation to the DigCompEdu Check-In questionnaire. Finally, in the fourth phase, a meeting is held with a group of professors and the final adaptations of the questionnaire are carried out.

The Aurora questionnaire is an adaptation of the DigCompEdu Check-In questionnaire, which is based on the DigCompEdu model.

At the beginning of the questionnaire, there is a description of the survey, a information about the research and the informed consent.

This is followed by 6 closed questions about the participant's personal characteristics:

- Professional category.
- Dedication.
- Gender.
- Age.
- Faculty.
- Years of experience.

In the central block the questions are organised by competence areas. The 3 areas and 4 competences selected are presented by 18 closed items:

- Area 1 Professional engagement, competence 1.3 - Reflective practice consists of 5 items.
- Area 3 Teaching and learning, competence 3.1 - Teaching contains 4 items.
- Area 4 Digital assessment, competence 4.1 - Assessment strategies contains 5 items.
- Area 4 Digital assessment, competence 4.3 - Feedback and planning contains 4 items.

The items are evaluated by means of a Likert scale of 7 ordinal values of degree of agreement (0, 1, 2, 3, 4, 5 and 6), from which the professor must select a value considering his own educational practice. These values are progressive and summative through an internal rating system, with 0 being strongly disagree and 6 being strongly agree.

As for the internal scoring of the items, each competence consists of 6 points, which are divided equally between the items of each competence. Likewise not all competence items have the same value, as some competences consist of 5 items and others of 4:

- Area 1 Professional engagement, competence 1.3 - Reflective practice consists of 5 items, and each item has a value of 1.20.
- Area 3 Teaching and learning, competence 3.1 - Teaching contains 4 items, and each item has a score of 1.50.
- Area 4 Digital assessment, competence 4.1 - Assessment strategies contains 5 items, and each item has a value of 1.20.
- Area 4 Digital assessment, competence 4.3 - Feedback and planning consists of 4 items, and each item has a score of 1.50.

Therefore, two types of values are underlined, considering the number of items of each competence (Table 3 and Table 4).

Internal scoring	Likert scale
0	0
0.20	1
0.40	2
0.60	3

0.80	4
1.00	5
1.20	6

Table 3. Internal score of the competences, consisting of 5 items

Internal scoring	Likert scale
0	0
0.25	1
0.50	2
0,75	3
1,00	4
1,25	5
1,50	6

Table 4. Internal score of the competences, consisting of 4 items

2.3 Procedure

In this study, a research environment is created based on a culture of integrity, transparency, and rigour in the research process.

A strategy is developed that requires compliance with ethical standards in order to apply basic ethical resources at the various stages of the research design process: requesting the relevant ethical authorisations, presenting to the sample the objectives, description of the study and the tool, stressing that the questionnaire is anonymous and voluntary and highlighting that by completing the questionnaire informed consent is given.

The survey data were collected in the year 2021, specifically from May to July.

Likewise, the implementation of the Aurora questionnaire is carried out by an online questionnaire. For this purpose, Google Forms is used, due to its various possibilities and facilities. The questionnaire is also sent to the sample by email. During the following weeks, the participants of the questionnaire are followed up and reminders are sent to them to complete the questionnaire.

It should be noted that first of all, an Excel sheet is used to collect the information from the Aurora questionnaire. Secondly, the Excel sheet is exported to the Statistical Package for Social Sciences (SPSS) version: International Business Machines Corporation (IBM) SPSS 28.0.

2.4 Statistical analysis

For the analysis of the results of the Aurora questionnaire, the internal scoring of the questionnaire is considered.

The results are structured in two sections, on the one hand the descriptive analysis and on the other hand, the inferential analysis.

3 RESULTS

3.1 Descriptive analysis

Table 5 presents the results of the demographic data, highlighting the frequencies and percentages obtained in each competence.

Demographic data					
Aurora N=154					
Professional category		Dedication		Gender	
Permanent professor	113 (73.4%)	Full time	102 (66.2%)	Male	74 (48.1%)
Non permanent professor	41 (26.6%)	Part-time	52 (33.8%)	Women	78 (50.6%)
				I prefer not to say	2 (1.3%)
Age		Years of experience		Faculty	
25-29	7(4.5%)	1-5	45(29.2%)	Psychology and Education	39(25.3%)
30-39	42(27.3%)	6-10	29(18.8%)	Social Sciences and Humanities	31(20.1%)
40-49	38(24.7%)	11-15	20(13%)	DBS	28(18.2%)
50-59	57(37%)	16-20	9(5.8%)	Engineering	27(17.5%)
60 or more	8(5.2%)	More than 20	51(33.1%)	Law	20(13%)
I prefer not to say	2(1.3%)			Other	5(3.2%)
				Theology	4(2.6%)

Table 5. Demographic data results, frequencies, and percentages

For the descriptive analysis, the descriptive statistics of mean, standard deviation, Pearson's coefficient of variation, asymmetry and kurtosis were calculated (Table 6). Cronbach's alpha was also calculated to analyse the reliability (Galindo-Domínguez, 2020; Rendón-Macias et al. 2016).

In the questionnaire, the minimum score is 0 and the maximum score is 6.

Aurora						
Descriptive statistics	N	Mean	S.D.	C.V.	As.	Ku.
Competence 1.3	154	3.830	1.032	0.269	-0.592	0.730
Competence 3.1	154	4.167	1.158	0.278	-1.029	1.352
Competence 4.1	154	3.187	1.148	0.454	-0.162	-0.686
Competence 4.3	154	3.010	1.306	0.434	-0.146	-0.336

Table 6. Descriptive statistics of the four competences

In this section, the Cronbach's alpha achieves an index of 0.777, which corroborates that the questionnaire has a high reliability, as it discriminates individuals well and is therefore an objective questionnaire.

3.2 Inferential analysis

The results are analysed by grouping them into seven sections, which are representative of the Aurora questionnaire: professional category, dedication, gender, age, faculty, years of experience and correlations of the four competences.

3.2.1. Professional category

In relation to the relationships between the professional category and the four competences, the Student's t-test was performed for two independent samples (Student, 1908).

First it should be noted that normality is assumed in this section, as the samples are over 30 as shown in table 5, and the Central Limit Theorem (CLT) is applied (Gyu & Hae, 2017; Le Cam, 1986).

Likewise, Levene's test is performed to check the homoscedasticity of the questionnaire (Gastwirth et al., 2009).

As for the Student's t-test, statistically significant differences are highlighted in competence 1.3 - Reflective practice (Table 7), $t(152) = 2.521$; $p\text{-value} = 0.013$; $d = 0.460$, being higher for the permanent professor mean = 3.954 ± 1.051 , than for the non-permanent professor mean = 3.488 ± 0.906 .

In the other competences, no statistically significant differences were found.

Aurora n=154	Permanent professor n=113		Non permanent professor n=41		t	p-value	d
	Mean	S.D.	Mean	S.D.			
Competence 1.3	3.954	1.051	3.488	0.906	2.521	0.013	0.460
Competence 3.1	4.212	1.182	4.043	1.092	0.803	0.423	0.146
Competence 4.1	3.283	1.492	2.922	1.301	1.372	0.172	0.250
Competence 4.3	2.971	1.373	3.116	1.108	-0.606	0.545	0.110

Table 7. Student's t-test between professional category and the four competences

3.2.2. Dedication and gender

To analyse these two demographic data, normality is assumed for both, as the samples are over 30 as shown in table 5, and the CLT is applied.

The Levene's test is also performed to test the homoscedasticity. Therefore, the Student's t-test was carried out in both sections, and it was found that there were no significant differences.

3.2.3. Age

To detect whether there are relationships between the age and the four competences, a one factor ANOVA test is carried out (Fisher, 1928). Therefore, first there are neutralise the samples that prefer not to state their age, since there are only a few of them, and they are isolated cases (Table 5).

Next, the Shapiro-Wilk normality test is performed to check whether the Aurora questionnaire is normal for samples under 30 (Shapiro & Wilk, 1965). The Levene test is also performed to check the homoscedasticity of the questionnaire.

In all competences, the normality of the groups is observed, so a one-factor ANOVA test is carried out for all of them. In the competence 1.3 - Reflective practice there is a significant relationship $F(4,147) = 3.858$; $p\text{-value} = 0.005$; $\eta^2 = 0.095$. On the other hand, in the other competences no significant differences are found (Table 8).

The differences found in the competence 1.3 - Reflective practice are between the groups of 30 to 39 mean = 3.795; $t.d. = 0.795$, 40 to 49 mean = 3.932; $t.d. = 0.974$, 50 to 59 mean = 3.909; $t.d. = 1.122$, with respect to the group 60 and over mean = 2.500; $t.d. = 1.121$ (Table 9) (Figure 1). Likewise, the 25-29 group obtains mean = 3.886; $t.d. = 0.527$.

Aurora	D.F.	F	P Value	η^2
Competence 1.3	4.147	3.858	0.005	0.095
Competence 3.1	4.147	2.267	0.065	0.058
Competence 4.1	4.147	1.630	0.170	0.042
Competence 4.3	4.147	1.203	0.312	0.032

Table 8. One-factor ANOVA test between age and the four competences in the Aurora questionnaire

Aurora N= 152	Mean	S.D.
25 to 29	3.886	0.527
30 to 39	3.795	0.795
40 to 49	3.932	0.974
50 to 59	3.909	1.122
60 or more	2.500	1.121

Table 9. Significant differences between age and competence 1.3 – Reflective practice in the Aurora questionnaire

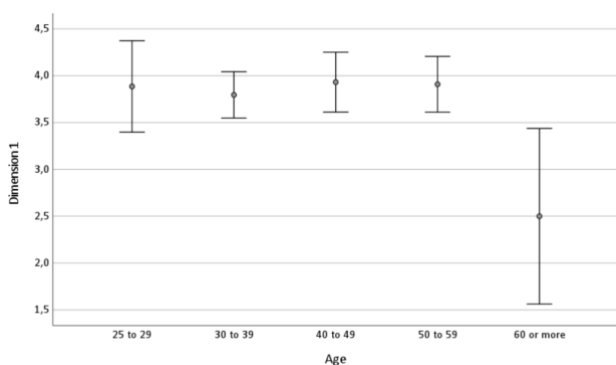


Figure. 1. Error bar chart between age competence 1.3 – Reflective practice

3.2.4. Faculty and years of experience

In order to analyse these two demographic data, the Shapiro-Wilk normality test is carried out to check the normality in samples below 30. The Levene test is also performed to check the homoscedasticity of the questionnaire.

It should be noted that the Kruskal-Wallis H test is used in some groups because normality is not achieved (Kruskal & Wallis, 1952). The one factor ANOVA test is also applied, given that normality is achieved in other groups. No statistically significant differences are found in any of the four competences of the two demographic data.

3.2.5. Correlation of the four competences

Finally, the Pearson correlations between the four competences are analysed, and it should be emphasised that statistically significant correlations are found in all of them (Table 10) (Pearson, 1900).

Aurora n=154		Competence 3.1	Competence 4.1	Competence 4.3
Competence 1.3	r	0.759	0.444	0.260
	p-value	0	0	0.001
Competence 3.1	r		0.556	0.329
	p-value		0	0
Competence 4.1	r			0.519
	p-value			0

Table 10: Synthesis of the correlations of the four competences

4 DISCUSSION AND CONCLUSIONS

Firstly, the results support the idea that the Aurora questionnaire is an objective tool for measuring DCUP self-reflection.

In relation to the analysis of the demographic data of the study, it is remarkable that significant differences are observed only in two areas. On the one hand, in the professional category, it can be observed that only in the competence 1.3 - Reflective practice are significant differences. Moreover, the permanent professors have a higher DC in terms of reflective practice than non-permanent professors.

These results are not in line with Liesa-Orús et al. (2020), who point out that permanent professors give less relevance to DC than non-permanent professors.

This may be because permanent professors are generally older and more experienced, which makes it easier for them to reflect on their DC. In addition, university professors are obliged to adapt to the European curriculum of education. Thus, they need to acquire

more specific competences, including reflective practice in terms of the DCUP.

On the other hand, regarding to the age, significant differences stand out only in the competence 1.3 - Reflective practice. This phenomenon occurs between the 30-39, 40-49 and 50-59 age groups in relation to the over 60 age group, which has the lowest mean.

In this line, there are several studies that support the idea that age influences on the DCUP, that is, when university professors are 50-60 years old or older, their DC competences generally tend to decrease (Díaz, 2015; Echeverri; 2018; González-Sanmamed et al., 2020; Orozco-Cazco et al., 2020; Robles & Ángulo, 2018). Therefore, they have a lower use of digital resources (González-Sanmamed et al., 2020). In addition, this stage of life is generally associated with a decrease in cognitive abilities, which hinders learning (Lepe-Martínez et al., 2020).

Furthermore, as Caballero (2013) indicates, young professors are more interested in training activities, and therefore in improving their professional training. Consequently, they make more use of digital resources.

Finally, regarding to the correlations of the DCUP, the analysis of the present research shows that there are statistically significant differences in the four competences of the questionnaire. In other words, there is a direct correlation between the four competences. When one DCUP increases, the others also increase in the same direction (Cabero-Almenara et al., 2020). Likewise, Mercader (2019) highlights that there is a direct relationship between the degree of knowledge of CPDC and its use in the classroom. Therefore, it is emphasised that the different areas are strongly correlated with each other.

As a general conclusion, it can be stated that the results obtained corroborate the idea that the Aurora questionnaire is reliable for measuring the self-perception of the DCUP. Therefore, it is a reference questionnaire at the European level, since it is the only questionnaire based on the DigCompEdu framework and created specifically for university professors. Similarly it is necessary to create a questionnaire that measures all the competences of the DigCompEdu model to be carried out in all European universities. In this way, the terms and criterias would be unified, as well as the concepts addressed by the DCUP. In this way, joint training actions could also be carried out at European and international level in terms of DCUP.

Considering the demographic data, statistically significant differences are only highlighted in the competence 1.3 - Reflective practice. Therefore, it is highlighted that there is a need to improve this DCUP.

Finally, in terms of correlations, a direct relationship between the four competences is observed. Furthermore, it should be noted that the current global pandemic of COVID-19 has led to a rapid increase in the use of technological tools by university professors and, as a result, they have improved their CD in the four competences.

Bearing in mind the limitations of the study, and despite being aware from the beginning, the research was carried out in the UD, therefore it is not representative at a state level and the data cannot be generalised to a national scale.

Also, it should be stressed that the tool used in this research is a self-reflective questionnaire of the

DCUP. Therefore, the limitation is that as it is a self-reflective questionnaire, each person indicates his perception of the DCUP, which may not be the reality. Therefore, the results of the study approximate the reality of university lecturers at the UD in terms of their perception of the DCUP in the four competences.

Nowadays, the DCUP is a topic of great importance at the international level, because of that, it is necessary to detect the shortcomings of university professors in this area. For this reason, it is important to have a global vision of these competences and to offer, in the near future, training actions at international level to implement them in universities and promote the DCUP. Likewise, in order to obtain this skills the university students, it is necessary for university professors to acquire a high level of CD. In this line, Bond et al. (2018) highlight that pedagogical training is crucial for adequate DCUP.

Acknowledgments

We are grateful to the UD and all research participants for taking part in the study.

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DEFINICIÓ D'UNA EINA D'AUTOREFLEXIÓ ANOMENADA AURORA PER A L'AVALUACIÓ DE LA COMPETÈNCIA DIGITAL DEL PROFESSORAT UNIVERSITARI

Actualment estem davant d'un moment històric en què les pràctiques educatives es transformen mitjançant la tecnologia. En aquest escenari, les institucions d'educació superior tenen una gran responsabilitat envers la Competència Digital del Professor Universitari (DCUP). L'objectiu principal de l'estudi és contribuir a la millora de l'autoreflexió del DCUP. Per tant, es defineix una eina d'autoavaluació anomenada Aurora, basada en el model del Marc Europeu per a la Competència Digital dels Educadors (DigCompEdu). Posteriorment, s'aplica l'eina i s'analitzen els resultats. La metodologia utilitzada és quantitativa mitjançant una enquesta en línia. La mostra estava formada per 154 professors universitaris de la Universitat de Deusto (UD). D'una banda, mitjançant l'anàlisi descriptiva es destaca que el qüestionari Aurora és una eina objectiva per mesurar l'autoreflexió del DCUP. D'altra banda, a través de l'anàlisi inferencial es subratlla que es troben diferències significatives en les dades demogràfiques de categoria professional i edat. També es subratlla que hi ha diferències significatives en les correlacions. Aquests resultats mostren que cal crear un qüestionari que mesuri totes les competències del model DigCompEdu per tenir en compte el model DigCompEdu.

PRAULES CLAU: DigCompEdu; competència digital; educació superior; professorat universitari; qüestionari

EVALUACIÓN DE LA COMPETENCIA DIGITAL DEL PROFESORADO UNIVERSITARIO

Actualmente estamos ante un momento histórico en el que las prácticas educativas se transforman mediante la tecnología. En este escenario, las instituciones de educación superior tienen una gran responsabilidad por la Competencia Digital del Profesor Universitario (DCUP). El objetivo principal del estudio es contribuir a la mejora de la autorreflexión del DCUP. Por tanto, se define una herramienta de autoevaluación llamada Aurora, basada en el modelo del Marco Europeo para la Competencia Digital de los Educadores (DigCompEdu). Posteriormente, se aplica la herramienta y se analizan los resultados. La metodología utilizada es cuantitativa mediante una encuesta online. La muestra estaba formada por 154 profesores universitarios de la Universidad de Deusto (UD). Por un lado, mediante el análisis descriptivo se destaca que el cuestionario Aurora es una herramienta objetiva para medir la autorreflexión del DCUP. Por otra parte, a través del análisis inferencial se subraya que se encuentran diferencias significativas en los datos demográficos de categoría profesional y edad. También se subraya que existen diferencias significativas en las correlaciones. Estos resultados muestran que es necesario crear un cuestionario que mida todas las competencias del modelo DigCompEdu para tener en cuenta el modelo DigCompEdu.

PALABRAS CLAVE: DigCompEdu; competencia digital; educación superior; profesorado universitario; cuestionario

DEFINICIÓN DE UNA HERRAMIENTA DE AUTOREFLEXIÓN LLAMADA AURORA PARA LA