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Enhancing non-profit engagement: the extended model of webpage engagement and adoption for strategic management

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This paper examines the study of Non-Profit Organization's (NPOs') webpages through the Strategic Online Communication Approach (SOCA) context to underpin public engagement. Although it can be argued that social networking sites such as Facebook or Twitter have a significant role in interactive online engagement, it is often webpages that have the critical role in creating engagement in the initial (and arguably most important) stage of opening dialog. In the SOCA context NPOs' webpages need to be strategically planned and aligned with the NPOs goals and targeted to various stakeholders such as the general public, volunteers and donors. In general terms, this research resulted in a sequential model called EMEA (Extended Model of Webpages Engagement and Adoption) with three levels (information, interaction, and action). The EMEA model shows the efficiency and maturity of the webpages, indicating the level of engagement that should be possible, to therefore improve relationships with the public and obtain better results. Results show that the more 'ways to help' an NPO presents on its webpage, the greater the level of potential engagement (as different options to collaborate, convey trustworthy information, and control content are evident). Finally, this research showed that the greater engagement achieved by NPOs, the better the likely results and therefore the effective application of EMEA can explain and even predict success for NPOs. This paper only addresses web pages, and therefore further research is needed to clarify the role of Social Networking Sites (SNS) for high interactivity. Secondly, although EMEA is able to explain and even predict the levels of engagement, it is not evident that it necessarily occurs. Finally, although EMEA is applied correctly, it does not guarantee that NPOs are managing communication in the context of SOCA, since a multi-channel online strategy is required.

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Introduction

The results of recent studies on NPOs (Ihm and Kim, 2021; Manetti and Bellucci, 2016; Olinski and Szamrowski, 2018, 2020; Patel and McKeever, 2014) indicate that both Web 1.0 tools, organizational websites, and Web 2.0 tools play a vital role in communication. NPOs operate multiple internet platforms for stakeholder relationship building and have crafted websites that play a key role in dialogic communication (Albanna et al., 2022; Di Lauro et al., 2019; Kim et al., 2014) but use Facebook and Twitter (Haro-de-Rosario et al., 2018; Lovejoy et al., 2012) to supplement dialogic features that are limited on websites.

It's important to note that websites still play a crucial role in a digital strategy as they complement social media channels by providing more in-depth information and establishing initial communication with external stakeholders, such as possible donors or supporters (Ihm and Kim, 2021; Lovejoy and Saxton, 2012; Milde and Yawson, 2017; Seo and Vu, 2020). Additionally, websites can be used in marketing communications strategy, for example, to promote events and increase the possibility of receiving donations and funding (Milde and Yawson, 2017; Seo and Vu, 2020).

Authors found that NPOs tend to prefer their websites over e.g., Facebook when conducting online stewardship, particularly for three stewardship dimensions: reciprocity, responsibility, and reporting (Waters and Feneley, 2013). Others argue that even although NPOs are managing social media such as Facebook or Twitter, they utilize their website to direct stakeholders to external social media sites (Campbell and Lambright, 2020; Olinski and Szamrowski, 2020).

However, it's important for NPO's websites to prioritize key characteristics such as visual appeal, mobile-responsiveness, and ease of navigation. The websites should be designed to be as simple and user-friendly as other marketing materials (McKnight, 2023) and this is an important justification for a model to improve the capability of websites to drive stakeholder engagement (Philips, 2022). Accordingly, there are some important actions that NPOs can undertake on a website to increase lead generation, such as encouraging site visitors to subscribe to newsletters, thus capturing information on possible supporters (Philips, 2022).

Therefore, the NPO's website is a core platform to communicate their purpose and mission, describe their work and their ways to help, generate interactions with different publics and facilitate online transactions (e.g. to increase fundraising) (Di Lauro et al., 2019; Kirk et al., 2016; Panic et al., 2016).

To optimize the above, organizations increasingly prefer websites where they have complete control over message design and content (Philips, 2022). Therefore, to strategically manage their online communication, NPO communication professionals utilize websites, followed by others social media channels, specifically Facebook, Twitter, blog site, Instagram, podcast, Snapchat, and Pinterest (Seo and Vu, 2020).

Overall, websites are a very important channel and fulfill two core organizational functions: to provide information and to generate dialog with stakeholders (Lovejoy and Saxton, 2012). It is evident that websites can drive meaningful interaction with NPO audiences, but these organizations often do not fully use their websites in a strategic and interactive way, (Lovejoy and Saxton, 2012). Similarly, some researchers doubt that NPOs are using websites effectively as part of a Strategic Online Communication Approach (SOCA) (Lee and Blouin, 2019; Olinski and Szamrowski, 2020).

In summary, the main objective of this work was to define a model able to measure the efficiency and maturity of NPO websites in building engagement with stakeholders, and to underpin how they should be planned in the context of a Strategic Online Communication Approach (SOCA) for better results.

There are two key hypotheses that derive from the above:

H1: The number of ways in which NPO's help will influence positively on the achievement of engagement.

H2: NPOs engagement with the public will positively influence NPOs results.

The essential novelty of the research is that it seeks to determine whether the effective application of a model (EMEA) can explain and even predict success for NPOs via their websites.

Literature review

The role of webpages in the strategic online communication approach (SOCA) for NPOs. Despite previous studies that agree the importance of corporate websites as channels for communication between organizations and their stakeholders (Aziz and Kamaludin, 2015; Huang and Ku, 2016; Kent et al., 2003; Simões et al., 2015; Olinski and Szamrowski, 2020; Philips, 2022), there is still limited information available to guide NPO's construction of their websites (Akrimi and Khemakhem, 2014; Seo and Vu, 2020) so in essence, the study of corporate websites has not properly addressed how they contribute to strategic corporate communication, especially in the non-profit sector.

In summary, although NPOs use websites, they have not always used them strategically (Gandía, 2011; Olinski and Szamrowski, 2020; Saxton and Guo, 2011). In this work (Figs. 1) utilizing the Strategic Online Communication Approach (SOCA) websites are studied as one instrument of the mix of corporate communications (Gurău, 2008; Lovejoy and Saxton, 2012). In the SOCA context webpages must be correctly managed to drive engagement (as the core purpose) using various channels in a longer term (not short term) focus, aligned with business goals, and targeted to stakeholders (Albanna et al., 2022). The SOCA framework advocates managing webpages with engagement as a primary purpose.

The reality shows that although websites are continuously evolving (and varying levels of complexity and functionality are needed) they may be simply an online presence, and the existence of a corporate website, therefore does not guarantee that it is fulfilling any strategic online corporate communication function. Also, relationship nurturing is possible on webpages, not only on social media such as Facebook or Twitter (Olinski and Szamrowski, 2020). Although it is suggested that webpages have demonstrated value in nurturing relationships, there is a lack of recent literature that explores how to improve websites for engagement (Olinski and Szamrowski, 2020) in line with the Strategic Online Communication Approach (SOCA).

Thus, engagement is a strategic function that needs to be properly planned and this has not been studied in the context of webpages. The question that arises is whether NPOs are using

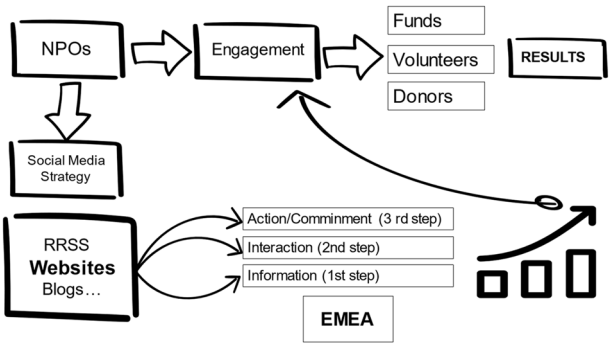

Fig. 1 Relationship between engagement, websites, and NPOs in the SOCA context. Source: the authors.

websites (as part of a social media strategy) efficiently to maximize stakeholder engagement?

As stated in the introduction, the main objective of this work was therefore to define a model able to measure the efficiency and maturity of NPO websites in building engagement with stakeholders, to underpin how they must be planned in the context of a Strategic Online Communication Approach (SOCA) for better results.

Understanding engagement in the SOCA context. The concept of engagement can be seen as an approach that drives stakeholder interactions and influences them to make decisions that generate social capital (Taylor and Kent, 2014). The literature highlights five key points for websites: the dialogic loop, the usefulness of information, the generation of return visits, the ease of the interface and the rule of conservations of visitors (Olinski and Szamrowski, 2020; Taylor and Kent, 2014). The first one, "dialogic loop", was the most important, as it allows the website user to provide feedback and interact with the organization. Although dialogic loop is a 'condition sine qua non' it is not sufficient alone to engage the public. Therefore, engagement is not only dialogic communication, but also an "affective, cognitive, and behavioral state" (Dhanesh, 2017, p. 931).

In the digital environment, the engagement concept takes a center stage (Taylor and Kent, 2014). Engagement is a multidimensional concept, (Dijkmans et al. 2015, p. 59) defined as "a combination of cognitive aspects (e.g., being interested in a company's activities), behavioral aspects (participation in the company's activities), and/or emotional aspects (feeling positive about a company's activities)".

Three dimensions were identified within engagement: the behavioral or dialogic dimension (based on the dialogic loop, e.g. when someone visits webpages to be informed of something), the cognitive dimension, comprising interest in the organization and its contents (the start of the real interactivity, e.g. when someone downloads material, or asks for information), and the emotional dimension based on feelings towards the firm to that lead to action (e.g. in the case of NPOs when someone introduces personal information, as a donor or a volunteer) (Carrillo-Durán and García, 2020).

Therefore, engaging stakeholders on websites is possible by going through the three dimensions sequentially (Carrillo-Durán and García, 2020). It means that engagement is not a matter of 'to be' or 'not to be' on the webpage, but rather that there are different levels: the lower level is just the level of information at the start of the dialog; the medium level that involves interactivity (communication based on genuine interest) and the higher level (involving action and commitment).

How do webpages lead to engagement in the SOCA context for NPOs? As discussed, in the SOCA context (Albanna et al., 2022), webpages should be managed to drive engagement with stakeholders in the long term and should align with business goals and results. In the specific NPO context it can be discussed as follows.

First, strategic communication should be designed around key stakeholder groups (Seo and Vu, 2020). For NPO's, the public is regarded as the most significant stakeholder, with potential funders, current funders, other non-profit organizations, and journalists following them in terms of importance (Seo and Vu, 2020).

The most important thing to highlight is that when talking about NPO's stakeholders, social media in general and websites are channels to support engagement, but none of them are exclusively able to do this (Albanna et al., 2022).

Therefore, one way to better engage general publics through webpages and generate the kinds of emotional responses needed can be through providing content on the NPO's goals and 'ways to help' to catch stakeholder's interest (Albanna et al., 2022; Olinski and Szamrowski, 2020). The authors discussed that the more ways and opportunities to develop the relationship, the greater the stakeholder engagement (Hoefer and Twis, 2018; Olinski and Szamrowski, 2018; Tsai and Men, 2013). For example, for online donations, specific goals are helpful in motivating donors (Olinski and Szamrowski, 2020), and the more goals provided gives more possibilities to engage stakeholders. Accordingly, the first hypothesis for this research is as follows:

H1: The number of ways in which NPO's help will positively influence the achievement of engagement.

Second, in the SOCA context, webpages should be aligned with business goals and results, with funding the most important of these (Albanna et al., 2022). NPOs are pertinent players in making the world a better place (Kirk et al., 2016). Their websites aid in fulfilling their socially beneficial missions by being a platform to present themselves, to engage stakeholders around the world, and to perform e-transactions to raise funds.

Although many NPOs deliberately utilize social media channels as Public Relations and advocacy tools instead of having official websites to seek funds (Di Lauro et al., 2019), It seems that "in that scenario, the social media efforts are not capturing any new donations. In a worst-case scenario, those same donors could decide to give less when they are motivated to give from social media than when they are spurred to give by websites" (Harris et al., 2021, p.3).

Therefore, in the SOCA context, the second hypothesis follows that the more engagement an NPO can get on its webpages the greater the influence on results:

H2: NPOs engagement with the public will positively influence NPOs results.

Models of efficiency and maturity of websites. The sequential models of evaluation and website efficiency is considered an important research area (Law, 2019). In general terms 'website features' has been the commonly used expression when evaluating a website, whereas the term 'website characteristics' has emerged subsequently and is used interchangeably.

Among different models to measure the efficiency of webpages the Extended model of Internet Commerce Adoption (EMICA) has been often cited and has been applied in the agricultural and tourism sectors (eg Daries et al., 2018)

EMICA is a scale to evaluate the efficiency of websites through sequential stages. The implication is that dialog is the pinnacle of communication (Olinski and Szamrowski, 2020). EMICA consists of three stages: promotion, provision of information and services, and transaction processing. As sites move from promotion to processing through provision, layers of complexity and functionality are added (Burgess, et al. 2003).

To move from one level to another, a website has to collect a minimum number of attributes (García-Lastra and Escalera, 2009). This form of evaluation in the EMICA is called 'analysis of the levels in a related way' and, is employed in this research against the 'analysis of the levels independently'. The main reason for this is to try to overcome one of the main drawbacks of EMICA, that a website can be on two levels at the same time (Schmid et al., 2008). According to these authors, the company experience in electronic commerce is expressed in website phases, also called steps or layers, each comprising certain features.

An alternative to EMICA was proposed using content analysis to assess maturity of websites based on four dimensions (Information, Interactivity, Online processing, Functionality) (Daries-Ramon et al., 2019).

Overall, there seems to be parallels between different levels on websites to measure efficiency and different levels to drive engagement. The comparison can be seen in Table 1.

Some additional features have been used to evaluate websites in non-profit organizations. Kirk et al. (2016) proposed a four stages model with four aspects to represent the different levels of usage of websites by NPOs. These features were quantified to evaluate the efficiency level of NPO websites. In terms of engagement, writers discuss which features of NPO websites are more effective to engage the general public and, also the level of engagement created (Albanna et al., 2022; Hoefer and Twis, 2018).

Similarly, studies related digital engagement to the level of interaction promoted by websites (Dhanesh, 2017; Kirk et al., 2016). In other words, a high level of engagement seems to be related to how much a website can provide two-way communication between the visitor and the NPO (Olinski and Szamrowski, 2020).

Extended model of webpage engagement and adoption as a proposed model. Based on the above, we propose a parallel model to EMICA called Extended Model of Webpages Engagement and Adoption (EMEA). Thus, engagement is possible at three stages (cognitive, behavioral and emotional) which resonates with the three dimensions of EMICA and the other models cited above (Taylor and Kent, 2014).

Thus, EMEA has been designed in practice as a data sheet to collect data analysis from webpages, and it is divided into three dimensions: Stage 1 -Information; Stage 2 - Interaction; Stage 3 – Action. As it is a sequential scale, the stages can be divided into layers, which demonstrates the advancement of the website through each stage. Also, as the final purpose is to measure the level of engagement, the more the website advances through the stages, the greater the engagement with stakeholders.

Measuring stage 1: information level. The first stage of information is also the most basic level of engagement. It is associated with a behavioral dimension in which resources that serve the stakeholder are "relatively passive forms of information-seeking" (Dhanesh, 2017, p. 930). We propose that this basic information is expected by the user, and it is not powerful enough to create a distinctive image to achieve engagement (Huang and Ku, 2016; Olinski and Szamrowski, 2020).

In terms of models and features, Kirk et al. (2016) proposed two levels of one-way information to non-profit websites called emerging presence and enhancing presence. In the same way, Huang and Ku (2016) found that Operational Management and Communication and Consultation are informational items in NPO websites related with the intention to donate money and time.

In the first Stage of the EMEA we summarize the features related to information on the NPO in websites (Di Lauro et al., 2019). However, we excluded the features that were not characterized as one-way communication (Kirk et al., 2016) because at the Information level of EMEA we assume a passive information search (Dhanesh, 2017).

EMEA: layer 1 of stage 1: information – basic information. In Layer 1 of the informational stage of EMEA, a low level of engagement is possible (Di Lauro et al., 2019; Dhanesh, 2017) when websites present features related to basic information in a passive form (Dhanesh, 2017; Kirk et al., 2016) such as: mission/vision, online contact form, contact detail, office location etc. (Huang and Ku, 2016; Kirk et al., 2016; Kirk and Abrahams, 2017; Olinski and Szamrowski, 2018, 2020).

EMEA: layer 2 of stage 1: information – rich information. Going further, Layer 2 of Stage 1 advances to a richer level of information, but still low engagement, where NPOs provide relevant information to connect the interest of stakeholders (Dhanesh, 2017; Kirk et al., 2016). NPOs usually prioritize the principles of usefulness of information and visitor retention (Wang and Yang, 2020), and EMEA includes features as goals, press releases, news updates, board members, key staff, annual reports, or budget/financials (Olinski and Szamrowski, 2020), organization structure, list of donors, information about related cooperation (Huang and Ku, 2016; Kirk et al., 2016; Kirk and Abrahams, 2017; Uzunoğlu and Kip, 2014). Table 2 summarizes the layers and features.

Measuring stage 2: interactivity level. Interaction is the second stage of EMEA and is considered as a cognitive dimension (Dhanesh, 2017). This level of engagement comprises interest in the organization.

At this level, the interaction with stakeholders evolves to a two-way interaction and, importantly, also a multi-interaction. The features proposed in EMEA Stage 2 enable stakeholders to develop an active relationship with the NPO website. We argue that the more that a relationship is developed the greater the stakeholder engagement (Hoefer and Twis, 2018; Olinski and Szamrowski, 2018, 2020; Tsai and Men, 2013).

To shape the second stage of EMEA, the features that allowed two-way information suggested in the literature were utilized (Olinski and Szamrowski, 2018, 2020). However, features that represent commercial activities, enabling money transactions, or volunteer registration were excluded from the second stage and are further discussed in the third stage of EMEA.

EMEA: layer 1 of stage 2: interaction – low interactivity. In this way, the features that promoted two-way information and improves the interaction with the stakeholders were kept in this EMEA Interaction level, including home page video, multimedia, email sign up and inducement, double opt-in.

Table 1 Comparison of EMICA and Daries-Ramon et al. (2019) models.

Main levels	EMICA	Daries-Ramon et al. (2019)	Engagement	
Information	Promotion	Information	The behavioral or dialogic dimension	Be proactive to get in contact to indicate communication and dialog
Interactivity	Provision and interactivity	Interactivity	The cognitive dimension	Interest in the organization and its content to participate and to produce real interactions
Commitment	Processing	Online processing	The emotional dimension	Based on feelings towards the organization to act in terms of value
		Functionality Information		

Source: the authors.

Table 2 Information features of EMEA.

Engagement	Layer	Features	Definition Presence: 1 No presence: 0	Authors
Low level	Layer 1: basic information	Mission/vision	Declaration of the NPO mission, vision and/or values. Vision is the most important purpose for a organization, mission is the way it will be achieved. Values are the group of principles to move the organization on one direction.	Di Lauro et al. (2019), Huang and Ku (2016), Kirk et al. (2016), Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
		Information on programs or projects	Information about NPO working projects and programs.	Di Lauro et al. (2019); Kirk et al. (2016).
		Online contact form	Availability of an online contact form.	Kirk et al. (2016), Di Lauro et al. (2019), Olinski and Szamrowski (2020).
		Contacts details	Availability of contact details as e-mail, phone, address and/or fax.	Di Lauro et al. (2019), Kirk et al. (2016), Olinski and Szamrowski (2018, 2020).
		Map to office location	Availability of a map to the office address.	Kirk et al. (2016).
		Information about contributing money/ effort	Information about how the visitor can contribute to the NPO with money or actively (volunteer).	Di Lauro et al. (2019), Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
		Details on becoming affiliated	Details of how the visitor can become affiliated to the organization.	Di Lauro et al. (2019), Kirk et al. (2016), Wang and Yang (2020)
		Logo presence	Presence of the visual identity (logo) in the homepage.	Di Lauro et al. (2019), Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
		Information of how the donated money is used	Explanations about how the donated money is managed by the NPO.	Huang and Ku (2016), Olinski and Szamrowski (2018), Philips (2022).
	Layer 2: rich information	Goals	Declaration of the NPO goals.	Di Lauro et al. (2019), Kirk et al. (2016), Olinski and Szamrowski (2020).
		Press releases	Posted press releases as a Channel of communication.	Kirk et al. (2016), Olinski and Szamrowski (2020).
		News updates	Updates about NPO news or issues reported by media.	Huang and Ku (2016), Kirk et al. (2016), Olinski and Szamrowski (2020), Uzunoğlu and Kip (2014),
		Board members	Brief about the board members.	Huang and Ku (2016), Kirk et al. (2016), Olinski and Szamrowski (2020).
		Board members' background	Brief about the board members.	Kirk et al. (2016), Olinski and Szamrowski (2020).
		Key staff	Presentation of the key staff.	Kirk et al. (2016).
		Financial report	Disclosure of annual report (with performance) and budget/financials.	Kirk et al. (2016), Olinski and Szamrowski (2018, 2020).
		Organization Structure	Functions and staff responsibilities (e.g. organization chart).	Huang and Ku (2016), Philips (2022).
		List of donors	A list with the main donors	Huang and Ku (2016), Olinski and Szamrowski (2018), Philips (2022).
		Partners and cooperations	Information about related cooperation or agreement with partners	Huang and Ku (2016), Philips (2022).

Source: the authors.

These features are important to catch stakeholder attention and allow the NPO to create a continuous relationship (Hoefer and Twis, 2018). Other features suggested in this level are: search engine box, calendar of events, downloadable files (e.g., audio/video, pdf, etc.), stakeholders support (e.g., FAQs, sitemaps), major links on the homepage to the subpages (eg., RSS), links to other websites (Hoefer and Twis, 2018; Huang and Ku, 2016; Kirk et al., 2016; Kirk and Abrahams, 2017; Law, 2019; Olinski and Szamrowski, 2018, 2020). Multimedia is a feature suggested from the hotel's quality models (Law, 2019), as EMICA, and included sounds, video, webcam or panoramas, flash-animation and graphics not included before. Although this feature does not appear in non-profit models, it can add-value to the website making it more attractive (Hoefer and Twis, 2018) and increasing the likelihood of a visitor engaging with the non-profit organization (Bastida and Huan, 2014).

EMEA: layer 2 of stage 2: interaction – medium interactivity. Non-profits should communicate and engage stakeholders in their purpose (Hoefer and Twis, 2018, Kirk and Abrahams, 2017), which can be achieved through links with social media to develop the perception of personal benefits and increase the willingness to interact (Avidar et al., 2015; Dhanesh, 2017; Hoefer and Twis, 2018). These features that enable interactivity are termed higher-level and include access to SNS's (Facebook, Twitter, YouTube, and/or Instagram) (Albanna, et al., 2022), social media sharing widgets, blogs and podcasts, forums, newsletters, terms of privacy (Hoefer and Twis, 2018; Kirk et al., 2016, Kirk and Abrahams, 2017; Olinski and Szamrowski, 2018, 2020; Uzunoğlu and Kip, 2014). The last feature involves trust where the stakeholder shares personal data with the NPO (Uzunoğlu and Kip, 2014).

EMEA: layer 3 of stage 2: interaction – high interactivity. Finally, in the third and final layer of Stage 2, there is high interactivity. This layer involves features such as: chat, exclusive areas for members, ability to leave comments and to receive feedback (Huang and Ku, 2016; Kirk et al., 2016; Kirk and Abrahams, 2017; Olinski and Szamrowski, 2018, 2020; Wang and Yang, 2020). Table 3 summarizes the layers and features.

Measuring stage 3: commitment level. The last, third stage is Action/Commitment, and it is considered an emotional dimension and the highest level of engagement, as it implies a personal cost involving money or time. Donating reinforces the connection between the stakeholder and the NPO (Hoefer and Twis, 2018; Kirk et al., 2016) and online transactions of money, online stores and online applications to volunteer are among features proposed for NPO websites (Albanna et al., 2022).

EMEA: layer 1 of stage 3: action/commitment. In the EMEA third stage, we summarized the features proposed in the models from the literature that enable commercial transactions and donations of money and time. Thus, the processing stage was divided into four features: secure online transactions for donations of goods, online registration to be enrolled as a volunteer, online donation of money, and online store (Albanna et al., 2022; Hoefer and Twis, 2018; Huang and Ku, 2016; Kirk et al., 2016; Olinski and Szamrowski, 2018). Table 4 summarizes the features.

Methodology

The primary objective of this study is to validate a model able to measure the efficiency and maturity of NPO websites in building engagement with stakeholders. This will underpin how webpages can be optimized through planning them through the context of a Strategic Online Communication Approach (SOCA).

The sample. To define a model able to measure the efficiency and maturity of NPO websites in building engagement with stakeholders, a sample of NPOs webpages is needed. The source of this sample was The Charity Commission for England and Wales ranking (2020) (The Charity Commission - GOV.UK (www.gov.uk). The Charity Commission for England and Wales (CCEW) is a non-ministerial government department accountable to Parliament. Its responsibility is to keep a precise and current record of charitable organizations in England and Wales and ensure that relevant information about each registered charity is widely accessible to the public. The CCEW assisted in this study in two ways. First, providing the sample composed of the top 50 charities by income from England and Wales. Although it is a non-probabilistic sampling that involves selecting participants for a study from those who are readily available, it is considered sufficient to apply our methodology in the context of an exploratory and descriptive study.

The selection by income was made following additional research, as in NPOs' online context the level of income was determinant to engaging the public and that the organization's website appears to be an effective tool for achieving that objective (Olinski and Szamrowski, 2020). For NPOs there was a positive relationship between the size of the communication team (which is supposed to be more consistent in bigger organizations with higher incomes) and the importance of the organization's website for its external communication (Seo and Vu, 2020) argue that.

Second, in the quantitative part of this research, the CCEW provides accurate information, widely available to the public, about each registered charity, such as: last recorded income, last recorded expenditure, groups targeted, ways to help and projects undertaken (Charity Comission for England and Wales, 2020). This information was fundamental to create quantitative variables that were used in the quantitative part of this study.

The dependent and independent variables. Drawing from the literature these are the variables employed in this research:

Variable 1: "Engagement" is the main dependent variable in this study, and it depends upon independent variables explained below.

According to the literature, sequential engagement at different levels through webpages (EMEA: Tables 1–3) can be measured, particularly, the efficiency and maturity of webpages in driving engagement. In this study, engagement is possible on webpages through EMEA in the SOCA context.

Variable 2: "Results" is considered the second dependent variable. This is because it depends on other variables around NPOs, such as the number of ways to help the organization, and the possible levels of engagement (Kirk et al., 2016; Seo and Vu, 2020). "Results" is a variable measured through two indicators: "Last recorded income" and "Last recorded expenditure" obtained from CCEW (Charity Comission for England and Wales, 2020).

"Last recorded income" was particularly key to rank the sample in terms of income, due to the positive relationship between the larger organizational size, better results, greater importance given to the communication team, and the organization's webpage for its external communication (Seo and Vu, 2020).

Variable 3: "Number of groups targeted", this variable is an independent variable referring to the various stakeholders of NPOs. An NPO employs their website as a way of communication between itself and its audience in building relations, so the more stakeholders they have, the more nurturing relationships they cultivate and greater possibilities to build engagement (Olinski and Szamrowski, 2020; Seo and Vu, 2020). This information was not directly present in the CCEW database as a numerical variable and was therefore calculated as a

Table 3 Interaction features of EMEA.

Engagement	Layers	Features	Definition Presence: 1 No presence: 0	Authors
Low level	Layer 1: low interactivity	Home page video	Video about the NPO in the homepage	Hoefer and Twis (2018).
		Multimedia	Sounds, video, webcam or panoramas, flash- animation and graphics not included before.	Law (2019).
		Email sign up and inducement	Inducement to the person providing an email address.	Hoefer and Twis (2018)
		Double opt-in	E-mail confirmation from NPO to the visitor's e-mail.	Hoefer and Twis (2018).
		Search engine box	Box to search for terms.	Huang and Ku (2016), Olinski and Szamrowski (2018, 2020).
		Calendar of events	An updated calendar of events.	Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
		Downloadable files	Informational files available to download (e.g. audio/video, pdf, audiovisual documents)	Olinski and Szamrowski (2018), Uzunoğlu and Kip (2014).
		Stakeholders support	Presence of support to stakeholders (e.g., FAQs, sitemaps).	Albanna et al. (2022), Huang and Ku (2016), Olinski and Szamrowski (2018), Uzunoğlu and Kip (2014), Wang and Yang (2020)
		Major links	Major links on the homepage to the subpages.	Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
		Links to other websites	Links to relevant websites.	Albanna, et al. (2022), Huang and Ku (2016), Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
High level	Layer 2: medium interactivity	Access to social media	Access to NPO social media (eg., Facebook; Twitter; YouTube; Instagram).	Albanna et al. (2022), Hoefer and Twis (2018), Kirk et al. (2016), Uzunoğlu and Kip (2014).
		Social media sharing widget	Possibility to like items and share the news.	Albanna et al. (2022), Hoefer and Twis (2018), Huang and Ku (2016), Kirk et al. (2016), Uzunoğlu and Kip (2014)
		Blogs and Podcast	Presence of blog or podcast.	Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014).
		Forum	Presence of a forum.	Kirk et al. (2016), Olinski and Szamrowski (2018, 2020), Uzunoğlu and Kip (2014),
		Newsletters or updates by email	Contents from NPO send by e-mail regularly.	Hoefer and Twis (2018), Olinski and Szamrowski (2018, 2020), Philips (2022).
		Terms of privacy	Presence of the terms of privacy.	Uzunoğlu and Kip (2014)
High level	Layer 3: high interactivity	Chat room	Chat room.	Kirk et al. (2016), Wang and Yang (2020)
		Exclusive area for members	Personalized area for registered members or intranet.	Huang and Ku (2016), Kirk et al. (2016), Wang and Yang (2020)
		Comments and feedback	Area to leave satisfaction comments and to receive feedback of people	Kirk et al. (2016), Olinski and Szamrowski (2018), Wang and Yang (2020)

Source: the authors.

Table 4 Action/Commitment features of EMEA.

Engagement	Layers	Features	Definition Presence: 1 No presence: 0	Authors
High level	Layer 1: action	Secure online transactions for donations of goods	Area to book the collections of goods or to deliver it	Authors
		Register online to be enrolled as a volunteer	Online register for volunteering	Albanna et al. (2022), Hoefer and Twis (2018), Huang and Ku (2016).
		Online donation of money	Possibility to donate money online	Albanna et al. (2022), Hoefer and Twis (2018), Kirk et al. (2016), Olinski and Szamrowski (2018).
		Online store	Possibility to buy online the products produced by the NPO	Albanna et al. (2022), Hoefer and Twis (2018), Kirk et al. (2016)

Source: the authors.

Table 5 Stages of the methodology.

PART 1. Qualitative part to define EMEA and to measure the level of engagement.	First stage: EMEA is a compound of three dimensions as previously explained: information, interactivity, and action. According to these three dimensions a data sheet was made up to facilitate analysis. The EMEA data sheet was applied to evaluate different degrees of engagement that could be achieved through the sample's websites.
PART 2. Quantitative part to clarify the relationship of the level of engagement (measured in the part 1) and other variables from the CCEW (2020): to test our hypothesis.	Second stage: ANOVA and Kruskal–Wallis tests were used to identify any significant differences between the EMEA stages in the sample for the quantitative variables ("Results" (Last recorded income and Last recorded expenditure), "Number of groups targeted", "Number of ways to help" and "Number of things done"). Third stage: structural equation methods based on variance and specifically partial least squares (PLS) via the SmartPLS 3.3.5 program (Ringle et al., 2015) was used to propose a theoretical research model (based on the previous results) to test EMEA and hypotheses 1 and 2. Justification for the choice of PLS was: (1) The objective was to identify potential relationships between variables. (2) PLS does not impose any specific distribution assumption (eg. normality) for the indicators and does not need the observations to be independent of each other (Chin, 2010). (3) PLS can estimate structural models with small samples (Chin & Newsted, 1999; Hair et al., 2019; Rigdon, 2016). (4) PLS can estimate models with estimated measurements in Mode A (traditionally reflective) and in Mode B (traditionally formative without any identification problem) (Chin, 2010). Our model presents variables measured as compounds estimated in Mode A, which are those created from diverse elements that are generally correlated. In our research model there is a higher order construct (EMEA) with which aggregate "scores" of the compounds are used in subsequent analyzes (Chin, 2010).

Source: the authors.

quantitative variable by the authors from the CCEW list of stakeholders for each charity.

Variable 4: "Number of ways to help" is an independent variable related to the mission of the organization and their main principles applied to stakeholders. By utilizing NPO websites to openly share information, show opportunities to help people and contribute to the NPOs' cause, opportunities for engagement increase (Olinski and Szamrowski, 2020). This information was also not directly present in CCEW database, and so was calculated as a numerical variable by authors based on CCEW information provided.

Variable 5: "Number of things does", is an independent variable related to projects the NPO develops and manages. A NPO uses its website to not only present its mission and principles, but also to present the way in which they are successfully using resources on projects (Olinski and Szamrowski, 2020). Therefore, the more activities undertaken, the more potential engagement. As with the last two independent variables this information was not directly present in the CCEW database, so was again calculated as a numerical variable by authors.

Stages of the methodology. According to the objective of this study to build engagement with stakeholders, the methodology seeks to explore the relationship between the activities and action NPOs develop and the level of engagement it is possible to reach (H1) to improve NPOs results (H2).

To clarify this, the methodology is divided into two parts and three stages as follows in Table 5.

Findings

The objective of this work was to define a model (EMEA) able to measure the efficiency and maturity of NPO websites in building engagement with stakeholders in the context of SOCA.

The results are shown according to the stages of the methodology.

Stage 1: EMEA analysis. After defining EMEA (according to the literature), a data sheet was designed and applied to the sample (Tables 1–3). The results of the application of EMEA to the top 50 NPOs by income from the CCEW (Charity Comission for England and Wales, 2020) showed the level of engagement that they can achieve with their stakeholders (through their websites) (Table 6).

As shown in Table 6, no NPOs reached the maximum stage (the third stage of Interactivity) or the level of Action. The majority of NPOs (23 out of 50) were in the medium level of

Table 6 NPO EMEA Level.

N°	NPO name	NPO EMEA level
1	ANCHOR TRUST	None
2	CITB	None
3	THE GAVI FUND AFFILIATE	None
4	MACMILLAN CANCER SUPPORT	None
5	THE CYRIL TAYLOR CHARITABLE FOUNDATION	None
6	THE ORMISTON TRUST	None
7	CHURCH COMMISSIONERS FOR ENGLAND	None
8	WAKEFIELD AND DISTRICT HOUSING LIMITED	None
9	SWANSEA UNIVERSITY	Basic information
10	OASIS INTERNATIONAL ASSOCIATION	Basic information
11	THE ERIC WRIGHT CHARITABLE TRUST	Basic information
12	THE AL-ANSARI FOUNDATION	Basic information
13	NUFFIELD HEALTH	Low interactivity
14	THE GIRLS' DAY SCHOOL TRUST	Low interactivity
15	METHODIST HOMES	Low interactivity
16	THE BRITISH RED CROSS SOCIETY	Low interactivity
17	LIVERPOOL SCHOOL OF TROPICAL MEDICINE	Low interactivity
18	UNIVERSITY OF SOUTH WALES/PRIFYSGOL DE CYMRU	Low interactivity
19	THE ROYAL BRITISH LEGION	Low interactivity
20	THE BRITISH COUNCIL	Medium interactivity
21	SAVE THE CHILDREN INTERNATIONAL	Medium interactivity
22	LLOYD'S REGISTER FOUNDATION	Medium interactivity
23	THE ARTS COUNCIL OF ENGLAND	Medium interactivity
24	CANCER RESEARCH UK	Medium interactivity
25	THE NATIONAL TRUST FOR PLACES OF HISTORIC INTEREST OR NATURAL BEAUTY	Medium interactivity
26	THE CHARITIES AID FOUNDATION	Medium interactivity
27	CARDIFF UNIVERSITY	Medium interactivity
28	WELLCOME TRUST	Medium interactivity
29	OXFAM	Medium interactivity
30	MOTABILITY	Medium interactivity
31	BRITISH HEART FOUNDATION	Medium interactivity
32	ROYAL COMMONWEALTH SOCIETY FOR THE BLIND	Medium interactivity
33	MARIE STOPES INTERNATIONAL	Medium interactivity
34	BARNARDO'S	Medium interactivity
35	THE SAVE THE CHILDREN FUND	Medium interactivity
36	THE SALVATION ARMY	Medium interactivity
37	CANAL & RIVER TRUST	Medium interactivity
38	ROYAL MENCAP SOCIETY	Medium interactivity
39	THE ROYAL NATIONAL LIFEBOAT INSTITUTION	Medium interactivity
40	THE FRANCIS CRICK INSTITUTE LIMITED	Medium interactivity
41	MARIE CURIE	Medium interactivity
42	JISC	Medium interactivity
43	LIFEARC	Rich information
44	UNITED CHURCH SCHOOLS FOUNDATION LTD	Rich information
45	THE ORMISTON TRUST	Rich information
46	CHANGE, GROW, LIVE	Rich information
47	THE SHAW TRUST LIMITED	Rich information
48	ST ANDREW'S HEALTHCARE	Rich information
49	AQA EDUCATION	Rich information
50	AGA KHAN FOUNDATION (UNITED KINGDOM)	Rich information

Source: research data.

Interactivity (the second stage of this level). Just 7 out of 50 demonstrated the low stage of Interactivity.

For the Level of Information, 8 out of 50 NPOs displayed the highest stage, and just 4 out of 50 did not attain the low stage of Information. Finally, 8 out of 50 did not attain any stage.

Stage 2: ANOVA and Kruskal–Wallis test. Progressing the methodology, the second stage involved EMEA data sheet analysis of webpages and allowed investigation of relationships between different stages of EMEA and different variables from The CCEW database (Charity Comission for England and Wales, 2020): "Results" (Last recorded income and Last recorded expenditure), "number of groups targeted", "number of ways to help", and "number of things done".

This was to understand if there were significant differences between stages of the EMEA according to the quantitative variables from the CCEW database (Charity Comission for England and Wales, 2020). We carried out ANOVAs and Kruskal–Wallis tests. The results can be seen in Table 7 and indicate that there are significant differences between the means of the EMEA stages with these two variables: "last recorded income", and "number of ways to help". A certain relationship exists between the level of engagement that NPOs reached and these two quantitative variables, but the sense and value of these relationships is not yet finalized.

Table 7 Differences between means according to quantitative variables from The Charity Commission.

Variable	Test statistic Kruskal–Wallis	Sig. Asintótica	ANOVA F	Sig	Comparisons between EMEA stages		
					Steps	Test statistic	Sig.
Last recorded income	8.582	0.035	n.a.	-	Information-interactivity	−11,952	0.025
					Information- action	−20,517	0.013
Last recorded expenditure	5.258	0.154	n.a.	-	-	-	-
Number of ways to help demonstrated	n.a.	-	2.818	0.049	Information-interactivity	Bonferroni	0.035
Number of things done demonstrated	n.a.	-	0.556	0.646	-	-	-
Number of publics helped	6.744	0.081	n.a.	-	-	-	-

Source: research data. n.a. not applicable.

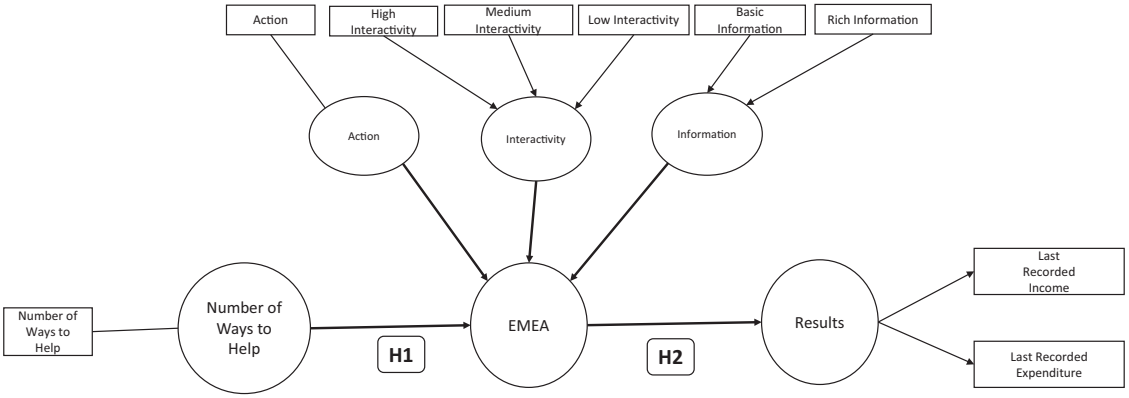

Fig. 2 Proposed research model. Source: the authors.

Stage 3: Partial least squares. Theoretical research model. Another objective for this paper was validating EMEA to get engagement in NPOs analyzing, according to the literature, the relationship between the activity of NPOs ("ways to help") (H1) and the level of engagement possible to reach in terms to increase NPOs results (H2) and its predictive power.

According to the third stage of the methodology, and to understand what kind of relationship exists between these two significant variables: "last recorded incomes", "number of ways to help" and NPOs' level of engagement reached, we applied a multivariable method based on structural equations.

In order to validate our hypothesis and taking into consideration previous results, it led the authors to propose the following research model (Fig. 2), in which the variable "number of ways to help"' can affect EMEA and this, in turn, the economic results of the NPO's in terms of "last recorded income" and "last recorded expenditure" indicators. In essence, we argue that NPOs with more 'ways to help' will drive greater engagement and therefore move higher up the EMEA to improve their results.

Results of the model validation. Missing data was less than 5% and the strength of fit should be the starting point for evaluating the structural model (Henseler et al., 2016). The results can be seen in Table 8. As it is a model with compounds, we focus on the exact fit tests based on bootstrap (Benitez et al., 2019). These tests help to achieve nomological validity.

All the measures and indicators of strength of fit indicate a good fit for the model (Table 9), and it can be stated that the model cannot be rejected from a confirmatory point of view (Henseler et al., 2016).

In the results for the model the "High Interactivity" stage got a very low value, not altering the content as this level did not filter any NPO, so we proceeded to eliminate the "High Interactivity" stage (Hair et al., 2011). The rest of the indicators of all the constructs have adequate values, which means that they have individual reliability.

To analyze the discriminant validity, we used the heterotrait-monotrait (HTMT) ratio (Henseler et al., 2016), the result of which we can see summarized in Table 10.

The results are sufficient as they do not contain the value 0.9 (Gold et al., 2001) or the more restrictive value of 0.85 (Kline, 2011). This implies that "Number of ways to help" and "NPOs Results" are empirically different. In relation to the formative constructs, there is no problem of multicollinearity between dimensions: Action, Information, and Interactivity (Diamantopoulos and Siguaw, 2006). The higher collinearity between indicators, the more difficult it would be to separate the distinctive effect of each indicator on the emerging construct, which could increase standard errors.

Final results. The path coefficients show the estimates of the hypothesized structural model relationships; Fig. 3 illustrates the results.

The results can be seen in Table 11. All the hypotheses are fulfilled. We have also used the Percentile method (Aguirre-Urreta and Rönkkö, 2018).

Next, we calculated the coefficient of determination (R^2) that represents a measure of predictive power. It indicates the amount of variance of a construct that is explained by the predictor variables of this endogenous construct in the model (Table 12). The higher the value (between 0 and 1), the greater the capability the model has to predict for this variable.

The value indicates a weak explanatory power level for EMEA (Chin, 1998), and negligible for results since it does not even reach the minimum threshold of 0.1 (Falk and Miller, 1992).

We then proceeded to analyze the effect size, f^2, which assesses the degree to which an exogenous construct contributes to explaining a given endogenous construct in terms of R^2 (Cohen, 1988). The results appear in Table 13. Thus, we can say that the effect size is weak for the Results construct and moderate for EMEA (Cohen, 1988).

Since R^2 increases when predictor constructs are included in the model, adjusted R^2 is used, which controls for model complexity when comparing different model configurations (different numbers of exogenous variables and/or different samples).

Finally, we have calculated the predictive relevance of the model using the Stone-Geisser test (Q^2) that is used for reflective dependent constructs. The results can be seen in Table 14.

The results indicate that EMEA has a medium predictive relevance on "NPOs results" and that the same happens with "Number of Ways to help" (Hair et al., 2019).

Although we used our model as explanatory, we do not preclude the possibility of using it as a predictive model for new scenarios. We used a procedure incorporated in SmartPLS called PLSpredict (Shmueli et al., 2016), and the results can be seen in Table 15.

These results indicate that the model shows high predictive power for "NPOs Results" (Last Recorded Expenditure and Last Recorded Income) and low predictive power for EMEA.

Whilst an explanatory model has the purpose of testing causal hypotheses, a predictive model aims to predict new observations or scenarios, to predict observations in a future time, or to predict observations that were not included in the original sample used to test the model (out-of-sample prediction) (Shmueli and Koppius, 2011).

Table 8 Model fit tests based on bootstrap.

	Saturated model	95%	99%
SRMR	0.076	0.090	0.113
d_ULS	0.121	0.169	0.270
d_G	0.082	0.144	0.227

Source: research data.

Table 10 Discriminant Validity.

	Original sample (O)	2.5%	97.5%
Number of Ways Helps -> Results	0.194	0.051	0.462

Source: research data. HTMT ratio.

Table 9 Measurement model assessment.

Latent variable		Indicators	Convergent validity			Reliability of inner consistency		Discriminant validity
			Outer loadings (outer weights)	Communality of indicator	AVE	Composite reliability	Cronbach's alpha	
-	-	-	>0.707	>0.50	>0.50	0.60–0.90	0.60–0.90	Do HTMT Confidence Intervals include value 1?
Results		Last recorded income	0.948	0.899	0.870	0.931	0.852	No
		Last recorded expenditure	0.917	0.840	-	-	-	No
EMEA (Composite Mode A)	Information (Composite Mode A) (0.916)[a]	Basic information	0.919 (0.465)	0.844	n.a.	n.a.	n.a.	No
		Rich information	0.952 (0.601)	0.907				
	Interactivity (Composite Mode A) (0.922)[a]	Low interactivity	0.976 (0.552)	0.953	n.a.	n.a.	n.a.	No
		Medium interactivity	0.968 (0.476)	0.937				
		High interactivity	0.298 (0.061)	0.004				
	Action (0.667)[a] n.s.	Action	n.a.	n.a.	n.a.	n.a.	n.a.	No
Number of ways to help		Number of ways to help demonstrated	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: research data.
n.s. not significant. *n.a.* not applicable.
[a]Loadings.

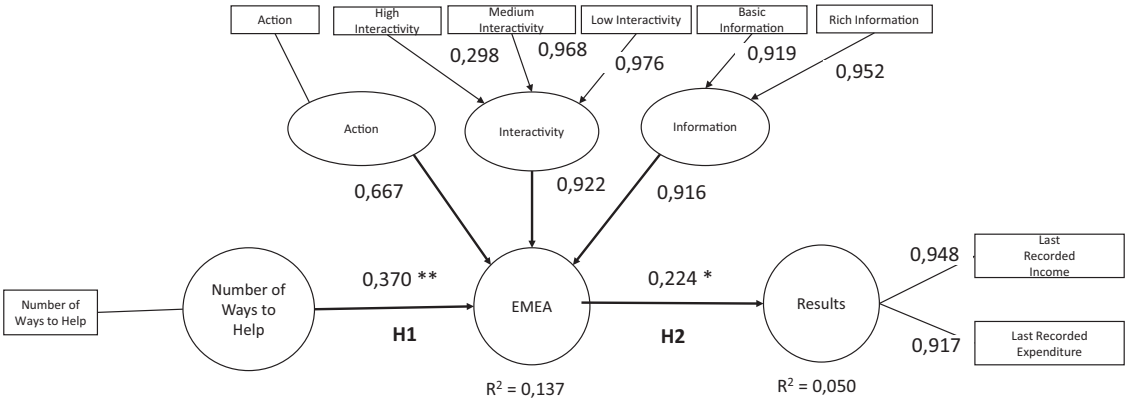

Fig. 3 Path model. Source: research data.

Table 11 Path coefficients.

Hypothesis	Path coefficient	T statistics *P* values Intervals	Percentile method		Is the hypothesis supported?
			5%	95%	
H1: The number of ways in which NPO's help will positively influence the achievement of engagement.	0.370	2914 $p = 0.002$ (**)	0.154	0.566	Yes
H2: The achievement of the level of engagement with the public of the NPOs will positively influence the Results.	0.224	2047 $p = 0.022$ (*)	0.110	0.431	Yes

$n = 5000$ subsamples: *$p < 0.05$; **$p < 0.01$; ns: non-significant (one-tailed *t* Student). $t(0.05; 4999) = 1645$; $t(0.01; 4999) = 2327$; $t(0.001; 4999) = 3092$.
Source: research data.

Table 12 Coefficient of determination (R^2 Values).

	R^2 values	R^2adj
EMEA	0.137	0.117
Results	0.050	0.029

Source: research data.

Table 13 Effect size (f^2).

	EMEA	Results
EMEA	-	0.053
Number of ways to help demonstrated	0.158	-

Source: research data.

Table 14 Construct cross-validated redundancy.

	SSO	SSE	Q^2 (=1-SSE/SSO)
Results	94,000	90,639	0.036
Number of ways to help demonstrated	47,000	47,000	-
EMICA	141,000	129,027	0.085

Source: research data.

Conclusions

In general terms, this research resulted in a model called EMEA (Extended Model of Webpages Engagement and Adoption) with three levels (information, interaction and action) and it concludes that NPO's communication through their websites has to be planned in the context of a Strategic Online Communication Approach (SOCA), should be long term, targeted to the general public, and demonstrate various ways to help so that it can drive increased engagement and consequently better results.

In particular, it is concluded that:

(1) The EMEA model is a compound of three dimensions (information, interaction, and action) with different weight in the results. Action is the lowest. Every dimension includes different functionalities to drive a higher or lower level of engagement. Therefore, EMEA shows the efficiency and maturity of the webpages indicating the level of engagement that it would be possible to achieve so that it can improve relationships with the public and obtain better results. The final action and total engagement are most probably, offline, because of a multichannel communication effort (online and offline).

However, it is found that the higher level of interactivity (the layer 3 of Stage 2) is non discriminant among NPOs. This level includes features such as Chat rooms, Members areas and Ability to receive feedback. This issue can be explained since the high level of interactivity is usually managed through social networking sites (principally Facebook and Twitter) as complementary media.

Although it is said that social networking sites such as Facebook or Twitter develop better interactive functions than

Table 15 Out-of-sample predictive power assessment using PLSpredict.

Variables	Excess kurtosis	Skew ness	PLS MAE	LM MAE	PLS-LM MAEPLS- MAELM
Last Recorded Expenditure	1.692	1.541	23098588 7.427	23657851 3.043	−5592625.616
Last Recorded Income	1.773	1.630	20747113 7.657	21230706 5.044	−4835927.387
			RMSE	**RMSE**	**RMSEPLS- RMSELM**
Interactivity	0.934	−0.904	870.313	873.240	−2.927
Action	−0.605	0.554	943.638	942.115	1.523
Information	2.151	−1.805	798.812	798.696	0.115

Source: research data.

webpages, it is webpages that have a significant role in the creation of engagement in the first stage: the dialogic loop (Olinski and Szamrowski, 2020; following Taylor and Kent, 2014).

Neither the existence of social networking sites, nor the existence of advanced functions on the web ensures greater engagement by themselves. However, this work demonstrates the capacity that webpages hold to achieve engagement if the EMEA is applied (although continuous management and ongoing work of the NPOs department of communication are important to facilitate this).

(1) The second conclusion is that the more ways to help NPOs' present on their webpages the greater level of engagement it is possible to achieve (hypothesis 1). An average Internet user, e.g., potential donor who is looking for information about a particular NPO, is likely to have first contact with this organization via their website (Olinski and Szamrowski, 2020). Therefore, NPO websites should present different options to collaborate (given that websites provide more trusted information and control over the published content) and should clearly differentiate from the websites of competing organizations.

(2) The third conclusion is that the greater engagement achieved by NPOs the better results they will enjoy (hypothesis 2). This research showed that the effective application of EMEA can explain and even predict better results. E.g., the application of EMEA not only can facilitate contact with the donors, but also it can explain and even predict deeper relationships with them in terms of donation levels. Therefore, it is not only a matter or placing a donation button on the organization's website, but also a matter or creating webpages able to involve donors sequentially and without gaps in the process of building effective engagement.

Limitations and future research

The authors acknowledge that work of this nature inevitably has limitations and can always be built upon. Firstly, the data only addresses web pages, so further research is needed to clarify whether "high interactivity" is effectively being worked out in SNSs as a future hypothesis. Additionally, EMEA can explain and even predict the level of engagement that can be generated through web pages, but it is not necessarily evidence that engagement takes place. Finally, it is said that the EMEA is a tool to manage web pages, but even if it is applied correctly, it is not a 'sine qua non' condition to say that NPOs are managing communication in the context of SOCA if it is not part of an online multichannel communication strategy and is developed with the help of the NPOs communication department.

Data availability

The data underlying can be found in the OSF HOME repository: https://osf.io/49shf/?view_only=2126100bcb9948bbafd324db2a0cd77b.

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Author contributions

MVCD, JLT-J, and CC: design and structure of the paper. MVCD and LS: theoretical framework. JLTJ: analysis, results, and conclusions. LS: field work. CC: full revision of the paper and proofreading.

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The authors declare no competing interests.

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This article does not contain any studies with human participants performed by any of the authors.

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