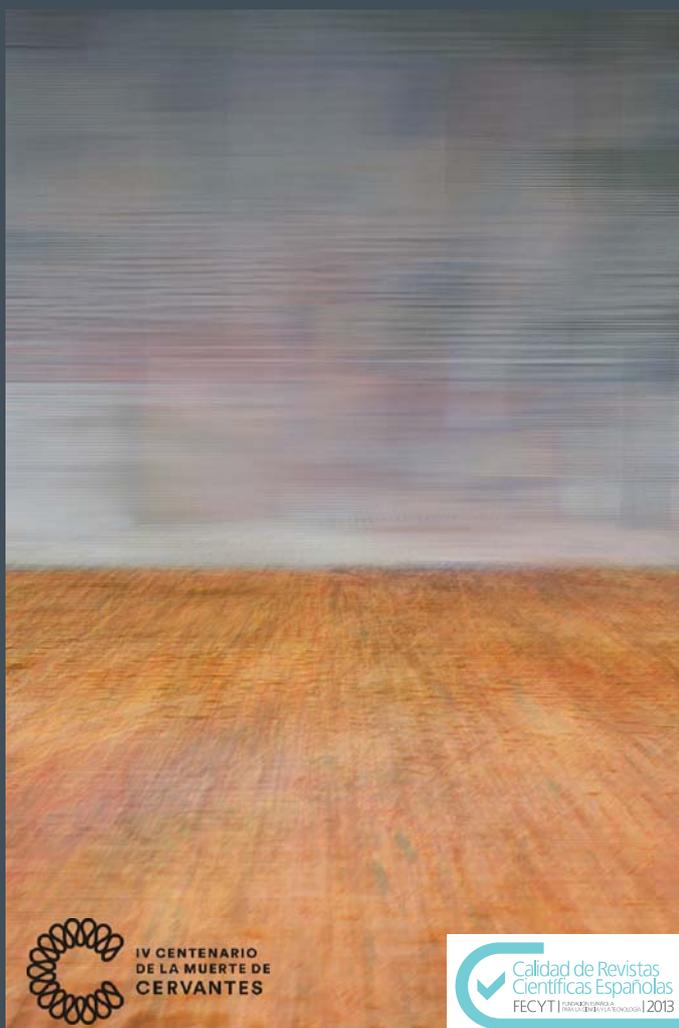# ¿Ética o prácticas deshonestas? El plagio en las titulaciones de Educación

Ethical or Dishonest Practice? Plagiarism in Academic Degrees

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Ethical or Dishonest Practice? Plagiarism in Academic Degrees[1]

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Abstract

The recent syllabuses of Spanish academic degrees in education have elicited some major changes, such as the emergence of new courses like TFG (Degree Dissertation) and TFM (Master's Dissertation), as well as a significant increase in Practicum hours (external work-related development). There is extensive literature on the impact of technology on this type of education, but there are also many references to potential added problems, such as: data protection, children protection, copyright and plagiarism. The present study is part of a larger project on the use of technologies for assessing these courses. The study focuses on the ethical dimension of assessment and prevention of plagiarism in order to answer the following research questions: To what extent is this topic contemplated in academic degrees in education? Are practices considered unethical in teaching guides the same as those considered unethical by academic staff? What mechanisms are put in place once dishonest practices are detected? What indicators are associated with good practice? A simultaneous exploratory

mixed design is performed, along with a DITRIAC concurrent triangulation. The study analyses 391 teaching guides and conducts 54 interviews with academic staff from 37 Faculties of Education from Spanish public universities (74% of the population). Results show little presence of these issues and a lack of mechanisms to prevent dishonest practices in 90% of teaching guides and 54.5% of interviews with academic staff. Data allows confirming the poor attention paid to this issue in the teaching guides and building a profile of indicators that draws a map related to good practice.

Keywords: Ethics, Plagiarism, Higher Education, Preservice Teachers, Academic Degrees in Education, Practicum, TFG (Degree Dissertation) and TFM (Master's Dissertation).

Resumen

Los últimos planes de estudio de las Facultades de Educación españolas han propiciado cambios curriculares importantes, entre otros, el surgimiento de nuevas asignaturas (TFG y TFM), y un aumento considerable de horas en el Prácticum. Hay literatura extensa sobre el impacto de las tecnologías en esta formación, pero no es mayor que las referencias sobre los problemas añadidos, como serían: la protección de datos, la protección a la infancia, los derechos de autor y el plagio. El estudio es parte de un proyecto más amplio sobre el uso de las tecnologías para la evaluación de estas asignaturas. Centrándonos en la dimensión ética de la evaluación y la prevención del plagio, respondemos a las preguntas: ¿en qué medida este tema es contemplado en las titulaciones de educación?, ¿qué mecanismos se ponen en marcha una vez detectadas prácticas deshonestas? ¿son las prácticas declaradas en las guías docentes coincidentes con las manifestadas por los responsables académicos? ¿qué indicadores están relacionados con las buenas prácticas? Se realiza un diseño mixto exploratorio simultáneo, junto con una triangulación concurrente DITRIAC. Se analizan 391 guías docentes junto con 54 entrevistas a responsables académicos de 37 Facultades de Educación de Universidades Públicas de España (74% de la población). Los resultados muestran poca presencia de estas cuestiones y mecanismos para evitar prácticas deshonestas en el 90% de las guías docentes y el 54,5% según los responsables académicos. Los datos permiten constatar la poca atención existente sobre el tema en las guías docentes y construir un perfil de indicadores que dibuja un mapa relacionado con las buenas prácticas.

Palabras clave: Ética, Plagio, Enseñanza universitaria, Formación inicial, Titulaciones de Educación, Practicum, Trabajos Fin de Grado y Trabajo Fin de Máster.

Introduction

There are plenty of research studies on plagiarism in the literature of this field (Hayes & Introna, 2005; López Puga & Puga, 2014; Sonfield, 2014) and on the perception of plagiarism by university students (Park, 2003; Wallace, 2006; Fish & Hura, 2013; Hu & Lei, 2015; Kokkinaki, Demoliou & Iakovidou, 2015). This topic has drawn the attention of European (and most recently, Spanish) institutions that focus on improving the academic ethics and preventing dishonest practice. Additionally, pioneering studies have warned of a worrying situation in Spain (Sureda-Negre, Comas-Forgas, & Gili-Planas, 2009; Comas-Forgas & Sureda-Negre, 2010; 2014).

This is certainly not a new topic of study or a genuine research topic, as dishonest practice appears in different ways, especially now, with the rise of new technology. It has become a worldwide, alarming and growing phenomenon, as studied by Parker, Lenhart, & Moore, (2011) through 1,055 interviews with representatives from US universities. The study shows how plagiarism has increased by 55% in the last decade and how computers and the Internet have been the main cause in 89% of cases. Rinaldi (1996) collected the Computer Ethics Institute guides over twenty years ago, explaining the «Ten Commandments» or the Netiquette of ethical behaviour in the use of computers. Indeed, the eighth commandment notes the «non-appropriation of people's intellectual production». After this initiative, other authors have compiled codes of conduct (Berleur, 2002) worldwide, while creating guidelines for institutions to develop their own codes (McDonald, 2015), starting from high school education, as recommended by Fryer (2004) and Sureda-Negre, Comas-Forgas, & Oliver-Trobat (2015).

The new syllabus in Spanish faculties of education leads to the emergence of new courses, which, together with an increased digitisation and use of technologies (Evans, 2000; Fry, Ketteridge & Marshall, 2014; Pfeffer, 2011), pose new challenges to university management. Specifically, TFGs (Degree Dissertations) do not have a long tradition, as universities have only recently begun requiring them. Writing a TFG brings into play the skills acquired during the degree. However, the TFG has to be tackled along with other projects at the end of the degree. Furthermore, the TFM (Master's Dissertation) is also written together with other projects in a short period of time, and, in some cases, students have to face public examinations at the same time, as well as new educational

contents that are sometimes meaningless to them. Finally, the Practicum has a longer tradition and develops over a longer period. However, with the new syllabus, Practicum credits have increased with "shallow assessment systems" (Zabalza, 2013), which, added to the pressure of the last course, having to cope with other courses like TFG, do not help to solve the problem. In these three courses, there is a common feature that causes pressure on students: the requirement to write long projects within short deadlines, which, together with productivity technologies, can elicit the old «copy and paste» old practice together with other dishonest practices. This is formalised in secondary educational levels and related to gender and «procrastination», as reported by Sureda-Negre, Comas-Forgas, & Oliver-Trobat (2015). Moreover, these practices can increase at the university levels, especially in students who do not usually have optimal skills in the self-regulating their learning (Steffens, 2008) or in study habits (Löfström & Kupila, 2013).

Next, the study will stress the most salient aspects in which technologies play a crucial role in these three courses: 1. E-portfolio platforms represent an opportunity for students to document their evidence with multimedia (texts, videos, images, sounds, etc.) that may infringe copyright, the right to privacy and child image protection laws. 2. Many new external work-related developments (especially in Education and Social Education degrees) take place in companies that use customer databases and copyrighted contents, which require students to sign a confidentiality agreement to protect customer databases, contents, logistics and, in sum, the "know how" of the company. 3. Some work-related developments take place in companies or institutions that involve direct or indirect customer service (museums, libraries, psycho-educational psychology departments, etc.), which handle sensitive information about users who are subject to data protection. 4. In order to draft dissertations and projects, the use of open resources is encouraged. However, resources may be misused, at the same time as their uploading to institutional repositories is encouraged, which can altogether generate a strain on academic staff.

Dishonest practices are mostly detected in informal learning (unofficial institutions), where they cannot be reproved nor discussed, just like social networks, where communication is more important than preserving privacy (Tello-Díaz, 2013). However, when technological practices are used in educational institutions, we have but to discuss them. Institutions

must foster an enabling environment and ethical culture in schools, from a cross-curricular approach and throughout students´ academic lives. Such is the case in guideline design and ethical assessment, as well as, in general, in the design and spreading of ethical codes that are inherent to each institution (McDonald, 2015). This is why universities are implementing strategies to follow up legal issues, such as: creating specific regulations, hiring special services, installing anti-plagiarism software, writing warnings on teaching guides, conducting training courses to prevent plagiarism, etc. However, above all reasons, universities are implementing the above strategies because of the ethics that underlie learning assessment and the moral values inherent to the essence of teaching.

Since Faculties of Education are responsible for the initial training of teachers at all levels, young teachers will imitate their models of behaviour in the future, so this is a powerful reason to carry out research in this field. In other words, these students will be teachers in the future, so their good practice will set an example and a multiplier effect for the citizens they are educating. For all the above reasons, it is necessary to conduct diagnostic studies on the situation of every Faculty of Education, as well as create, implement and evaluate prevention programmes on the dangers of technology in academic degrees in education and post-graduate programmes. This is why the R&D+i project studying the use of technologies for mentoring and assessing the Practicum, TFG and TFM courses in Spain cannot escape such an important issue as the good practice on copyright and the prevention of plagiarism. Therefore, the main objective of this study is to examine the situation on plagiarism and dishonest practice in preservice teachers of Spanish academic degrees in education, especially when it comes to Practicum, TFG and TFM courses. At the same time, the study poses the following questions: To what extent is this topic contemplated in academic degrees in education in Spanish universities? What mechanisms are put in place once dishonest practices are detected in courses like TFG, TFM and Practicum? Are practices considered unethical in teaching guides the same as those considered unethical by academic staff? Can teaching guides and/or academic staff identify a profile or indicator associated with good practice?

Method

The research carried out responds to a descriptive intentionality, with a mixed simultaneous exploratory design. In addition, the research adapted the DITRIAC concurrent triangulation design, for it to be suitable to «confirm or corroborate results and perform cross-validation between quantitative and qualitative data» (Hernández & Fernández, et al., 2010: 570). Resulting data will be contrasted in the interpretation stage, seeking potential relationships.

Sample

The current Spanish university system consists of a total of 83 universities, 50 of which are publicly owned and the rest are private. Data was collected from two sources of information (both coming from academic degrees in education): 1) teaching guides, and 2) interviews with academic staff. Instruments were validated during the first semester of the academic year 2014-15 and data was collected during the second semester.

a) Teaching guides were examined because they are considered as «a dialogue with students, an educational resource that is available to support and guide their learning» (Zabalza & Zabalza, 2012). Teaching guides are a key document to verify the desirable academic practices and discuss what, when and how students are taught and assessed. Although, strictly speaking, teacher training boils down to three university qualifications (two Bachelor degrees and a Master's degree), for the purpose of this study and to be able to answer one of the research questions concerning plagiarism in academic degrees in education, this study also includes all the qualifications taught in Spanish faculties of education. All guides published and accessible on external work-related development or Practicum, TFGs and TFMs in all academic degrees in education were consulted. Whenever they could not be accessed this way, requests were sent to the responsible staff by email. A total of 391 educational guides were analysed, 376 of which (96.2%) belong to public universities. According to their contents and taking into account that the same guide can sometimes respond to two different realities (for instance, work-related development and TFM), the frequency distribution was as

follows: Practicum = 276, TFG = 70, work-related development of the Secondary Education Master's degree = 37 and TFM = 28. The link between external work-related development and the TFG or TFM is found in 282 guides (72.1%). It is observed that Early Childhood Education degrees (121 in total, 30.9), Primary Education degrees (115 in total, 29.4%) and the Master´s Degree in Secondary Education (73 in total, 18.7%) are the most popular choices, in line with the high number of groups that are offered in these degrees. The rest of the degrees (82 in total, 21.0%) correspond, in descending order, to Social Education (48), Education (28) and Physical Education Science and Sports (6). The latter has only been recently included as a degree in some Spanish faculties of education.

b) Academic staff also provided information to this research, that is, deans in the case of external work-related development, degree coordinators and TFG/TFM coordinators). An intentional strategic sampling was used (Perelló, 2009: 27), which involved a total of 54 academic staff members (64.8% women and 33.3% men).

Instruments

According to informants, two instruments were used: a registration form to analyse the content of teaching guides and a survey to interview academic staff. Both instruments were conducted in three stages:

1st Stage: Delphi technique was conducted (Patton, 1987; Okoli and Pawlowski, 2004; Cabero-Almenara, Barroso-Osuna & al, 2009) with members of the research team who provided information regarding the aim of the study from informants' point of view. A series of items were designed and grouped in indicators in order to form categories.

2nd Stage: The content and construct of the first draft were validated using three techniques, namely: a) 14 experts, who based their judgment on criteria of relevance and uniqueness, which allowed for prioritising ideas and a confidential and thoughtful exchange from different points of view (Cabero-Almenara & Barroso-Osuna, 2013). The resulting data from this stage was calculated using the Competition Coefficient (Kcomp) (Martínez, Zúñiga, et al., 2012). The result in all cases was greater than 0.9 points; b) The second technique involved a discussion group (Krueger, 1991) of 12 researchers from 9 universities involved in the project; c)

Thirdly, a pilot application of the instrument to 10 cases that match the population characteristics. The content validity index (CVI) was extracted by applying the formula suggested by Lawshe (1975) to the items. Results obtained with a value of 0.736 are above the measurement set by Lawshe in 0.51, with a minimum of 0.57 and a maximum of 1.

3rd Stage: The synthesis of the above results allowed for building the final version of the two instruments with the same 6 dimensions: contextual data, nature, management, evaluation, technological support and evaluation ethics. The registration form for analysing the guides consists of 44 items and the survey on academic staff has 80 items. This study focuses on items related to the ethical dimension of evaluation (plagiarism and copyright items) in the two instruments. The internal consistency of the survey was measured with Cronbach's alpha statistical test, obtaining a value of 0.72, which is considered sufficient (Nunnally, 1967; Huh, Delorme & Reid, 2006). Items were drafted differently depending on the data source (staff or guides), but linked to the following 6 questions related to the *ethical dimension of evaluation and prevention of plagiarism*:

1. Are texts related to assessment ethics collected for Practicum, TFG and TFM dissertations?

2. Is the institutional repository considered a place to deposit Practicum, TFG and TFM dissertations?

3. What conditions must these dissertations have in order to be deposited in institutional repositories?

4. What are the initiatives used to preserve ethical issues in the evaluation of Practicums, TFGs or TFMs?

5. Are there technological tools to avoid plagiarism?

6. In the event of plagiarism, what actions are taken against the student?

Due to space limitations, the above questions are reorganised and summarised in three main questions: To what extent is this topic contemplated in academic degrees in education in Spanish universities? What mechanisms are put in place once dishonest practices are detected? Are practices considered unethical in teaching guides the same as those considered unethical by academic staff? And what indicators are associated with good practice?

Procedure and Data Analysis

Our study went through three stages, which are concurrent in terms of the object of study, but divergent in terms of approaches and informants (Graph no. I).

GRAPH I. Research Stages

Own source

The *first stage* is qualitative and focuses on decision-making of relevant aspects and indicators for the study, which are present in teaching guides and the survey. The *second stage* is quantitative, exploratory and correlational. In it, the frequency tables of the options that are present in each indicator are calculated, items and indicators of the desirable practices shown in both instruments are summed up and finally, an order is established and relationships between the ordered cases are calculated. The correlation between the survey and the teaching guides in terms of ethics can be observed in Table no. 1. The *third stage* is qualitative. In it, a contextual profile is created and related to the sum of items that indicate the desirable practice shown in teaching guides and academic staff. Likewise, results are compared and interpreted at this stage. A methodological triangulation takes place at the level of the instrument (analysis form/interview/survey), analysis (qualitative/quantitative) and information sources (teaching guides/academic staff). Two of these levels overlap here. Results are based on different viewpoints but in the end, they complement each other and lead to a comprehensive understanding. Likewise, the same conclusions are also confirmed and supported, or at least the conclusions that are on the same direction. Quantitative data analysis starts being descriptive and ends up being complemented by another analysis of a

undergo content analyses (Krippendorff, 1990).

Results

Next, the study analyses the data collected, based on the questions raised above, to allow us to answer them at the end of this section, while drawing a map to provide a *snapshot* of the current situation in Spanish academic degrees in education. This exercise will put us in a better position to address the findings and identify a set of indicators associated with good practice.

The first research question was: *Is the topic of plagiarism contemplated in Spanish academic degrees in education?* As reported by the teaching guides, issues related to ethics in Practicum dissertations in general and more specifically, the issues of plagiarism, intellectual property and industrial exploitation, have little presence, with negative responses and values ??over 94% of cases (94.1% for plagiarism; 98.7% for registration, custody and dissemination of data; 99% for intellectual property and industrial exploitation; 99.5% for confidentiality agreements and 99.7% for agreements). On their part, academic staff report technological tools and mechanisms to prevent dishonest practices. In most cases, each professor uses the technological tool that s/he considers appropriate (55.6%). There is rarely a single tool for all, whether a platform at an institutional level (20%) or a specific software (22.2%). If a student has plagiarised content, academic staff may decide that: s/he must repeat their course (48.1%); it is up to tutors to decide what to do (44.4%); there is no available protocol to be followed (25.9%); or regulations do not cover such situation (24.1%). Other measures (12.7%) also include: "failing the student for reassessment in September", "requiring the student to submit an individual project", "requiring the student to repeat the dissertation" or "the student is not allowed to present his/her work".

As for the answers provided by academic staff, we found that more than a third confirm the existence of initiatives to preserve the ethical issues of assessment in Practicum, TFG and TFM courses. In the former case, 46.3% of participants gave recommendations for "the preservation of data identity and privacy" and "the preservation of children's images". 38.9% have "regulations for data protection and intellectual property"; 31.5% "sign confidentiality agreements with companies" and 37% "conduct

seminars to train students". With regards to TFGs or TFMs, these initiatives reach lower values: 33.3% report the existence of "regulations for data protection and intellectual property" and "recommendations for the preservation of data identity and privacy", 24.1% give "recommendations to preserve children's image", 18.5% "sign confidentiality agreements with companies" and 24.1% "conduct seminars to train students". All these initiatives are important for all degrees, which, while having different contexts, should still be included in teaching guides as standard practice.

Deposit and Visibility of the Intellectual Production

With the enactment of the Spanish Law on Science, institutional repositories play a crucial role in organising, filing, preserving and disseminating the intellectual production resulting from the research activity of a particular institution. While the aforementioned law mainly concerns the publication of periodical journals, it goes beyond it and affects the publication of basically anything that received public funding. Thus, teaching guides mention that Practicum dissertations will be uploaded to institutional repositories in 237 cases (60.6%), while TFG or TFM dissertations will be uploaded in only 4 cases (1%). The conditions dissertations must meet in order to be included in institutional repositories are not specified in teaching guides, as evidenced by 97 negative answers (24.8%) and 293 no answers (74.9%). Practicum dissertations are not usually part of institutional repositories, as reported by more than 94% of academic staff. This percentage is reduced by almost 10 points when it comes to TFG or TFM dissertations (83.3%). Thus, less than 5.6% of work-related development dissertations are included in repositories. The condition dissertations must meet to be included in repositories is the tutor\student approval (3.7%). With regards to TFGs or TFMs, less than 16.7% are included in repositories. In this case, conditions to be met include: approval by the tutor (31.5%), approval by the student (31.5%), distinction and/or honours (22.3%). In order to sum up the results of the two questions on institutional repositories for dissertations and TFG/TFMs, and depending on the degree, the study gets five new variables (one variable per degree). These new variables present significant correlations among them except for the Master´s Degree on Secondary Education, which does not correlate with any variable. The Pearson correlation index for Children Education with Primary Education

is 0.706; Children Ed. with Social Ed. = 0.566; Children Ed. with Education = 0.347; Primary Ed. with Social Ed. = 0.606; Primary Ed. with Education = 0.379 and Social Ed. with Education = 0.331). The error bar graph shows the difference between the Master's Degree in Secondary Education and the rest of the studied degree.

GRAPH II. Error diagram on institutional repositories depending on the degree.
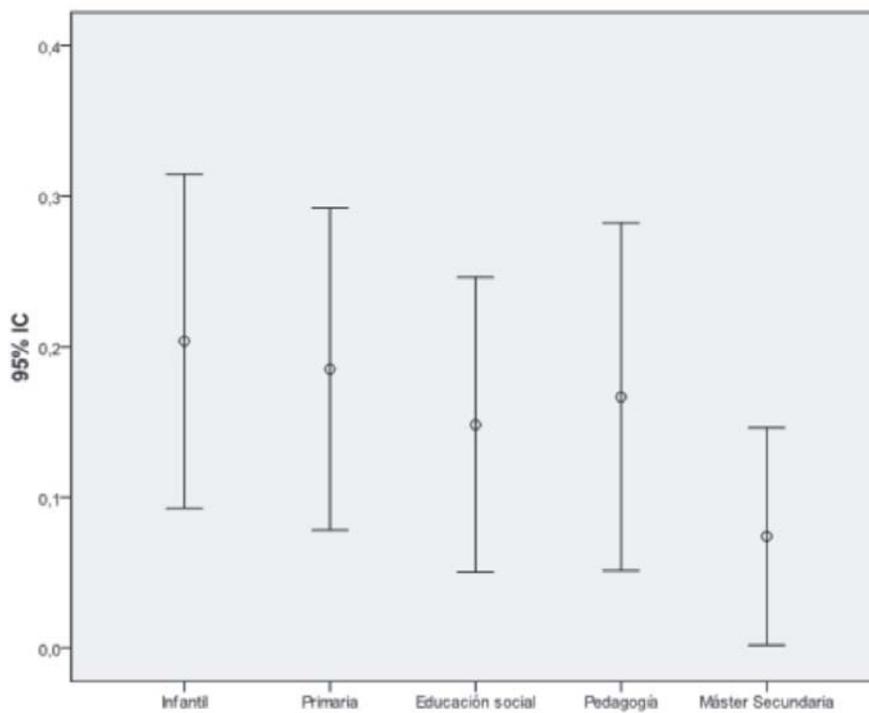
Own source

As for the second research question: *What mechanisms are put in place once dishonest practices are detected?*, academic staff report making students repeat their course (48%), it is up to tutors to decide what to do (44%), there is no available protocol to be followed (26%) and regulations

do not cover such situation (24%). Other measures (12.7%) also include (depending on the course): failing the student for reassessment, having an academic board specially constituted for this purpose decide, requiring the student to repeat the dissertation or not allowing the student to present his/her work". Regarding the teaching guides, and although most academic staff do not explicitly contemplate mechanisms of action against detected dishonest practice such as plagiarism by students, the study observes a difference between Practicum guides and TFG or TFM guides. While the former consider plagiarism as a dishonest practice in 10% of cases, the latter only consider so in 5% of cases. In addition, Practicum guides also cover the consequences of such practice, as well as its criminal nature, and champion the annulment of the plagiarised work in terms of evaluation plus the subsequent fail in the course in question.

TABLE I. Correlation between teaching guides and academic staff survey on ethics.

			Teaching Guides	Survey
Spearman Rho	Teaching Guides	Correlation Coefficient	1,000	,714[*]
		Sig. (bilateral)	.	,020
		N	25	25
	Survey	Correlation Coefficient	,714[*]	1,000
		Sig. (bilateral)	,020	.
		N	25	25

Own source

As for the third research question: *Are practices considered unethical in teaching guides the same as those considered unethical by academic staff?* In relation to this, the study reports coincidence among informants, given that correlations among different guides and academic staff's opinions are significant at a confidence level of 0.05. Table I shows that correlations among universities that are on the highest quartile

concerning ethics yielded a Spearman Rho coefficient of 0.714. Such similarity reflects that guides are being written and their application is being monitored by academic staff, regardless of what each academic team understands as factors related to good practice, as will be discussed in the next question.

In relation to the last research question *Can teaching guides and academic staff identify a profile or indicator associated with good practice?,* the study has followed the following procedure:

1. Good practice is understood as the compliance with the topics included in the teaching guides analysis forms (11 items) and the academic staff survey (14 questions, 6 of which are open-ended questions).
2. If good practice is observed (in the guide) or reported (in the questionnaire), the score given is 1. If good practice is neither observed nor reported, the score is 0.
3. Once the total score is worked out for each teaching guide or academic staff person, scores are arranged in quartiles.

Based on the above procedure, the study applied an *indicator of good practice according to teaching guides*. Results show that: a) 317 guides (81.1%) do not meet any item; b) 110 guides (15.1%) only meet one item; c) 15 guides meet two or four of the items studied (3.3% and 0.5%, respectively).

The above *indicator of good practice according to teaching guides* shows that 74.1% of participants (40) have identified half of the items or less, and less than 4 items in 20.4% of the cases. Only a quarter of them identify 11 items or more (25.9%).

Therefore, a profile can be drawn up in relation to ethics and depending on the studied degrees, in both Practicum and TFG or TFM courses (Graph III). Inevitably, these profiles seem to be paired up. In Children Ed., Primary Ed., Practicum and TFG courses, the values have an opposite sense, that is, ethical issues are more taken into account in the former case (Practicum) than in the latter (TFG). However, Education and Social Ed. scores have a positive sense, and the scores of the Master's Degree in Secondary Education and the degree in Physical Education Science and Sports also have the same sense, although in this case, it is negative.

GRAPH III. Degree profiles on ethical issues
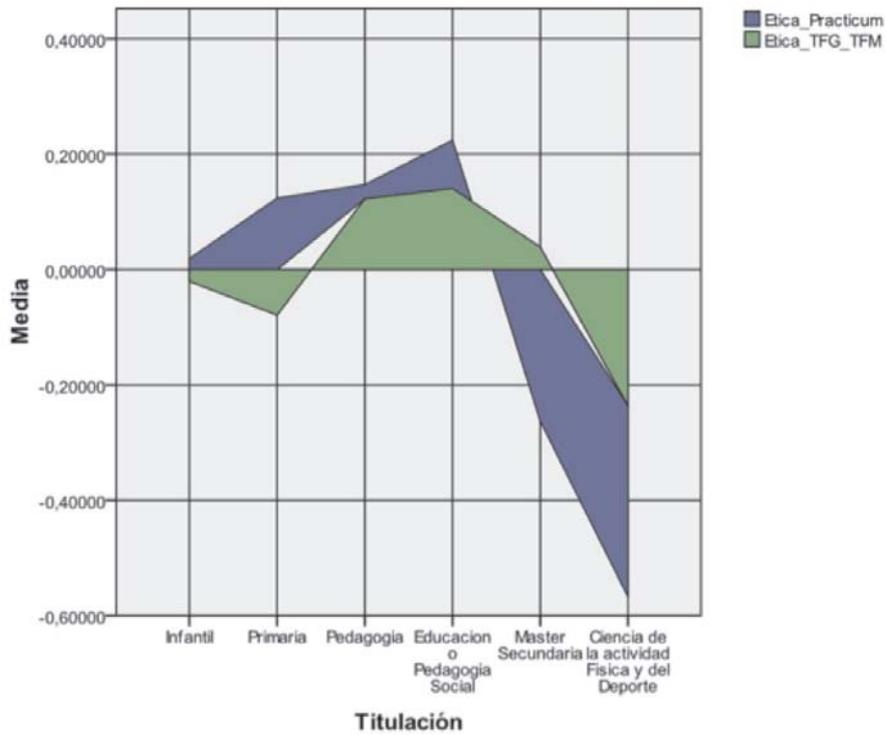
Own source

Infantil	Children Education
Primaria	Primary Education
Pedagogia	Education
Educacion o Pedagogia Social	Social Education
Master Secundaria	Master's Degree on Secondary Education
Ciencia de la Actividad Fisica y el Deporte	Physical Education Science and Sports
Titulación	Academic Degree

Once the total score of good practice indicators is extracted from the 391 analysed guides and from the answers of 54 academic tutors, the information is arranged in quartiles. Attributes/factors with a greater

weight in the presence/absence of good practice are selected and arranged; in this case University is the greatest attribute. The gain algorithm of an attribute in relation to a class (InfoGainAttributeEval) is applied on the available information of a contextual nature. This is done by implementing the Weka statistical package (Witten, Frank & Hall, 2011).

TABLE II. Decision tree using Weka.

Attribute Evaluator (supervised, Class -nominal- 5 Cuartil): Information Gain
Ranking Filter. Ranked attributes:
0.5254 1 University
0.2051 4 Type_Dissertation
0.04   3 Study
0.0128 2 Authorship

Own source

In the decision tree performed by using the J48 classifier from the Weka programme, there are two observations to be made: 1) the importance of the "university" factor in implementing good practices concerning the ethical dimension (at least with regards to overcoming indicators); and 2) the scarce presence of good practice indicators in TFM dissertations. In relation to the academic staff survey, the decision tree does not offer relevant information beyond the importance of the university, once again, as a differentiating element in the present case, and, to a lesser extent, the type of course included in the guide, external work-related development or TFG/TFM.

Next, there is a map (Graph no. IV) showing the distribution of participating universities, where the code colours are green, yellow and red, the latter corresponding to those universities whose teaching guides present the highest scores, in percentage terms, in relation to the ethical dimension; as they are the universities located in quartiles 3 and 4 in "good practice" indicators, according to what has been discussed earlier.

GRAPH IV. Universities with the highest scores in terms of the ethical dimension in teaching guides.
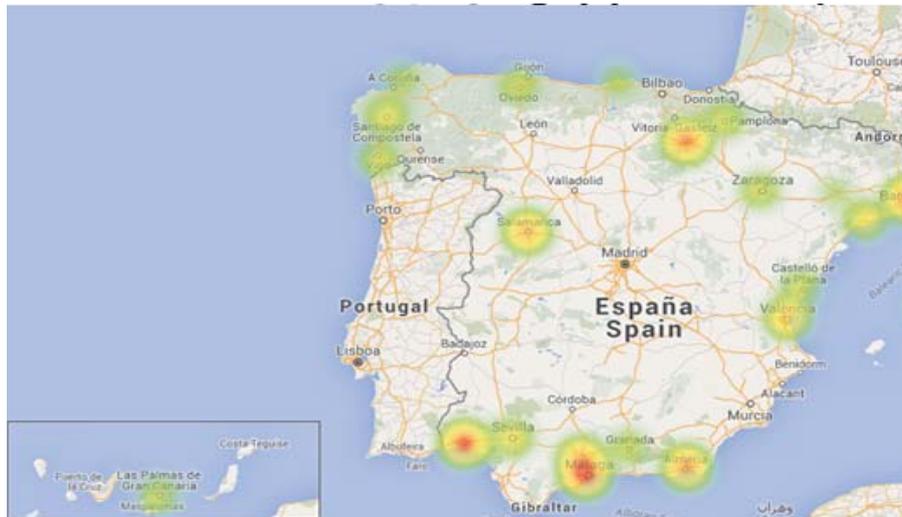
Own source

Based on the percentage of existing items in the fourth quartile, universities on the above map are represented in the following order: **Malaga and Huelva (100%), La Rioja (85.71%), Autónoma de Barcelona (77.78%), Almería (76.92%), Salamanca (66.67%), Mallorca and Valencia (50%), Rovira i Virgili (30.77%), Sevilla (28.57%), Santiago (28%), Vigo (22.22%), Zaragoza (18.75%), Oviedo (18.18%), Jaume I and Las Palmas de Gran Canaria (16.67%), Granada (16%), Cantabria and Coruña (12.5%), Barcelona (10%) and Lleida (7.69%). The universities that did not score these items were as follows: Alicante, Autónoma de Madrid, Burgos, Cádiz, Complutense de Madrid, Córdoba, Extremadura, Jaén, León, Murcia, País Vasco, Tenerife and Valladolid.**

Conclusions

The literature review on plagiarism and dishonest practice, even if scarce in the Latin American context, mainly focuses on students' perspective,

the determining factors (Sureda-Negre, Comas-Forgas & Gili-Planas, 2009; Comas- Forgas & Sureda-Negre, 2010) and their perception of plagiarism (Halupa & Bolliger, 2013). To a lesser extent, it also focuses on teachers' perspectives. This study agrees with Walker & White (2014), who claim responsibility is to be shared between teachers and students, as institutions draft their political programmes as a whole, from structure to evaluation design. This is why the present study approached this issue from an institutional perspective, collecting practice expressed by academic staff on courses as important (educationally speaking) as Practicums, TFGs and/or TFMs, together with practices reported in the corresponding teaching guides. Even if expected, results are very valuable and helpful, and were confirmed under strict study and analysis criteria. Moreover, results draw attention and add value to factors that determine the initiatives implemented by the different institutions, which, apart from drafting a differentiating map, may help academic staff identify indicators associated with good practice. Next, the study will discuss the conclusions extracted from the research questions and achieved results.

a) A low concern (lack of sensitivity) for academically dishonest practices (plagiarism and violation of intellectual property) is observed; at least in terms of reported practice, as over 94% of teaching guides do not cover the issue. However, the fact of it being explicit would not guarantee its understanding, let alone good practice, as proven by Gullifer & Tyson (2014).

b) As for the mechanisms implemented once dishonest practices are detected, the study observed coercive measures to be the most common, such as sanctioning the student by making him/her repeat the course (48%) or leaving it up to tutors to decide what to do (44%). Another conclusion is that this issue is not explicitly addressed in the teaching guides of the studied courses.

c) On the one hand, there is an agreement between what has been identified in teaching guides and reported by academic staff (Spearman Rho = 0.714). However, there is also a certain inertia regarding the consequences of dishonest practices. This is because there is a lack of prevention, in terms of regulations, habits and ethical codes inherent to each institution. On the other hand, this similarity places academic staff and institutional teams on different institutional levels (as observed in Graph no. III), in relation to collecting different aspects of plagiarism and dishonest practices. Therefore, a description of factors and preventive strategies – see below – may help improve and standardise the situation.

c) ICTs show benefits for the management and literal reproduction of information. As shown by Comas, Sureda & Others (2011), more than three-quarters of university students (77.2%) state that, according to their experience and knowledge, Internet resources are frequently used to copy projects or fragments of projects. Therefore, it is necessary to develop specific training initiatives in general and for professional educators in particular, on copyright from a systemic approach, in order to defend and justify academic integrity (Gullifer & Tyson, 2014).

d) There is a link between Practicums and TFGs or TFMs (72.1%). It is necessary to revise this relationship so that the advantages of such link do not become a temptation leading to plagiarism in the final stages of these courses.

e) The above issues must be made explicit in university regulations, which, according to Cavanillas (2008), requires at least two complementary policies: students' education on the one hand, which must include a sufficiently clear definition of what *cyberplagiarism* is and what it is not; and teacher training on the other, to define "cyberplagiarism" in an uniform manner, prevent it and take proportionate measures against it. In addition, this study suggests a third policy: to develop institutional policies to create and spread their own ethical codes (McDonald, 2015) and take more initiative and leadership on strategies, so that it is not left up to tutors to decide what technological tool would be best (55.6%), nor what to do in case of plagiarism (44.4%), or find no protocol to be followed (25.9%) and no institutional regulations to guide them (24.1%).

In relation to the last question, perhaps the most important contribution of this study is the finding of differentiating elements and indicators that generally help in defining good practice to avoid plagiarism:

a) Organisational measures.
   i. Regulations to guide the academic community, as a deontological code for future teachers in the different degrees.
   ii. Curricular organisation (distributing the workload, instead of leaving it for the end, avoid overlapping with other courses; planning strategies and guidance on issues and possible problems from previous courses, etc.)
   iii. Reviewing management and university services, in order to integrate responsibilities and human resources in the community, from university committees and boards to administration staff to library services to resource centres, etc.

    b) Precautionary measures.
        i.   Training (distributed throughout the career, getting students to learn what is meaningful to them for immediate use, topics like plagiarism, APA, copyright, licenses).
        ii. Work based on competences (to value skills such as originality, creativity, time and knowledge management, self-regulation and ethical competences, respect, responsibility, courage, etc.)

    c) Coercive measures.
        i.   Protocols, axis. What to do in case of plagiarism.
        ii. Available technological tools.
        iii. Penalties (type and length).

Finally, the authors of this study are well aware that they have not raised, let alone answered all the questions that can be posed on plagiarism and dishonest practice. Instead, the study has focused on technologies, as they are in constant change and development, and due to their importance as instruments of dual-use and training of digital competence in Spanish faculties of education, by allowing management and communication of information between students and the institution. However, technologies also allow for a great facility to carry out dishonest practices. The present study would need to be extended in order to cover a larger number of institutions to confirm whether the university ranking established on practices involving plagiarism mentioned in teaching guides is maintained by academic staff. Information regarding attitudes and perception of plagiarism should be complemented with students' and teachers' perception. Given the increased mobility and collaboration among universities from different countries, it would also be interesting to carry out comparative studies. This study can be complemented by case analyses of educational institutions, with successful strategies to prevent plagiarism for instance, as well as by practical and ethical regulations in general. There is a long road ahead of Spanish faculties of education for the "copy & paste" tradition not to be consolidated in them. The authors of this study hope that research on this topic continues to increase and finally breaks through the limitations of the study itself, affecting and improving the practice of all responsible educators.

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