Personal academic websites serving scholarly work purpose

Rosaria Ciriminna[1] and Mario Pagliaro[1]

[1]Affiliation not available

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Abstract : Is having a personal academic website worth the effort? Does a personal site provide real benefits to the research, education, and societal service activities of a scholar? Referring to selected examples, this study shows how a personal academic website can effectively serve the overall purpose of scholarly work, whatever the scholarly field.

1. Introduction

A personal academic website is a personal website owned and managed by a scholar to present her/his activities in the three fields (research, education and societal service) comprising the academic profession [1].

Usually, it is a website with its own domain (uniform resource locator, URL), and not a subdomain of another website, owned and managed by a scholar. Plentiful websites (Wix, Squarespace, Weebly, WordPress.com, etc.) offer free web space to create a personal academic website, but only using their subdomain. Owning the domain name has a modest annual cost but the domain permanently belongs to its owner (modest annual renewal cost) and the website is controlled uniquely by its owner with no advertising and other content not pertinent to a personal academic website [2].

Several guides are freely available on the web to develop a usable and aesthetically pleasant academic website. Numerous online companies offer websites specifically designed for academics with templates for publications, projects, courses, etc. One company, for example, offers a basic service for free and a "pro" version at affordable cost which allows to create and release a personal academic website in less than an hour, and then grow it over time by updating it regularly [3].

This study aims to answer a research question: is having a personal academic website worth the effort with respect to the three main dimensions of scholarly work (research, education, and societal service)? Surprisingly, very little scholarly research has been published on personal academic websites. A search carried out by early May 2023 on two large research databases online (Google Scholar [4] and Dimensions [5]) with the query "personal academic website" returned only 33 and 23 articles, respectively. Said pioneering research, however, unveiled early revealing outcomes.

In 2006 Thelwall and co-workers found that the web impact of a scientist "personal homepage" measured by the "inlink" counts (the number of incoming links to the page) was clearly associated to the presence of full-text articles (the latter articles being the most linked-to content in homepages) [6].

Seven years later Más-Bleda and Aguillo found that 64% of highly cited researchers in western Europe and in Israel only had a personal web page hosted on the domain of the employer institution [7]. The same researchers, they also found, publicized their research online either through a digital object identifier (DOI) link to the online version of their articles on the publisher website or by "outlinks" to PDF versions of their articles generally posted in open access (OA) repositories [8]. Confirming the poor uptake of open science principles and tools by research chemists [9], not even one of the fifty highly cited chemistry researchers in the ranking linked to any OA repository [8].

The need for the present study stems from a single fact: thirty years after the introduction of the World-Wide Web in 1993 [10], most scholars worldwide do not have a personal academic website. For instance, in 2016, the share of the surveyed researchers maintaining websites that also targeted web users "who are not scientists or students" was found to be 11% in Germany, 13% in Taiwan and 17% in the USA [11]. These figures may even be overestimated because the surveyed scientists likely referred to the personal web page hosted by their employer website, and not to their personal academic website, namely a self-managed website either on a personal domain or on one. Accordingly, recent investigation of nearly 1,000 faculty members in the disciplines of physics, biology and chemistry at universities in Germany's Lower Saxony found that online presentations on institutional websites were "mostly rudimentary" [12]. The scope of having a personal academic website, as we show in the following, goes far beyond the need to "attract attention to your publications", or increase "your name recognition", and "get cited more" [13].

2. Serving academic work purpose

On April 1993 Berners-Lee, a physicist working at European Laboratory of Particle Physics, published the source code for the first royalty-free "browser" and editor dubbed "World-Wide Web" [10]. In a few months, the first browsers became freely available to "navigate" content in the WWW (shortened "Web") alongside editing software "applications" to produce the web pages written in the hypertext markup language (HTML).

Likewise the internet [14], also the Web was invented by scientists to enhance communication amid scientists as "a pool of human knowledge which would allow collaborators on remote sites to share their ideas and all aspects of a common project" [10]. Scholars *en masse* , one would expect, would have soon adopted a personal website to share their research, educational and public outreach academic work. Unfortunately, this was not the case with the share of scholars owning a personal academic website nearly 25 years after the invention of the Web being remarkably low even in high income countries hosting a large number of scientists [11].

This fact shows that most scholars continue to consider a personal website an unnecessary communication tool wasting valued working time. Perhaps, only early career researchers working in today's "precarious times" [15] understood the relevance of a personal website to their work "to aggregate... dozen course pages, three project blogs, scattered professional profiles and twitter account, into one accessible, aesthetically pleasing and not too difficult to manage personal website" [15]. In the following, thus, we show how having a personal academic actually serves the purpose of scholarly work with respect to its three main dimensions of scholarly work: research, education, and societal service.

2.1 Support to research

A personal website supports scholarly research work by enhancing the impact of published research *and* networking possibilities.

The impact of published research because through "green" self-archiving of formerly paywalled research articles on the personal academic website, research is made freely and openly accessible to all [16]. Yet, nearly thirty years after 1994 Harnad's "subversive proposal" [17] to make publicly retrievable all research articles through FTP archives, scholars worldwide continue to *not* self-archive their articles. For example, in 2014 Bjork and co-workers found that while nearly all publishers allowed self-archiving of accepted version manuscripts in institutional or subject repositories immediately after publication (in 62% of cases) of after one year since publication (in 79%), the share of self-archived research articles was around 12% of annual articles [18]. "The real barrier to green OA", the team concluded "is author behavior", with most authors being "unaware of what they can do" [18].

In brief, "green" self-archiving paywalled research papers remains a critically important, and largely untapped, task. For example, even if the share of sampled articles published in 2018 made OA on at least one website
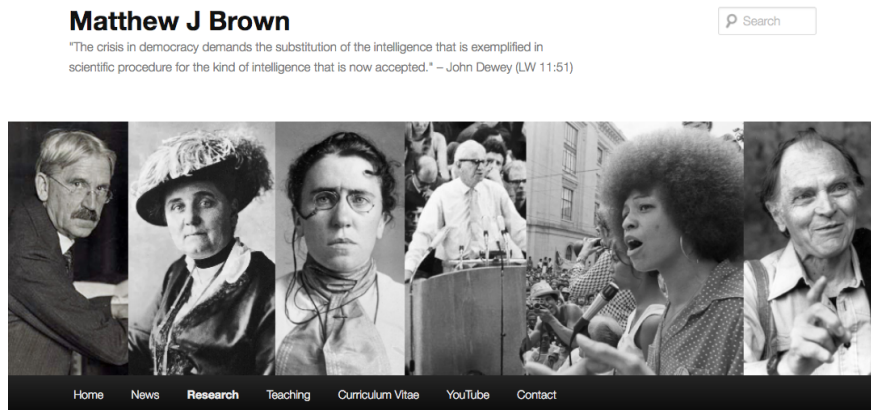
in 2020 increased to 62% [19], this is certainly not the case for papers published by authors prior to 2017 in paywalled journals, the majority of which remains paywalled on publisher websites.

Since more than two decades both researchers [20] and students [21] search for previous publications online only. A research paper, thus, either is posted online or is invisible [22]. As early as of 2001, Lawrence found an average 336% citation advantage to online articles compared to offline articles published in the same journal [23]. Yet, researchers continue to not "green" self-archive their own research papers even in Germany and even in fields such as medicine where anticipated knowledge sharing via openly accessible research papers and clinical trials can literally save lives [24].

So why scholars should self-archive their own research papers on a personal academic website, rather than relying on their institutional repository? One reason is suggested by the case of the aforementioned Lawrence's paper [23]. Brody and Harnad cite the self-archived version of the latter paper in their 2004 presentation describing the Harnad's research-impact cycle [22].

Unfortunately, the link [25] to an edited version of the paper (supposed to be self-archived on the online repository of the research institute to which Lawrence was affiliated when he published the study) 19 years later is no longer working.

On the other hand, Matthew Brown, a philosophy scholar at Southern Illinois University, by late 2022 "replaced all of the Academia dot edu links on my website to either self-archived or open access versions" [26]. The personal academic website (Figure 1) now includes all the author's publications [27].

Matthew J Brown

"The crisis in democracy demands the substitution of the intelligence that is exemplified in scientific procedure for the kind of intelligence that is now accepted." – John Dewey (LW 11:51)

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Publications

Books Published

- *Science and Moral Imagination: A New Ideal for Values in Science*, University of Pittsburgh Press, 2020

Edited Collections

- *More Critical Approaches to Comics: Theories and Methods* (with Randy Duncan and Matthew J. Smith), Routledge, 2020

Figure 1. The list of self-archived publications on the personal academic website of philosophy scholar Matthew J. Brown. [Retrieved from www.matthewjbrown.net, May 2023].

Similarly, Suze Leitão, a clinician and language scholar at Curtin University, Australia, self-archives her research paper in the website created and self-managed by researchers of the Language and Literacy in

Young People Research Group [28]. Accessing the web page by late 2022, papers published between 2019 and 2022 were freely accessible as PDF files. Articles published between 2009 and 2018, though were not self-archived, in agreement to what found by Bjork and Laakso in 2014 for which even authors who self-archive their papers "do so only periodically, and there are strong indications that roughly half of green OA copies in repositories are uploaded a year or more after publishing" [18].

Martin Gilje Jaatun, a senior scientist at Norway's SINTEF and adjunct professor at University of Stavanger, self-archives his paper on his personal website https://jaatun.no/papers "according to the publisher's policy" [29], "but for some reason they are invisible to Google" [29].

It is enough, in this respect, to undertake a search engine optimization of the personal academic website [30], to allow search engines to find and index all the publications uploaded online. We remind that by uploading a research article in PDF format, search engines such as Google Scholar can index textual content (written in any language) from PDF files that use various kinds of character encodings (provided they are not password protected or encrypted; as most PDF files (based on LaTex, Microsoft Word, etc.) have a text layer of information that is indexed by search engines).

One of the problems of a personal academic website is the "reputation" (for web crawlers) of the personal domain, which will never be able to match the "reputation" of institutional domains, academic social network sites (such as ResearchGate or Academia.edu), or repositories of scientific papers. As a result, the personal academic site will appear in search results only after plentiful other results. In brief, the "reputation" or "rank" of a website online is basically given by the number of links to the target website (domain) from other websites, and by the number of other domains each linking domain links to.

There are several online tools providing such ranking. One, for instance, is Domain Rating (DR) on a 100-degree (logarithmic) scale [31]. Table 1 shows the Domain Rating value of selected personal academic websites as of May 2023 next to the DR value of the same researcher web page on ResearchGate or Academia.edu. For example, using one of the many tools available (e.g., https://ahrefs.com/website-authority-checker), one can check the "reputation" of the olumuyiwaigbalajobi.com domain is 0.2 on a 100-degree scale. However, for the link https://www.researchgate.net/profile/Olumuyiwa-Igbalajobi, the value is 93, an outcome that directly affects the positioning of search results. For example, searching for one of the scholar's most popular papers ("Red-and blue-light sensing in the plant pathogen *Alternaria alternata* depends on phytochrome and the white-collar protein LreA") by typing its title in a commonly used search engine (Google) includes his personal website in one of the last positions (on page 4 of the research results). On the other hand, the paper reference on ResearchGate is found by the search engine as 4[th]result on page 1, showing in this case the advantage to academic social network sites.

However, this is not case when searching (on the same search engine) a research paper of Ananikov and co-workers published in 2022 (""Hidden" Nanoscale Catalysis in Alkyne Hydrogenation with Well-Defined Molecular Pd/NHC Complexes"). Now, the article on the personal academic website (http://ananikovlab.ru) is found as 6th search outcome, on page 1 of the search engine results, whereas the article on ResearchGate is found only on page 2 of the search outcomes returned by the search engine.

In brief, even if no comparison is possible between personal academic websites (domains) and the corresponding web pages of scholars in academic social networks in terms of "authority" or "reputation" as defined by the search engine algorithms (Table 1), owning a personal websites remains clearly advantageous in relation to many aspects of research work.

Table 1 . Domain Rating for selected personal academic websites along with Domain Rating of the same researcher on selected academic social network sites[a]

Scholar	Domain	Domain	DR
Olumuyiwa Igbalajobi	Olumuyiwa Igbalajobi	https://olumuyiwaigbalajobi.com https://www.researchgate.net/profile/Olumuyiwa-Igbalajobi	0.2 93

Scholar	Domain	Domain	DR
Valentine Ananikov	Valentine Ananikov	http://ananikovlab.ru https://www.researchgate.net/profile/Valentine-Ananikov	12 93
Matthew J. Brown	Matthew J. Brown	www.matthewjbrown.net https://siu.academia.edu/MatthewJBrown	22 91
Martin Gilje Jaatun	Martin Gilje Jaatun	https://jaatun.no/ https://www.researchgate.net/profile/Martin-Jaatun	16 93
Suze Leitão	Suze Leitão	https://www.languageandliteracyinyoungpeople.com/ https://www.researchgate.net/profile/Suze-Leitao	10 93
Kay Taye	Kay Taye	https://tyelab.org/ https://www.researchgate.net/profile/Kay-Tye	52 93

[a]Values retrieved from https://ahrefs.com/website-authority-checker, May 1, 2023.

The news of a research article publication, for example, can be given on the personal academic website summarizing the findings (Figure 2) which aids search engines to index and find the corresponding research article.

Figure 2 . News section of the personal academic website of chemistry scholar Valentine P. Ananikov. [Retrieved from http://ananikovlab.ru/news, May 2023].

2.2 Support to teaching

Elena Giglia, an open science scholar based at the University of Turin, carries out a wide scope educational activity in Italy and abroad. The scholar posts the slides of all the presentations she gives on the web page (Figure 3) of the open science unit of the university [32].

Figure 3 . Seminar and course web page of open science scholar Elena Giglia on Turin's University website. [Retrieved from https://www.oa.unito.it/new/materiale-scaricabile/, May 2023].

Rather than on the website itself, it may be useful to upload the materials on scientific repositories such as Zenodo.org, where the material is given a DOI and made permanently available online. Students from Giglia's courses, workshops and seminars (as well as researchers and students from across the world) can thus freely download presentation slides in English or in Italian from the repository. Being generally licensed under a Creative Commons Attribution 4.0 International License, the educational material – which may comprise OA textbooks, videos and interviews – can be reproduced, freely used and distributed for any purpose, provided that appropriate credit is given.

For example, the aforementioned personal academic website of philosophy scholar Matthew J. Brown includes in the home page (Figure 1) links to online videos in which he discusses philosophy topics from Heidegger's to Dewey's thought.

From lecture videos through exercises and questions and answers (Q&A), sharing teaching resources on the faculty's personal academic website will, *inter alia* , aid in reducing multiple e-mails sent by anxious students, badly affecting the work of many professors and educators [33]. Sharing educational materials on a personal academic website does not replace in-person teaching with its unique benefits and advantages [34]. To the contrary, the key resource to overcome both e-mail anxiety [33] and to promote the purposeful uptake of open science, including scholarly communication in the digital era of open science [35], is in-person education supported by the wise use of digital technologies, such a personal academic website.

2.3 Support to service to society

The scholarship of engagement (service) promotes the application of academic knowledge and prevents its societal irrelevance. As put it by Boyer, it consists of "service activities. . . tied directly to one's special field of knowledge" in the form of "serious, demanding work, requiring the rigor - and the accountability - traditionally associated with research activities" [36]. Even though analysis carried out for example at European universities in 2014 found that Europe's academics largely prioritized research and teaching, with only 3 h per week dedicated to societal engagement activities [37], today a rapidly increasing number of scholars are active in community-engaged scholarship [38].

In other words, after a prolonged period in which the "historic commitment to the 'scholarship of engagement' has dramatically declined" [39], in the last decade (2012-2022) with the emergence of environmental, financial,

economic, energy and geopolitical problems of intrinsically global nature the role of academic intellectuals acquired again broad societal relevance [40].

A personal academic website critically supports this part of the academic work by making publicly available past and ongoing activities aimed to the non-academic community, including activities such as public engagement, providing expert opinions, and consulting. The website may thus conveniently include public presentations, interviews, articles in the general press, consulting and expert witness reports, and videos aimed at the public. The aforementioned life scientist Olumuyiwa Igbalajobi, a post-doctoral researcher at Canada's University of British Columbia, launched his personal academic website in mid 2021. Besides presenting his research in the field of fungal diseases, the website supports his societal service academic work spanning from fund raising to aid in the processing of passports for prospective graduate students from Nigeria [41].

3. Perspectives and conclusions

A personal website is a tool by which the *effectiveness* and *scope* of communication with all the "stakeholders" of academic work is enhanced. Through the website, for example, a scholar can *freely* and *personally* communicate with prospective students, young researchers, colleagues, journalists, prospective employers, research funders and interested citizens, offering a coherent presentation of her/his overall work and approach to research.

For example, the website of neurobiologist Kay Tye created in the early 2010s included a "philosophy" web page describing her expectations for all lab members emphasizing "the importance of having a positive attitude, communicating honestly, supporting other lab members and taking care of oneself (for example, by making time to socialize and exercise)" [42]. Many applicants, underlined Tye in 2014, cited the philosophy statement "as a reason they wanted to work with her" [43]. On the other hand, "people who don't identify with this philosophy won't apply" [43]. This single example shows why a personal academic website developed from a mutually beneficial perspective (in which users can readily find the information of relevance to their needs, and scholars present their own expectations), will stand the test of time. The latter website indeed is still online and retains the same "Philosophy" statement in 2023.

Most researchers are not aware that for over two decades since the Web introduction, until collaboration between publishers and search engine companies was established, academic articles stored in publishers' databases were actually part of the "academic invisible web" [44].

In other words, managing a personal academic website should not be seen as an obsolete activity that can be replaced by the use of academic social network websites, such as ResearchGate or Academia.edu, chiefly used to maintain a personal profile, posting links to published papers, tracking read (and recommendation) metrics, and finding recommended research papers [45]. Nor a personal academic website loses its value because social networks such as Twitter allow (beyond a threshold of 1,000 "followers") to readily disseminate scientific messages to a broader audience comprised of journalists, members of the public, and decision-makers [46].

Thirty years after the introduction of the web [10], most world's researchers do not have a personal academic website either in high-income [11-12] and in economically developing countries. Opportunities therefore abound.

The few, selected examples of the scholars briefly reviewed in this study show that having a personal academic website is worth the effort, with respect to each of the three main dimensions of scholarly work: research, education, and societal service [1]. Only a personal website, furthermore, can aggregate the research, educational and societal service activity of a scholar, as well as the aforementioned "scattered professional profiles" [15], making said activity freely and openly accessible to anyone having access to the internet (5 billion people by the end of 2022) [47].

An academic willing to start her/his own website does not need to learn the HTML 5.0 standard or the

CSS style language, nor is required to learn search engine optimization (SEO) for proper positioning. The main technical guideline to follow should be to create a highly usable website, namely a website presenting information in a clear and concise way being at any stage of the website development easy to access and "navigate" [48].

Effective mentorship of students and young researchers requires to teach them how to write scientific manuscripts "in a manner that draws and maintains the interest of the intended scientific audience" [49]. Hence, it is of high educational value to involve young researchers in the joint development of the personal academic website, giving students for example the task to draft the news communicating to the public their research findings.

In conclusion, owning and managing a personal academic website provides clear benefits the research, education, and societal service activities of any scholar, whatever may be the scholarly field. As with any other online activity, the main risk associated with maintaining a website is related to unproductive use of time. The aim is to provide users with accurate, relevant, targeted, and updated content. This requires to focus on producing said content by allocating enough, uninterrupted time [50] to produce such content and publish it online.

Keywords: personal academic website; open science; academic profession; scholarship of engagement; self-archiving

Author Information

* *Corresponding Authors:*

Rosaria Ciriminna - *Istituto per lo Studio dei Materiali Nanostrutturati, CNR, Palermo, Italy;* orcid.org/0000-0001-6596-1572 ; E-mail: rosaria.ciriminna@cnr.it

Mario Pagliaro - *Istituto per lo Studio dei Materiali Nanostrutturati, CNR, Palermo, Italy;* orcid.org/0000-0002-5096-329X; E-mail: mario.pagliaro@cnr.it

Conflicts of Interest

The authors declare no conflict of interest.

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