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ENGAGEMENT MARKERS IN RESEARCH PROJECT WEBSITES: PROMOTING INTERACTIVITY AND DIALOGICITY

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ABSTRACT

Scholars are currently not only required to produce primary output, i.e. peer-reviewed research articles, chapters or books, which constitutes certified and legitimised knowledge (Puschmann 2015), but also to disseminate such output, which is frequently carried out digitally and in English. In this context it is the aim of this paper to gain insights into scholars' digital discursive practices by analysing academic websites of research projects funded under the European H2020 programme. More specifically, it explores the ways in which a potentially wide, blurred audience is addressed by means of engagement markers, particularly, reader pronouns, questions, and directives, including imperatives, obligation modals and adjectival phrases expressing necessity. Results indicate that the frequency of use of engagement markers varies across websites and that it may affect their degree of potential interactivity. They further show that some engagement markers are more common than others and that they tend to display specific rhetorical purposes. Differences on their use and function when compared to their use in RA writing are also shown. It is concluded that these interpersonality features have an important role in the potential promotion of dialogicity in this digital medium, and crafting an effective professional identity of the research teams.

KEYWORDS: Science communication; identity; interpersonality features; Computer Mediated Communication (CMC).

1. Introduction

Scholars and scientists are currently not only required to publish the outcomes of their research in the form of research articles (RAs), book chapters or books, that is, to produce primary output, to certify and legitimise new knowledge (Puschmann 2015), but also to disseminate, circulate and discuss such output,

which is frequently done online and through English. Such dissemination seeks to promote the visibility of the scholars and their work, so that they and their research get to be known by a wide, international audience. This potentially includes not only academics and scientists, but also other stakeholders and beneficiaries from research and specialised knowledge. In this context academic websites can be seen as an important medium to engage with multiple audiences. They are indeed "an inexpensive and inclusive way to engage with the public" (National Coordinating Centre for Public Engagement in the UK[1]) and they contribute to opening up science, blurring the boundaries between modes of scholarly discourse, between stakeholder roles, and between internal communication (scholarly discourse) and external communication (science communication) (Puschmann 2015). These websites may also be considered to respond to a call for more transparency in publicly funded research. The need for this dissemination poses new challenges for scholars who require the development of varied, complex discursive practices entailing different media. Academics and scientists must now be able to make an effective use of Computer-Mediated-Communication (CMC) (Herring 2004) as part of their professional discursive practices.

In this context this paper focuses on the analysis of research project websites, more specifically, those of European H2020 funded projects, with the ultimate aim of gaining insights into scholars' digital discursive practices. Whereas academic blogs have attracted quite a lot of research attention (e.g. Bondi 2017, 2018; Luzón 2017, 2018a, 2018b; Mauranen 2013; Myers 2010), academic websites have been less researched. Previous studies have been carried out on personal academic homepages (Hyland 2011, 2012) pointing out the self-promotional and informational characteristics of this genre through which a particular academic identity is constructed. Research project websites present both similarities and differences with research group blogs (Luzón 2017, 2018a, 2018b). Research project websites seem to have similar communicative functions to those of blogs by research groups, "to showcase their academic output, disseminate information, enhance visibility, and connect with different audiences" (Luzón 2017: 3). However, whereas "academic blogging is motivated by the *desire* to communicate research and discuss science with a wide and diversified audience" (Luzón 2017: 3, emphasis added), research project websites, at least in the case of those under the European H2020 program, are a requirement. The research teams receiving the funding need to comply with this requisite of creating a website. These platforms thus take on

[1] <https://www.publicengagement.ac.uk/do-engagement/choose-method/websites>.

a further accountability purpose toward the funding body that supports the research group. It is part of a dissemination strategy that project members need to carefully design and implement to convince external stakeholders (as well as academic ones) of the validity, credibility, quality, significance or utility of the research undertaken and also to engage the public addressing potential beneficiaries and anyone who may have an interest in their work.

In European research project websites scholars seek to forge their identities as competent, credible and active researchers, as "networked" members of the disciplinary community, as members of the international research community and of the local community, and as civic scientists. By sharing their research aims and results online these projects can gain visibility. In this endeavour of crafting a collective identity in positive ways and to reach visibility, scholars need to address and engage a wide, varied audience, which comprises not only academic stakeholders but also external ones and the society or laypeople overall. These websites thus entail a key dialogic dimension in as much as through them "[h]umans address other humans and establish relationships with a persuasive purpose" (Gil-Salom and Soler-Monreal 2014). Whereas there may be other semiotic resources for interacting with the audience, I will focus in this paper on text-based content, and more specifically, on the use of a type of discourse features to create a dialogue and promote potential interaction with the multiple audiences addressed: engagement markers (Hyland 2001, 2004, 2005b, 2014). It is, thus, the aim of this paper to look, specifically, into the ways in which the potential wide audience is addressed in the presentation of research by means of these interpersonality markers, specifically, reader pronouns, questions, obligation modals, imperatives, and adjectival phrases expressing necessity. In particular, it seeks to answer the following questions:

– Are there any differences among websites in the extent of inclusion of engagement markers which can potentially affect the projection of the research projects' online identity?
– Are engagement markers in research project websites, that is, in Computer Mediated Science Communication (CMSC) used to the same extent as in written academic discourse, specifically, RAs, (primary output)? Do they fulfil different or similar functions?
– Which are the preferred verbal means of attracting readers' attention in research project websites (reader pronouns, questions, imperatives, modals of obligation, or adjectival phrases expressing necessity)? How

can these be potentially accounted for bearing in mind the purposes of these websites?

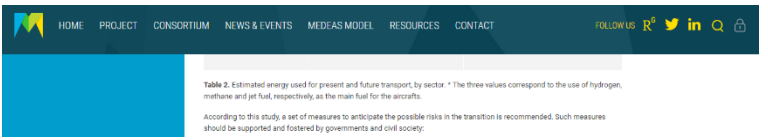
2. Engagement markers in academic written and digital discourse

The relationship established between writers and readers through or in the text has been analysed using different frameworks, such as, appraisal (Martin and White 2005), stance (Biber 2006), metadiscourse (Hyland 2005a) and stance and engagement (Hyland 2004, 2005b). This study will draw on Hyland's stance and engagement model to focus on specific discourse features used in websites to appeal to the audience. In academic writing engagement has been interpreted as the authors' recognition of the presence of readers and the need of "pulling them along with their argument, focusing their attention, recognising their uncertainties, including them as discourse participants, and guiding them to interpretations" (Hyland 2004: 16). In the particular context of the research project websites under study, engagement markers may not so much be aimed at pulling the readers along their argument and guiding them in their interpretations, but rather as focusing their attention and leading them in the navigation process as well as including them as discourse participants. Another common function of engagement markers in written discourse or scholarly communication, and in CMSC, may be to meet the rhetorical expectations of involvement. Engagement markers can be considered the most obvious indication that writers, scholars and scientists in this case, are aware of a potential audience. As highlighted by Hyland (2014: 3), "to view writing as dialogic means examining discourse features in terms of the writers' projection of the perceptions, interests and needs of a potential audience". This audience is "notoriously elusive" even in relation to a specific genre, such as the research article (RA), but even more so in academic online communication, in which texts are potentially accessed by anyone having an Internet connection. Engagement markers are a way of establishing proximity (Hyland 2010) with such an audience, which may constitute a virtual community, understood as an online group formation (Herring 2008). Engagement markers can then be considered to fulfil an important interpersonal function in as much as their use shapes and is shaped by the writer-reader relationship, or in this particular case, by the relationship between research project or team and a wide, blurred audience. They are interpersonality features in that they constitute a linguistic phenomenon "contributing to the rhetorical dimension of academic texts" (Mur-Dueñas et al. 2010: 83).

Engagement markers encompass directives, reader pronouns, questions, personal asides and reference to sharedness (Hyland 2002, 2004, 2005b, 2014). Personal asides "briefly interrupt the argument to offer a comment on what has been said" (Hyland 2005a: 152) and references to sharedness encompass "explicit markers where readers are asked to recognize something as familiar and accepted" (Hyland 2004: 184), thus working on authors' assumptions of readers' background knowledge. As such, the latter have not been found in the corpus possibly given the blurred, potentially wide, global audience these digital texts are addressed to, and the former would be difficult to trace in digital discourse as a linear reading is not expected and asides may be (un)intentionally created by offering readers diverse reading paths through hyperlinks or other hypermodal and hypermedial affordances. As a result, the focus of this study will be on the first three categories of engagement markers. Directives are "utterances that instruct the reader to perform an action or to see things in a way determined by the writer" (Hyland 2002: 215–216). They encompass three different realizations: imperatives (Example 1), modals of obligation addressed to the reader (Examples 2 and 3), and a predicative adjective expressing the writer's judgement of necessity/importance followed by a clause (Example 4). According to the type of action or instruction they entail, directives can be classified into: textual acts: "referring to another part of the text or another text", physical acts "involving a research process or real word action", or cognitive acts "where readers are initiated into a new domain of argument, led through a line of reasoning, or directed to understand a point in a certain way" (Hyland 2002: 217). Examples 1 to 4 would be considered physical acts as they urge readers to take a course of action, although as will be shown below (Section 4), imperatives very frequently express textual acts, guiding readers to other parts of the website.

(1) **Subscribe** now to have access to the Indus3Es newsletters and many other project resources. (website 1 – Indus3Es)

(2) Such measures **should be supported and fostered** by governments and civil society. (website 2 – Medeas)



(3) Under this perspective, uP_running has requested that these positive effects **should be taken into account**, in order to consider the use of PARP biomass in European energy policies, rural development, of circular economy, and emissions and environmental quality. (website 6 – uprunning)

Under this perspective, uP_running has requested that these positive effects should be taken into account, and in line with the arguments of European policies, in order to consider the use of PARP biomass in European energy policies, rural development, of circular economy, and emissions and environmental quality.

(4) Before performing any further assessment **it is crucial to** carry out a general identification of the LCMW biomass framework including information related to how widely it is extended in the local territory, or how many areas are object of treatment; who is the owner, who programs the works and who executes it; if the treatments are object of any regulation; how are the treatments usually executed, and how is the residual biomass currently handled; and determine if the LCMW biomass has been already object of any use in the area. (website 9 – Greengain)

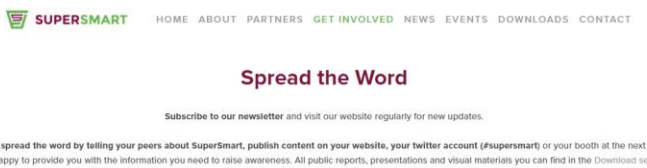
Step 1: Status quo

Before performing any further assessment it is crucial to carry out a general identification of the LCMW biomass framework including information related to how widely it is extended in the local territory, or how many areas are object of treatment; who is the owner, who programs the works and who executes it; if the treatments are object of any regulation; how are the treatments usually executed, and how is the residual biomass currently handled; and determine if the LCMW biomass has been already object of any use in the area.

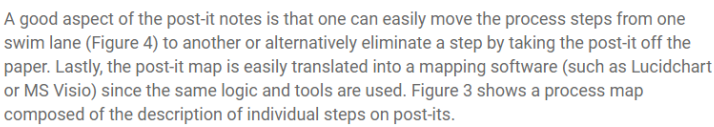
Reader pronouns are included in the text to bring in the audience. These encompass inclusive *we*, *our*, and *us*, as well as second person *you* and *your* (Example 5) and the indefinite pronoun *one* (Example 6) (Hyland 2001, 2004, 2005, 2014). The noun phrase "the reader" has also been found in the corpus of websites, and has been included in the analysis (see Section 4).

(5) Subscribe to our newsletter and visit our website regularly for new updates.

Or simply spread the word by telling **your** peers about SuperSmart, publish content on **your** website, **your** twitter account (#supersmart) or **your** booth at the next event. (website 4 -Supersmart)



(6) A good aspect of the post-it notes is that **one** can easily move the process steps from one swim lane (Figure 4) to another or alternatively eliminate a step by taking the post-it off the paper. (website 5 – simpla)


A good aspect of the post-it notes is that one can easily move the process steps from one swim lane (Figure 4) to another or alternatively eliminate a step by taking the post-it off the paper. Lastly, the post-it map is easily translated into a mapping software (such as Lucidchart or MS Visio) since the same logic and tools are used. Figure 3 shows a process map composed of the description of individual steps on post-its.

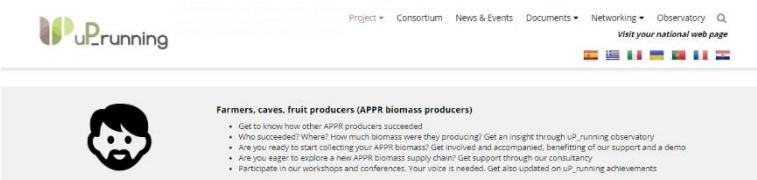
Finally, questions are considered the clearest sign of dialogic involvement in academic writing (Hyland 2001, 2002, 2004). They contribute to constructing an alignment with others and establishing a dialogic relationship with the audience (Example 7). In some cases, questions are used in combination with other engagement markers in the form of invitations to the audience (Example 8), likely responding to expectations of involvement and overall to the need to foster a "participatory culture" (Page 2012), enacting potential interactions with the audience.

(7) Farmers, caves, fruit producers (APPR biomass producers)

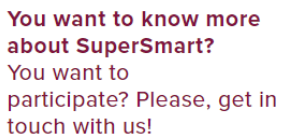
- Get to know how other APPR producers succeeded
- **Who succeeded? Where? How much biomass were they producing?** Get an insight through uP_running obsevatoriy
- **Are you ready to start collecting your APPR biomass?** Get involved and accompanied, benefitting of our support and a demo
- **Are you eager to explore a new APPR biomass supply chain?** Get support through our consultancy

– Participate in our workshops and conferences. Your voice is needed. Get also updated on uP_running achievements

(website 6 – upRunning)



(8) **You want to know more about SuperSmart?**
You want to participate? Please, **get in touch** with us!



(website 4 – SuperSmart)

As pointed out above and as will be argued, engagement markers appear to perform different rhetorical functions in research project websites as an example of CMSC from those in published academic writing as an example of primary output or scholarly discourse. In research articles these appeals to the reader are used to "to effect interpersonal solidarity and membership of a disciplinary in-group" (Hyland 2001: 555) as well as to recognize "the reader's role as a critic and potential negator of claims by predicting and responding to possible objections and alternative interpretations" (Hyland 2001: 556). In the research project websites, however, these markers seem to respond to the dialogical nature of CMC (e.g. Bondi 2018; Herring and Androutsopoulus 2015) and the need to open ways for a wide, blurred audience to be able to participate and interact with the research project members.

3. Corpus and methods

The corpus-based analysis was carried out taking a data driven approach. The corpus consists of ten websites from international research projects financed under the Horizon 2020 program, and constitutes part of the EUROPROWebs (European Project Research Websites) corpus compiled by the InterGedi

group. One of the criteria used for the selection of websites was that those projects had to be active at some point between December 2017 and December 2021. The texts of the websites were downloaded and the format and visual elements tagged in March 2019. This means that at that moment in time some projects may have been going on for a longer period of time than others (see Table 1), which could affect the information included in the website. Nevertheless, the text-based analysis had to be necessarily based on a fixed moment. The verbal component of the website downloaded included all pages or sections as long as the texts were not just embedded and downloadable from the website. The texts were saved and labelled using different codes to refer to the pages or sections of the website (namely, *Home*, *About*, *Partners*, *Work*, *News* and *Output*) even if other labels had been used in the website menu.[2] The section that tends to be further developed as projects advance is that of news and events. In order to ensure some degree of comparability, 20 pieces of news were selected from each website, when available. If a website had published fewer pieces of news at the moment of compilation, all of them were selected. The specific number of news included in the corpus used in this study is specified in Table 1.

Table 1. Description of the corpus.

Research project	Website	No. of words	Start date	End date	No. of news in corpus
Indus3es	http://www.indus3es.eu/	12,469	1/10/2015	30/11/2019	20
Medeas	http://www.medeas.eu/	19,159	1/1/2016	31/12/2019	20
Migrate	https://www.h2020-migrate.eu/	15,052	1/1/2016	31/12/2019	13
Supersmart	http://www.supersmart-supermarket.eu/	15,584	1/2/2016	31/1/2019	20
Simpla	http://www.simpla-project.eu/en	22,594	1/2/2016	31/1/2019	20
uP-running	http://www.up-running.eu/	15,027	1/4/2016	30/6/2019	20
Wast2fuels	http://www.waste2fuels.eu/	6,145	1/1/2016	31/12/2018	2
Tropico	http://tropico-project.eu/	7,436	1/2/2015	31/5/2018	5
GreenGain	https://greengain.eu/	22,244	1/1/2015	31/12/2017	20
Dice	http://www.dice-h2020.eu/	22,116	1/2/2015	31/1/2018	20
		157,826			

[2] For further information on the compilation of the corpus, the InterGedi research group website can be accessed: <http://intergedi.unizar.es/methodology/>, and see Pascual et al. (2020).

AntConc, version 3.5.8 (Anthony 2019) was used to carry out automatic analyses of reader pronouns and adjectives (*we, us, our, you, your, one, the reader*) questions, obligation modals (*must, should, have/has/had to, need/needs/needed to*), and adjectival phrases (*it is * to, it is * that*). As for imperatives, the texts were read manually to record different types (see the Appendix for a full list of items) and then their frequency was recorded using the concordancer. Each token was analysed in context as some tokens retrieved may not function as engagement markers. These interpersonality features are highly context-dependent, which means that the same lexico-grammatical element can function as an engagement marker in a particular context but not in another one.

For instance, retrieved examples of first person plural pronouns and possessive adjectives were discarded when having an exclusive role, functioning as self-mentions and referring to the research teams and project. Also, special attention was paid to the tokens retrieved when analysing obligation modals as the auxiliaries can express other meanings, namely, epistemic or dynamic uses which convey physical circumstances and, therefore, do not perform an engaging function. Questions that were part of a paper, article or workshop title were disregarded from the countings, as well as those questions, and other potential markers used in an attributed way, that is, included within a quotation. Finally, the frequencies were normalised per 1,000 words to compare their use across websites. Also, as one the aims was to look at their use in CMSC and in written scholarly discourse, these normalized figures allow for the comparison of their frequency of use with that reported on RA writing in Hyland's studies (2004, 2005a, 2005b).

4. Results and discussion

In this section findings will be presented and discussed trying to respond to the research questions. First, the overall frequency of use of engagement markers across the websites in the corpus will be shown and the potential role in the creation of a collective publicly-engaged identity on the part of the research teams discussed. Their frequency and use will also be compared to that in RAs. Then, the frequency of use of each type of engagement markers and their communicative purpose in the particular context of use will be presented.

4.1. Use and function of engagement markers in research project websites

Table 2 presents the overall frequency of engagement markers in each of the research projects and its normalised frequency per 1,000 words. As can be seen, there is a high degree of variability in the use of these markers across the websites, the frequency ranging from just 1.9 markers to 11 makers per 1,000 words.

Table 2. Frequency of use of engagement markers in the corpus.

	Research project	Total number	Per 1,000 words
1	Indus3es	80	6.4
2	Medeas	49	2.6
3	Migrate	29	1.9
4	Supersmart	143	9.2
5	Simpla	213	9.4
6	uP-running	72	4.8
7	Wast2fuels	14	2.3
8	Tropico	50	6.7
9	GreenGain	95	4.3
10	Dice	248	11.2
		993	6.3

Through engagement markers, the research project members directly appeal to the audience. As such, they can be considered a key way of making the website potentially more dialogic and promoting a participatory culture (Page, 2012) in which the research and text author agents (i.e. the scholars) and the audience (i.e. academic and external stakeholders and the society) are framed in a more balanced way. The latter are no longer seen as passive recipients but as participative readers who may respond to the text, can get involved, and may be led in the navigation (Example 9) and invited to take course of actions (Example 10).

(9) To learn more about the DICE tools, please **visit** the DICE Knowledge Repository and the DICE blog.
Follow DICE on Social Media (website 10 – DICE)

(10)

1. **Download** the DICE IDE, and **you** are ready to design for Big data.
2. **Setup** and **connect** to the IDE the runtime tools following the tutorials available in the DICE Knowledge repository.

1. **Download** sources directly from the DICE GitHub project.
2. **Read** the wiki in each sub-repository for compilation and installation instructions.

(website 10 – DICE)

Through the websites the scholars project a competent, credible and active professional identity by sharing research objectives and description of procedures, as well as research results with a global audience. In addition, they need to seek visibility through the projection of a publicly-engaged identity committed to responding to social problems and to having an impact and being held accountable for the funded research undertaken. The use of engagement markers can have an important role in framing such an identity. As such, a cline could be established from potentially highly dialogic, participative-prone and publicly-engaged websites – in which engagement markers are most common (4, 5 and 10) – to more static websites (2, 3 and 7) – in which engagement markers do not feature prominently, and the research project's role in fostering digital participatory culture does not seem to be undertaken at least through discourse text choices. The rest of websites would lie somehow in between. Thus, it is argued that the frequency of use of engagement markers may at least potentially have a bearing on the degree of dialogicity, which would be expected of CMSC, and also on the identity construction of the project members.

As pointed out above, some differences can be traced between the functions of engagement markers in primary output, especially RA writing, in which their use fosters collegiality and appeals to scholarly solidarity, drawing on communal values to persuade disciplinary members of their arguments (Hyland, 2002, 2004, 2005b), and in research project websites, in which their use appeals to a wide, blurred audience's participation and navigation.

Perhaps not surprisingly, given the dialogic nature of digital texts and of CMC (Bondi 2018; Herring and Androutsopoulus 2015), the overall frequency of engagement markers has been found to be higher in the corpus of research project websites analysed than in RAs in all disciplines (Sociology – 5.1 markers per 1,000 words, Applied Linguistics – 5.0, Physics – 4.9, Electrical

Engineering – 4.3, Marketing – 3.2, Mechanical Engineering – 2.8, and Biology – 1.6), except for Philosophy (16.3), in which the number of engagement markers is very high given its particular epistemology (Hyland 2004, 2005a and 2005b) (see also Table 3). The normalised frequency per 1,000 words is considerably higher in the research project websites, even though they comprise fewer types, since (as indicated in the Methods sections), asides and appeals to shared knowledge have not been analysed here.

Table 3. Frequency of reader features per 10,000 words per discipline (Hyland 2001: 556).

	Questions			Pronouns					
Discipline	Real	Rhetorical	Asides	Inclusive	Second Person	Indefinite	Shared Knowledge	Directives	Total
Philosophy	4.3	10.1	2.2	81.7	12.1	16.3	9.9	26.1	162.7
Sociology	0.9	5.8	1.8	19.9	0.1	2.5	4.2	15.8	51.0
Applied linguistics	0.7	4.2	1.4	13.3	0.0	5.8	5.5	19.5	50.3
Physics	0.2	0.8	0.3	12.9	0.0	8.0	5.2	21.1	48.5
Electrical engineering	0.0	0.0	0.0	6.8	0.0	2.7	3.9	29.0	42.3
Marketing	0.7	2.6	1.4	8.0	0.1	3.2	3.8	12.6	32.4
Mechanical engineering	0.1	0.8	0.1	2.4	0.3	1.8	3.0	19.9	28.4
Biology	0.2	0.8	0.0	0.8	0.0	0.3	1.3	13.0	16.4
Overall	1.1	3.9	1.1	21.5	2.0	5.4	4.9	19.0	58.9

4.2. Use and functions of different types of engagement markers in research project websites

As can be seen in Figure 1, reader pronouns are the most common type of engagement markers in the corpus of research project websites analysed, followed by imperatives, modals of obligation, questions and adjectival phrases. If directives are considered together (modals of obligation, imperatives and adjectival phrases), they outnumber reader pronouns (3.5 markers per 1,000 words). The results indicate that the audience is mostly prompted to carry out actions. They are then brought directly into the texts addressing them as discourse participants through the use of reader pronouns. Finally, they are dialogically involved to a lower extent through questions.

Table 4 shows the extent of use of each type of engagement markers across the websites. It is interesting to point out that with the exception of websites 5 and 10, which deploy a high use of all markers except for maybe questions, potentially highly and average dialogic and interactive research project websites (see previous section) tend to present high frequency in a particular feature, or two: website 1 in imperatives, website 4 in reader pronouns and imper-

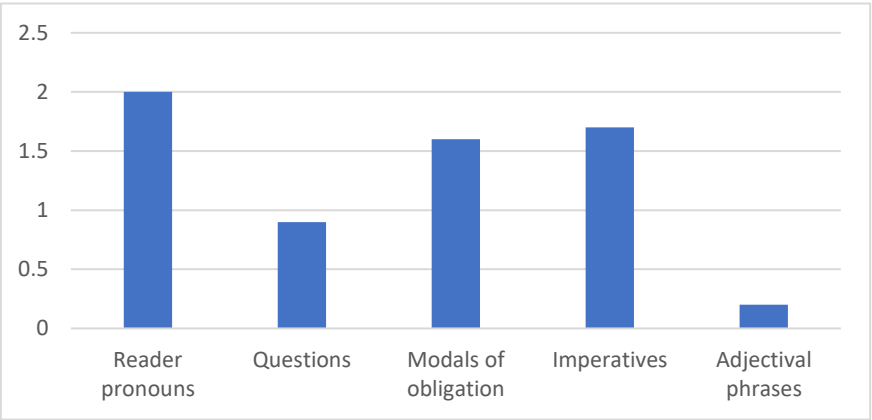


Figure 1. Types of engagement markers in the corpus.

atives, website 6 in imperatives, website 8 in questions, and website 9 in modals of obligation. It seems that they have specific preferences in how to address and involve the audience.

Table 4. Frequency of use of different types of engagement markers in the corpus.

	Research project	Reader pronouns		Questions		Modals of obligation		Imperatives		Adjectival phrases	
		Total	Per 1,000 words	Total	Per 1,000 words	Total	Per 1,000 words	Total	Per 1,000 words	Total	Per 1,000 words
1	Indus3es	19	1.5	1	0.1	4	0.3	55	4.4	1	0.1
2	Medeas	11	0.6	5	0.3	23	1.2	7	0.4	3	0.2
3	Migrate	15	1.0	2	0.1	4	0.3	7	0.5	1	0.1
4	Supersmart	76	4.9	3	0.5	9	0.6	53	3.4	2	0.1
5	Simpla	36	1.6	57	2.5	75	3.3	35	1.5	10	0.4
6	uP-running	17	1.1	13	0.9	5	0.3	37	2.5	0	0
7	Wast2fuels	0	0	0	0	10	1.6	2	0.3	2	0.3
8	Tropico	5	0.7	26	3.5	0	0	19	2.6	0	0
9	GreenGain	5	0.2	10	0.4	61	2.7	14	0.5	5	0.2
10	Dice	125	5.7	18	0.5	61	2.8	41	1.9	3	0.1
	TOTAL	305	2.0	135	0.9	252	1.6	270	1.7	26	0.2

As regards reader pronouns, inclusive pronouns have been found to be scarcer than in RAs, since it is not communal understandings that international research teams refer to in their websites, as they are addressing not only their disciplinary community, but potentially also other academics as well as stakeholders, beneficiaries and the global society. However, *you* and *your* are far more common in our EUROPROWebs corpus. They actually constitute 88.2% of all reader pronouns. Inclusive pronouns and adjectives and the indefinite pronoun *one* are scarce. These results are in stark contrast with the use of engagement markers in RAs (Hyland 2004, 2005b) in which the frequency of use of *you* and *your* is very low, except in the case of Philosophy texts (see Table 3).

Together with questions, these reader pronouns have been referred to as appeals to the reader and considered popularising features (Giannoni 2008). The frequency of use of these pronouns is similar in academic research websites (1.7 tokens per 1,000) and in journal editorials (1.9 in Medicine and 1.4 in Applied Linguistics). To some extent research project websites may be considered to popularise academic knowledge (primary output), which could lead to a high number of this interpersonality feature, which could be explained taking into account the reader-oriented nature of CMSC.

The number of questions is rather low in most research project websites (Table 4). They are directed to the audience as a way of focusing on giving answers that are useful to them. When compared with RAs, they are found to be more frequent per 1,000 words (0.5 in Hyland 2004, 2005b – see Table 3 – vs. 0.9 in this study). Questions can be considered popularising features (Giannoni 2008) as they are frequently included in pedagogic texts to direct and appeal the reader. They could be considered to perform this function as well in the research project websites, although they are found to be far less common than in journal editorials analysed by Giannoni (2008), in which they feature prominently.

The most frequent obligation modal in the corpus is *should* (48% of the total number), followed by *need to* (24.2%), *must* (14.7%) and *have to* (13.1%). Perhaps the use of modals carrying a stronger meaning of obligation, *must* and *have to*, are less frequent, since, as research teams are addressing a wide audience, they may not seek to convey a high degree of imposition. Obligation modals have been used to perform physical acts (Hyland 2002) especially directing the audience to courses of action (not usually research-oriented), somehow highlighting the implications and applications arising from the research undertaken, as shown in Examples 2 and 3 above. Unlike what happens in RAs (Hyland 2002), modals of obligation in particular or directives

in general (as commented on below in relation to imperatives) are not used in this type of CMSC to perform cognitive acts. Readers are not directed towards the scholars' arguments or guided in their interpretations.

The list of imperative verbs is rather long (see Appendix) and only a few of them have been used recurrently in the corpus and across several websites. Table 5 presents those imperative verbs with 10 or above tokens in the corpus.

Table 5. Most common imperatives in the corpus.

Imperative type	No. of tokens	No. of websites including it
Contact	34	10
See	31	8
Click	31	6
Visit	25	4
Read	16	5
Learn	13	5
Let us	11	4
Register	10	3

As can be seen in Table 5, most of these directives can be considered textual acts (Hyland 2002) referring readers to another page or section of the website and/or leading to disclose further information. This would be the case of imperatives such as *see, click, visit, read or learn*. Through these imperatives the need for different amounts of information by a wide, blurred audience seems to be met, as through them this audience is led in the navigation directing readers to further details and further information, if considered necessary. Other imperative forms, such as *contact* or *register* could rather be considered physical acts (Hyland 2002) in as much as they involve an action potentially promoting further participation and dialogicity. Finally, *let us* is used with different purposes; it has been used as a physical act (*let's go ahead together*), but also, in one website only (website 10) it has been used to lead the readers in the argumentation, something which, as has been pointed out, is very rare in the corpus analysed (e.g. *let us consider*, *let us imagine* or *let us suppose*).

Adjectival phrases are scarce in the corpus and point towards physical acts, some of which may be research-oriented in this case, as in Example 4 above,

highlighting the importance and need to accomplish the research (steps) to be undertaken by the project, thus displaying highly persuasive purposes. Overall, it seems that whereas obligation modals and adjectival phrases mostly direct readers to perform physical acts, indicating courses of action, imperatives mostly direct readers to perform textual acts, that is, to navigate the web, giving them the chance to participate and become (more) involved.

5. Conclusions

In a context of growing, complex digital discursive practices necessary for academics, it has been the aim of this paper to gain insights into these by looking into how the dialogicity between the researchers and a highly elusive audience is discursively crafted in international research project websites by focusing on the use of engagement markers. The analysis has been based on a small, but representative corpus of academic websites by European project teams funded within the H2020 program. Through these websites scholars not only seek to project credible, competent academic identities persuading different stakeholders and potential beneficiaries of the fact that they are able to carry out quality research, and establish an international network of collaboration, but also to convince these that the knowledge they produce is transferrable, has an impact, leading them to establish a publicly-engaged identity. The use of engagement markers may play an important role in creating such an online identity. Through these markers readers are addressed directly and their potential participation triggered as may be expected from digital texts in general and from CMSC in particular, seeking to foster dialogicity and interactivity. The analysis of engagement markers in the research project websites analysed shows how the context and medium shape the use of particular discourse features.

The study has allowed us to respond to the research questions posed. As for the first research questions, the results indicate that these websites present great differences in the inclusion of engagement markers. Those with a low number of engagement markers seem not to respond to the possible expectations of involvement and dialogicity in CMC and may not effectively craft a publicly-engaged identity, potentially promoting interactivity and opening spaces for the audience to participate, as could be expected. They may be considered rather static CMSC sites. At the other extreme, those websites with a great number of engagement markers may foster interactivity to a greater extent and may be more effective in portraying such an identity and responding

to the need for public engagement and promoting participatory culture. It would be interesting to see whether these uses are intentional and whether project teams are aware of the implications of the rhetorical choices. In this respect, further research may combine text-based analyses with ethnographic studies, in which scholars participating in these research projects are contacted and asked to answer specific questionnaires or interviewed to gather their views. In addition, it would also be interesting to analyse the extent to which the actual use of these engagement markers does lead to more involvement and has a clear effect on their degree of actual interactivity, by focusing on reception analysis, for instance in terms of how these are perceived and also of their potential effectiveness, based on number of views, and their possible duration, as well as the number of comments, emails, or messages received. To do so, the collaboration with participants will be also necessary as no direct access to this information seems feasible.

With regard to the second and third research questions, it has been shown that there are differences in the extent of use and in the function of engagement markers in RAs (primary output) and in research project websites (CMSC). Engagement markers have been found to be overall more frequent than in RAs when comparing normalised results with those reported by Hyland in his analysis. This shows that the medium through which academic discourse is communicated affects the use made of these interpersonality features. The higher number of these markers, especially the reader pronoun, *you*, and possessive adjective, *your*, in the research project websites analysed than in RAs make them highly dialogic. It has also been indicated that directives (imperatives, obligation modals, and adjectival phrases) take specific roles and functions in the research project websites analysed. Imperatives most commonly perform textual acts, directing readers to other parts of the websites, fostering their navigation through it, and obligation modals most commonly perform physical acts referring to courses of action to be taken as implications from their research.

So, overall, the findings show that engagement markers fulfil rather different functions in scholarly written communication and in CMSC. In RAs engagement markers are used to express interpersonal solidarity and membership of a disciplinary in-group, to recognise the readers' role and their possible objection to claims and alternative interpretations, and to guide them in their interpretations and the readers' argument (Hyland 2001, 2002, 2005b). In research project websites, on the other hand, they are rather used to attract readers' attention, to arouse their interest in further information, and to lead them in their navigation process, catering for a wide, blurred audience's different

needs for information, in line with the dialogic nature of CMC and fostering a participatory culture.

The frequency of use of the different types of engagement markers has been analysed in all pages and sections within the website. Future research could look into the extent of use of engagement markers across different sections or pages of the research project websites and whether specific types of engagement markers (reader pronouns, questions, imperatives, obligation modals, or adjectival phrases) may be more common or characteristic of particular sections or pages.

The present study has only focused on the verbal analysis of how engagement markers may potentially foster interactivity in research project websites. It would be interesting to explore further semiotic resources used in academic research websites that may influence such interactivity, such as visuals or the nature of hyperlinks to gain further insights into CMSC and into how the research team's identity is forged.

"There is little question that the landscape for the contemporary academic has shifted in a virtual way" (Barbour and Marshall 2012) and that, therefore, scholars' professional discursive practices are becoming more complex entailing different media. This necessarily deems further investigation from Computer Mediated Discourse Analysis and also from English for Academic Purposes to understand the nature of English academic digital discourse, since novice and expert scholars need to develop effective digital discursive practices.

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APPENDIX
LIST OF ENGAGEMENT MARKERS IN THE CORPUS

Reader pronouns: *you*, *your*, *we*, *our*, *us*, *one*, *the reader*

Questions

Modals of obligation: *have/has/had to*, *must*, *need/needs/needed to*, *should*

Imperatives: *access*, *become*, *click*, *connect*, *contact*, *download*, *email*, *find*, *find out*, *follow*, *get (an insight into, articles, (email) updates, in touch, involved, started, the benefit, to know)*, *have (an insight into, a look at)*, *join*, *keep*, *learn*, *let*, *login*, *look*, *meet*, *note*, *participate*, *read*, *register*, *search*, *see*, *send show*, *setup*, *sign up*, *solicit*, *spread*, *stay*, *subscribe*, *view*, *visit*, *welcome.*

Adjectival phrases: it is * to (*advisable*, *conveniente*, *crucial*, *essential*, *important*, *necessary*, *paramount*, *required useful*), it is * that (*essential*, *important*, *remarkable*, *unquestionable*), it could be * to

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