

Open Access in Greek academic institutions: a profile of researchers' perceptions

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Introduction

Over the years, the implementation of Open Access has taken various forms, both in the Green and the Gold OA Road. The plurality of scholarly publishing practices makes the application of only one paradigm a challenging exercise and therefore various ways have been proposed to accommodate all preferred conditions in a community. Open Access and Open Science are considered movements for restoring scholarly communication values and establishing links with society and innovation. It is very encouraging that research funding organizations have pushed towards the adoption of progressive policies, including the PlanS implementation and Wellcome Trust policies. OS is often greeted as a beneficial set of practices for researchers, as McKiernan et al. have supported.¹ They delineate the benefits of OS in an ecological system of openness, from Open Access to Open Data and Open Source. They conclude that these can take the form of increased attention to their work, higher impact, more collaboration opportunities, etc. However, even with these clear and straightforward benefits, a substantial part of the authors does not follow the OA roads, especially in countries, such as Greece, where the OA spirit has not been cultivated enough. While monitoring services, such as the European Commission's Open Science Monitoring² and COKI,³ show that there is a tendency for OA to grow, at the very practical level there are valid concerns about the actual progress and the cultural change that is needed to make the transition viable and long-standing. HEAL-Link, the consortium of Greek academic libraries, signed the first agreements with an OA component for the years 2019–2021. Anticipating the importance of handling and monitoring them and the need to actively support the research community, HEAL-Link decided to

Abstract

Over the years, the implementation of Open Access has taken various forms, both in the Green and the Gold OA Road. The plurality of scholarly publishing practices makes the application of only one paradigm a challenging exercise and therefore various ways have been proposed to accommodate all preferred conditions in a community. Open Access and Open Science are considered movements for restoring scholarly communication values and establishing links with society and innovation. It is very encouraging that research funding organizations have pushed towards the adoption of progressive policies, including the PlanS implementation and Wellcome Trust policies.

Im Laufe der Jahre hat die Umsetzung von Open Access verschiedene Formen angenommen, sowohl auf dem grünen als auch auf dem goldenen Weg des Open Access. Die Pluralität der wissenschaftlichen Publikationspraktiken macht die Anwendung nur eines Paradigmas zu einer Herausforderung, und daher wurden verschiedene Wege vorgeschlagen, um alle bevorzugten Bedingungen in einer Gemeinschaft zu berücksichtigen. Open Access und Open Science gelten als Bewegungen zur Wiederherstellung der Werte der wissenschaftlichen Kommunikation und zur Herstellung von Verbindungen zur Gesellschaft und Innovation. Es ist sehr ermutigend, dass Forschungsförderungsorganisationen auf die Annahme fortschrittlicher Strategien gedrängt haben, einschließlich der Umsetzung von PlanS und der Richtlinien des Wellcome Trust.

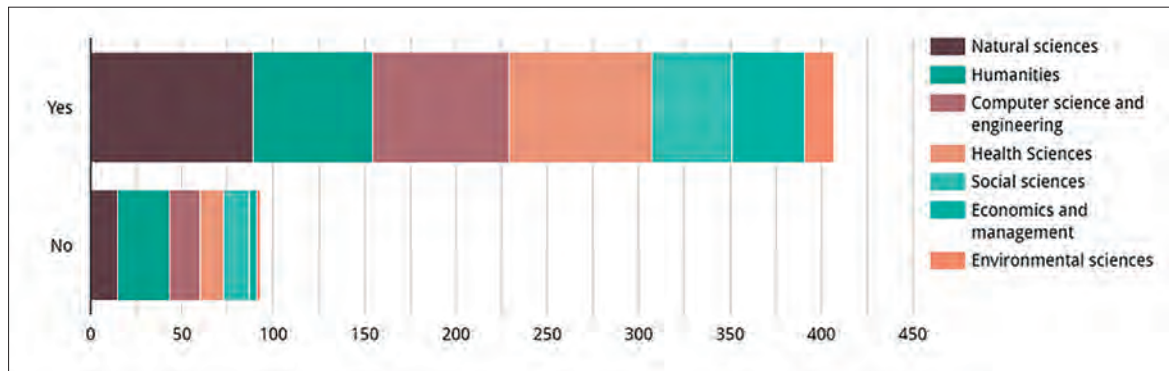
establish the Scholarly Communication Unit (EESC) in October 2020. EESC, among other actions and projects, conducted a survey in the spring of 2021 asking mainly the faculty of the Greek academic institutions about their perceptions and experiences of OA in Greece. In this paper, we present the results of this survey, which are crucial for the HEAL-Link, the academic institutions, and the broader public to understand the reception of OA, as it also allows comparison with other countries.

1 McKiernan, Erin C. / Bourne, Philip E. / Brown, C. Titus / Buck, Stuart / Kenall, Amye / Lin, Jennifer / McDougall, Damon / Nosek, Brian A. / Ram, Karthik / Soderberg, Courtney K. / Spies, Jeffrey R. / Thaney, Kaitlin / Updegrove, Andrew / Woo, Kara H. / Yarkoni, Tal: "How open science helps researchers succeed." *Elife* 5:e16800 (2016). URL: <https://doi.org/10.7554/eLife.16800>

2 EU: Trends for open access to publications (2019). URL: https://ec.europa.eu/info/research-and-innovation/strategy/strategy-2020-2024/our-digital-future/open-science/open-science-monitor/trends-open-access-publications_en

3 Diprose, James P. / Hosking, Richard / Rigoni, Richard / Roelofs, Aniek / Napier, Kathryn R. / Chien, Tuan-Yow / Wilson, Katie S. / Montgomery, Lucy / Neylon, Cameron: (2022). "COKI Open Access Website." Zenodo. (2022). URL: <https://doi.org/10.5281/zenodo.6374486>

Figure 1.
Knowledge of
the Gold Open
Access Road
per discipline



Our study follows the main questions posed by previous works and concerns the motives and the barriers for someone to publish with one of the main OA roads. For instance, Ruiz-Pérez and Delgado-López-Cózar⁴ made a survey targeting Spain-based researchers and found that the levels of Gold OA awareness were very high, while the younger researchers believed that OA is beneficial for their research field. In their study with more than 1.000 authors from social and medical sciences, Wijewickrema and Petras found out that prestige and Impact Factor are considered some of the key deciding factors that are common to researchers.⁵ Researchers also want professional services, such as connection with indexing services and submission systems, that can guarantee wide exposure and trust. Prestige and reputation seem to be overarching conditions in other studies as well. Edelman and Schoßböck state that the participants in their mixed-method study – through workshops and surveys – “strongly reflected on OA publishing as a highly individualist matter that is embedded within a publishing culture that strongly emphasizes reputation and rankings.”⁶ At the same time, OA is considered a criterion of lower importance as other studies have provided evidence of.^{7 8} Author surveys look also at the Green OA Road and in some studies, such as the ones of Serrano-Vicente, Melero and Abadal⁹ and Yang & Li,¹⁰ there are some concerns about the low author engagement with institutional repositories.

Finally, researchers have concerns about the overall context and the easiness to implement OA with limited resources and support.¹¹ These were also concerns in the current study, especially regarding the reasons that encourage or discourage the authors to use at least one of the OA roads.

Research Methodology

The survey was conducted from March to April 2021 addressing all Greek academic institutions, through a separate form for each one. In total, 980 researchers participated in the survey. However, in this paper, only the first valid 500 answers were selected by stratified sampling. This means that, based on the population of the researchers of an institution, the number of responses per institution was proportional to the total number of 500 responses that were targeted. This group of respondents was further categorized according to age, years of experience and broad scientific fields. The researchers could state one of the scientific fields in the format used by the Unit to classify the works published in OA mode under the deals of HEAL-Link.

Throughout the survey, the researchers were questioned about their opinion and experience with different aspects of OA and its implementation. Our interest was also in their background on OA venues and the reasons for choosing them or not. Other aspects of open publishing were examined as well, such as

4 Ruiz-Pérez, Sergio / Delgado-López-Cózar, Emilio: “Spanish researchers’ opinions, attitudes and practices towards open access publishing.” In: *El profesional de la información* 26, 4 (2017) S. 722-734. URL: <https://doi.org/10.3145/epi.2017.jul.16>

5 Wijewickrema, Manjula / Petras, Vivien: “Journal selection criteria in an open access environment: A comparison between the medicine and social sciences.” In: *Learned Publishing* 30 (2017), S. 289-300. URL: <https://doi.org/10.1002/leap.1113>

6 Edelman, Noella / Schoßböck, Judith: “Open Access perceptions, strategies, and digital literacies: a case study of a scholarly-led journal.” In: *Publications* 8, 3, 44 (2020). URL: <https://doi.org/10.3390/publications8030044>

7 Nature Publishing Group / Palgrave Macmillan: *Author insights 2015* (2015). URL: https://figshare.com/articles/dataset/Author_Insights_2015_survey/1425362

8 Taylor and Francis: *Taylor & Francis researcher survey 2019: Researchers’ views on the present and future of scholarly communication* (2019). URL: <https://authorservices.taylorandfrancis.com/researcher-survey-2019/>

9 Serrano-Vicente, Rocio / Melero, Remedios / Abadal, Ernest: “Open Access awareness and perceptions in an institutional landscape.” In: *The Journal of Academic Librarianship*, 42, 5, (2016), S. 595-603.

10 Yang, Zheng Y. / Li, Yu: “University faculty awareness and attitudes towards Open Access publishing and the Institutional Repository: a case study.” *Journal of Librarianship and Scholarly Communication* 3, 1, p.eP1210 (2015). URL: <https://doi.org/10.7710/2162-3309.1210>

11 Niamh Quigley: “Open access in the humanities, arts and social sciences: Complex perceptions of researchers and implications for research support.” In: *LIBER Quarterly: The Journal of the Association of European Research Libraries*, 31, 1 (2021) S. 1-27. URL: <https://doi.org/10.53377/lq.10937>

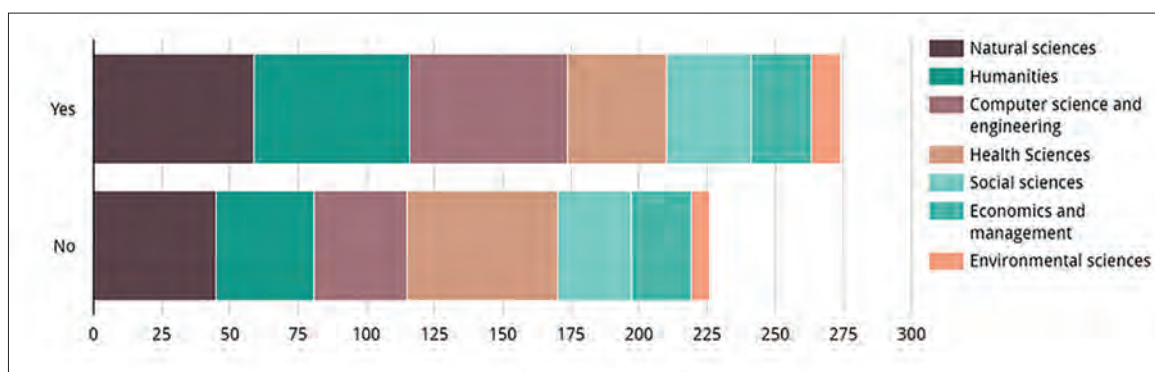


Figure 2. Knowledge of the Green Open Access Road per discipline

their opinion on Institutional Repositories and their relationship and interaction with them. Lastly, we studied the level of their awareness when it comes to OA publishing options provided by the consortium. After collecting the questionnaires, a series of interviews followed, with participants that stated their interest to give their insights regarding OA. In total, 31 interviews were conducted through the Zoom platform. Therefore, the results are measured in two aspects: quantitative (analysing the questionnaires) and qualitative (analysing the interviews). The focus is on the differences and similarities spotted among scientific fields, different age groups, and/or levels of experience. The quantitative results of the survey are available as a dynamically explored dashboard at <https://scholarly.heal-link.gr/en/open-access-perceptions/>.

Results

Demographics

The first section was dedicated to the collection of demographic data and the investigation of the research community's familiarity with Open Access, the general attitude towards it, and their level of experience so far. The participants were mostly of ages 50-59 (229 out of 500), and 40-49 (159 out of 500). Most of them were also experienced in terms of their active participation in research since 415 of the 500 noted that they had more than 16 years of experience, a percentage that exceeds 80%. It is important however that young researchers also participated, as 73 had 6-15 years of experience, and 12 had 0-5 years. The highest response came from the Natural Sciences and the Humanities, corresponding to 20,8% (n=104) and 18,6% (n=93) of questionnaires respectively, while the lowest participation came from the Environmental Sciences, making up only 3,6% (n=18).

A great number of participants claimed to know either both OA roads or at least one of them, reaching more than 85,2% (n=426). More specifically, 81,4% (n=407) of all were aware of the Gold and 54,8% (n=274) of the Green OA Road and 51% (n=255) of the partici-

pants were aware of both. 80,4% of the experienced researchers (separated into the very experienced and the experienced enough, regarding their years of conducting research), claimed to be aware of the Gold OA Road, and 54,4% of the same group claimed to be aware of the Green OA Road. The lowest numbers of OA awareness were spotted among researchers with less experience, with only five of them being aware of the Gold OA and two (of 12) being aware of Green. Half of the researchers with less experience were aware of either Green or Gold OA (six out of 12).

Regarding their opinion on OA, 71,6% (n=358) have either a positive or definitely positive opinion about it, while negative or definitely negative opinions were formed only by the 3,9% (n=19) of all participants. Even though 36,8% (n=184) claimed to pursue publishing in Open Access venues, 50,2% (n=251) don't consider it when it comes to choosing a publishing venue. Despite the low representation of Technology and Engineering, Health Sciences, and Humanities, it seems that their young researchers are pursuing to publish OA, in contrast to the more experienced researchers.

Gold OA

The second section was devoted to the detection of perceptions of the Gold Road, which concerns the open publication in scientific journals, and which often entails a financial burden for the publishing author. In the section, the participants were asked whether they have published in an OA journal and the reasons for doing so.

Regarding the reasons why they have chosen to publish in an OA journal, the participants were able to select more than one option. 354 of the participants chose one or more of the options given, meaning that 70,8% of all respondents have published in an OA journal, regardless of the reason. The most common answer to this question was because they believed that their research would have greater visibility, an option chosen by 38,8% (n=194) of the participants. Another common reason was the greater impact that an OA publication would have (30,6%, n=153),

which was expressed mostly by the very experienced researchers (123), and/or by researchers of the Humanities (21,6% n=33 out of 153) and the Health Sciences (19,6% n=30 out of 153).

26,6% of all participants (n=133) claimed that having the necessary financial resources was also a strong factor. Most of those researchers came from Computer Science and Engineering (27,8%, n=37) and Health Sciences (24,8%, n=33). Also, in contrast to what was expected, being obligated by a funding program didn't seem to be an important factor, as chosen by only a small number of participants (12,6%, n=63), most of which came from Computer Science and Engineering (33,3%, n=21) and Natural Sciences (23,8%, n=15). Lastly, a percentage of 6,6% (n=33) said that their decision to publish in an OA journal was because the journals in their field happen to be OA. Other reasons (not included on the questionnaire) are making up 14,6% (n=73).

On the other hand, they were also asked to choose one or more reasons why they haven't published or don't prefer to publish in an OA journal if any of these statements applied to them. 42,6% of all (n=213) said that one of the reasons for choosing not to publish in an OA journal was because they considered it expensive. Most of them came from Computer Science and Engineering (20,7%, n=44), and Health Sciences (27,2%, n=58), while there wasn't any specific distinction when it came to years of experience in research. A 12,2% (n=61), said that they considered OA journals of lower quality. Most of the researchers with that opinion seemed to be in the more experienced group of respondents (80,3%, n=49). Also, a reason for not choosing OA was that their community did not publish in OA journals (4,4%, n=22), while 1,4% (n=7) said that there weren't any OA journals in their field.

A percentage of 13,8% (n=69) admitted that one of the reasons for not publishing in OA journals was because they were not properly informed, with most of them coming from Humanities (33,3%, n=23). One small percentage (2,4%, n=12) responded that they found the course of action for publishing in an OA journal complicated, while 4,2% (n=21) didn't choose to publish in an OA journal for other reason(s), not included in the questionnaire.

Green OA

The third section of the questionnaire was dedicated to their opinions and knowledge when it comes to repositories and their institutional repository, and on the reasons that might keep them back from posting their research there.

In their opinion about institutional repositories in general, 79,4% (n=397) of participants indicated that

they thought positively or definitely positively of IRs, only 2,2% (n=11) had a negative opinion, while there weren't any respondents that chose the definitely negative choice. The percentage of positive opinions was very high for the more experienced researchers, those with more than 15 years of experience (82,4%, n=327). A significant percentage of 18,4% (n=92) said that they had neither a positive nor negative opinion. When it came to their awareness regarding the repository of their Institution, a substantial percentage said that they know it well (28,8%, n=144) or that they have heard of it (43,2%, n=216). The rest of the respondents 28% (n=140) said that they didn't know their IR at all. Regarding the reasons for choosing not to publish on their IR, the participants were given several options. Many respondents, 23% (n=115), chose to publish their papers on other platforms and/or services instead of their IRs. Most of them came from Natural sciences, Computer Science and Engineering, and Humanities, taking up more than 20% each. It seems that it was also a very popular practice among researchers of Social Sciences since 32,8% (n=19) of all respondents in the field chose to do so. Another issue that was also highlighted while analysing the results, is the need for timely and precise information when it comes to what is allowed and what isn't, as claimed by 21,6% (n=108) of respondents. Also, 21,4% (n=107) said that they didn't know how to post on their IR. Most of them came from Health and Natural Sciences, taking up 19,6% (n=21) and 18,7% (n=20) respectively.

In general, the course of action was considered by a percentage of 7,2% (n=36) as complicated and that led to not choosing to publish on their IRs. Of all respondents, 4% (n=20) said that they didn't publish on their IR because they were not allowed by the co-authors of the paper, and 5% (n=25) that they just didn't want to do so.

HEAL-Link agreements

The last section of the survey focused on their awareness of the agreements with an OA component provided by HEAL-Link and the use or not of them, and the reasons for not deploying them if that's the case. Most of the respondents claimed not to be aware (76,6%, n=383) of them, which was also the main reason for not taking advantage of them, as claimed by 67,2% (n=336) of respondents on a follow-up question. That opinion, which was common for all levels of experience, was adopted by 75,8% (n=69) of respondents coming from Health Sciences and 73% (n=76) of those coming from Natural Sciences.

It is expected that the number of those that have used the programs is low, with only 1,4% (n=7) to have

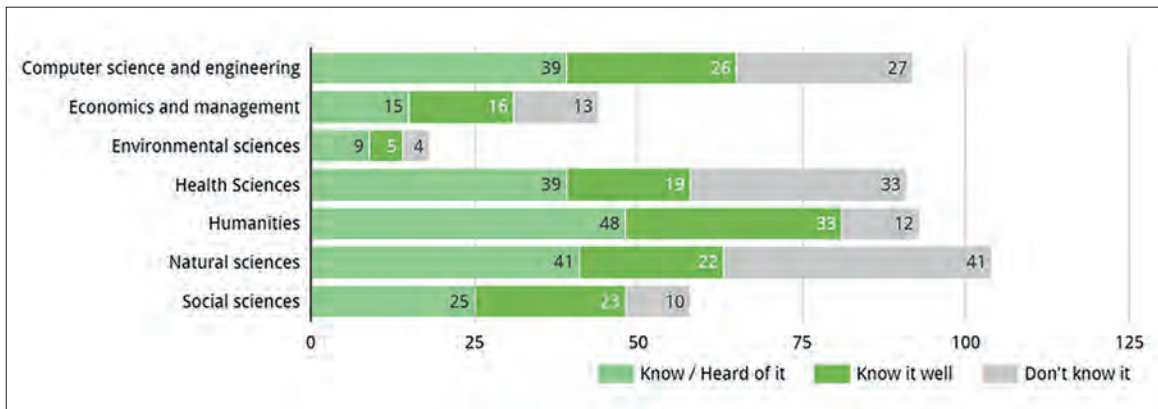


Figure 3. Knowledge of institutional repositories per discipline

published with the fully waived option and only 3% (n=15) with the discount option. A 12% (n=14) of the respondents that were aware of the HEAL-Link agreements, said that they didn't use them because they didn't have the required funds. Also, we need to keep in mind that around 1/3 (28,2% n=141) of respondents claimed that it simply didn't occur to use the HEAL-Link programs. Lastly, only a few participants (3,6%, n=18) indicated that the journals that interest them were not included in the agreements.

Interviews

In total, 31 researchers were interviewed coming from all subject areas. More specifically, 10 were

from Humanities, five from Computer Science and Engineering, four from Social Sciences, four from Health Sciences, four from Natural Sciences, two from Environmental Sciences, and two from Economics and Business.

With few exceptions, all interviewees were amenable to OA having a positive opinion of OA in general. Some have described it as a necessary condition for the progress of scientific research. According to them, it is necessary for easy and inexpensive access to scientific information. These researchers focused more on its properties for finding and retrieving the desired information, especially in our country that faces fi-

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nancial constraints, and less on its properties as a means of publication and dissemination of research. A few talked about achieving openness in research beyond research publications, such as open data, open software, and open educational resources. One researcher from the field of Health Sciences said that the research conducted on the COVID-19-pandemic led to fast results because of the open access to publications and data.

What might make the researchers hesitant or negative when it came to OA publications was the matter of the high cost of APCs and the matter of quality. Two-thirds of respondents considered the cost of publication to be a problem, which in many cases was considered extremely high and one-third declared that they had reservations and concerns about the quality of OA publications. However, they clarified that they were in favor of OA as long as certain quality requirements were met. Some researchers have also mentioned the lack of OA journals in their subject field. Two-thirds admitted that they would pursue publishing in OA, under certain conditions, such as resources, quality, and journals.

The vast majority was unaware of the agreements of HEAL-Link and therefore have not used them. Moreover, most of them had a positive opinion about IRs and considered them important. Some have stated that they have posted their papers on their IRs and some had knowledge and experience of it, but they believed that it didn't work well or malfunctioned. Many admitted that they posted their research elsewhere, such as other repositories or services. However, some did not know that their institution had a repository. Most of those who said they knew it, seemed to have partial knowledge of its purpose and operation and have linked its use only to the submission and search of postgraduate theses and doctoral dissertations. A large percentage believed that if they knew the purpose of the IR and had the appropriate information or were requested by their institution, they would post their work on their IR.

Discussion

Despite the general positive opinion about OA, it seems that according to some of the views that were expressed in interviews, OA is often viewed by Greek researchers as a way of accessing scientific content, and not as a publication practice. This was reflected also in the questionnaire responses, as a considerable part of the researchers said that they didn't consider OA when publishing and a percentage of 34,8% are pursuing publishing in OA mode. Senior researchers seem to have a good opinion of OA, while young

researchers – with less than five years of experience – seem to be unaware or unfamiliar with the concept and its implementation. The main reason for choosing open publishing is because they think that their work will be better exposed and will receive more citations, while the main reason for not choosing OA is the high cost of APCs. Nevertheless, when it came to their awareness of the HEAL-Link OA programs, which is one of the main national instruments that financially support OA, most of the participants said that they were not aware of them, hence they had not used them. This, combined with the low level of knowledge of OA procedures in younger researchers, means that there should be a coordinated effort to raise awareness and train researchers. New tools and practices should be invented for the long-term engagement of Greek researchers with OA programs.

The general good opinion about IRs is not translated to high rates of usage. Many researchers claimed not to know their IR, even though Greek Universities have been operating them for more than a decade. This is in accordance with other studies that have raised concerns about the low engagement of scholars with repositories. The researchers in our study were not confident that they have the right to post their work on repositories, which is also raising the matter of training very high on the action list. Implementing policies that place IRs in a more central position in order to complete the main roles of collecting, documenting and promoting research from every Institution can be a viable solution. Repositories in particular can play an important role in highlighting fields expressed in the Greek language or other types of publications, except for journal articles.

It is encouraging that many of the researchers interviewed see Open Access as a component of Open Science, which, together with data and other parts of scientific research and information, will help to answer major questions about humanity.

Conclusion

One can argue that growth is closely related to what incentivizes or disincentivizes authors to adopt the OA paradigm. As the library community has the aim to make a sustainable and permanent swift to OA, the perceptions of the authors must be taken into account in order to address any issue on every possible level, including the local one that can be more direct and closer to them. The results of the survey along with the interviews confirmed findings in studies that were conducted in other countries. Researchers are largely unaware of not just the services, but also of the support. The information they receive from the

library world is limited and there is a lot of confusion on what kind of support they can get. As a consortium and as libraries in support of the OA movement, it was crucial and fundamental for us to be informed about the notion, the perspective and the experience of our researchers regarding OA and its implementation to have a full view of the reality in Greece and to know exactly where we stand. It became clear that our perception and viewpoint of – in Greece aren't comprehensive and now we have the chance to work more focused on the aspects that need our attention and support. More than anything else it's essential to actively engage and involve all the stakeholders and, mainly, the faculty and the researchers in Greece across all the initiatives and actions in support of Open Access and Open Science, so our vision of a successful and sustainable open scholarly environment, including all types and forms of research, knowledge, information and data would be realized. **I**



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