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Research Article

Digital Identity and Promotion of Research Works – Analytical Study of Social Science Researchers at Taiwanese Institutions

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This study aims to show the significance of a robust digital identity for researchers and examines the role that online platforms play in enhancing their research outputs. The study explores the digital identity of social science researchers at Taiwanese universities and evaluates the effect it has on promoting their research. To achieve that goal, we analyzed the researchers' profiles on four platforms: Google Scholar, Research Gate, ORCID, and Twitter. The methodology used is a mixed-methods approach that combines qualitative and quantitative data collection and analysis techniques depending on measures or identity types: introduction, activity, and statistic.

The findings indicate that having a strong digital identity, demonstrated by a high number of well-maintained online profiles, significantly enhances the promotion of the researchers' outputs and that the existence of the three types of digital identity on the platforms vary depending on the features of each platform.

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I. Introduction

Today's scientific research aims to change the narrow classical perspective and aims to open up and liberate from the imposed restrictions that make it confined to a certain category of special privileges, and to achieve this goal, a group of researchers who believe in the idea of free openness have used a group of electronic channels to make it a platform for publishing scientific production and disseminating it on a wider range (Wang & Chen, 2015). Since the emergence of the Internet and the spread of its use in all walks of life has led to the emergence of new groups and communities, which are now referred to as digital communities, with the development of these latter, a group of electronic spaces appeared, in which the individuals can show their digital presence through virtual interaction on its fields, which made those interested and researchers in

various fields of science realize the importance of creating new identities that match and reflect the real identities in the digital world (Zimmerman & Woolf, 2014). The current trend in the scientific field, which aims to open up free access to scientific research outputs, has focused the attention of the scientific community on how to use digital identity as a means of promoting and valuing scientific content, and this is what prompted us to conduct this study, which aims to shed light on the digital identity of social sciences scholars at Taiwanese universities and the mechanisms of building it in the digital space.

A mixed-methods approach that combines qualitative and quantitative data collection and analysis techniques will be used to address the following problems: What is the significance of a digital identity for researchers? What role do online platforms play in enhancing researchers' research outputs? What are the types of digital identity?

In this study, we hope to examine the significance of a digital identity for researchers and explore the role that online platforms play in enhancing their research outputs. It could contribute to provide useful information for researchers and educational institutions in the field of social sciences in their efforts to promote and value scientific content in the digital world.

To conduct this study, we'll collect the needed data by browsing the targeted institutions' websites, we'll collect the names of researchers from social sciences and humanities disciplines like sociology, political sciences, social work, history, literature, anthropology, cultural studies etc., then we'll search out their accounts on the four platforms (Research Gate, Google Scholar, ORCID, and Twitter) and we will record notes on each researcher.

Although Twitter is a non-academic platform unlike the other three platforms of our study, it has a growing presence for researchers when compared to other social media such as Facebook. Some studies (Ebner, M. 2013, 302: Amiruzzaman and Amiruzzaman, 2022: Mollett et al., 2011) noted relatively high use among academics to communicate with each other as well as in the educational and research process and that because Twitter offers several advantages as it provides access to experts, professors, and peers in area of study, making it easier to ask questions and get advice. The use of Lists on Twitter allows researchers to keep up with the latest trends and practices in their field. Twitter is also more professional than Facebook, with a strictly professional relationship between followers. Interacting with various people on Twitter can provide researcher with sufficient data for their studies and real-time updates on what's trending in their subject area.

II. Theoretical Framework – Digital identity in the virtual world

Identity is closely linked to the idea of difference, whether in the real world or the virtual world, an example of this is that an attempt to describe another person in the real world relies on verbal representation by mentioning the characteristics that distinguish them from others. As for the virtual world, it is not possible to

distinguish between individuals virtually, this is due to the virtual user not being present in the field of vision that we belong to and due to our lack of sufficient information about them except for the pseudonym they use, which can be shared by a group of people; and from here we cannot rely on it as a criterion for differentiation (Zheleva & Getoor, 2010, 890). However, it is necessary to note that this differentiation can be practiced between a specific category of individuals virtually (the category of researchers) by measuring the impact of their scientific works in digital spaces (Golbeck, 2011: Martin & Barter, 2018); therefore, it is not possible to ignore the fact that our actual presence extends to the virtual world due to our daily activities that occupy considerable space on the web, whether in a purely personal or professional context.

Digital identity characteristics: According to Fanny Georges in her study "Representation of Self and Digital Identity" (2009), "the process of presenting the self is nothing but a part of digital identity that is presented in the virtual community, where this latter is woven through the process of collecting together a set of symbols acquired by the actor and a set of symbols available on the computer, which are a direct reflection of the cultural influences to which it is exposed" (Georges, 2009, p. 167). She argues that digital identity is built through two basic axes: the user and the system. "The first creates and provides a set of identification marks that are entered by the profile owner, such as name, date of birth, picture, and this is known as the identification identity or self-representation, to process this first set by the system which measures the user's activities through regular reports of the page and represents the active identity or activity" (Georges, 2009, p.172). The profile identity is highlighted through numerical variables calculated and displayed on the page by the system, such as the number of friends, important dates, and the number of groups (Georges, 2009, p.185). These three dimensions allow us to analyze the quantitative variations of identity features and their context and directions in the digital space.

Digital Identity: A Fingerprint to Identify Researchers in the Digital Environment

"Digital identity is linked to two main components: researchers and research institutions represented by all the data and effects associated with their activities on the internet (profile, procedures, data) which can be active and positive (through the interaction of the institution and the researcher) or negative (through the interaction of other parties such as colleagues) and can take multiple aspects such as personal, professional or scientific identity" (Sullivan, 2012, p. 235).

According to Olivier Ertzcheid, "digital identity is a collection of effects (written or audio or video content, messages on forums, login and logout records, etc.) that we leave behind consciously or unconsciously while browsing the web and the reflection of this collection of effects in search engines" (Ertzscheid, 2016, p. 61). In other words, "it's about what I say (as a researcher) on the internet or what others publish about me, and the result is a digital reputation that relates to what is said about the academic on the web, and the digital identity

or electronic reputation is not fully controllable by the researcher as there are a set of strategies and recommendations for control" (Ertzcheid, 2016, p. 62).

Establishing Digital Researcher Identity: Creating a personal web profile for a researcher is considered the first step in introducing oneself on a global level and enhancing their academic journey in the virtual world, with the help of available electronic spaces on the web, which are considered effective channels for valuing scientific production and contributing to its dissemination, which in turn supports the building the researcher's digital identity on the web (Bartling & Friesike, 2014), and that can be measured through:

1. Creating new connections and collaborations among researchers from different geographical areas.
2. Building a scientific reputation and status among individuals and colleagues in the field.
3. The researcher also contributes to publishing new research and ideas, and opening up a discussion between researchers on the web.

Through these practices, a researcher can have a set of data and information about each other; however, the opportunity to build a digital researcher identity is hindered by several obstacles such as plagiarism, and attribution of what belongs to the researcher to someone else, in addition to rumors and false information that are published and lead to the tarnishing of the researcher's reputation and status (García-Peñalvo, 2018; Fidalgo-Blanco et al., 2016). Therefore, researchers should practice daily monitoring of how their virtual image appears and control this identity by following a set of steps represented in:

Reviewing how the researcher's name is displayed in search results because some studies indicate that the most effective sources appear at the beginning of the search results and that people who conduct the search spend only eight to nine seconds to find the result they want and that they usually only look at the first page of the search results. Thus, the goal of the researcher is to be visible and present on the first page in the search results order or at least in the first five pages (Carpenter, 2015; García-Peñalvo, 2018).

Hence, a researcher who wants to establish a digital identity should put themselves in the place of others, by conducting a search using their full name, and through the search results, researchers can answer the following question: What do I see? Is this what I want others to see? The answer to this question is based on the following criteria (Boyd & Crawford, 2012):

1. What is the location of the researcher's name in the search results that appear?
2. Is there a similarity between the name of the researcher and other people during the display of search results? This requires the use of the same formula in writing the name and surname of the researcher throughout their academic career, while being careful to write the name of the institution to which the researcher belongs and its address in a codified manner and avoiding the use of abbreviations in the process of retrieving the work of the researcher, including increasing their visibility.

3. Is the researcher's work presented in an attractive way as the researcher intended, through viewing the presentations, articles and projects they participated in? The researcher should also make sure that the way to access the research is easy and fast for retrieval operations, which will bring a large number of readers and help increase the number of citations.

4. Is the researcher's CV updated regularly and continuously?

5. Can the researcher find their contributions in social communication media, whether personal, professional or academic ones?

6. Can the researcher find out what others say about them? For example, has reference been made to the previous production, citing or quoting it in scientific blogs, social communication, or even inclusion in specific media coverage?

And from the strategies that researchers can use to make their research results good and serve their academic path and maintain their digital identity, the following:

- Establishing relationships with communication and media outlets by explaining the importance of the research and its results in simple language (Van den Eynden, 2017, 56), using this to create awareness and attract interest, – Creating and updating a personal website or professional blog that presents the researcher's work and personal information, – Participating in conferences, workshops and academic events, – Creating a presence on social media platforms, – Networking with colleagues and academics in the same field (Varnelis, 2008, 92).

III. Methodology

Creating a portfolio in one of the digital spaces is considered a first step that helps in establishing the digital identity of the researchers and identifying their scientific production. According to Manca and Stanojevic (2015), "valuing and promoting scientific research outputs relies on the presence of the researcher on the web through owning an account on one of the platforms in addition to efforts to make their digital identities active and active through daily interactions and spreading their scientific production through this portfolio." Some researchers believe that promoting their work only requires being included in one place so that other researchers can find it, while others believe that "every additional place where their work is recognized is an additional opportunity to be found and valued, especially by researchers who only use general search engines in their search" (Silvia, 2012).

To further clarify the applications of digital identity in the digital space and measure their contribution to promoting the scientific production of the study sample, a research process was conducted using the names of researchers belonging to the faculties of social sciences in all departments in the following reputed Taiwanese universities: National Taiwan University, National Yang Ming Chiao Tung University, Academia Sinica, National Central University, and National Chung Hsing University.

The sample of 127 researchers and academics was gathered by visiting the social and human sciences departments of Taiwanese educational institutions listed on their official websites. The names of faculty members were collected and organized alphabetically in an Excel file. We then conducted a search for each name on Google and the four platforms, verifying their presence on each platform. Notes were recorded in the Excel file for each researcher during the search process until all 127 researchers were searched on all four platforms.

Platform	Profiles	Percentage	without Profiles	Percentage
Google Scholar	79	62%	48	38%
ORCID	41	32%	76	68%
Research Gate	98	77%	29	23%
Twitter	12	10%	115	90%

Table No. 1. The sampling distribution on platforms (the Source: Prepared by the authors)

Table No.1 explains the scientific platforms that the study sample used to build their digital identity through opening profiles in them, and we found that the Research Gate academic network had the lead in terms of the first rank in the number of open profiles by the study sample: 98 profiles available, equivalent to 77 % and this shows the effective role played by creating an account on this site, which is considered a new means for researchers to publish their work, and Google Scholar as an academic and free platform, it is very important to encourage academic institutions and research centers to create profiles for all researchers on this site, which explains the site's second ranking in terms of the number of open profiles, which reached 79 accounts, representing 62%. And here we can highlight the great advantages that this scientific platform provides in marketing the results of published scientific research, which raises the global classification of the academic and research institution on the one hand, and the contribution of open profiles in Google Scholar in evaluating the

researcher's work and knowing the number of beneficiaries from it on the other hand, and this service remains an alternative in the case of the researcher not having a personal web page on the official site of the research institution to which he belongs.

The sample's trend toward Twitter and ORCID was weak, as shown by the number of open profiles, which reached 53 profiles in total. As for the short posts platform, Twitter, it should be noted that some profiles of the sample have been inactive and have not tweeted since May 2013, so it can be said that the study sample missed the opportunity to establish its identity in one of the most important scientific space, which has proven its widespread effectiveness in disseminating and introducing scientific outputs (Laakso & Björk, 2014), and finally, it should be noted that the steps to open an account on the site are simple and free and can be completed in a few minutes (Haak et al., 2016, 68).

Regarding obtaining a profile on ORCID, it can be said that its low percentage is due to researchers' lack of knowledge of this digital space and the many features it offers for promoting research outputs or researchers trying to avoid wasting their time due to imposed system restrictions (Martín–Martín et al., 2015, 371). Approximately 20% of registered ORCID profiles are inactive, and some scientific works are listed in user profile files incorrectly. Despite the huge efforts made to cover a large number of researchers and contributors, only 10% of researchers in the world are currently represented on the ORCID platform, and their distribution across countries is not proportionate (Martín–Martín et al., 2015, 373).

Regarding the digital identity of social science researchers at Taiwanese universities, in order to access the nature of researchers' identity in the digital spaces previously referred to, it was necessary to know the extent of exploitation of the sample's presence and to identify their research outputs. We represented the researcher's identity in three levels as mentioned in the study by Georges Fanny - previously mentioned - on the levels of digital identity, represented by the introduction, activity and statistics (Georges, 2009, 187), and extracted a set of indicators from the studied sites that determine the type of researcher's identity as shown in the following table:

Identity Type	Google Scholar	ORCID	ResearchGate	Twitter
introduction	Profile photo	Profile photo	Profile photo	Profile photo
	Area of interest	Area of interest	Area of interest	Area of interest
	/	C.V.	contact details	/
Activity	/		Questions	c
	/	/	Answers	Tweet
	Introducing scientific production	Introducing scientific production	Introducing scientific production	Introducing scientific production
Satatstics	/	/	Current research projects	Current research projects
	/	/	Followers and followings	Followers and followings
	Citation number	/	Citation number	Likes number
	/	/	Reads number	Tweets number

Table No. 2. The indicators of identity types of researcher on each platform (Source: prepared by the authors)

Through recording notes on the researchers of the sample of our study, we reached the number of publications that are promoted through the availability of the full text of the research work, abstract, bibliography, or any other information that increases the number of reading and citation times.

The following table No. 3 shows the percentage of promoted and non-promoted scientific production in the digital spaces used by the study sample:

Platforms	Total studies	Promoted studies	Percentage	Non-promoted Studies	Percentage
Google Scholar	1562	1282	82%	280	18%
ORCID	392	327	83%	65	17%
Research Gate	1726	1286	74%	440	26%
Twitter	43	42	97%	1	2.50%

Table No. 3. The percentage of promoted and non-promoted scientific works. (Source: prepared by the authors)

## IV. Data Analysis & Discussion

On Research Gate, the introduction indicator can be tracked by the ability of researchers to provide identifying information about themselves, including their interests and contact details. This allows other users of the site to easily identify and connect with researchers who share similar interests or whose work may be relevant to

their own research. This information is readily available on the researcher's profile and can be viewed by anyone visiting the site. Regarding activity, it is tracked through various indicators like the question and answer indicators. This metric specifically looks at the number of researchers who have asked a question on the platform, compared to the number of researchers who have responded to questions (Archambault et al., 2013, 92). Based on this indicator, 21 out of 98 researchers (21%) have asked a question, while 27 researchers (27%) have responded. Additionally, the platform also tracks the promotion of researchers' scientific work as an indicator of activity. This process is active on the platform as researchers can promote their work by making the full text or bibliographic data of their contributions available for others to see. Out of the 1726 items available on the platform, 1286 have been promoted in this way, while 440 have not been promoted.

And for the fourth indicator of activity, which refers to current research projects and ongoing research in which the study sample participates, we found that only 54 researchers reported their research activities at a rate of 55% compared to 44 researchers who did not refer to it for specific reasons, such as the researcher is not participating in collaborative work with other researchers.

It is also noted that the percentage of articles promoted on Research Gate is lower than on other platforms, and this can be seen in the following Figure No. 1:
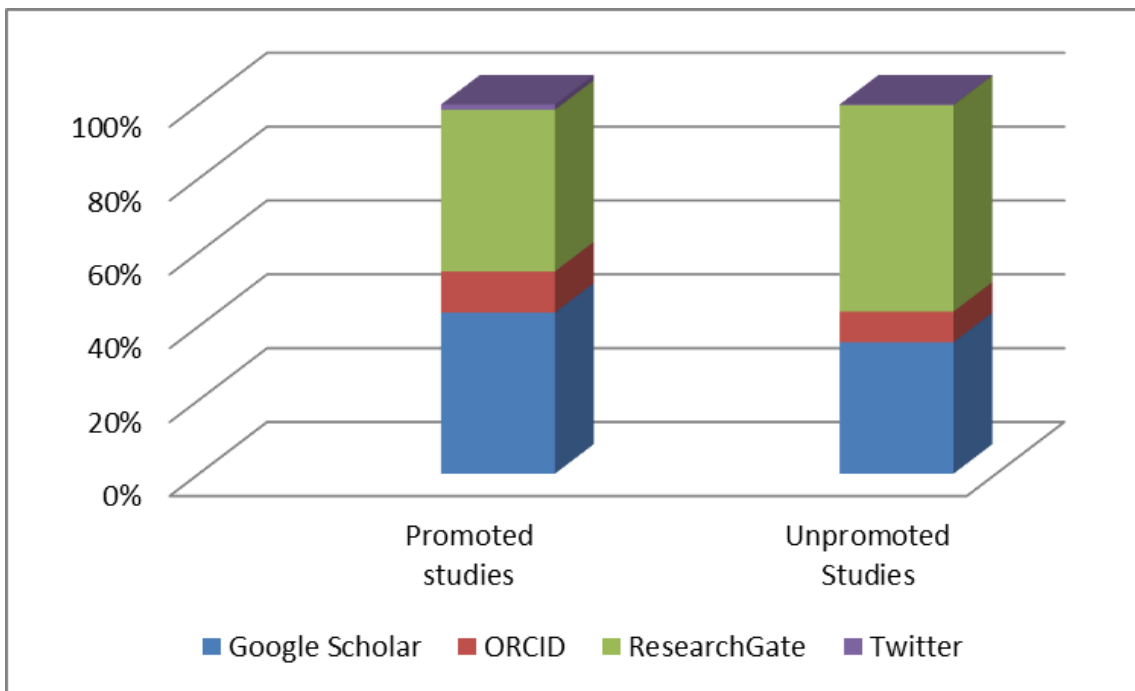
Figure No. 1. Comparison between promoted and non-promoted scientific works on each platform (Source: prepared by the authors)

As previously mentioned, we can't say that the active identity of researchers on **Research Gate** is as it should be, as there is a significant weakness in response and daily interaction rates, including the first and second indicators, which are considered indicators of measuring impact such as was referred to in a study (Martin-Martin, Orduna Malea, & Aylon, 2016, 09) which indicates that both questions and answers fall within the criteria used to calculate the Research Gate Score. However, it should be noted that the question and answer indicator is the place where a researcher can ask questions related to research and get answers from other specialists, it is a better place for sharing knowledge and communicating with other researchers, opens opportunities for scientific cooperation, but it may be due to lack of interest or time and the researcher's busy schedule or that most of the questions on the site are general and not related to the researcher's specialized field, while some researchers see that answering Research Gate questions is of no academic benefit. As for the number of scientific research (440 research articles) that were not included in the researcher's records, this may be because the study sample does not have enough time to archive everything produced.

As for the stats indicator, it was fully present through the existence of a number of criteria like the number of reference citations and readings and this indicator is uncontrolled by researchers as the system is responsible for calculating them.

In contrast to the Research Gate site, we found that **Google Scholar** does not provide an opportunity for daily interaction, and thus measuring the activity of researchers and their activity indicator is determined only through the number of scientific research listed on their profile compared to the scientific production they have produced, and thus the researcher is obliged to archive every new work to say "they have active identity on the site". We found that the open profiles of our study sample on the platform contributed to 1282 promoted works out of 1562 research items produced by 79 researchers, compared to the non-promoted 280 works without additional details in the researchers' profiles.

It can be said that these non-promoted research items are those that were used to participate in international or local conferences, and thus researchers had to refer to them only once in their accounts and here we can say the identity of those researchers of our sample are active and keen to introduce their research outputs regularly. This is all because they realized that scientific research on the Google platform is becoming increasingly important as this platform has imposed itself within the scientific community in order to achieve high standards and expand global collaboration opportunities (Portela, 2017, 38; Slack, 2013, 7).

As for the introduction indicator, we found it is present through the availability of information that introduces the researcher such as personal picture and expression of interests, as for the stats indicator, we found that the system is responsible for forming it by counting the number of reference citations such as the h-index, i10-index, which are indicators that reflect the researcher's impact on the scientific community (Sierra, 2013, p. 642).

And regarding the **ORCID** and the digital identity of the study sample, we found that the 41 researchers who have accounts on this site with active identity (activity indicator) and contributed to 327 promoted research items out of 392 published articles present 83%, we attribute the high percentage of promoted work compared to Research Gate either to the feature provided by this platform that allows publishers of scientific research to write details about the publication in the researcher's record, and thus the promotion process is joint between the publisher and the researcher, or that the site automatically collects and puts it in the researcher's record through its interaction with other platforms such as Scopus ID. And with regard to the research items that are not promoted (65 articles) on the platform, they were published in non-peer-reviewed that the site did not work to add to the researcher's record because they are not listed in global databases (Manca & Ranieri, 2016).

The identification process was done by providing bibliographic data for the articles or by including links that refer to the full text, of which 93 links were found to be out of service, which necessitates that researchers be vigilant and interactive with their pages (Gordon & Repanas, 2016, 626; Nkambou et al., 2017, 28) by addressing the defect by including the abstract and keywords in PDF or Word formats, and thus we can say: "the identity of the researchers on this site" is not fully active because it is a joint process between the researcher, the site and the publisher, and we can also conclude that the researchers depend on the site to introduce their scientific outputs and that explains the absence non-peer-reviewed articles and the presence of broken links on the platform".

We found that introducing researchers (introduction indicator) is present through the availability of the researchers' CVs, which, through examination, showed that they have sufficient information to introduce the researchers, while the stats identity is absent due to the unavailability of its indicators or tools on the site.

On **Twitter**, in order to find out the extent to which this space is used to promote the research outputs and to determine the identity of the researchers who own the 12 open accounts on the platform, we tracked and analyzed them in the period from January 2022 to November 2022, and it was concluded that there are only 7 accounts used in an effective manner to promote their scientific identification with scientific production, they fulfilled, as far as possible, the information and conditions that must be in any account opened on Twitter for the purpose of promoting the research production, such as the information that must be contained in the personal profile, which is represented in:

- Availability of the name and photo of the researcher used throughout the academic career of the 7 researchers.
- Existence of details that reflect the research interests of the sample.

As for the activity indicator, it was present through tweeting and introducing the scientific production of the researcher. As for the tweeting process, it was somewhat uneven between the available 7 accounts, as some

accounts have not tweeted for more than 3 months and some are active and tweet regularly and share the others' tweets.

As for introducing research outputs, we found that the 7 accounts are used to promote their works by sharing links that refer to scientific articles in addition to referring to modern sources in the specialty, knowing that the accounts did not promote all their article (42 scientific articles out of a total of 43) and some articles were available on other platforms not available on Twitter while we found that the use of the other 5 accounts in promoting their work of the researcher is completely non-existent the activity is limited to introducing modern sources in the field, which leads us to conclude that the identity of researchers on Twitter is not active due to the number of researchers use it and thus the slim number of the articles promoted on this digital space.

And by comparing the extent of the impact of each account (the stats indicator), we find that the three accounts have a significant scientific standing with more than 1000 followers for each of the three accounts, and this is what we measure through the number of tweets reached in total of 6941 tweets for all of these three accounts since the owners opened their accounts in December 2012, March 2013, and July 2015. And the interaction of their followers, represented by the number of likes, which reached 10339 likes for all three accounts.

Based on the above data, we can show the type of digital identities (indicators) that can be achieved on each of the studied digital platforms. In the following Table No. 4, marks are used: / means available, x is not available.

Identity Type	Research Gate	Google Scholar	ORICD	Twitter
Introduction	/	/	/	/
Activity	X	/	X	/
Statistics	/	/	X	/

Table No. 4. Identity types promoted by each platform (Source: prepared by the authors)

Table No. 2 shows a strong correlation between a researcher's scientific activity and their digital identity. The more a researcher produces scientifically and interacts on digital platforms, the more their presence is amplified in the virtual world, leading to greater promotion of their research outputs.

V. Conclusion

The results of our study show that the researchers' attitude towards building a digital identity and valuing the outputs of their scientific research is linked to a number of variables, mainly as follows:

- Researchers should seek to prove their presence in virtual spaces and establish their digital identity by adopting a number of personal initiatives such as creating profiles that contain information related to their scientific specialization and research productions on the sites most visited by other researchers and that is exactly what the study sample sought to do by opening accounts in the sites most explored by Google, such as Research Gate and Google Scholar, while ensuring that their digital identity is active and effective by introducing their own scientific production.

- The language used in publishing plays an important role in spreading works, expanding their circulation, and contributing to the promotion of the researcher's digital identity (Singal, 2015, p. 29). That was seen in the open accounts on the ORCID website, on which all the 392 articles of the study sample are in English and most of them are listed in global databases, meanwhile production on this platform in Chinese was absent. So, in order to enhance social research in Taiwanese universities, researchers need to publish in English because the promotion of their articles, according to the statistics issued by actors work in scientific research and international databases like Elsevier and Web of Science (WOS), "can be achieved if they are published in English on the one hand and in prestigious international journals on the other hand" (Wouters, 1999, p. 143).

- Our study revealed that the digital identity of Taiwanese social science researchers, represented by the study sample, took the three identity **types, which are, first** introducing identity (introduction) that proved its presence in all digital platforms by its reliance on a set of indicators centered on introducing the researchers and providing the possibility of contacting them, and viewing their biography. **The second type** is active identity (activity) and it is varied from one space to another, in which the Google Scholar search engine proved its effectiveness in promoting scientific research produced by the study sample. Through these data, we conclude that the exploitation of the Google Scholar platform by the study sample was at the highest rank.

- Research Gate comes after Google Scholar, where the researchers showed on it that they are not interested in daily interaction with their peers through the use of the service of question, answer and reporting their ongoing research projects, while we found that its use to promote scientific content was effective, while the identity is not active in both ORCID and Twitter evidenced by the number of scientific productions published by the sample of our study. In addition to the **third type** of digital identity, which is represented by the statistical identity that was ensured and controlled by the platforms, and it was present in the accounts of researchers in Research Gate, Google Scholar and Twitter through the availability of a number of indicators that measure the impact of scientific research produced by each scholar, such as the number of reference citations, followers and followings, etc. While such stats were not available on the ORCID website, which did not provide any numerical indicator related to the researchers.

We can say from what has been reached that the social science researchers at Taiwanese institutions face a challenge to raise the value of the outputs of their scientific research by adopting a number of personal initiatives that help in establishing their digital identity as the first step to impose their mark in the digital world, and thus contribute to the dissemination of their research contributions and this can be done through the following:

1. Open personal accounts in the most popular digital platforms in the scientific community, such as the Google Scholar search engine and the other academic networks.
2. Adopt blogging initiatives by creating personal blogs, participating in group blogs or even writing in blogs as a guest without neglecting the use of Twitter and similar networks.
3. Use English in the published articles in order to ensure having a place within the global databases.
4. Go towards international publishing and establishing international research collaborative relationships and partnerships.

At the end of this study, we concluded that researchers can play an effective role in promoting their research works and in creating a virtual recognition that is no less important than the traditional recognition among peers in the scientific community by training their identity to be active and effective and adopting a number of personal initiatives using some electronic spaces that facilitate the process of spread all information related to them on one hand, in addition to considering these spaces as free tools available for use by everyone without restrictions or conditions on the other hand.

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Declarations

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