

**Survey Report on Research Activities and
Open Access (OA)**

March 2006

Committee on International Scholarly Communication,
Japan Association of National University Libraries
and
National Institute of Informatics

Contents

Executive Summary	i
Outline of Survey	1
Summary of Survey Results	3
Survey Results	11
I Attributes of Researchers Surveyed.....	12
II Gathering Research Information and Publication of Research Results	14
2-1 Availability of articles through the Internet.....	14
2-2 Ease of obtaining information.....	17
2-3 Search engines used by researchers	18
2-4 Frequency of use of online bibliographic databases and e-journals	20
2-5 Motives for submitting/publishing research results	23
2-6 Number of articles researchers submit/publish in a year.....	25
2-7 Number of articles researchers have published in the last 3 years	27
2-8 Number of works researchers have published in book form in the last 3 years.....	31
2-9 Format used for saving articles	33
III Open Access (OA)	35
3-1 Recognition rate.....	35
3-2 Notification of OA.....	38
3-3 Awareness of OA journals.....	39
3-4 Submitting to/publishing in OA journals.....	41
3-5 Possibility of publishing through OA journals	42
3-6 Reasons for publishing in OA journals	44
3-7 Reasons for not publishing in OA journals	47
3-8 Publication fees.....	49
3-9 Funding sources for publication fees	51
3-10 Researchers' views on publishing in OA journals under conditions of contract	52
3-11 Who should be responsible for archiving articles in OA journals?	54
3-12 Impact of OA publishing on scholarly publishing system.....	55
3-13 Impact of OA publishing on publication business of LPSs	57
3-14 Importance of roles of scholarly journals.....	59
IV Article Repositories and Self-archiving	63
4-1 Self-archiving experience to date.....	63
4-2 The time when respondents started self-archiving.....	66
4-3 Motives for self-archiving.....	67
4-4 Awareness of self-archiving as a means to providing OA to academic works	68
4-5 What made researchers aware of self-archiving?.....	70
4-6 Parties owning copyrights of latest articles	72

4-7 Willingness to self-archive upon request for deposit in repositories	75
4-8 Concerns with regard to self-archiving.....	78
Appendix.....	81

EXECUTIVE SUMMARY

The aim of this survey, carried out in December 2005, was to investigate trends in Japanese researchers' research activities, their use of databases, their awareness of new Open Access (OA) possibilities such as open access journals (OAJ) and self-archiving, and their concerns about this form of publishing. 613 faculty members (researchers) at National University Corporations or Inter-University Research Institution Corporations responded to the queries. The results of the survey suggested that Japanese researchers are, in general, still hardly aware of or prepared to cope with OA, although their counterparts in developed countries are knowledgeable about OA.

29% replied that they were aware of OA, while according to A. Swan's JISC Report (2004), over 60% of those who have not published through OAJ were aware of the concept. This evidences that Japanese researchers do not have enough knowledge concerning OA.

Only 17% of the respondents answered they have plans to publish through an OAJ in the next three years. The primary reason for more than half of those respondents who choose an OAJ is a belief that the principle of free access to research information is important.

In contrast, those who answered that they do not plan to publish through an OAJ (21%) stated that the most important reason for not doing so is that they are not familiar enough with OAJs in their fields to be motivated to submit to them. These findings are consistent with the tendency reported in A. Swan's JISC Report (2004).

Most researchers feel that the author's fee should be subsidized by research grants. More than two thirds (69%) of the respondents said that, if publishing their work in an OAJ were a condition prescribed by the contract with grant-awarding bodies, they would accept the condition.

About 20% of the respondents expressed concern about the possible breakdown of the conventional scholarly communication system which the proliferation of OA might bring about, while over 40% stated they could not make any judgment concerning this subject. Importance of certain aspects of traditional journal publishing carried out by publishers, including peer review and quality control was pointed out.

Regarding researchers' self-archiving, only 20% of the respondents have self-archived at least one article during the last three years in one of three possible ways: by placing a copy of the article in an institutional (or departmental) repository, in a subject repository, or on a personal or institutional website. A. Swan's 2nd report (2005) states that almost half (49%) of the author population has self-archived at least one article in the past three years. Most Japanese researchers are still unaware of the possibility of providing open access to their work by

self-archiving.

Almost half (46%) of respondents would willingly comply with a mandate from their employer or research funder to deposit copies of their articles in an institutional or subject-based repository. Together with further 12% who replied that they would comply reluctantly, 58% of the whole population would comply with such mandates. According to A. Swan's 2nd report, 81% of authors said, in response to the same questions, they would willingly comply and 13% would comply reluctantly, which means that 94% of the total author population would comply with such mandates.

Concerns were expressed by a third of the respondents about copyright issues. For half of those had not deposited their articles in repositories, the greatest concern was that they were not informed well enough of self-archiving activities (41%).

Communicating their results to their colleagues remains the primary reason for scholars to publish their work; in other words, they publish in order to have an impact in their fields. Most researchers use Internet search engines (such as Google), bibliographic databases and/or e-journals to locate sources of scholarly information for their research. 58% of respondents replied that they were able to locate research and news articles they need on the web.

A. Swan's JISC Report:

Swan, Alma and Brown, Sheridan (2004) Report of the JISC/OSI open access journal authors survey.

http://www.jisc.ac.uk/uploaded_documents/JISCOAreport.pdf

<http://cogprints.org/4125/>

A. Swan's 2nd Report:

Swan, Alma and Brown, Sheridan (2005) Open access self-archiving : An author study May 2005

[http://www.keyperspectives.co.uk/openaccessarchive/reports/Open Access II \(author survey on self archiving\) 2005.pdf](http://www.keyperspectives.co.uk/openaccessarchive/reports/Open%20Access%20II%20(author%20survey%20on%20self%20archiving)%202005.pdf)

<http://cogprints.org/4385/>

Outline of Survey

Outline of Survey

1. Aims

This survey was conducted to clarify researchers' research activities and the degree of their awareness of and experience with Open Access (OA). The aim of the survey was to gather basic information on how national universities should build their own institutional repositories in the future.

2. Architecture of survey

(1) Respondents

Researchers who are members of national universities/institutions

(2) Number of queries sent

2000

(3) Selection of respondents

Randomly selected from researchers belonging to National University Corporations and Inter-University Research Institute Corporations

(4) Number of responses and response rate

Number of responses: 613

Response rate: 30.7%

(5) Time of survey

December 2005

(6) Method of survey

By post

3. Notes for the graphs and tables in this report

- Each percentage figure in a graph or table is rounded to the nearest whole number. Because of this, the total percentage points do not always add up to 100%.
- No "0%" percentage figures are presented in the graphs or tables.
- Subject areas mentioned in the survey results are in line with the 1st to 7th divisions as classified by the Science Council of Japan.

Summary of Survey Results

Summary of Survey Results

1. Collection of research information and publication of research results

- ◆ 58% of the respondent population say that they can obtain articles and reports necessary for their research via the Internet, although to varying degrees depending on subject areas.
- ◆ Google and PubMed are the 2 main search engines most frequently used by the respondents.
- ◆ 56% of the respondents are “heavy users” of online bibliographic databases and e-journals. By subject area, heavy usage is noticeable in researchers in pure science and “medicine, dentistry, and pharmaceutical science”.
- ◆ The 2 main motives for submitting/publishing research work are “to communicate results to their peers” and “to advance their career”.
- ◆ The average number of articles a researcher submits/publishes per year is 3.2.
- ◆ On average, the total numbers of publication by language type during the most recent 3 years were 3.7 articles in Japanese in domestic journals and 5.8 in English or other European languages in overseas journals. Researchers have published average 1.0 works in book form during the period.
- ◆ The researchers save their articles mainly in MS Word (72%) and PDF (56%) formats.



Information gathering for research and publication of research results vary greatly depending on subject areas.

- 3% of respondents say that, by using the Internet, they can obtain “all” articles and reports they need for research, while 55% say they can obtain “almost all (with some exceptions)” articles and reports needed for research, which means approximately a combined 60% of researchers said they could obtain them. On the other hand, in total one-third of the researchers say that they often cannot obtain such articles and reports, summing 30% of those saying that they sometimes fail to obtain them (they can obtain some) and 3% of those answering that they can hardly obtain them. By subject area, about 60% of researchers in pure science, engineering, agriculture and “medicine, dentistry, and pharmaceutical science” say that they can. By contrast, only 23% of researchers in “literature, philosophy, educational science, psychology, sociology, history (literature etc.)” say that they can, this percentage outnumbered by 55% saying they can’t. 20% said they did not obtain articles and reports needed for research by using the Internet.

- Of the researchers who say that they can obtain articles via the Internet, 83% of them said they obtained them with relative ease.
- The most frequently used Internet search engines among researchers for searching articles and reference materials are Google (43%) and PubMed (35%), both used by around 40% of the respondents.
- Over half (56%) of the respondents are “heavy users” who use online bibliographic database and e-journals “almost every day (19%)” or “at least once a week (37%)” to gather information for their research. By subject area, in pure science and “medicine, dentistry, and pharmaceutical science”, over 70% of researchers are “heavy users,” while only 22% of researchers in literature etc. are “heavy users.”
- As the main reason for submitting articles to and publishing research results in journals, the overwhelming majority (90%) of the researchers cited “to communicate results to their peers” and “to advance their career,” while very few researchers cited “for direct financial reward.” Over 60% say that their motives were to “increase their chances of gaining grants” and “for personal prestige in their field.”
- Nearly half (46%) of the researchers say that they submit/publish “2–3” articles per year, while 26% publish “1 or fewer” and 17% publish “4–5” articles. The average number of articles a researcher submits/publishes per year is 3.2.
- Based on submission by language, during the last 3 years, over half (54%) of the researchers have published “3 or fewer” articles “in Japanese in domestic journals,” while 26% have published “4 or more” articles, with an average of 3.7 articles. 25% published “6 or more” articles in “English or other European languages in overseas journals,” with an average of 5.8 articles.
- During the last 3 years, over half (54%) of the respondents published articles in both “domestic” and “overseas” journals. By subject area, over 60% of researchers in engineering and “medicine, dentistry, and pharmaceutical science” have published in both “domestic” and “overseas” journals while 71% of researchers in literature etc. published articles in “domestic” journals only.
- During the last 3 years, half of the researchers have published no works in book form, while 21% have published 1, and 17% have published 2–3 works. On average, they have published 1.0 work.
- When saving their articles electronically, 72% and 56% of the respondents mainly use MS Word and PDF, respectively. By subject area, 70% of researchers in pure science and engineering use PDF format while only 21% of those in literature, etc. use the same format.

2. Open Access

- ◆ 29% of the respondents say that they are aware of OA.
- ◆ 13% of the respondents were notified by their institution or library regarding OA.
- ◆ 15% of the respondents are aware of academic bodies that publish OA journals or their titles.
- ◆ 7% of the respondents have submitted/published their articles to/in OA journals in the most recent 3 years.
- ◆ 17% of the respondents say that they have plans to publish through OA journals in the next 3 years.
- ◆ 44% the respondents say that they do not know about the possible impact of the diffusion of OA publishing on the existing publishing system.
- ◆ The top 3 priorities in the role of academic journals were: “peer review,” “selection of relevant and quality-controlled content” and “gathering articles together to enable browsing of relevant and quality-controlled content”.



Researchers' awareness and understanding of OA is low. Researcher education efforts and facilitation of OA understanding are needed.

- Only 29% of the respondents say they are aware of OA, compared with 62% who are not yet aware. Researchers who submit/publish more articles per year are more aware of OA.
- Only 13% have been notified by their institution or library regarding OA in the last 1-year period. A great majority (86%) have not been notified of it. About 25% of those who are aware of OA said they have been notified.
- Only 15% know academic bodies that publish OA journals or their titles. A great majority (84%) do not know about them.
- Less than one-tenth (7%) of the respondents have submitted articles to or published them through OA journals in the most recent 3 years and 70% have not. About 1 out of 4 answered that they didn't know.
- 17% say that they have plans to publish through OA journals in the next 3 years, while 21% do not have such plans, and 62% answered that they have not yet decided. Among researchers who submit/publish 4 or more articles per year, 24%–30% have plans to publish through OA journals.
- Among the researchers who either say they have plans to publish articles through OA journals or haven't decided, a majority of 58% gave the reason: “the principle of free access for all readers”.
- Among the researchers who either say they don't have plans to publish articles through OA journals or haven't decided, a majority of 55% gave the reason they were “not familiar

enough with OA journals in my field to feel confident about submitting work”, followed by 38% saying they “could not identify any OA journals to publish in”. This shows the main reason for not publishing through OA journals is the lack of knowledge.

- Among the researchers aware of OA, 34% were aware of OA journals and related academic bodies, and only 16% of them have submitted articles to or published them through OA journals. Also, only 30% of the researchers cite the possibility of publishing through OA journals, which illustrates the awareness of OA is not necessarily linked with the publishing of works through OA journals.

		I am aware of academic bodies that publish OA journals and their titles.	I have submitted/ published my articles to/ through OA journals.	I have plans to publish my articles through OA journals.
Overall		15%	7%	17%
Concept of OA	Aware	34%	16%	30%
	Not aware	7%	3%	11%

- About half (45%) of the respondents say they would publish articles in OA journals if the required publication fees were “less than US\$500.” Only 11% say they “would not pay publication fees.” As the funding source for publication related expenses, the greatest majority of 65% cite “research grants,” followed by “departmental budgets” (41%) and “library and other institutional budgets” (36%).
- Were they asked to publish their works in OA journals as per conditions of research grants contracts, 50% of the respondents say they “would be willing to abide with such conditions” and 19% say that they “would abide by such conditions, although reluctantly”, which means a combined 69% would “comply with such conditions.” Those who said that they “could not accept such conditions and would look for other funding sources” were less than 5%.
- The greatest percentage (80%) of respondents said that “the publisher of OA journals” would be the ones who should be responsible for archiving articles published in OA journals.
- With regard to the concern about the possibility of disruption of the existing scholarly publishing system that the diffusion of OA publishing might cause, 21% of the respondents say the possibility is high, which compares with a higher percentage of 33% who say that the possibility is low. Overall, nearly half (44%) of the respondents said they didn’t know. Likewise, with regard to the possible impact on the publishing business of Learned and Professional Societies (LPSs), 18% of the respondents say that the possibility is high, compared with 34% saying the possibility is low. 44% answered that they have no idea, resulting in the highest percentage.
- As to priorities regarding the role of academic journals, those who consider that “peer review,” “gathering articles together to enable browsing of relevant and quality-controlled

content,” and “selection of relevant and quality-controlled content” are either “very important” or “important” total a combined 80% of the respondents.

3. Article Repositories and Self-archiving

- ◆ 20% of the respondents said that they have self-archived their articles.
- ◆ 13% of the researchers who self-archived their articles know that self-archiving in OA websites enables OA to their works.
- ◆ 62% do not know of the existence of institutional repositories or subject-based repositories.
- ◆ 46% would willingly deposit while 12% would reluctantly deposit articles published by green publishers in repositories.
- ◆ When depositing their articles, 39% of the respondents are concerned about the lack of information about repositories.



*There is a low awareness among researchers of repositories.
Only 1 in 5 researchers self-archives their articles.*

- The table below shows the composition ratios of researchers who have deposited their articles on either a pre-print or a post-print basis during the last 3 years. 20% have deposited articles either on a pre-print or a post-print basis. By subject area, a rather substantial proportion (25%) of researchers in economics, commerce, and business administration have published their pre-print articles 1-3 times on their departmental web sites or in institutional repositories. In terms of post-print articles, 15% of researchers in agricultural science have published their articles 1-3 times on their personal web pages, which is greater than the figures for a pre-print basis. Among researchers in literature, etc., 13% have published their articles 1-3 times on their departmental web pages or in institutional repositories. Although the number of respondents was not large, 26% of researchers in economics, commerce, and business administration have published articles 1-3 times on departmental web sites or in institutional repositories, and not a few researchers have published articles on their personal web sites or in subject-based repositories.

	Pre-print	Post-print
The researcher's personal web site	4%	9%
Website of the institution the researcher belongs to or institutional repositories	3%	8%
Subject-based repository	3%	3%

- Over half of the researchers (54%) have deposited their articles within the last 3 years voluntarily and willingly. By subject area, in pure science and engineering, around 50% of

researchers have deposited their articles either within the last 4-5 years or for over 6 years.

- Of the researchers who have not deposited articles on either a pre-print or a post-print basis, only 13% know that self-archiving on OA websites enables OA to their research work.
- Overall, 62% of the researchers are not familiar with institutional repositories or subject-based repositories.
- 11% of the researchers don't know about the copyrights of their latest articles. The majority (60%) of researchers cite journal publishers as the owners of the copyrights of their most recent articles, while 23% say that the copyrights of their most recent articles belong to themselves.
- In case of being asked by their employers or funding bodies to deposit their articles published in journals by green publishers, 46% say that they would willingly deposit their articles and 12% would do so reluctantly, meaning a combined 58% said that they would do so. 36% of the researchers withheld their answer via a "don't know" response.
- As for their concerns when depositing articles, the researchers most often cite "lack of information on repositories" (39%) and "concerns over copyright" (35%), which were followed by "bothersome registration procedures" (28%) and not knowing which articles to register (22%). In terms of whether researchers have deposited their articles or not, fewer of those who have deposited articles commented that they did not have enough information on repositories or that they did not know which articles to deposit.
- The table below maps out degrees of awareness of OA with reference to self-archiving and repositories. It shows that only a small percentage of researchers know that self-archiving in OA websites enables OA to their research works. Many researchers do not know of the existence of institutional repositories or subject-based repositories.

		Have self-archived articles	Know that self-archiving in OA websites enables OA to my research works	Do not know of the existence of institutional repositories or subject-based repositories
Overall		20%	13%	62%
Concept of OA	Aware	27%	22%	49%
	Not aware	16%	6%	68%

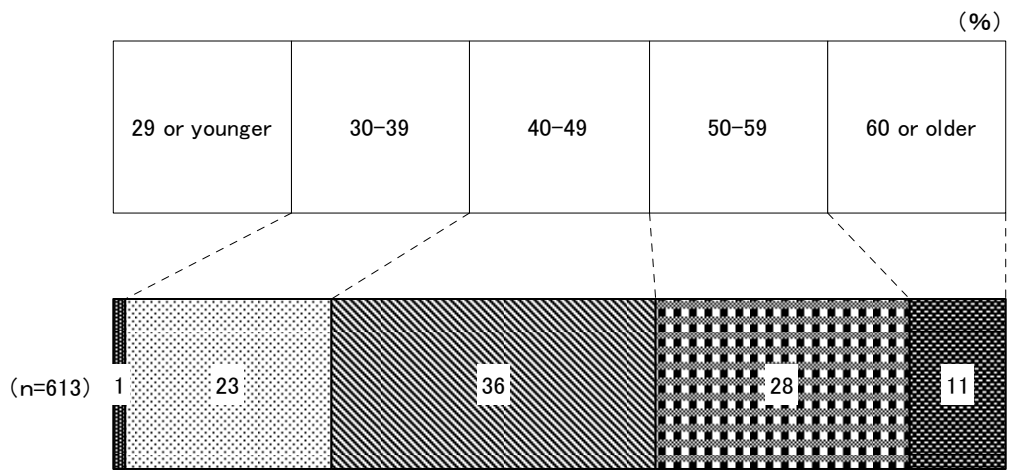


Survey Results

I Attributes of Researchers Surveyed

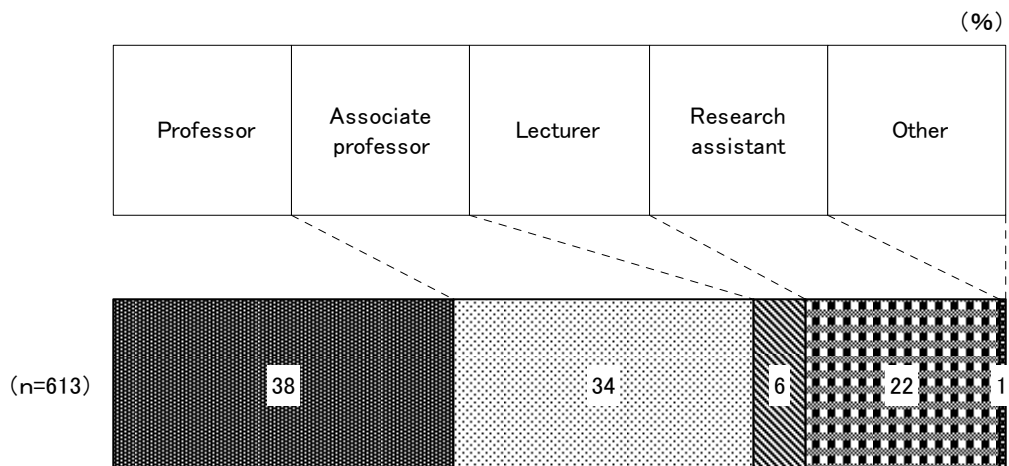
1. Age

- The greatest proportion of respondents are between age 40 and 49 (36%), followed by those between 50 and 59 (28%) and between 30 and 39 (23%).



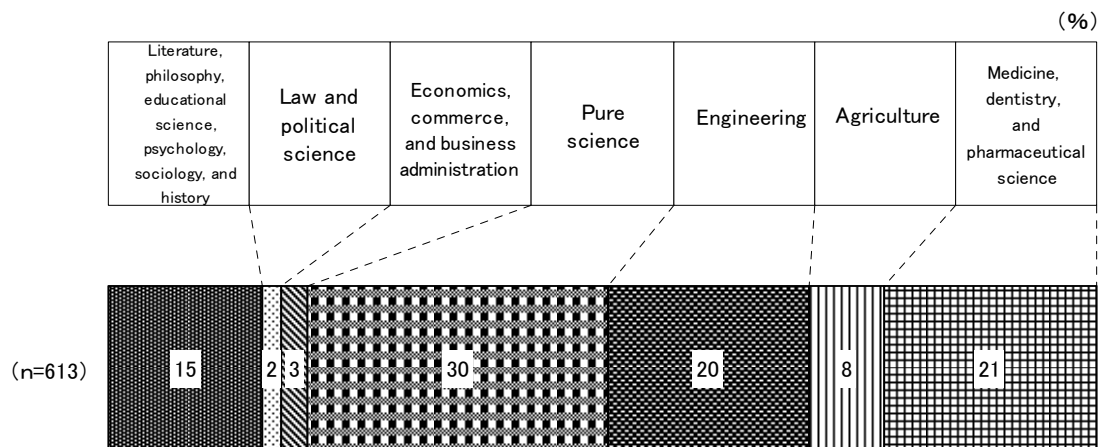
2. Job title

- 38%, 34%, and 22% of the respondents are professors, associate professors, and research assistants, respectively.



3. Subject area

- With regard to subject areas, the greatest percentage of respondents (30%) are those in pure science, followed by those in “medicine, dentistry, and pharmaceutical science” (21%), engineering (20%), and “literature, philosophy, educational science, psychology, sociology, history (literature etc.)” (15%).

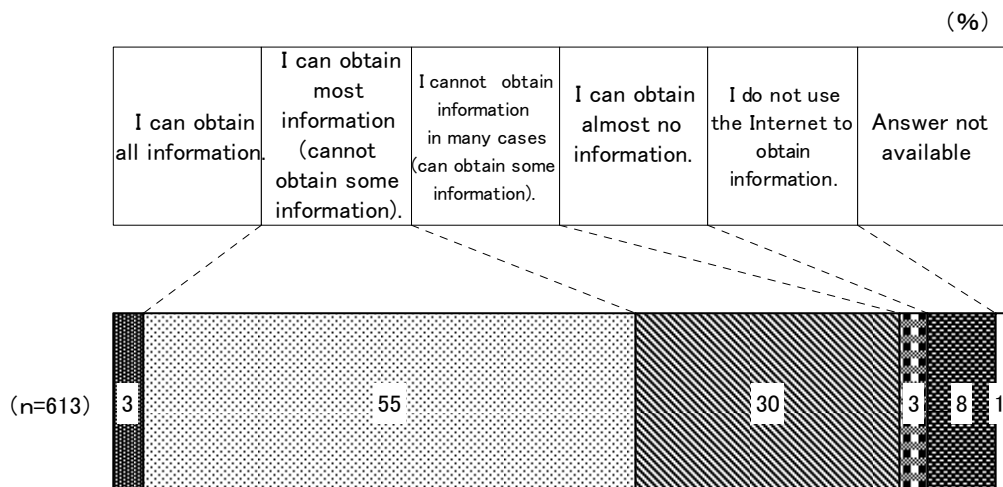


II Gathering Research Information and Publication of Research Results

2-1 Availability of articles through the Internet

- 55% of the respondents say that in most cases they can obtain articles and reports they need for their research via the Internet. Together with 3% of the respondents saying they can obtain all information via the Internet, a combined 58% can obtain necessary information via the Internet. On the other hand, 33%, representing 1 in 3 respondents, say they cannot obtain research information, with 30% and 3% of the respondents saying they “cannot obtain information in many cases (can obtain some information)” and “can obtain almost no information,” respectively.

Question 4 Which of the following corresponds to your case when obtaining articles/reports needed for your research via the Internet (i.e. using publishers’ e-journals or search engines such as Google)? (Choose 1 statement.)



- By age group, around 60% of the respondents aged under 50 say they can obtain information, slightly outnumbering those aged 50 or older. The number of those who do not use the Internet to obtain information is greater, at 26%, in those aged 60 or older.
- By subject area, around 60% of the respondents in pure science, engineering, agriculture, “medicine, dentistry, and pharmaceutical science” say that they can obtain information, while only slightly over 20% of the respondents in literature etc. say they can obtain information via the Internet. Some 20% of them do not use the Internet to obtain information.
- By domestic/overseas publication activity, around 70% of the respondents who have submitted/published their articles to/in either overseas journals only or both domestic

and overseas journals during the last 3 years, said that they could obtain information. By contrast, only 34% of those who have submitted/published only in domestic journals said that they could obtain information, while 47% of them said that they could not, and 19% said that they did not use the Internet to obtain information.

(%)

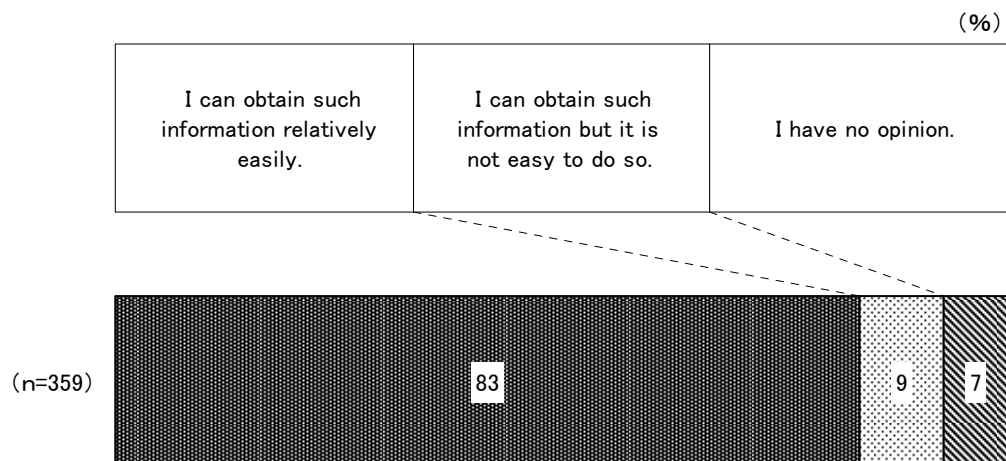
		n =	I can obtain all information.	I can obtain most information (cannot obtain some information).	I cannot obtain information in many cases (can obtain some information).	I can obtain almost no information.	I do not use the Internet to obtain information.	Answer not available
Overall		613	3	55	30	3	8	1
Age	Under 40	150	2	△ 61	△ 35	1	▼ 1	0
	40–49	223	2	57	31	4	4	1
	50–59	174	5	▼ 50	28	4	11	2
	60 or older	66	6	▼ 50	● 17	2	☆ 26	0
Subject area of respondent	Literature etc.	95	2	★ 21	☆ 47	△ 8	○ 20	1
	Law and political science	12	0	★ 8	▼ 25	☆ 33	☆ 25	△ 8
	Economics, commerce, and business administration	16	0	★ 25	☆ 56	0	○ 19	0
	Pure science	186	2	☆ 74	▼ 21	1	▼ 2	1
	Engineering	123	3	54	28	4	9	2
	Agriculture	47	△ 11	55	26	0	9	0
	Medicine, dentistry, and pharmaceutical science	131	5	△ 63	29	0	▼ 2	1
	Publication of articles during the most recent 3 years							
Domestic journals only	155	3	★ 31	○ 41	6	○ 19	1	
Overseas journals only	110	5	○ 68	▼ 22	2	▼ 2	2	
Both domestic and overseas journals	328	3	△ 64	26	2	▼ 3	1	

(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.
 ☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

2-2 Ease of obtaining information

- Respondents who answered that they could obtain all or most (with some exceptions) articles and reports necessary for research were asked if they can obtain such information easily. A dominant percentage (83%) of them say that they can obtain such information relatively easily.

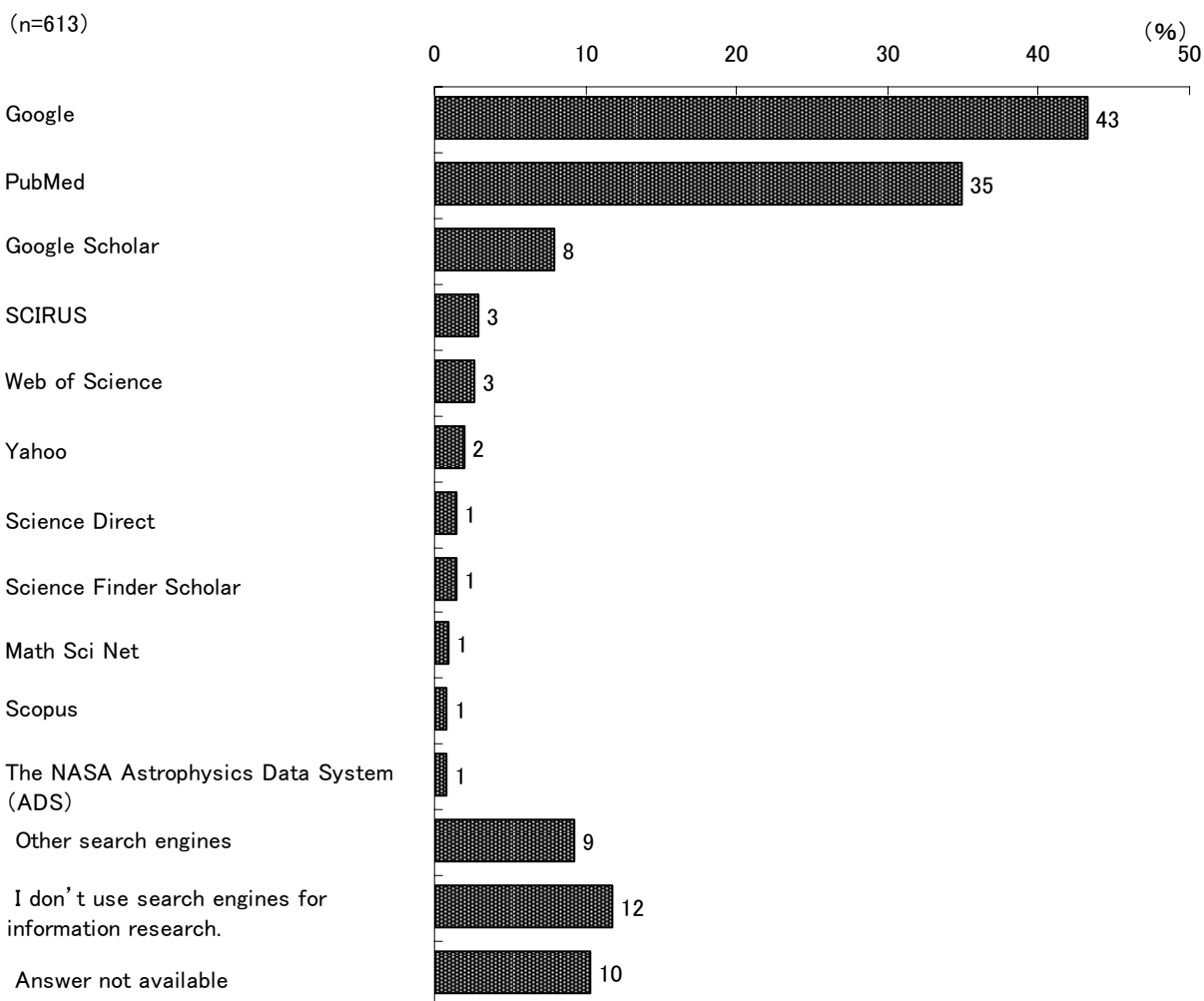
Question 4-1 Can you obtain such information easily? (Asked to those who answered Question 4 by choosing “1: I can obtain all information” and “2: I can obtain most information (cannot obtain some information);” (Choose 1 statement.)



2-3 Search engines used by researchers

- The 2 most frequently used Internet search engines for searching for articles and reference materials are Google (43%) and PubMed (35%), with around 40% respondents citing them.

Question 5 What services do you use when searching for research articles on scholars' websites via the World Wide Web? (Choose as many answers as apply.)



(Note) The above includes fee-based databases (such as Web of Science (Thomson Scientific)) and e-journals (Science Direct (Elsevier Science, B.V.)), for which fees are paid by universities and institutions which allow respondents to use free of charge.

- The table below shows the use of Internet search engines by attribute.
- By age group, over 80% of the respondents under 50 use search engines, compared with 71% of those between age 50 and 59 and 61% of those aged 60 and older.
- By subject area, a dominant majority (95%) of the respondents in “medicine, dentistry, and pharmaceutical science” use Internet search engines.
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, a combined 80% of researchers who submit their articles only in overseas journals and those who submit articles in both overseas and domestic journals use Internet search engines, which compares with a lower percentage (64%) of those who do so in domestic journals only.

(%)

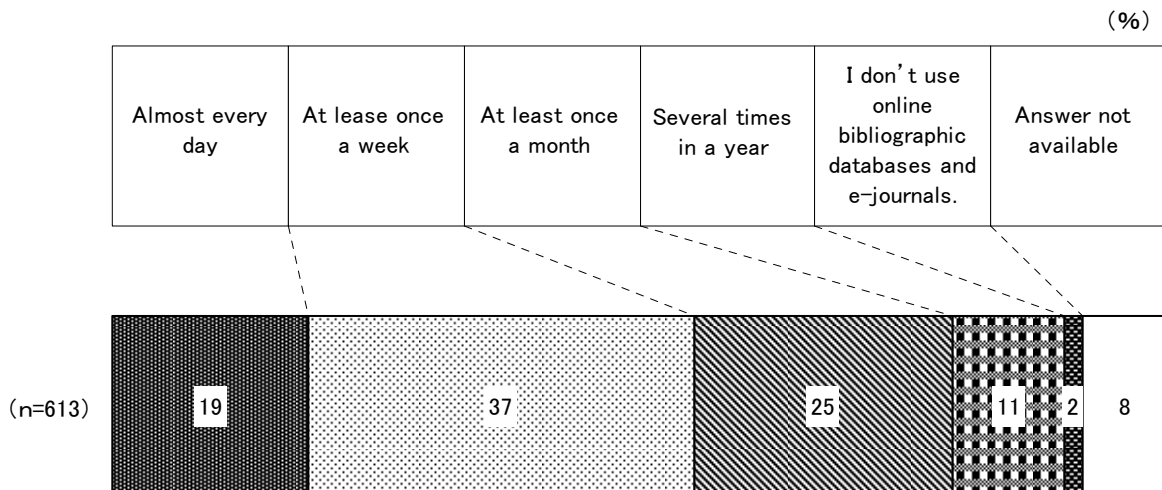
		n =	I use Internet search engines for research information.	I don't use search engines for research information.	Answer not available
Overall		613	78	12	10
Age	Under 40	150	△ 87	10	▼ 3
	40–49	223	△ 83	12	▼ 5
	50–59	174	▼ 71	13	△ 16
	60 and older	66	★ 61	11	☆ 29
Subject area	Literature etc.	95	● 65	13	○ 22
	Law and political science	12	★ 58	△ 17	☆ 25
	Economics, commerce, and business administration	16	★ 56	△ 19	☆ 25
	Pure science	186	82	13	▼ 4
	Engineering	123	● 68	△ 18	14
	Agriculture	47	74	15	11
	Medicine, dentistry, and pharmaceutical science	131	☆ 95	● 1	▼ 4
Publication of articles during the most recent 3 years	Domestic journals only	155	● 64	14	○ 23
	Overseas journals only	110	△ 86	11	▼ 3
	Both domestic and overseas journals	328	△ 84	11	6

(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history
 ☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

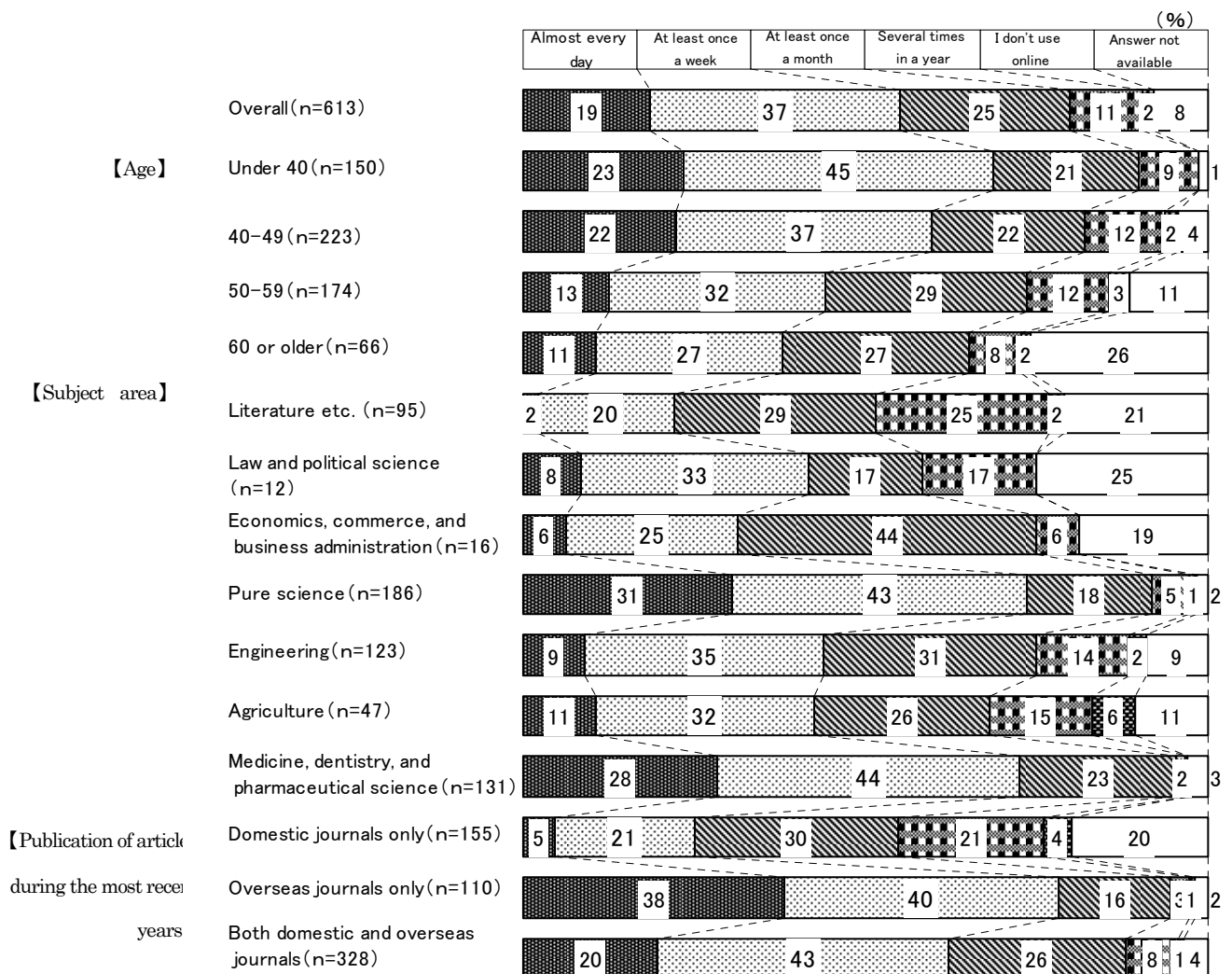
2-4 Frequency of use of online bibliographic databases and e-journals

- The highest percentage (37%) of the respondents use online bibliographic databases and e-journals at least once a week for gathering research information. 19% use them almost every day. Combined, more than half (56%) of the respondents are “heavy users” of such media.

Question 6 How often do you use online bibliographic databases and e-journals for gathering research information? (Choose 1 statement.)



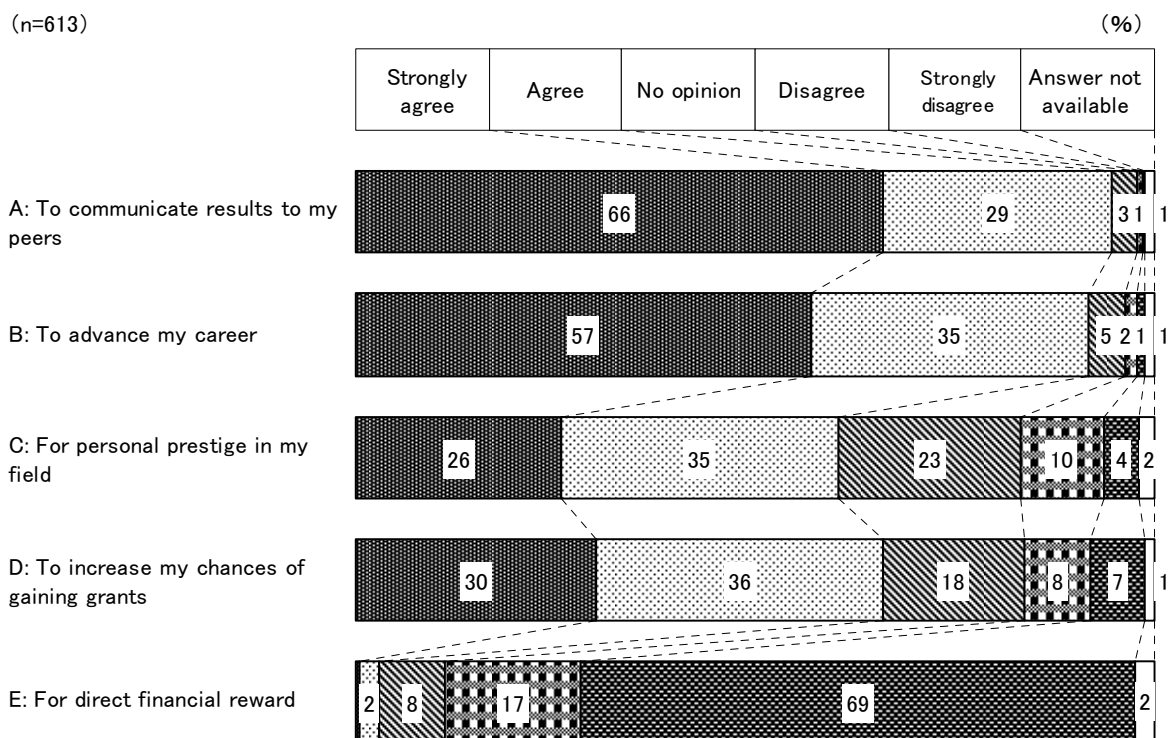
- By age group, younger researchers tend to be “heavy users,” using such media either almost every day or at least once a week.
- By subject area, about 30% of respondents in pure science and “medicine, dentistry, and pharmaceutical science” use such media almost every day. Combined with those using the media at least once a week, over 70% are “heavy users.” On the other hand, only 22% of those in literature etc. are “heavy users,” while 25% use them only several times in a year.
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, only 26% of those who submit articles in domestic journals only are “heavy users,” which compares with greater percentages of “heavy users” among those who submit articles in overseas journals only (78%) and in both domestic and overseas journals (63%).



2-5 Motives for submitting/publishing research results

- Asked about motives for submitting/publishing research results, a dominant majority (over 90%) of the respondents “agreed” (a combined percentage of those who “strongly agree” and “agree”) with the objectives “to communicate results to my peers” and “to advance my career”.
- While over 60% of the respondents agreed with the objectives “to increase my chances of gaining grants” and “for personal prestige in my field,” a great majority (86%) of the respondents “disagreed” (a combined percentage of those who “strongly disagree” and “disagree”) with the objective “for direct financial reward”.

Question 7 What are your objectives when submitting/publishing scholarly work?
Please indicate the degree to which you agree or disagree with the following statements A–E.



- The table below shows a combined percentage of respondents who either strongly agree or agree with the 4 statements excluding “for direct financial reward.”
- By subject area, some 70% of researchers in engineering agreed with objective C: “for personal prestige in my field,” while some 70% of researchers in pure science and “medicine, dentistry, and pharmaceutical science” agreed with objective D: “to increase my chances of gaining grants.”
- By the number of articles submitted/published per year, over 70% of respondents who submit 4 or more articles agreed with objective C: “for personal prestige in my field,” and 83% of those who submit 6 or more articles agreed with objective D: “to increase my chances of gaining grants.”
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, less than half (some 40%) of the researchers who submit articles in domestic journals only agreed with the objectives “for personal prestige in my field” and “to increase my chances of gaining grants.” On the other hand, 82% of those who do so in overseas journals agreed with the objective “to increase my chances of gaining grants.”

[A combined percentage of respondents who either strongly agree or agree]

(%)

		n =	A: To communicate results to my peers	B :To advance my career	C :For personal prestige in my field	D: To increase my chances of gaining grants
Overall		613	95	92	61	66
Subject area	Literature etc.	95	91	▼ 84	● 49	★ 46
	Law and political science	12	91	▼ 83	★ 41	★ 33
	Economics, commerce, and business administration	16	△ 100	△ 100	▼ 56	★ 44
	Pure science	186	96	95	61	○ 77
	Engineering	123	97	92	○ 71	▼ 61
	Agriculture	47	91	▼ 87	62	70
	Medicine, dentistry, and pharmaceutical science	131	96	93	61	○ 76
Number of articles submitted/published per year	1 or fewer	158	92	90	▼ 54	63
	2–3	284	95	91	57	63
	4–5	105	97	94	○ 72	68
	6 or more	58	99	△ 97	○ 74	☆ 83
Publication of articles during the most recent 3 years	Domestic journals only	155	▼ 90	▼ 86	★ 43	★ 41
	Overseas journals only	110	98	93	△ 67	☆ 82
	Both domestic and overseas journals	328	97	94	△ 66	△ 73

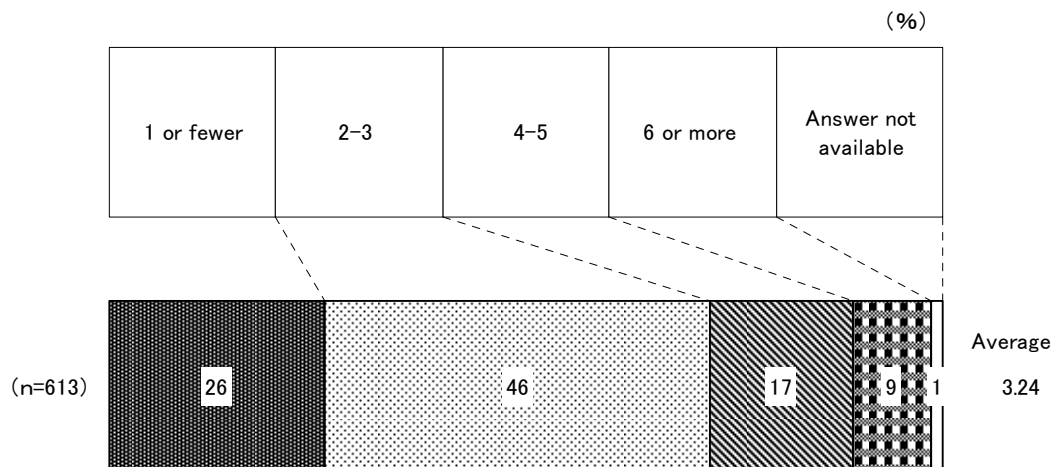
(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

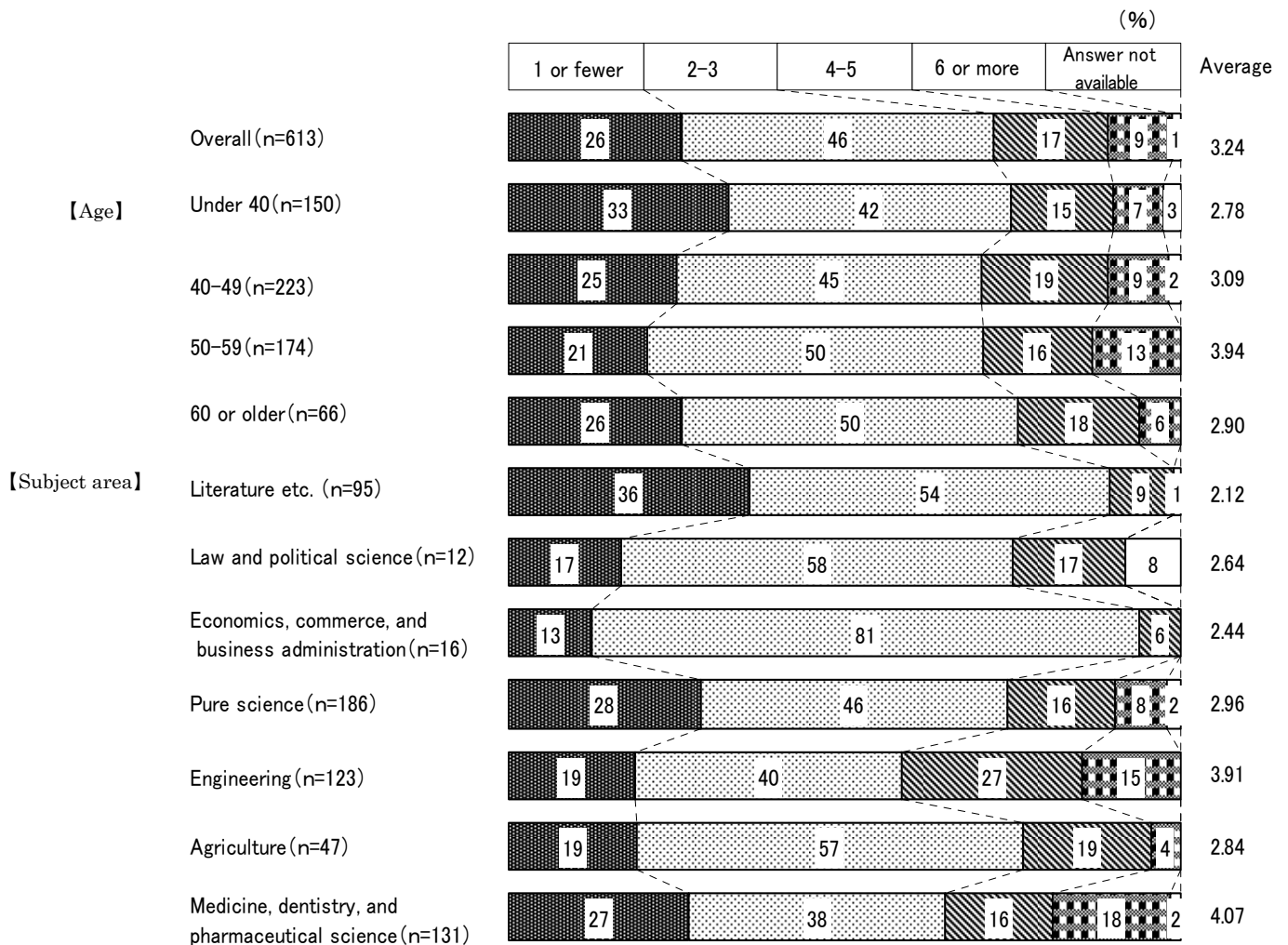
2-6 Number of articles researchers submit/publish in a year

- Nearly half (46%) of researchers submit/publish 2–3 articles in a year. Those who submit/publish 1 or fewer and 4–5 articles account for 26% and 17% of all respondents, respectively. The average number of articles a researcher submits/publishes in a year is 3.2.

Question 8 approximately how many articles do you submit/publish in a year?



- By age group, researchers age 50–59 are the most prolific authors, with 3.9 articles in a year.
- By subject area, the most prolific researchers are those in “medicine, dentistry, and pharmaceutical science”, with 4.1 articles per year, followed by those in engineering with 3.9 articles per year.

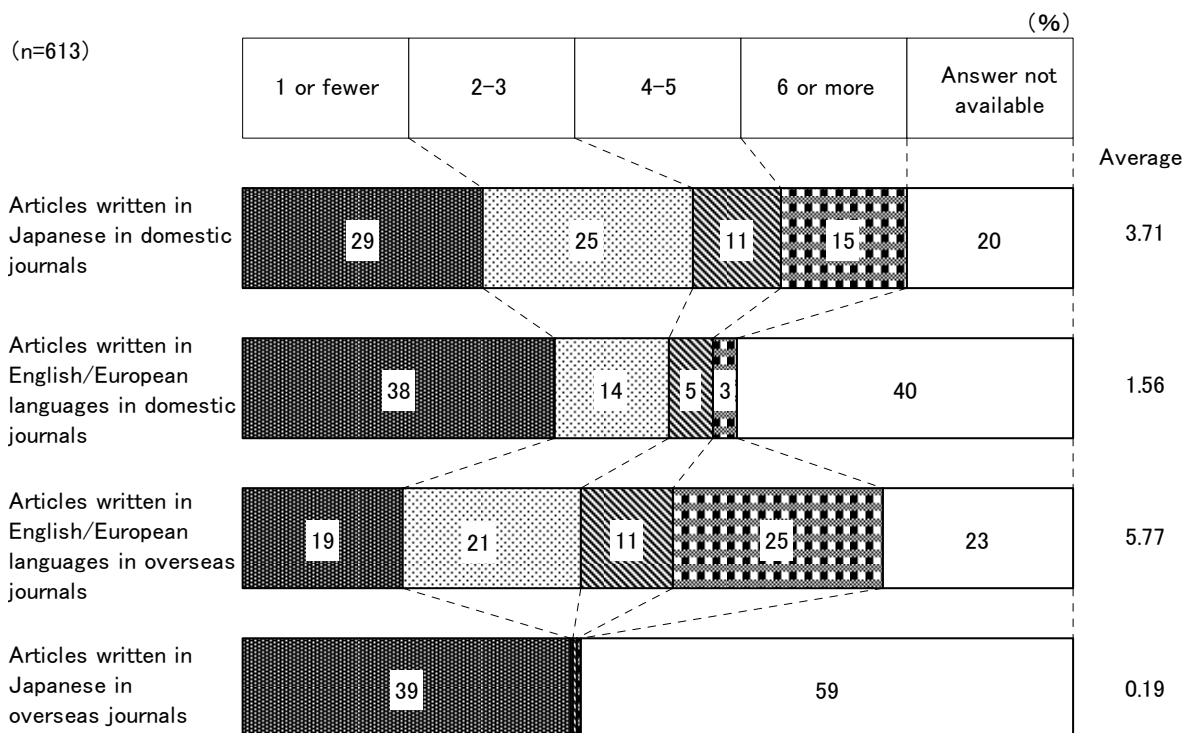


2-7 Number of articles researchers have published in the last 3 years

(1) By language type

- Within the most recent 3 years, a quarter (25%) of the respondents have submitted/published 6 or more articles in English or other European languages in overseas journals, with the average number of articles being 5.8, the greatest number among all respondents. They are followed by those who have submitted/published 3 or fewer articles in Japanese in domestic journals, accounting for over half (54%) of the respondents. 26% of respondents have submitted/published 4 or more articles, making the average number of articles in Japanese in domestic journals 3.7.
- About 40% of respondents submitted/published 1 or fewer articles in English/European languages in domestic journals or in Japanese in overseas journals. The average number of articles written in English/European languages in domestic journals is 1.6, while the average number of articles written in Japanese in overseas journals is only 0.2.

Question 9 How many articles have you submitted/published in the most recent 3 years? What languages did you write them in? Where were the locations of publication?



- By age group, researchers age 50–59 are the most prolific in terms of the average number of articles “in Japanese in domestic journals” and “in English/European languages in overseas journals.”
- By subject area, researchers in pure science have submitted/published an average of only 2.0 articles written in Japanese in domestic journals, while it is notable that those in literature, etc. have submitted/published an average of 4.5 articles written in Japanese in domestic journals—a greater number than those for other subject areas. Among those who have written articles in English/European languages in overseas journals, those in “medicine, dentistry, and pharmaceutical science” have been the most prolific authors, with an average of 7.4 articles. They were followed by those in engineering and in pure science, who have averages of 6.3 articles and 5.9 articles, respectively.

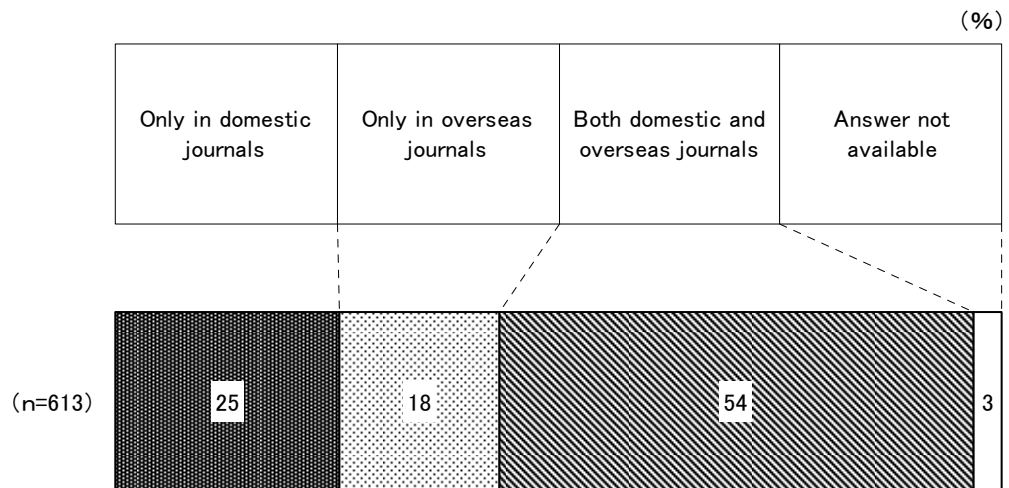
[Average number of articles]

		n =	Domestic journals		Overseas journals	
			Japanese	English/ European	Japanese	English/ European
Overall		613	3.71	1.56	5.77	0.19
Age	Under 40	150	2.88	1.27	5.28	0.09
	40–49	223	3.92	1.42	4.95	0.16
	50–59	174	4.32	1.84	7.50	0.37
	60 or older	66	3.14	2.22	5.90	0.17
Subject area	Literature etc.	95	4.45	0.84	1.26	0.13
	Law and political science	12	5.55	0.00	0.67	0.20
	Economics, commerce, and business administration	16	3.31	0.60	4.29	0.00
	Pure science	186	1.99	1.76	5.93	0.41
	Engineering	123	3.36	1.75	6.30	0.10
	Agriculture	47	3.47	2.38	4.43	0.00
	Medicine, dentistry, and pharmaceutical science	131	5.32	1.24	7.40	0.03

(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.

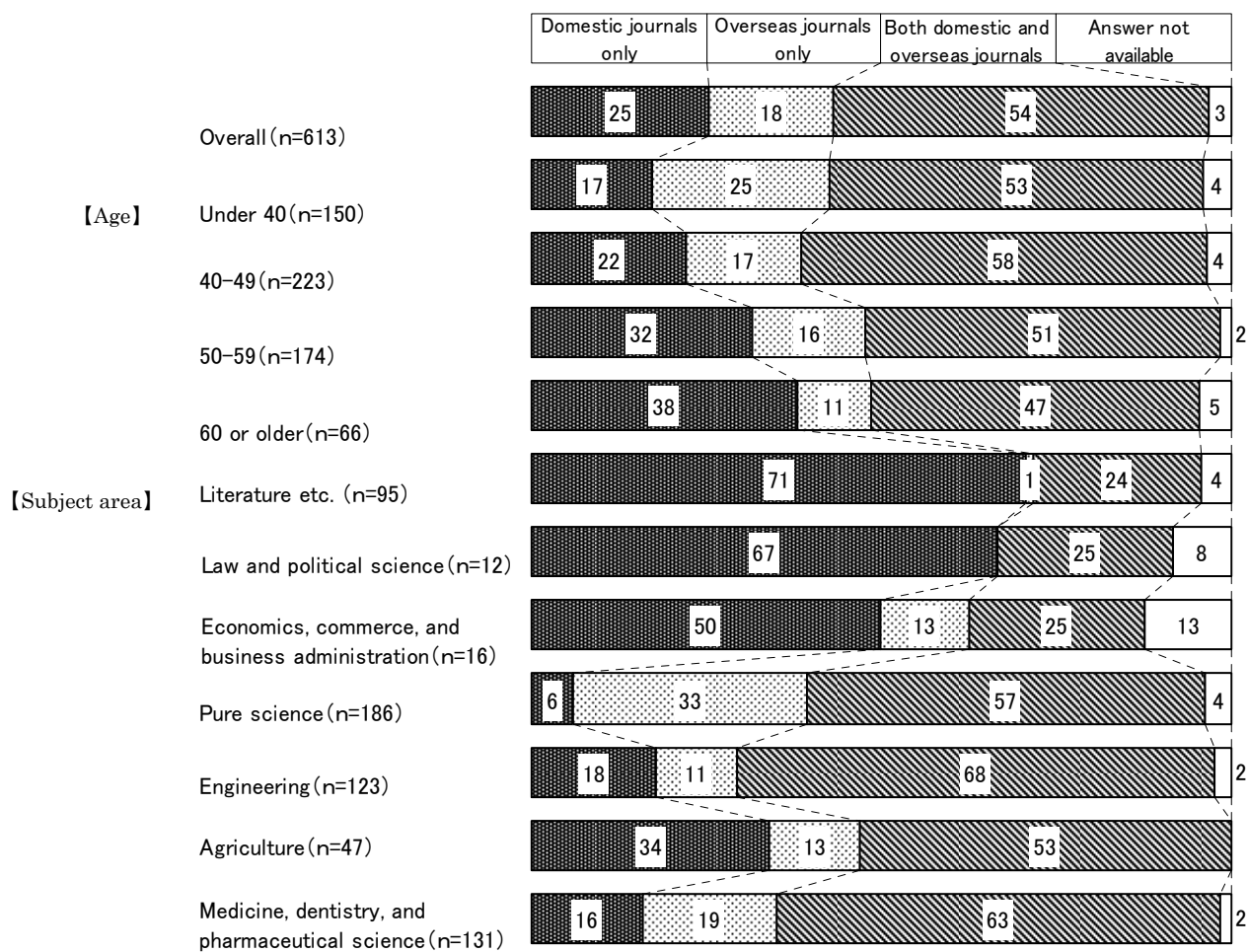
(2) Publishing location

- In the last 3 years, more than half (54%) of the respondents have published articles in both domestic and overseas journals. 25% have published only in domestic journals, and 18% have published only in overseas journals.



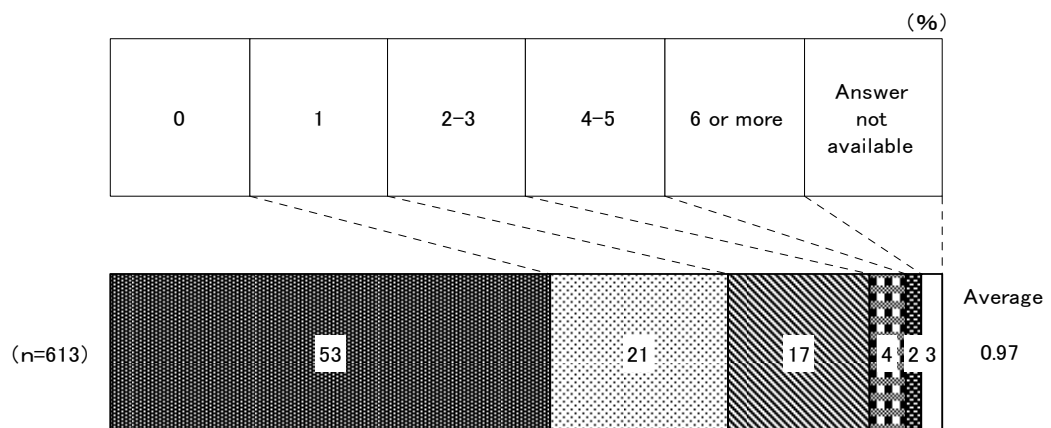
- By age group, older researchers tend to publish articles in domestic journals only, with smaller numbers of them publishing articles in overseas journals only.
- By subject area, a majority of 71% of researchers in literature etc. have published articles in domestic journals only. This may be compared with researchers in pure science, engineering and “medicine, dentistry, and pharmaceutical science” where there is a tendency towards publishing in overseas journals. A majority of the latter have published articles either in overseas journals only or in both domestic and overseas journals, and fewer of them have published in domestic journals only.

(%)



2-8 Number of works researchers have published in book form in the last 3 years
 - Over half (53%) of the respondents have not published work in the last 3 years. 21% and 17% have published 1 work and 2–3 works, respectively. The average number of works they have published in book form during the period is 1.0.

Question 9-1 How many works have you published in book form in the most recent 3 years?



- By age group, older researchers have published more works on average.
- By subject area, researchers in pure science and engineering have published fewer works on average.

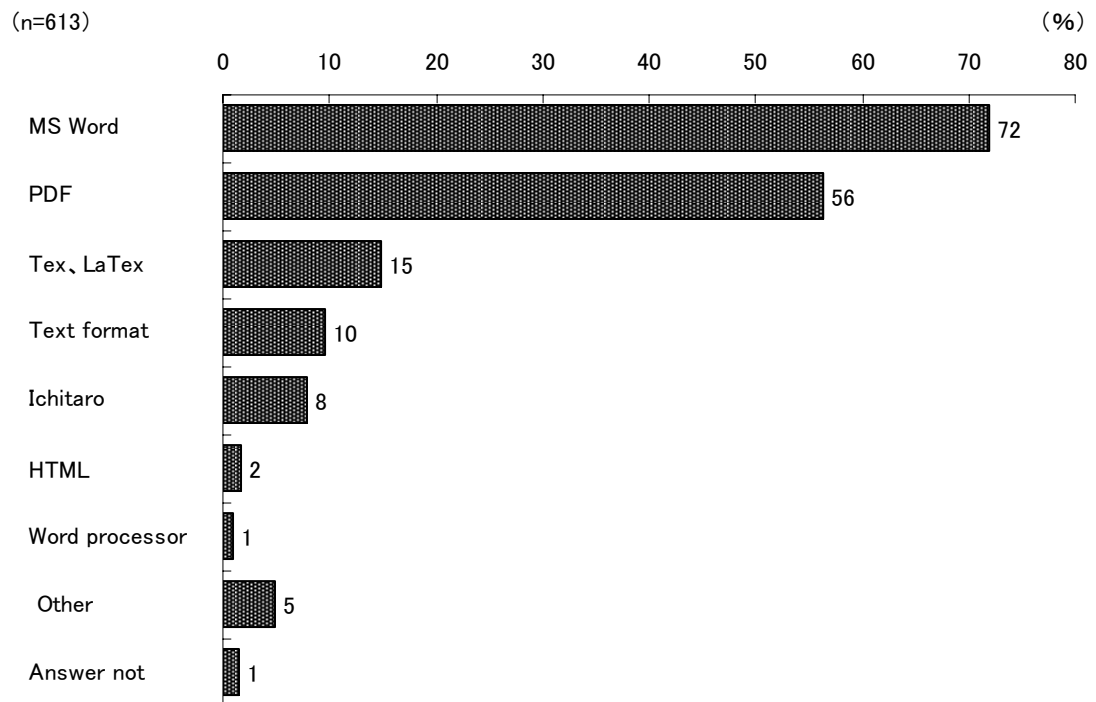
		n =	Average number of works
Overall		613	0.97
Age	Under 40	150	0.46
	40–49	223	1.03
	50–59	174	1.19
	60 or older	66	1.41
Subject area	Literature etc.	95	1.30
	Law and political science	12	1.36
	Economics, commerce, and business administration	16	1.13
	Pure science	186	0.55
	Engineering	123	0.69
	Agriculture	47	1.30
	Medicine, dentistry, and pharmaceutical science	131	1.38

(Note) "Literature etc." include literature, philosophy, educational science, psychology, sociology, history.

2-9 Format used for saving articles

- A great majority (72%) of researchers save their articles electronically in the MS Word format. The most frequently used format after MS Word is PDF, with 56% of respondents using it.

Question 10 Which format(s) do you use when saving your articles electronically?
(Choose as many answers as apply.)



- By age group, 73% of the researchers aged under 40 frequently use the PDF format, which is used by only 39% of age 60 or older. 30% of those under 40 use the “Tex and LaTeX” format.
- By subject area, some 70% of the researchers in pure science and engineering save articles in the PDF format, while around 80% of researchers in agriculture and “medicine, dentistry, and pharmaceutical science” use MS Word format. Relatively greater numbers of 30% in pure science use the Tex and LaTeX formats while 26% in literature etc. use the Ichitaro format.
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, many of those who have done so only in overseas journals or both in domestic and overseas journals save their articles in the PDF format.

(%)

		n =	PDF	Text	Tex, LaTeX	MS Word	Ichitaro
Overall		613	56	10	15	72	8
Age	Under 40	150	☆ 73	7	○ 29	71	▼ 3
	40–49	223	56	12	13	73	9
	50–59	174	▼ 49	9	▼ 6	74	9
	60 or older	66	★ 39	8	11	▼ 67	12
Subject area	Literature etc.	95	★ 21	△ 16	● 1	72	☆ 26
	Law and political science	12	★ 8	△ 17	★ 0	75	☆ 25
	Economics, commerce, and business administration	16	▼ 50	6	○ 25	69	○ 19
	Pure science	186	☆ 76	8	☆ 30	● 62	▼ 2
	Engineering	123	○ 70	6	△ 24	72	4
	Agriculture	47	▼ 49	▼ 4	● 2	△ 79	11
	Medicine, dentistry, and pharmaceutical science	131	▼ 50	13	★ 0	○ 84	▼ 2
Publication of articles during the most recent 3 years	Domestic journals only	155	★ 28	11	● 5	72	○ 21
	Overseas journals only	110	☆ 75	▼ 5	△ 24	▼ 65	▼ 3
	Both domestic and overseas journals	328	△ 63	11	17	75	▼ 3

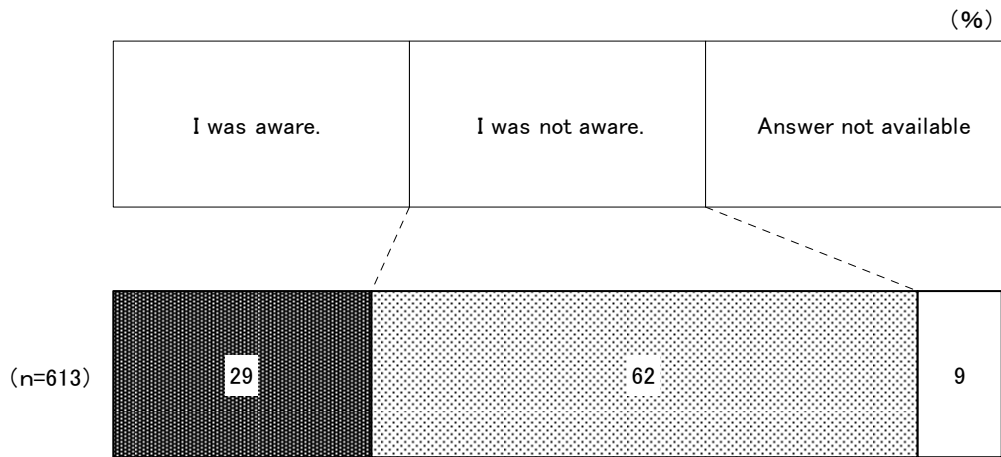
(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.
 ☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

III Open Access (OA)

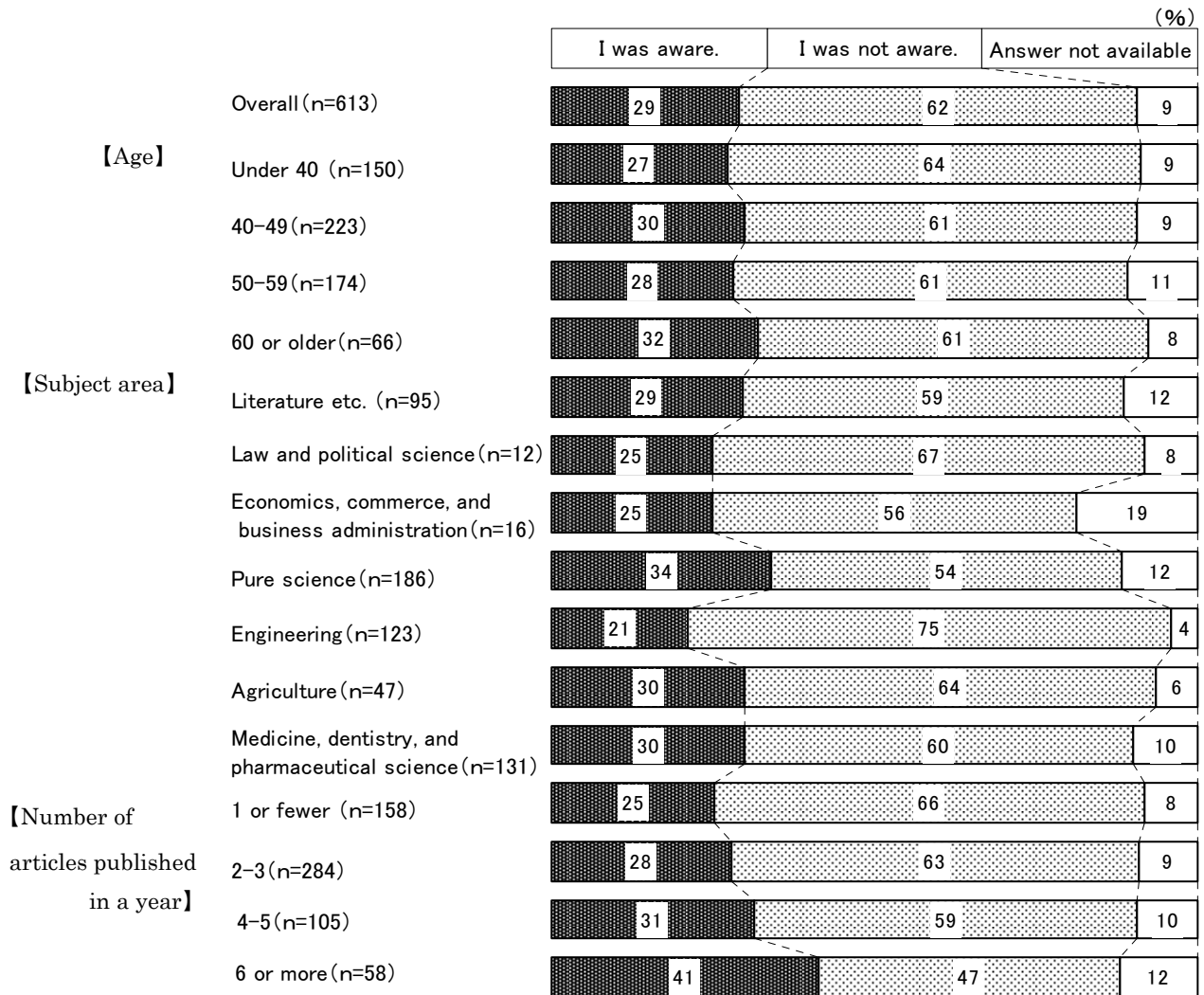
3-1 Recognition rate

- Only 29% of the respondents are aware of OA, which contrasts with 62% of the respondents who are not.

Question11 Were you aware of the concept of OA before this survey? (Choose 1 statement.)



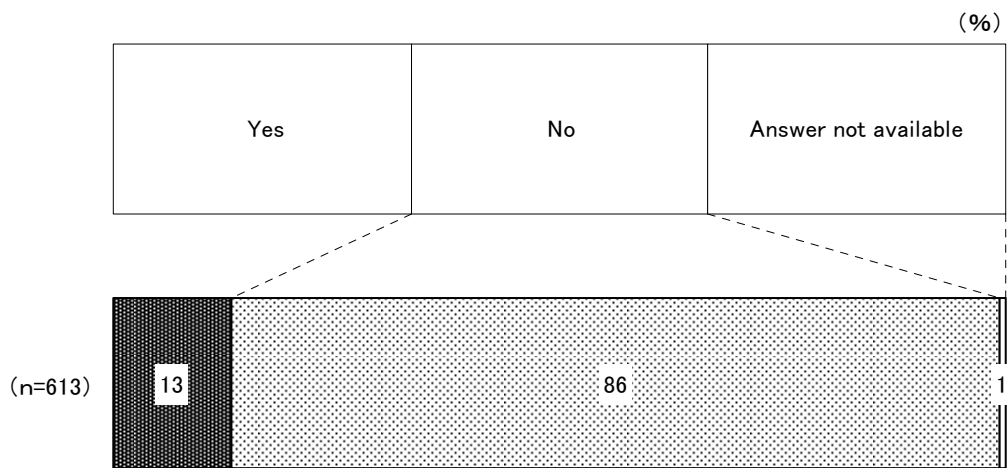
- There are not large differences either by age group or by subject area, although it is noticeable that only 21% of researchers in engineering were aware of OA before the survey.
- By the number of articles submitted/published within a year, those who submit/publish more articles have greater awareness of OA.



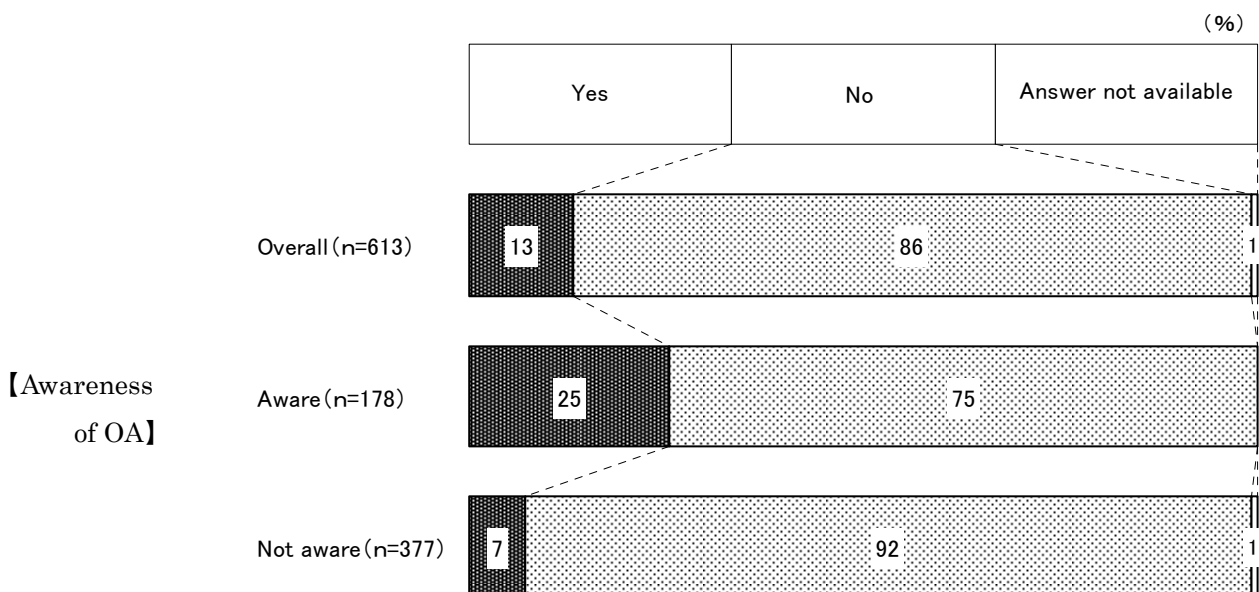
3-2 Notification of OA

- During the most recent 1-year period, only 13% of the respondents have been notified of OA by their institution or library, in contrast with 86% of the respondents who were not.

Question 12 Has your institution or library brought the concept of OA to your attention in the last year? (Choose 1 statement.)



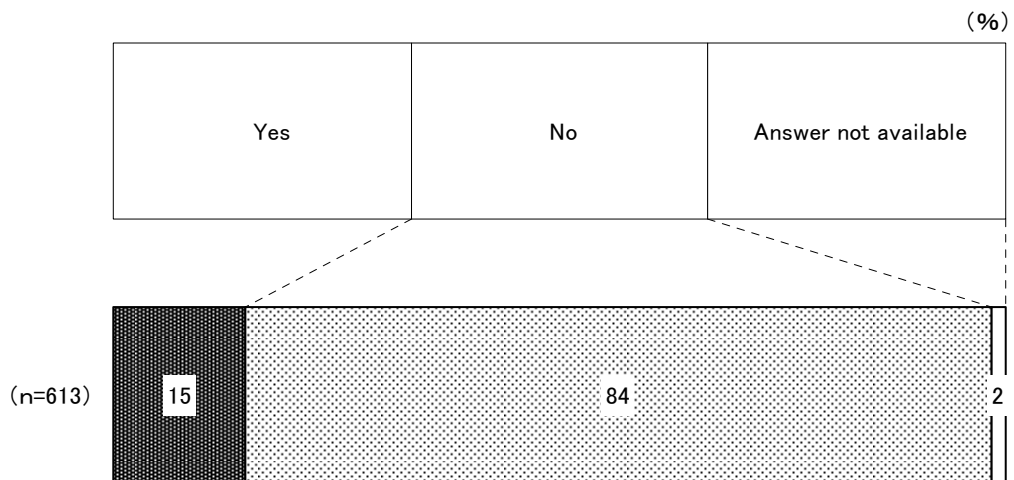
- By degree of awareness of OA, 25% of the researchers who are familiar with OA say they have been notified of OA by their institution or library.



3-3 Awareness of OA journals

- A great majority of 84% of the respondents did not know any names of academic bodies publishing OA journals or titles of OA journals published.

Question 13 Do you know names of any organizations that publish OA journals or any OA journals? (Choose 1 statement.)

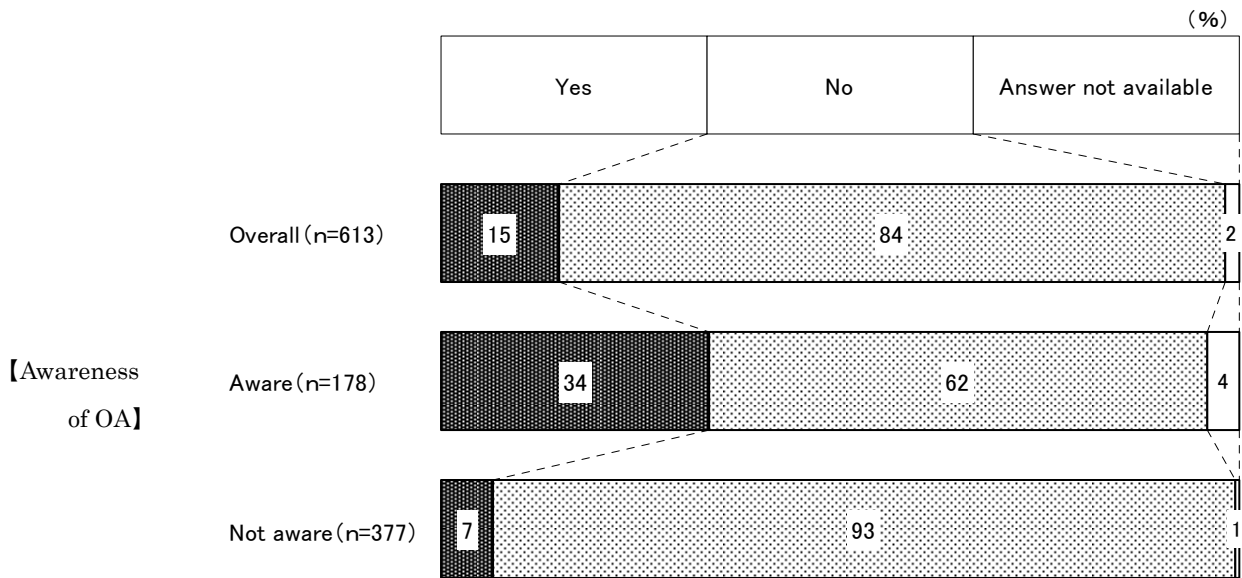


- The survey asked the respondents who knew names of the organizations or titles of OA journals to give specific names thereof, and 80 researchers responded. Among those researchers, some gave titles of existing OA journals, although a similar percentage of researchers gave names of non-OA journals, such as e-journals subscribed to by universities and institutions that can be accessed on the Internet. This illustrates the insufficient knowledge of OA among researchers. (Please see the appendix for specific names of OA journals and organizations cited by the researchers.)

Number of answers citing any OAJ	OAJ listed in DOAJ, etc.	Non-OAJ journals (Elsevier, etc.)	Other (unknown)
80	35 (43.8%)	33 (41.3%)	12 (15.0%)

*DOAJ: Directory of Open Access Journals (<http://www.doaj.org/>)

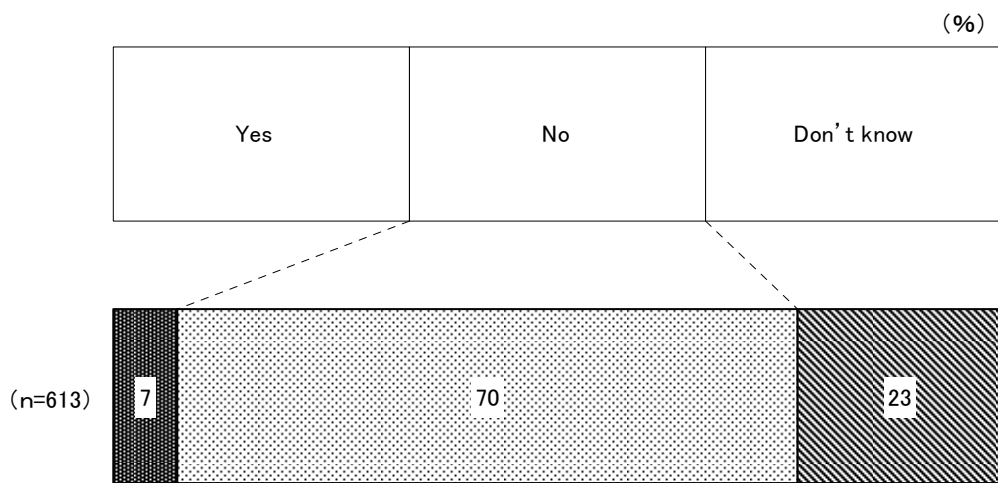
- By degree of awareness of OA, only 34% of those who are aware of OA actually knew names of relevant organizations or titles of OA journals.



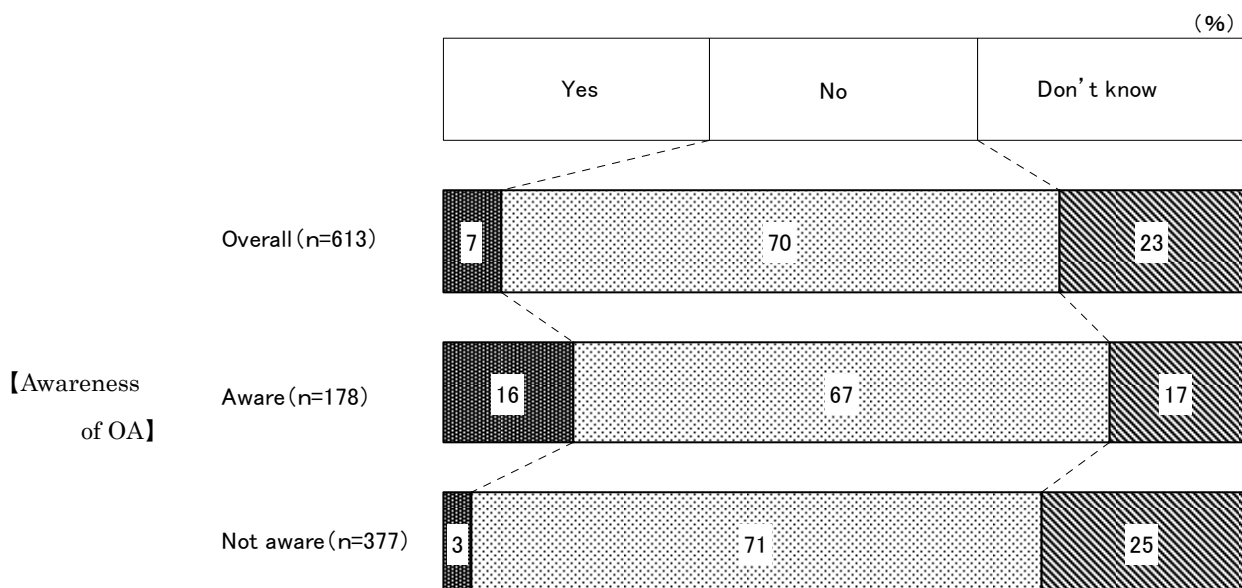
3-4 Submitting to/publishing in OA journals

- Only 7% of the respondents have either submitted or published their articles in OA journals in the last 3 years, which contrasts with 70% who have not. About 1 in 4 respondents said they didn't know.

Question 14 Have you either submitted a manuscript or published an article in an OA journal in the last 3 years? (Choose 1 statement.)



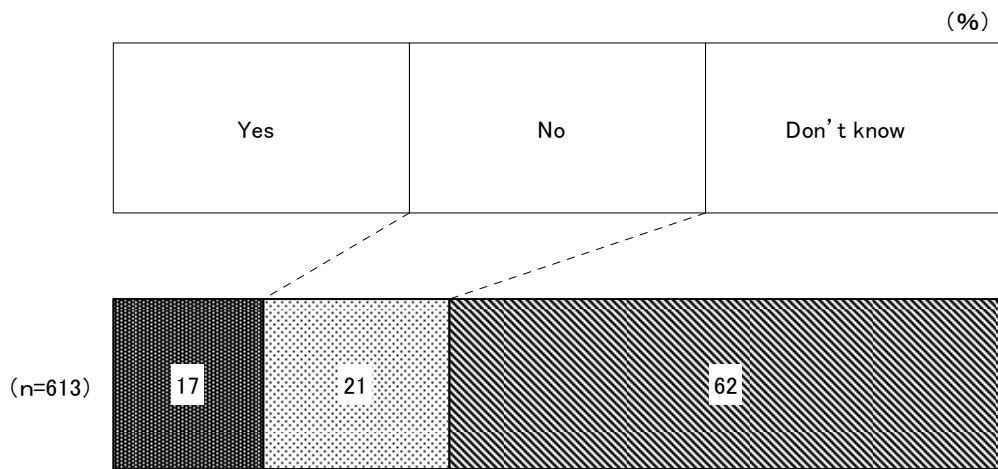
- By degree of awareness of OA, only 16% of those who are aware of OA have submitted or published their articles in OA journals.



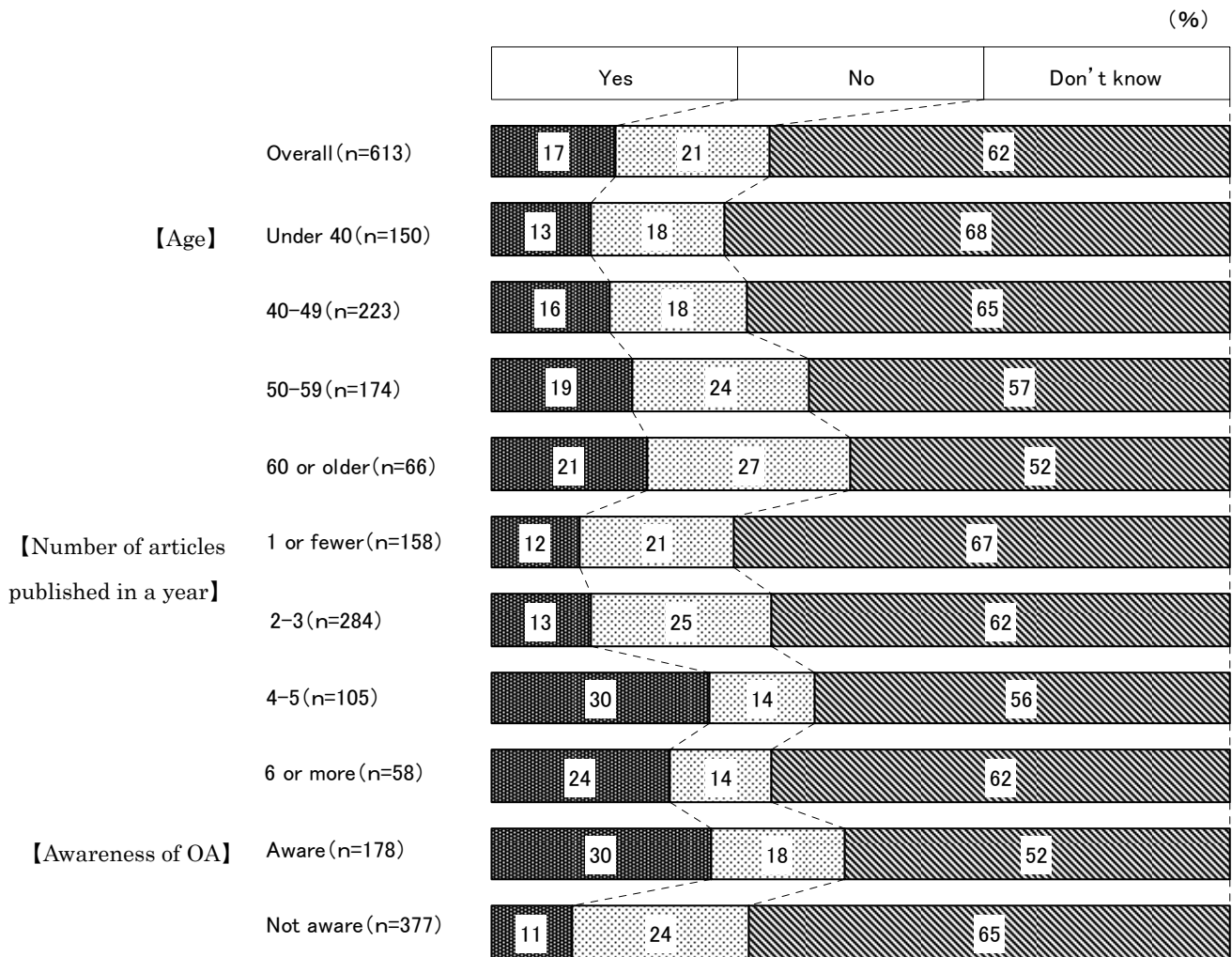
3-5 Possibility of publishing through OA journals

- 17% of the respondents have plans to publish through OA journals in the next 3 years and 21% do not have such plans. A majority of 62% said they didn't know.

Question 15 Do you have plans to publish at least 1 article through OA journals in the next 3 years? (Choose 1 statement.)



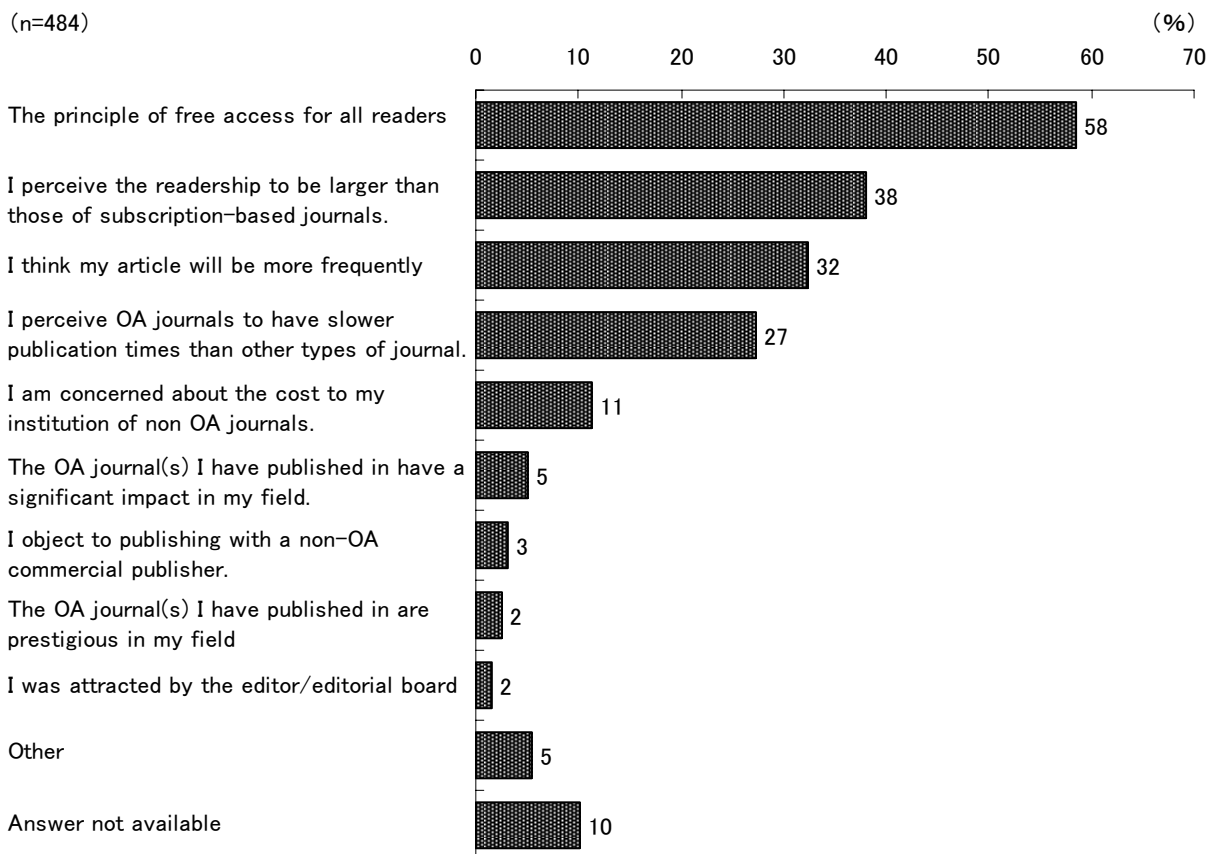
- By age group, younger researchers have a greater tendency to say they didn't know.
- By number of articles submitted/published in a year, only slightly more than 10% of those who submit/publish 3 or fewer articles have plans to publish through OA journals in the next 3 years, while 30% of those who publish 4-5 articles have such plans.
- By degree of awareness of OA, only 30% of those who are aware of OA have such plans.



3-6 Reasons for publishing in OA journals

- The survey asked researchers who either say that they have plans to publish in OA journals or said they don't know about their reasons for publishing research outcomes in OA journals. The highest score (58%) was for "the principle of free access for all readers." In a distant second place, with a score of 38% of respondents, came "I perceive the readership to be larger than those of subscription-based journals," followed by "I think my article will be more frequently cited" (32%) and "I perceive OA journals to have faster publication times than other types of journal" (27%).

Question 15-1 If you HAVE published in an OA journal or are not sure, please indicate which of the following factors were reasons for doing so. Please select any that apply.



- By subject area, in literature etc. more researchers cited “the principle of free access for all readers” and “I perceive the readership to be larger than those of subscription-based journals” than those in other subject areas, and more researchers in “medicine, dentistry, and pharmaceutical science” cited “I think my article will be more frequently cited” than those in other subject areas.
- By degree of awareness of OA, among researchers who are aware of OA, relatively more researchers cited “the principle of free access for all readers” and “I perceive OA journals to have faster publication times than other types of journal.”
- High scores for all the 4 statements came from respondents who have plans to publish through OA journals in the next 3 years.

(%)

		n =	The principle of free access for all readers	I perceive the readership to be larger than those of subscription-based journals.	I think my article will be more frequently cited.	I perceive OA journals to have faster publication times than other types of journal.
Overall		484	58	38	32	27
Subject area	Literature etc.	59	○ 68	☆ 53	34	▼ 19
	Law and political science	8	☆ 75	38	△ 38	● 13
	Economics, commerce, and business administration	12	★ 42	42	★ 0	☆ 67
	Pure science	151	60	36	▼ 25	27
	Engineering	103	▼ 53	35	33	23
	Agriculture	39	62	38	33	△ 33
	Medicine, dentistry, and pharmaceutical science	110	55	35	○ 44	29
Awareness of OA	Aware	146	△ 66	42	36	△ 32
	Not aware	287	55	35	33	25
Possibility of publishing through OA journals in the next 3 years	Yes	103	☆ 74	○ 49	○ 45	☆ 42
	Don't know	381	54	35	29	23

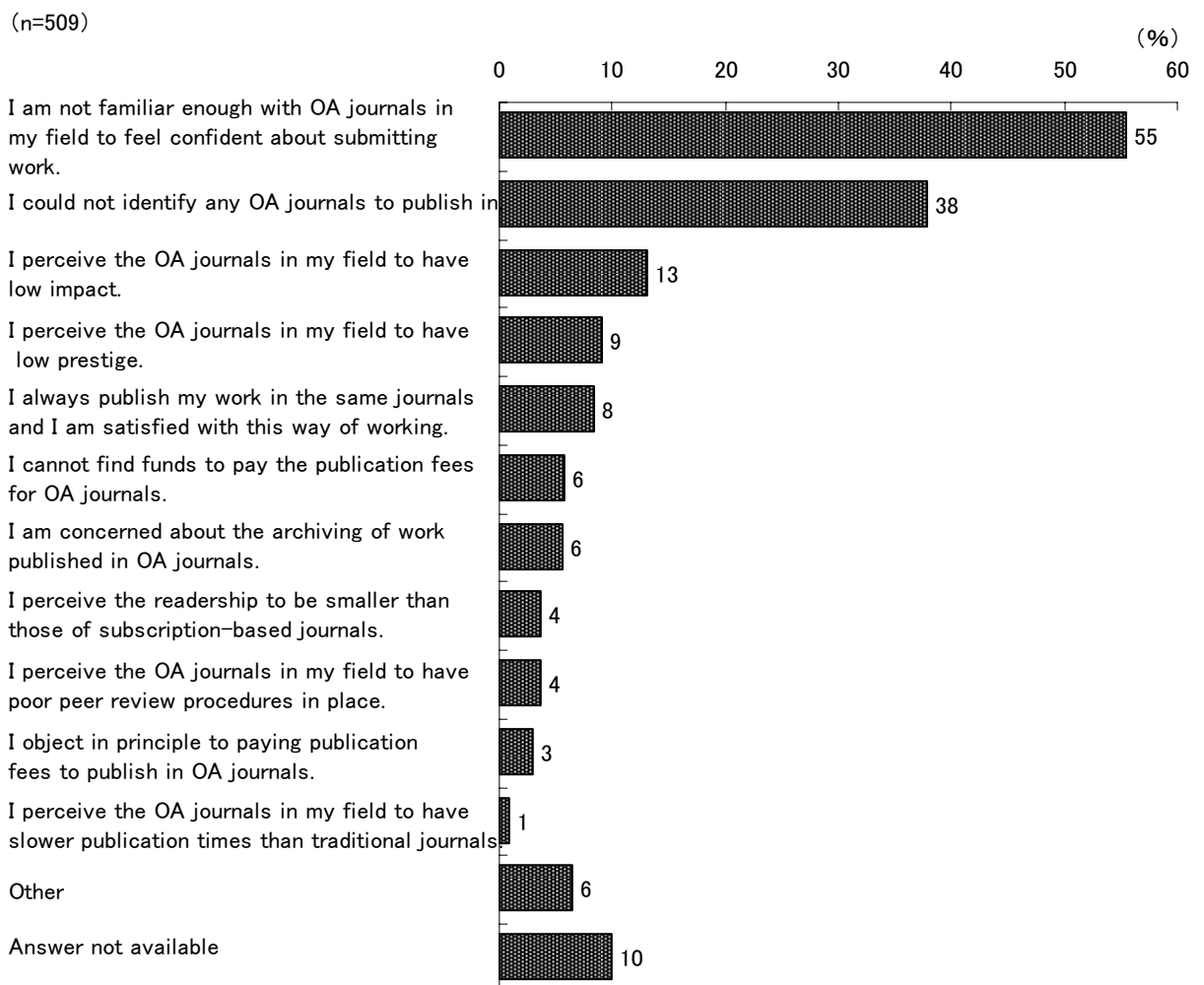
(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
△: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

3-7 Reasons for not publishing in OA journals

- The survey asked researchers who either say that they do not have plans to publish in OA journals or said they don't know about their reasons for not publishing in OA journals. The highest score (55%) was for "I am not familiar enough with OA journals in my field to feel confident about submitting work," which was followed by "I could not identify any OA journals to publish in" (38%). This highlights lack of knowledge of OA journals as a reason for not publishing in them.

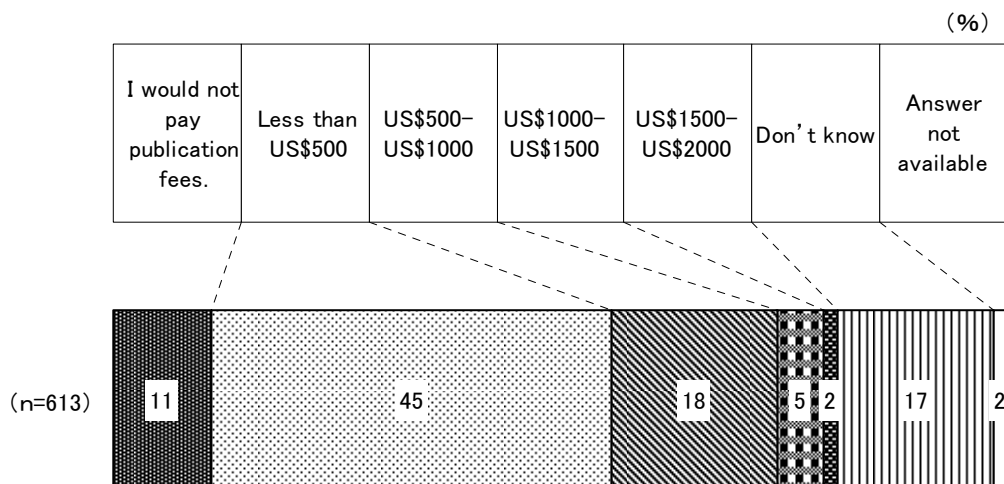
Question 15-2 If you have NOT published in an OA journal or are not sure, please indicate if any of the following factors were reasons. Please select any that apply.



3-8 Publication fees

- The largest proportion of respondents (45%) say that they can afford “less than US\$500” for publication fees for publishing their article in an OA journal, which was followed by those who could afford “US\$500–US\$1000” (18%). Only 11% of respondents say that they will not pay publication fees.

Question 16 Generally, in the publishing model of OA journals, either authors or their institutions pay publication fees for publishing of their work. Currently, overseas OA journal publishers require publication fees of between US\$500 and US\$1,500, although actual expenses associated with publication seem higher. Some OA journal publishers bill authors over US\$3,500 to cover publication expenses. Assuming that your article is accepted via a normal procedure, what are the highest publication fees you are prepared to pay (if you were in the place of your fund providers) to the OA journal you have chosen? (US\$1.00 = JPY110).



- By subject area, many researchers in literature etc. answered that they will not pay publication fees or say they don't know.
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, 12% of researchers who have done so in domestic journals only were prepared to pay US\$500–US\$1000, and 27% say they don't know.

(%)

		n =	I would not pay publication fees.	Less than US\$500	US\$500- US\$1000	US\$1000- US\$1500	US\$1500- US\$2000	Don't know	Answer not available
Overall		613	11	45	18	5	2	17	2
Subject area	Literature etc.	95	△ 19	● 35	● 4	3	1	☆ 36	2
	Law and political science	12	☆ 33	★ 25	★ 0	▼ 0	0	☆ 33	△ 8
	Economics, commerce, and business administration	16	○ 25	● 31	▼ 13	▼ 0	0	△ 25	6
	Pure science	186	10	44	△ 23	5	2	15	1
	Engineering	123	▼ 6	△ 54	△ 23	6	1	▼ 10	2
	Agriculture	47	11	47	21	2	2	17	0
	Medicine, dentistry, and pharmaceutical science	131	8	47	20	9	2	▼ 12	2
	Contribution /Publication of articles during the most recent 3 years								
Domestic journals only	155	14	44	▼ 12	3	0	○ 27	0	
Overseas journals only	110	12	47	22	6	2	▼ 9	2	
Both domestic and overseas journals	328	9	45	21	6	2	15	1	

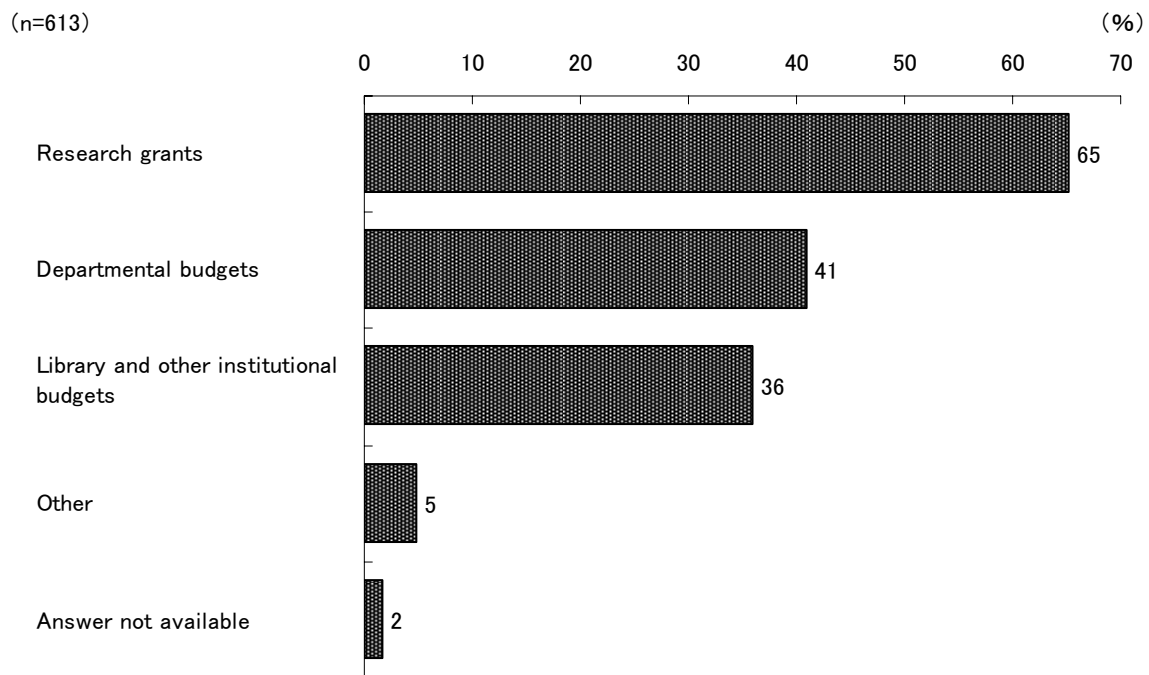
(Note) "Literature etc." include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

3-9 Funding sources for publication fees

- The largest proportion of respondents (65%) think that publication fees should be paid from their research grants, with 41% who would use departmental budgets and 36% who would use library or other institutional budgets.

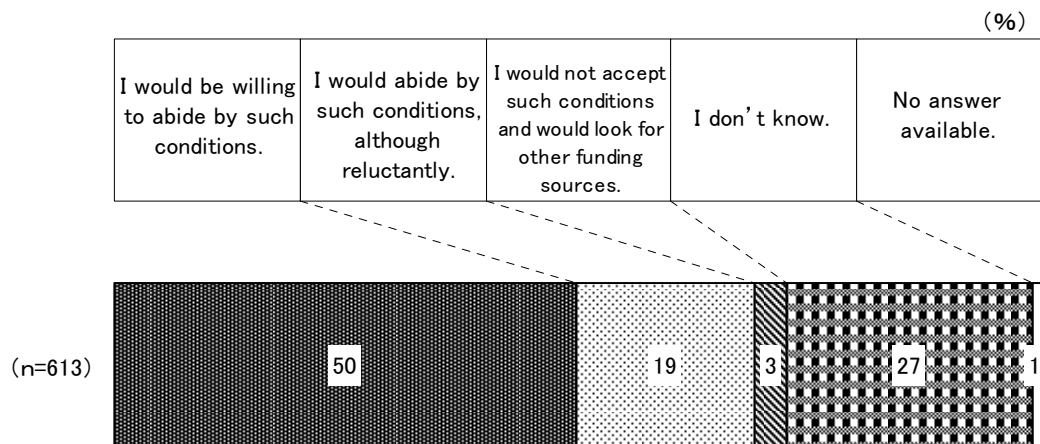
Question 17 Where do you think OA publication fees should come from? (Choose as many answers as apply.)



3-10 Researchers' views on publishing in OA journals under conditions of contract

- Requested as a result of conditions of research grant contract to publish their research work in OA journals, 50% of the respondents would be willing to comply and 19% would do so reluctantly, which means a combined 69% of the respondents would abide by such conditions. Only 3% would not accept such conditions and would look for other funding sources, and 1 in 4 said they didn't know.

Question 18 What would your reaction be if a grant-awarding body required you to publish the results of your research funded by that body with OA? (Choose 1 statement.)



- By awareness of OA, 62% of those aware of OA would abide by such conditions willingly. On the other hand, among those who are not aware of OA 43% would do so willingly and a relatively large proportion of 32% said they didn't know.

(%)

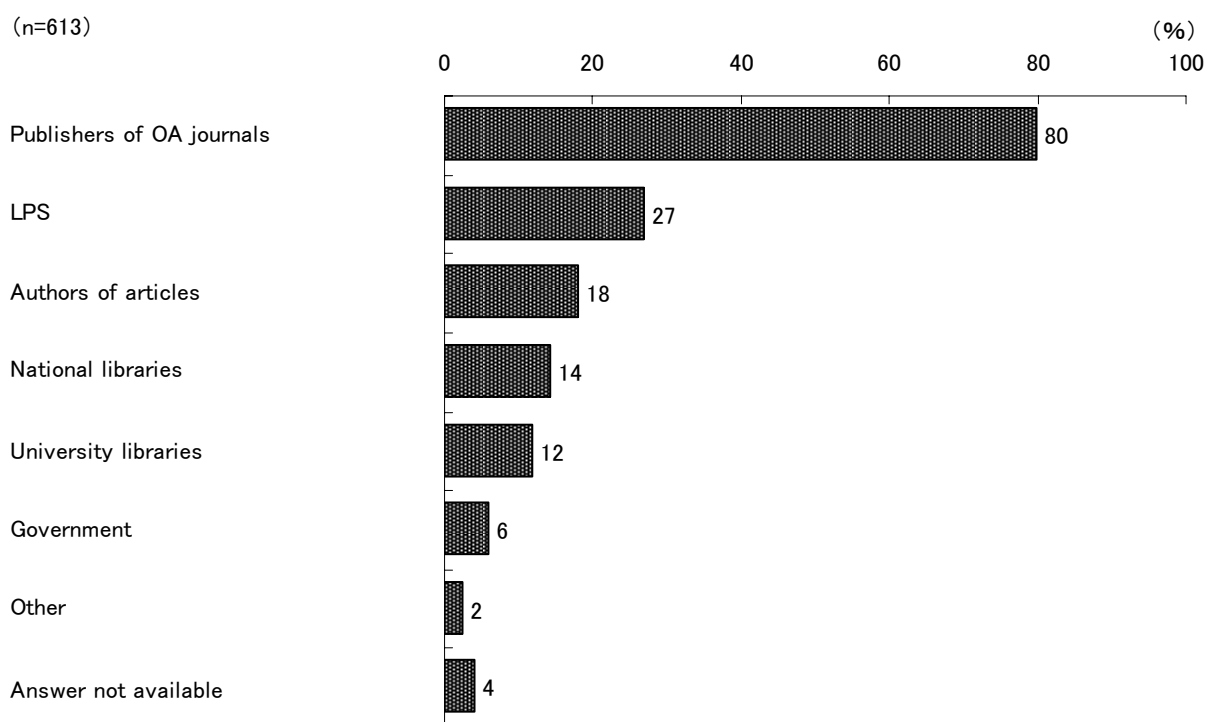
		n =	Willingly abide by such conditions	Reluctantly abide by such conditions	Would not accept such conditions and would look for other funding sources	Don't know	Answer not available
Overall		613	50	19	3	27	1
Awareness of OA	Aware	178	○ 62	16	4	● 17	1
	Not aware	377	▼ 43	21	3	△ 32	1

(Note) ☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

3-11 Who should be responsible for archiving articles in OA journals?

- A great majority (80%) of the respondents consider that publishers of OA journals should be responsible for archiving articles published in OA journals. Only 18% think authors of articles should be responsible.

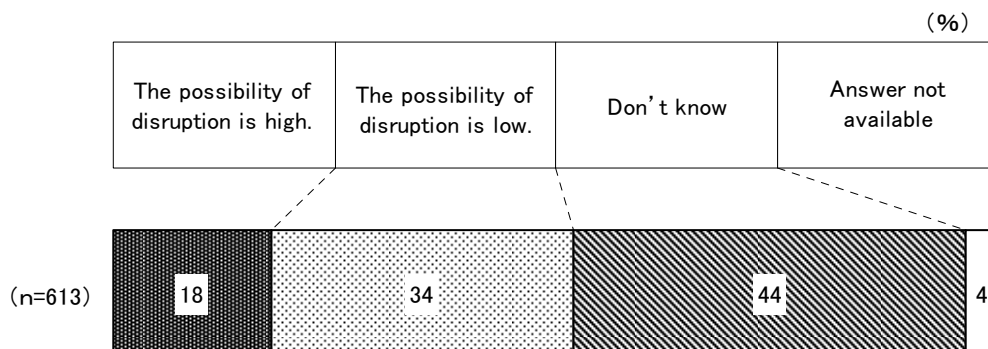
Question 19 Who do you think should be responsible for archiving articles published in OA journals? (Choose as many answers as apply.)



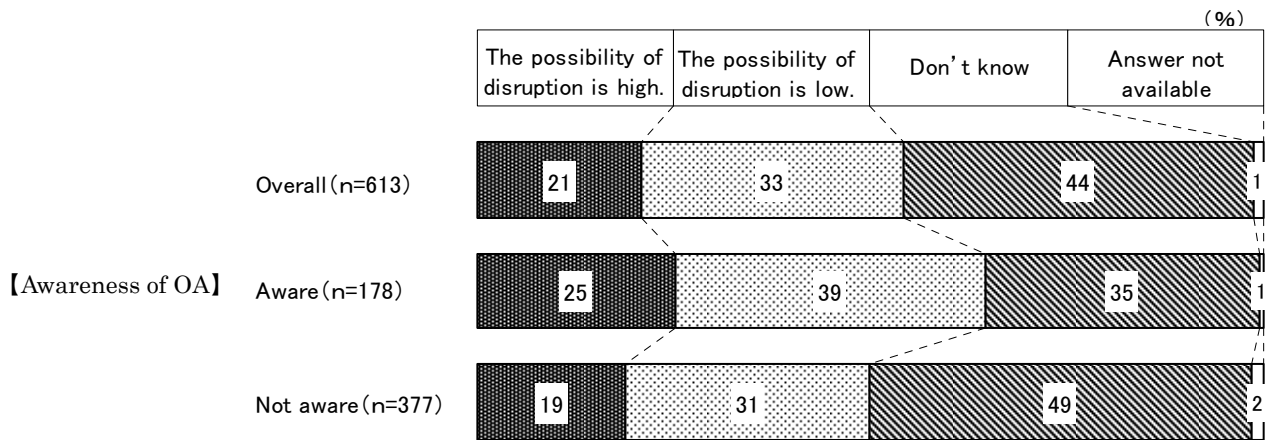
3-12 Impact of OA publishing on scholarly publishing system

- With regard to concerns about the possibility that the diffusion of OA publishing might cause a disruption in the traditional scholarly publishing system, 21% of the respondents say the possibility is high, which compares with a higher percentage of 33% who say that the possibility is low. Overall, nearly half of the respondents say they don't know.
- Those who chose "the possibility is high" mainly cite reasons such as "publications in print will be no longer needed, and this will strain publishers' business," "OA is more convenient than printed journals," "existing publishing costs are higher than those of OA" and "information is available free on OA."
- Those who chose "the possibility is low" mainly cite reasons such as "we need printed media," "I think both forms of media will coexist," "printed journals already have an established status," and "it will take some time until OA publishing is fully diffused."

Question 20 There is a view that the diffusion of Open Access publishing will cause disruption to scholarly publishing system. What is your view? (Choose 1 statement.)



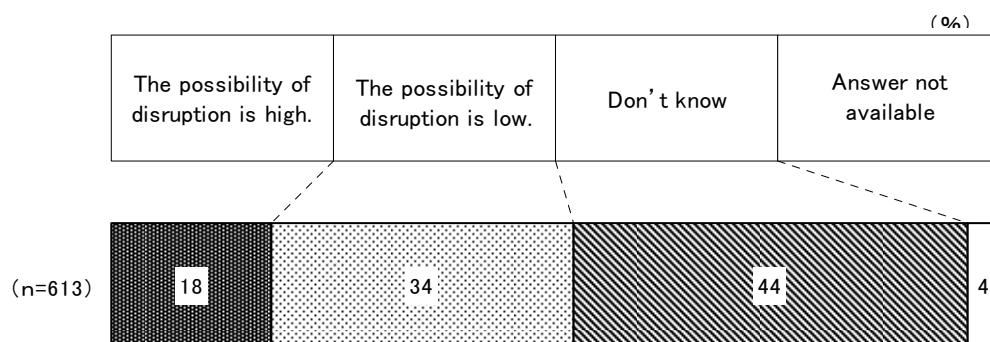
- By degree of awareness of OA, among those who are aware of OA, the percentage of researchers who chose “the possibility is low” is rather high.



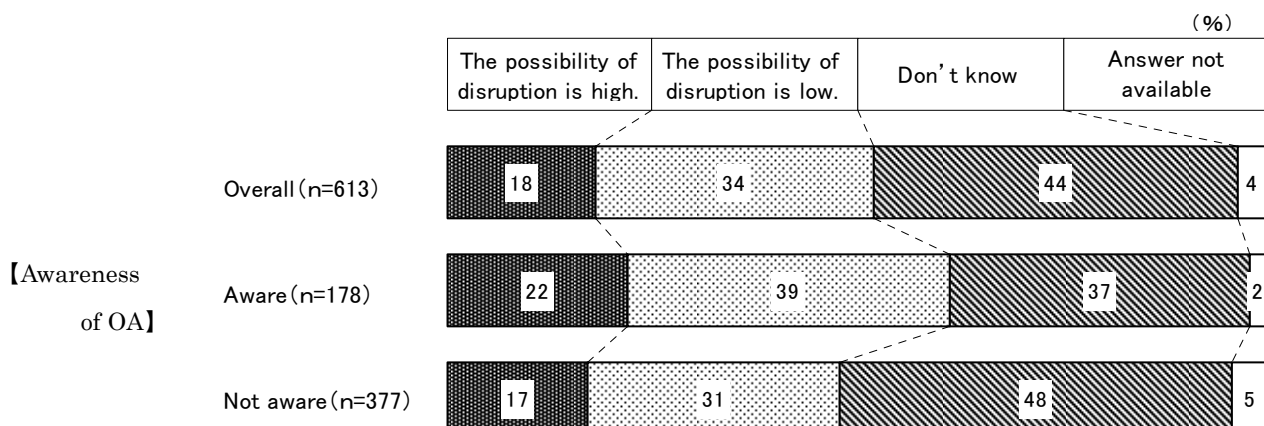
3-13 Impact of OA publishing on publishing business of LPSs

- With regard to the possible disruption to the publishing business of LPSs to be caused by the diffusion of OA publishing, 34% of respondents chose “the possibility is low,” overriding the 18% that chose “the possibility is high.” Both of these were outnumbered by the 44% who chose “don’t know.”
- Those who say “the possibility is high” mainly cited reasons such as “printed publications will not be needed, which will lead to lower sales of academic journals,” “the entirety of scholarly publishing activity will migrate to OA publishing,” and “OA publishing is more convenient,” etc.
- Those who say “the possibility is low” cited reasons such as “we need printed media,” “the publishing business of LPSs will not cease to exist as long as the LPSs exist,” “the publishing business of LPSs has roles other than publishing,” and “it will take some time until OA publishing is fully diffused.”

Question 20-2 There is also a view that the diffusion of Open Access publishing will cause disruption to the publishing business of LPSs. What is your view? (Choose 1 statement.)



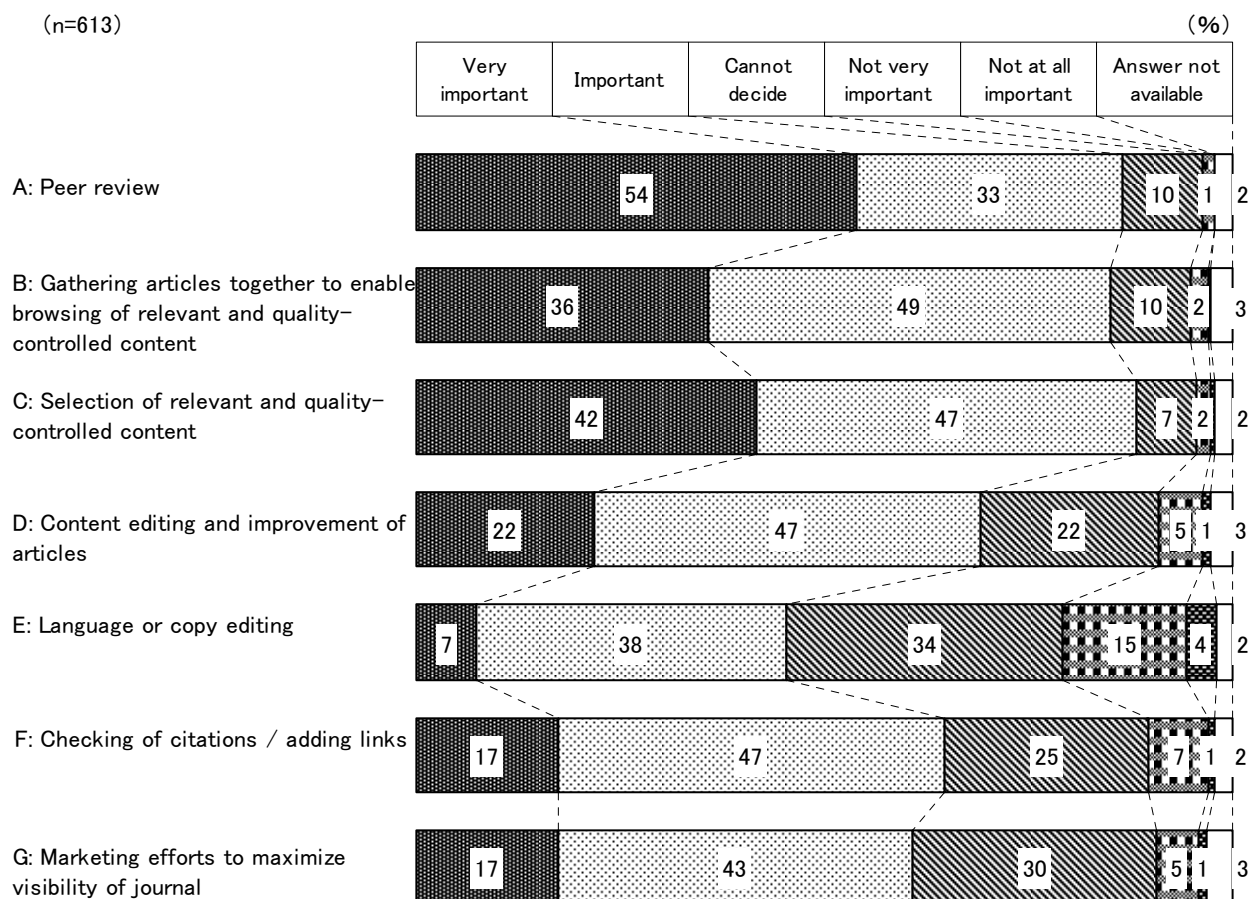
- By degree of awareness of OA, among those who are aware of OA, the percentage of researchers who say “the possibility is low” is rather high.



3-14 Importance of roles of scholarly journals

- As to roles of scholarly publishers, over 80% of respondents consider roles such as “peer review,” “collecting articles to enable browsing of relevant and quality-controlled content,” and “gathering and selection of articles to maintain a certain level of quality” to be either very important or important.
- Over 60% of respondents either consider very important or important the following roles: “content editing and improvement of articles,” “checking of citations / adding links,” and “marketing efforts to maximize visibility of journal,” while less than half (45%) of the respondents consider the role of “language or copy editing” to be either very important or important.

Question 21 As an author, how important do you think it is to preserve the following features of scholarly journals?



- Analyzing the percentages of respondents who chose “very important” in each statement by subject area, an outstanding percentage (67%) of those in pure science consider “peer review” to be very important, which contrasts with only 39% of respondents in literature etc. considering “peer review” to be very important. Compared to the respondents in other subject areas, a relatively higher percentage (23%) in literature etc. consider “checking of citations / adding links” to be very important.
- By the number of articles submitted/published in a year, researchers who submit/publish 4 or more articles consider roles such as “peer review,” “collecting articles to enable browsing of relevant and quality-controlled content,” and “gathering and selection of articles to maintain a certain level of quality” to be very important.
- In terms of whether researchers have submitted/published their articles either domestically or overseas in the last 3 years, a significantly high percentage (72%) of those who have done so in only overseas journals consider “peer review” to be very important.

[Percentage of respondents who chose “very important”]

(%)

		N=	A Peer review	B Gathering articles together to enable browsing of relevant and quality-control led content	C Selection of relevant and quality- controlled content	D Content editing and improvement of articles	E Language or copy editing	F Checking of citations / adding links	G Marketing efforts to maximize visibility of journal
Overall		613	54	36	42	22	7	17	17
Subject area	Literature etc.	95	★ 39	35	▼ 36	19	7	△ 23	18
	Law and political science	12	★ 8	★ 17	★ 25	● 8	▼ 0	★ 0	★ 0
	Economics, commerce, and business administration	16	● 44	38	38	☆ 38	▼ 0	● 6	13
	Pure science	186	○ 67	39	45	19	6	17	19
	Engineering	123	54	37	45	20	6	15	13
	Agriculture	47	53	● 23	▼ 34	26	9	17	15
	Medicine, dentistry, and pharmaceutical science	131	53	37	44	△ 28	11	19	21
	Number of articles submitted/ published in a year	1 or fewer	158	▼ 48	34	39	21	6	16
2–3	284	51	34	38	21	8	17	17	
4–5	105	△ 60	△ 41	△ 47	22	6	△ 23	△ 22	
6 or more	58	☆ 72	△ 45	☆ 59	26	△ 12	19	14	
Publication of articles during the most recent 3 years	Domestic journals only	155	★ 33	▼ 29	● 31	▼ 17	4	13	14
	Overseas journals only	110	☆ 2	△ 42	△ 51	△ 30	10	△ 25	△ 24
	Both domestic and overseas journals	328	△ 60	39	45	22	9	17	18

(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
△: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

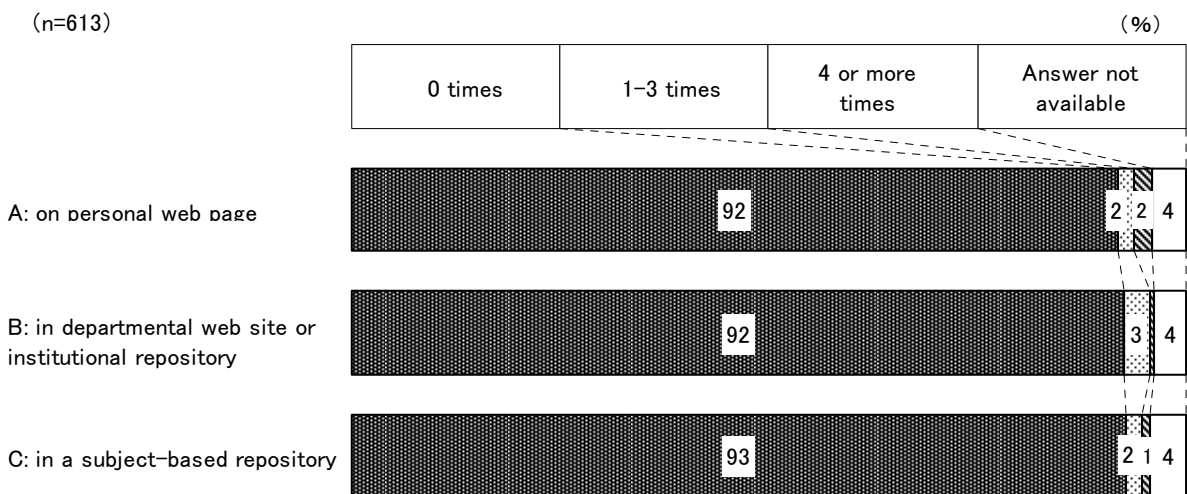
IV Article Repositories and Self archiving

4-1 Self-archiving experience to date

(1) Pre-print articles

- During the last 3 years, over 90% of respondents have not posted/deposited an article on/in either his/her personal website, departmental website, electronic institutional repository, or subject-based repository. This contrasts with only around 3% of those who have posted/deposited an article in any thereof.
- By subject area, although the number of respondents was not large, a rather substantial proportion (25%) of respondents in economics, commerce, and business administration have published their articles 1-3 times on their departmental web sites or in institutional repositories (See Appendix 10(1) for details).

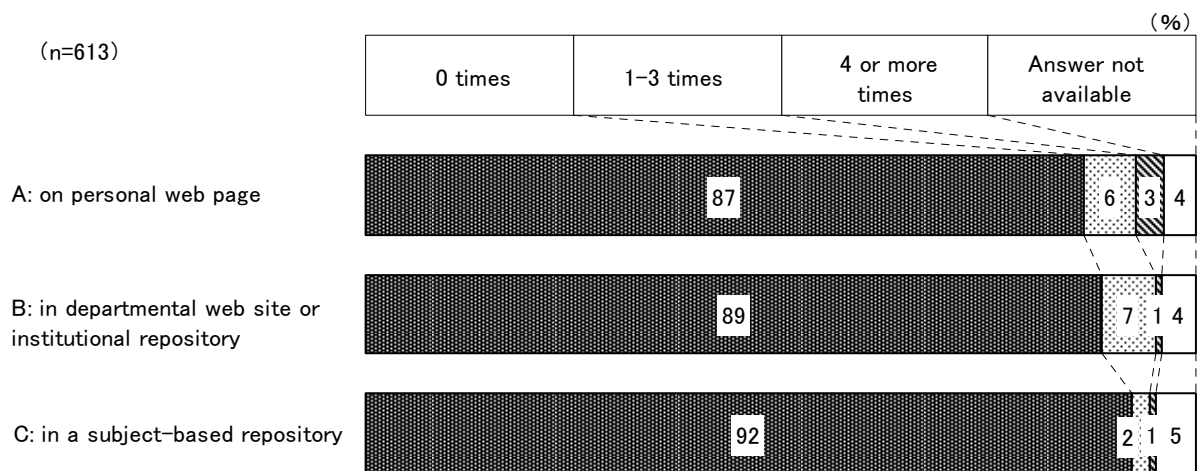
Question 22 In the past 3 years, how many times have you deposited full copies of a pre-referring draft version of a research paper in the following ways?



(2) Post-print articles

- As with post-print articles, the great majority (around 90%) of respondents have not deposited their post-print articles. However, nearly 10% of them have either posted an article on a personal web page or a departmental web site or have deposited the same in an electronic institutional repository. This is a greater percentage than in the case of pre-print articles.
- By subject area, 15% of researchers in agricultural science have published their post-print articles 1-3 times on their personal web pages, which is a greater proportion than that corresponding to a pre-print basis. Among researchers in literature and other subject areas, 13% have deposited pre-print articles 1-3 times on departmental web sites or in institutional repositories. Although the number of respondents was not large, a rather substantial proportion (26%) of respondents in economics, commerce, and business administration have published their articles 1-3 times on their departmental web sites or in institutional repositories, and not a few respondents have published articles on their personal web pages or in subject-based repositories (See Appendix 10(2) for details).

Question 22-1 In the past 3 years, how many times have you deposited full copies of a refereed, published version of a research article in the following ways?

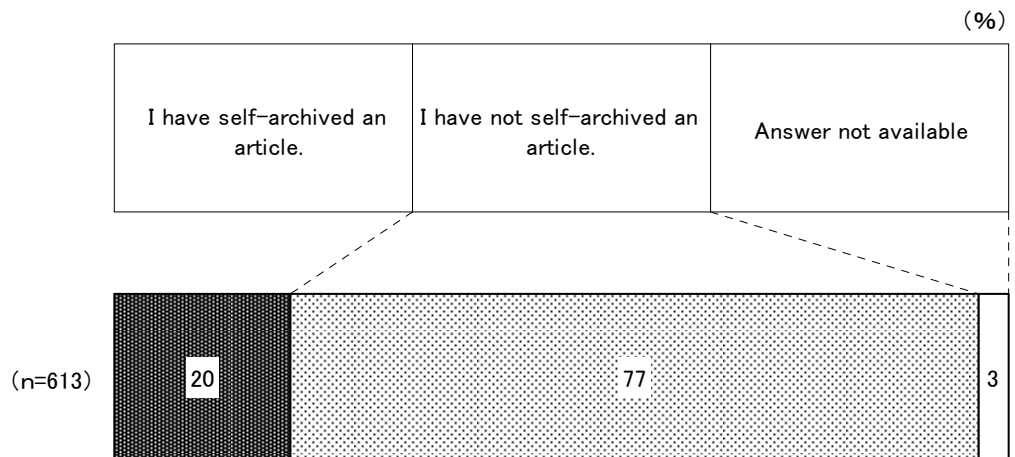


The table below again shows the composition ratios of researchers who have deposited their articles on either a pre-print or a post-print basis during the last 3 years.

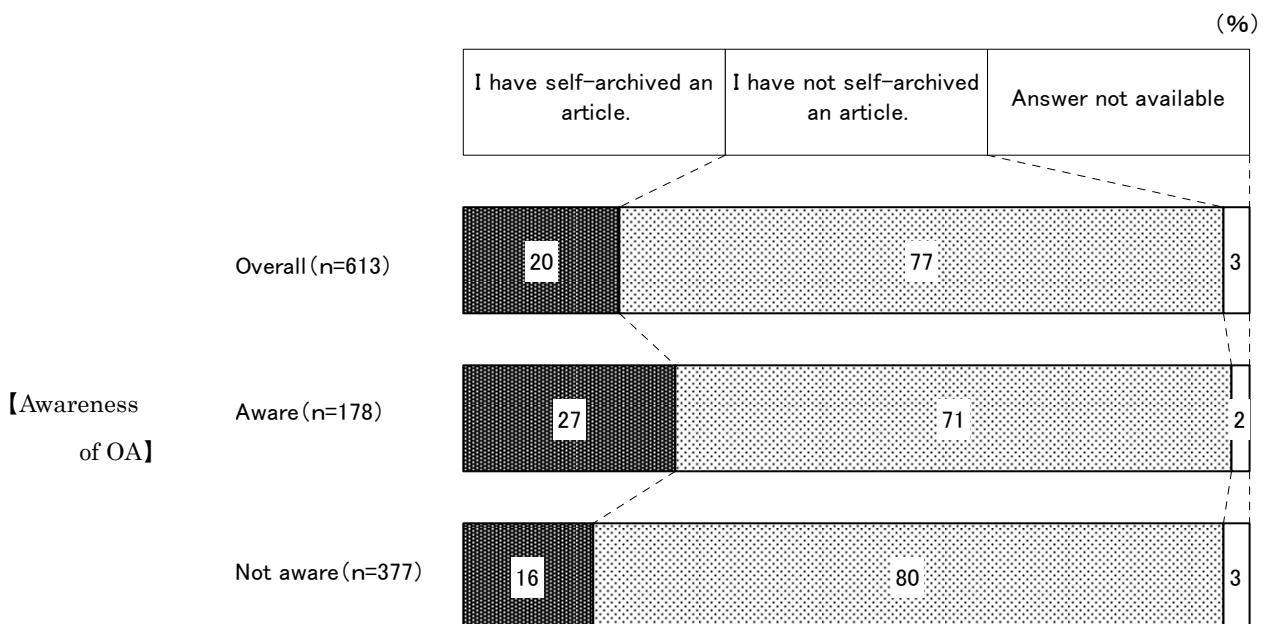
	pre-print	post-print
on personal web page	4%	9%
in departmental web site or institutional repository	3%	8%
in a subject-based repository	3%	3%

(3) Self-archiving experience

- Only 20% of respondents have self-archived either pre-print or post-print articles in the last 3 years, compared with 77% who have not.



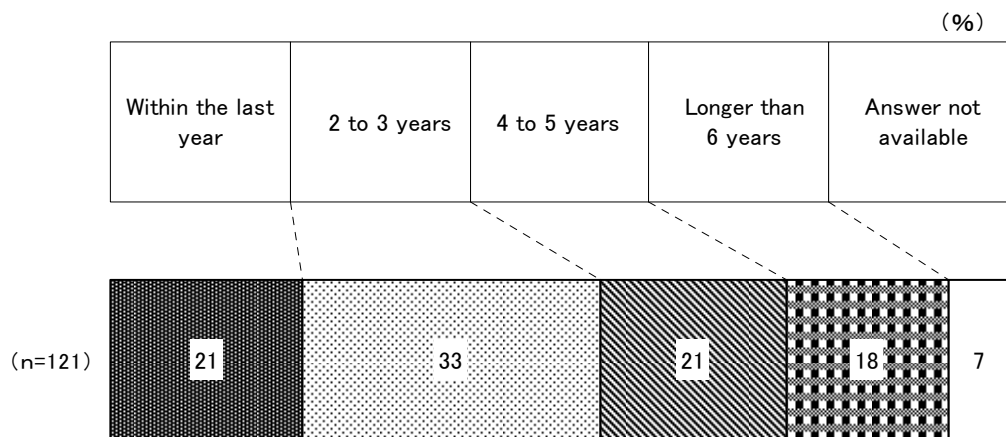
By degree of awareness of OA, only one-fourth (27%) of those who are aware of OA have self-archived an article.



4-2 The time when respondents started self-archiving

- Those that have self-archived at least 1 pre-print or post-print article were asked when they had started self-archiving. 33% of the respondents started self-archiving 2–3 years ago, 21% started within the last year, and 54% started within the most recent 3 years.

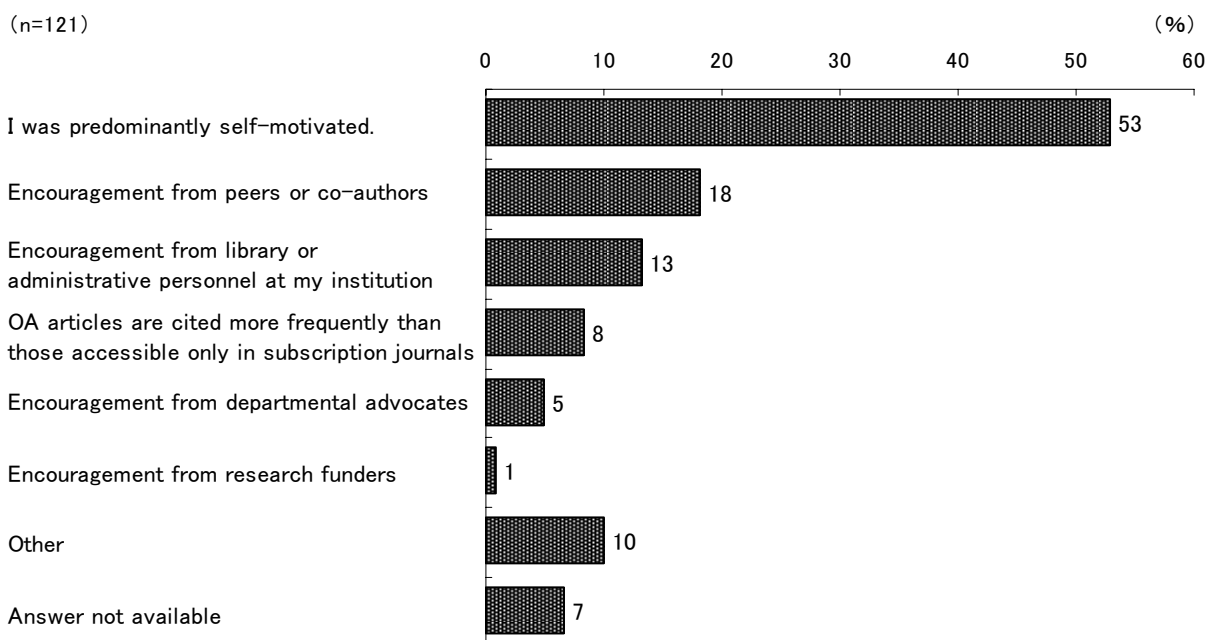
Question 23 If you have done any of the above, for how long have you been doing this? (Choose 1 statement.)



4-3 Motives for self-archiving

- An outstanding majority (53%) of respondents self-archive their work “voluntarily and willingly.”

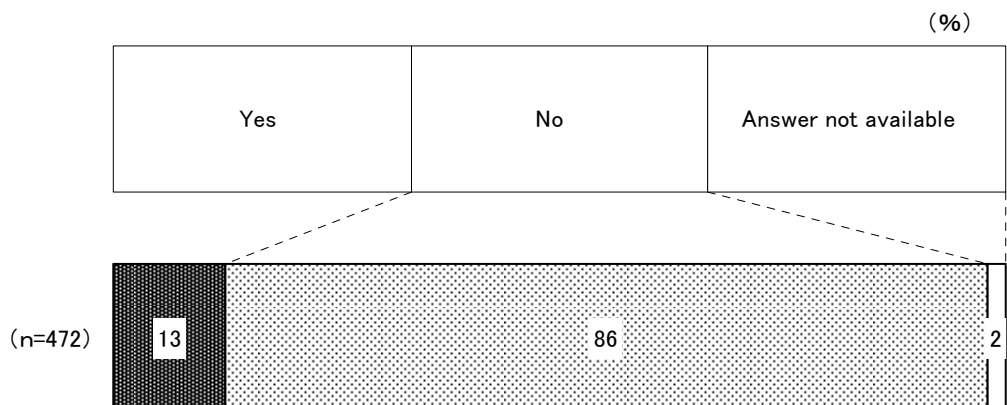
Question 24 What was your original motivation for self-archiving your work? Please select any that apply.



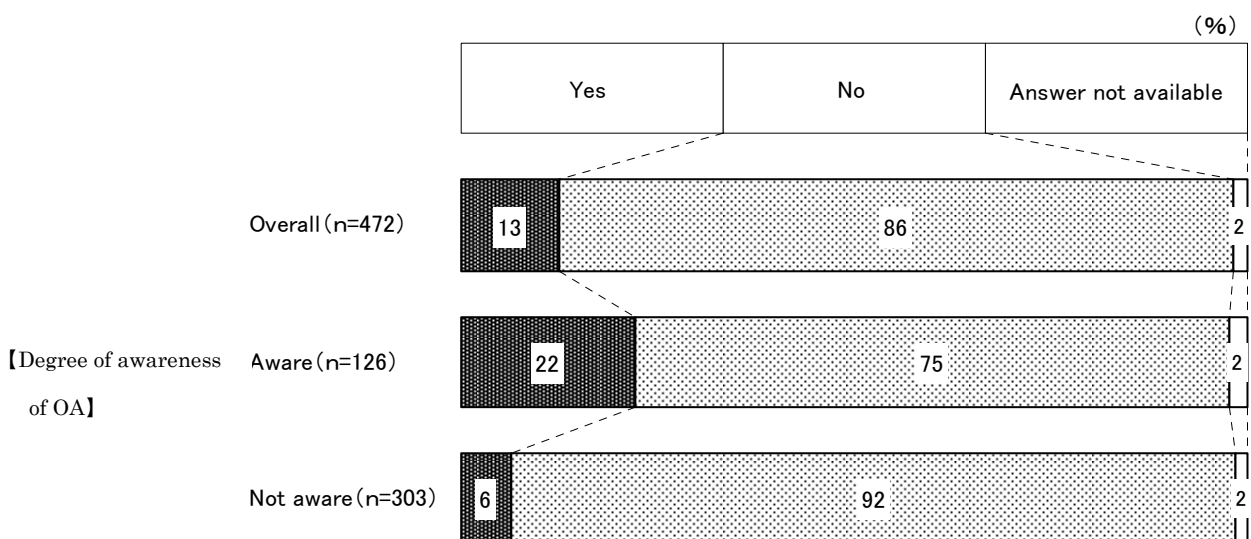
4-4 Awareness of self-archiving as a means for providing OA to academic works

- Respondents who answered that they had self-archived neither pre-print nor post-print articles were asked whether they knew that self-archiving on a website providing OA enabled OA to their work. 86% of them did not know this, which sharply contrasts with the only 13% who did know.

Question 25 If you have not deposited drafts or refereed, published research articles in any of the ways listed, are you aware of the possibility of providing OA by self-archiving your work in open archives? (Choose 1 statement.)



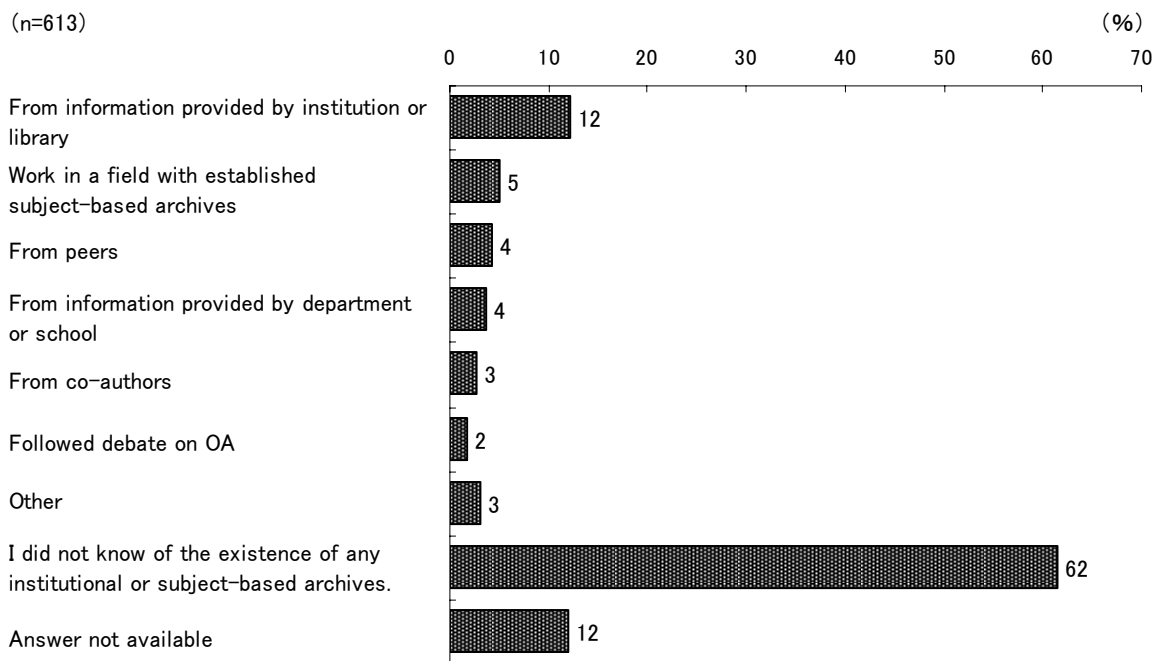
- By degree of awareness of OA, even among those who are aware of OA, only 22% knew such a fact.



4-5 What made researchers aware of self-archiving?

- Only some 10% of respondents say they had come to know of the existence of institutional or subject-based repositories as means to provide OA for their work through their library or institutions. Overall, a great majority (62%) does not know of the existence thereof.

Question 26 How did you originally learn about self-archiving in an institutional or subject-based archive as a means to provide OA to your work? Please select any that apply.



- By degree of awareness of OA, among the respondents who are aware of OA, a rather substantial percentage (25%) of them became aware of the existence of repositories through their institutions or libraries, although nearly half (49%) of them do not know of the existence thereof

(%)

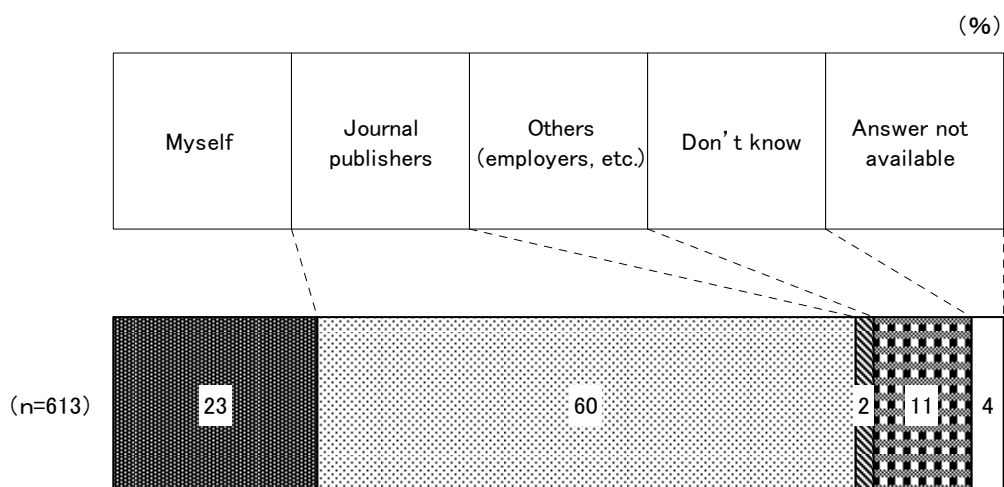
		n =	Work in a field with established subject-based archives	Followed debate on OA	From information provided by institution or library	From information provided by department or school	From co-authors	From peers	Other	I did not know of the existence of any institutional or subject-based archives.	Answer not available
Overall		613	5	2	12	4	3	4	3	62	12
Awareness of OA	Aware	178	7	3	○ 25	6	4	6	4	● 49	▼ 7
	Not aware	377	4	1	▼ 6	2	2	3	3	□ 68	14

(Note) ☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

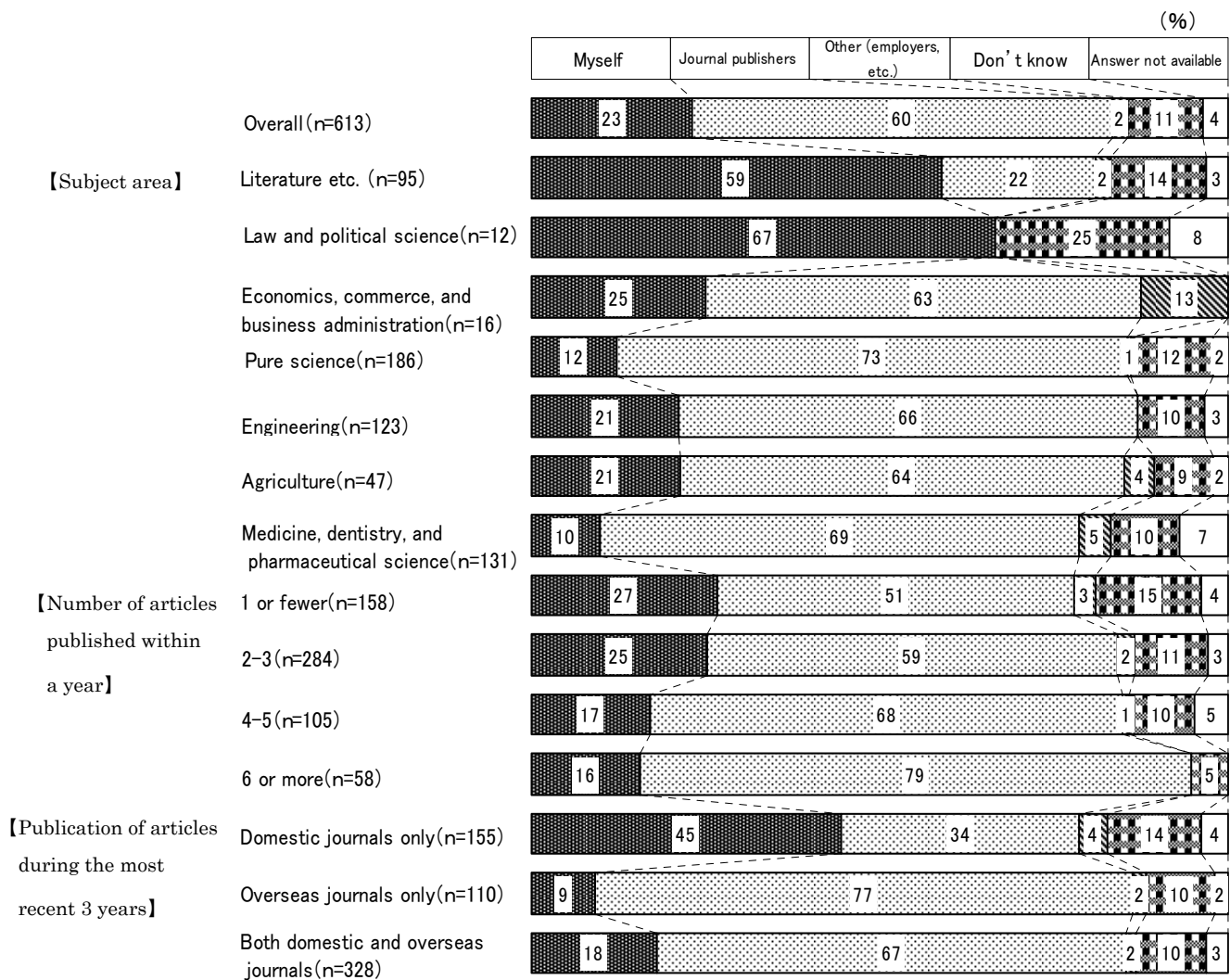
4-6 Parties owning copyrights of latest articles

- Only 11% of respondents do not know who owns the copyrights of their latest articles. 60% of respondents say journal publishers own the copyrights of their latest articles, followed by 23% that say they own the copyrights of their own articles.

Question 27 Who retains the copyrights of your latest articles? (Choose 1 statement.)



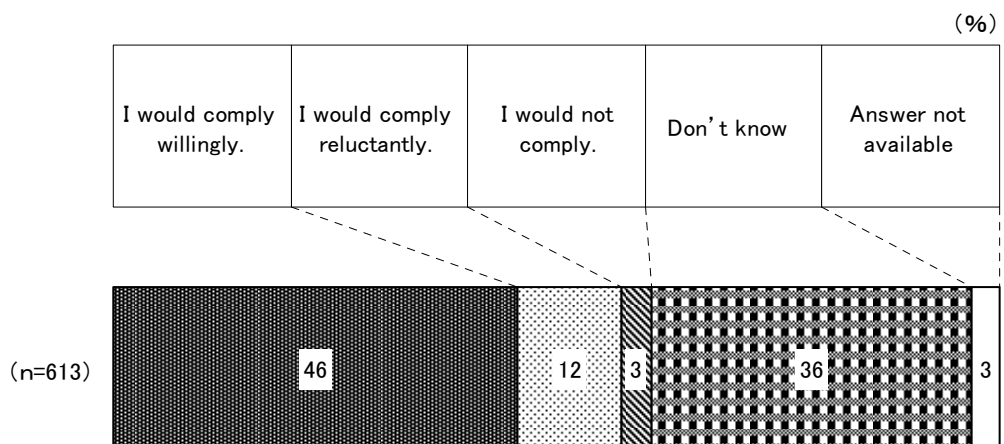
- By subject area, 59% of researchers in literature etc. own the copyrights of their own articles. However, around 70% of those in pure science, engineering, agriculture and “medicine, dentistry, and pharmaceutical science” say journal publishers own the copyrights of their latest articles.
- By number of articles submitted/published in a year, researchers who submit/publish more articles in a year tend to say journal publishers own the copyrights of their articles.
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, 45% of researchers who have submitted in domestic journals only say they own the copyrights of their own articles. By contrast, a vast majority of around 70% of those who have submitted either in overseas journals only or both in overseas and domestic journals say journal publishers own copyrights of their articles.



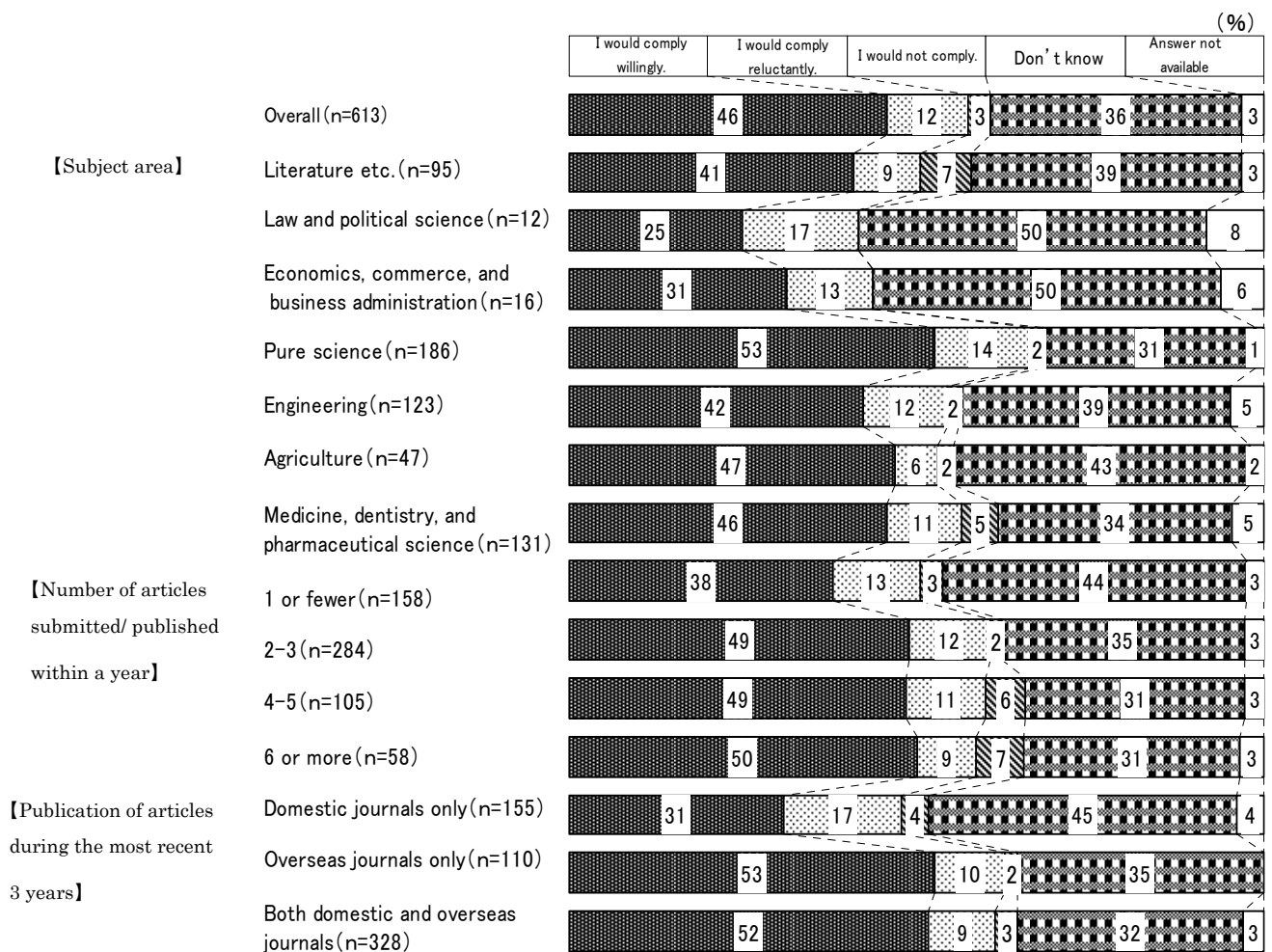
4-7 Willingness to self-archive upon request for deposit in repositories

- Answering to the question asking how they would feel if their employer or funding body required them to deposit copies of their articles published in journals by green publishers (publishers permitting authors to self-archive their articles) in 1 or more of these repositories, 46% of respondents say they would do so willingly and 12% say they would do so reluctantly, resulting in a combined 58% of respondents saying they would do so. Although only 3% of respondents say they would not do so, 36% withheld their answer by saying they don't know.

Question 28 If your employer or research funder **REQUIRED** you to deposit copies of your articles published in green journals in an open archive, what would be your reaction? (Choose 1 statement.)



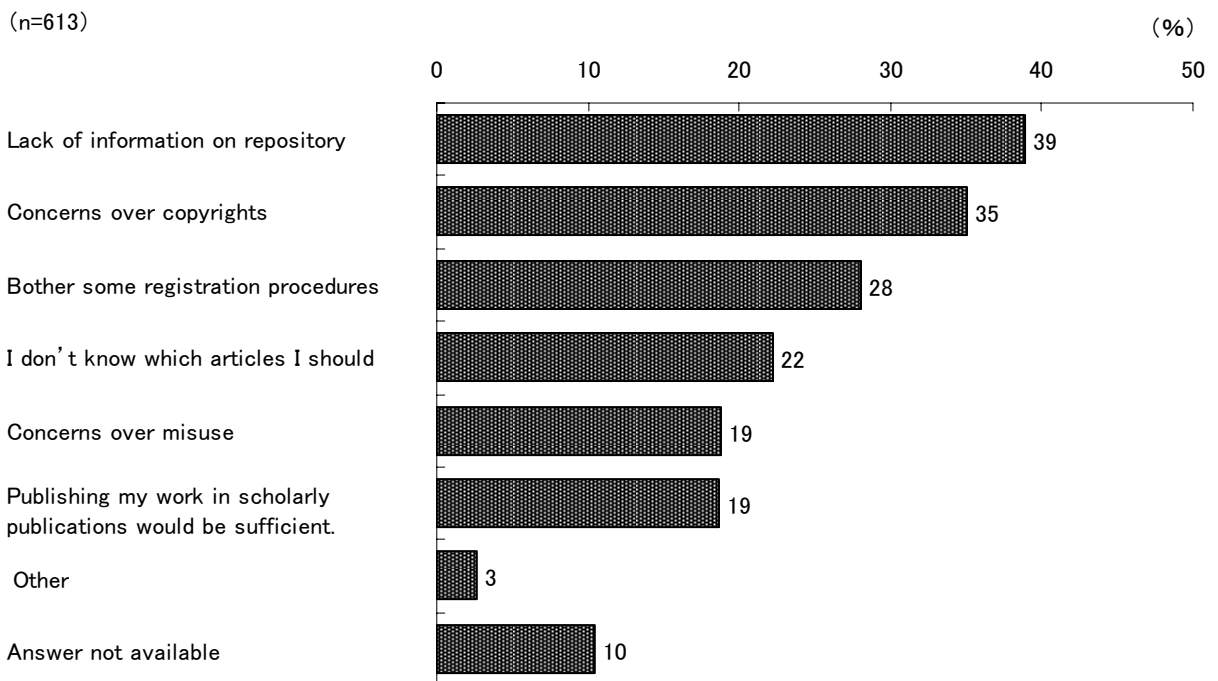
- By subject area, a majority (53%) of respondents in pure science say they would self-archive willingly, and combined with those who would do so reluctantly, 67% of them would do so, accounting for the greatest proportion among all subject areas.
- By the number of articles submitted/published within a year, a rather small percentage (38%) of those who submit/publish 1 or no articles are willing to self-archive.
- In terms of whether researchers have submitted/published their articles either domestically or overseas in the last 3 years, over 50% of those who have done so either in overseas journals only or in both domestic and overseas journals are willing to self-archive. Only 31% of researchers were willing to do so among those who have submitted only in domestic journals, and nearly half of them say they don't know.



4-8 Concerns with regard to self-archiving

- The most frequently cited concerns with regard to self-archiving are “lack of information on repositories (39%)” and “concerns over copyrights (35%),” both of them scoring over 30%. These are followed by “bothersome registration procedures (28%)” and not knowing which articles to register (22%).”

Question 28-1 What are your concerns when self-archiving your articles? (Choose as many answers as apply.)



- By subject area, 40% of respondents in medicine, dentistry, and pharmaceutical science are “concerned about copyright issues.”
- By the number of articles submitted/published in 1 year, among the respondents who submit/publish 4–5 articles in a year, the overall percentage of those concerned is lower than in the cases of other groups of respondents.
- In terms of whether researchers have submitted/published their articles domestically or overseas in the last 3 years, among respondents who have submitted in overseas journals only, the percentages of those who chose “concerns over copyrights” and “lack of information on repository” is rather high.
- By experience of self-archiving, smaller proportions of those who have self-archived answer with “lack of information on repository” or “I don’t know which articles I should register.”

(%)

	n =	Concerns over copyrights	Bothersome registration procedures	Publishing my work in scholarly publications would be sufficient.	Concerns over misuse	Lack of information on repositories	I don't know which articles I should register.	Other	Answer not available	
Overall	613	35	28	19	19	39	22	3	10	
Subject area	Literature etc.	95	35	25	△ 24	△ 27	43	25	1	8
	Law and political science	12	33	25	△ 25	○ 33	42	○ 33	0	☆ 25
	Economics, commerce, and business administration	16	31	○ 38	○ 31	19	△ 44	▼ 13	0	△ 19
	Pure science	186	34	28	20	18	▼ 33	18	5	9
	Engineering	123	37	27	▼ 13	20	41	▼ 17	2	△ 15
	Agriculture	47	▼ 26	▼ 21	15	▼ 11	43	○ 32	0	▼ 4
	Medicine, dentistry, and pharmaceutical science	131	△ 40	△ 34	17	▼ 14	40	△ 27	2	9
	Number of articles submitted/published in a year	1 or fewer	158	38	△ 34	21	21	41	△ 29	2
2–3		284	36	26	20	19	40	22	2	7
4–5		105	▼ 27	▼ 22	▼ 12	17	▼ 34	20	4	○ 21
6 or more		58	△ 40	31	19	▼ 14	40	● 10	5	10
Publication of articles during the most recent 3 years	Domestic journals only	155	33	30	△ 24	22	43	26	1	9
	Overseas journals only	110	△ 40	25	21	15	△ 44	25	3	▼ 5
	Both domestic and overseas journals	328	34	29	16	18	37	20	3	12
Experience of self-archiving	I have self-archived	121	36	25	17	18	▼ 32	● 9	4	△ 16
	I have not self-archived	472	36	29	20	19	42	26	2	7

(Note) "Literature etc." include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average



Appendix

1 Specific details of notification of OA

Question 12 Have you been notified of OA (OA journals, self-archiving, institutional repositories, etc.) by your institution or library in the most recent 1 year? (Choose 1 statement.)

[Yes, I have: specific details]

- Holding of an explanatory meeting (31 respondents) • Request for submission of articles (16 respondents)
- Notification (7 respondents) • Library committee (3 respondents)

2 Academic organizations publishing OA journals and their titles

Question 13 Do you know names of any organizations that publish OA journals or any titles of OA journals? (Choose 1 statement.)

["I know:" names of organizations and OA journals]

Name of organization	Name of OA journal
ACPM, ATPM	American Journal of Preventive Medicine
American Society of Hematology	Blood
Bio Med Central	BMC Biology
Bio Med Central	BMC Biology
Bio Med Central	BMC Biology
Bio Med Central	BMC Biology
Bio Med Central	Molecular Pain
ECCC	
Elsevier	Journal of Nuclear Materials
Elsevier	Int Rev Cytol
Elsevier	
Elsevier	Materials Research Bulletin
Elsevier B.V.	
Elsevier Science Publisher	Journal of Computational and Applied Mathematics
Elsevier	Phytochemistry
Elsevier	JOURNAL OF GEOMETRY AND PHYSICS
Footsteps of Man	TRACCE
Geometry and Topology Publication	Geometry and Topology
Geometry and Topology Publication	Geometry and Topology
Geometry and Topology Publication	Algebraic & Geometric Topology
International Association of Radiolarian Palaeontologists	JRADS, RADNEWS,
J.Biol.Chemistry	J.Biol.Chemistry
Japan Spenser Society	
J-Stage	
Labscience	BioMed Central
Oxford University Press	Nucleic Acids Research
Oxford Journals	Nucleic Acid Res, Online Version
Oxford University Press	Nucleic Acids Research
Public Library of Science	PLOS Biology

Name of organization	Name of OA journal
Science Direct	Gastroenterology
Springer	
米国生化学分子生物学会 (The American Society for Biochemistry and Molecular Biology(ASBMB))	
アメリカ生理学会(American Physiological Society)	American Journal of Physiology
英米文化学会(The society of English Studies)	英米文化(Eibei Bunka)
日本気象学会(Meteorological Society of Japan)	Journal of Meteorological Society Japan
心の諸問題考究会 (Mind/Soul Explorers)	心の諸問題論叢(Mind/Soul Interfaces)
人工知能学会 (The Japaness Society for Artificial Intelligence)	人工知能学会論文誌 (Transactions of the Japaness Society for Artificial Intelligence)
地盤工学会(The Japanese Geotechnical Society)	地盤工学ジャーナル(Japanese Geotechnical Journal)
長崎大学工学部 (Faculty of Engineering, Nagasaki Universigy)	長崎大学工学部研究報告 (Reports of the Faculty of Engineering, Nagasaki Universigy)
日本グループ・ダイナミックス学会 (The Japanese Group Dynamics Association)	実験社会心理学研究 (The Japanese Journal of Experimental Social Psychology)
日本ソフトウェア科学会 (Japan Society for Software Science and Technology)	コンピュータソフトウェア (Computer Software)
日本レオロジー学会 (The Society of Rheology, Japan)	Nihon Reoroji Gakkaishi
日本遺伝学会(The Genetics Society of Japan)	Genes&Genetic System
日本応用動物昆虫学会 (The Japanese Society of Applied Entomology and Zoology)	Applied Entomolgy & Zoology
日本過酸化脂質・フリーラジカル学会 (The Japanese Society of Lipid Peroxide and Free Radical Research)	Journal of Chemical Biochemistry and Nutrition
日本学士院(The Japan Academy)	Proc Japan Acad Ser Math Sci
日本計算工学会 (The Japan Society for Computational Engineering and Science)	日本計算工学会論文集 (Transactions of JSCES)
日本細胞生物学会(Japan Society for Cell Biology)	Cell Structure and Function
日本水環境学会 (Japan Society on Water Environment)	Journal of Water and Environmental Technology
日本生化学会(The Japanese Biochemical Society)	J Biochem
日本生物物理学会(The Biophysical Society of Japan)	

Name of organization	Name of OA journal
日本農芸化学会 (Japan Society for Bioscience, Biotechnology, and Agrochemistry)	Bioci.Biotechnol.Biochem.
日本表面科学会 (The Surface Science Society of Japan)	e-Journal of Surface Science and Nanotechnology
日本分析化学会 (The Japan Society for Analytical Chemistry)	Anul.Sci.
日本霊長類学会(Primate Society of Japan)	
北海道教育大学(Hokkaido University of Education)	紀要(bulletin)
北大(Hokkaido University)	HUSCUP
立命館大学法学部、法学研究科 (Ritsumeikan University Faculty of Law and Graduate School of Law)	立命館法学(Ritsumeikan Law Review)
	Cell Structure & Function
	Dental Materials
	紀要など(bulletin,etc)
	World Journal of Surgery
	PNAS
	BMC Cancer
	Nature
	PLOS Genetics
	International Journal of Transdisciplinary Research
	Journal of Clinical Periodontology
	PLoS Biology
	Documenta Math
	Computer Environment and Urban Systems
	JBC、PNAS
	BMC Cell Biol
	International Journal of Legal Medicine
	Circulation
	Archiv of Histology and Cytology
	History of Psychiatry
	Journal of Vision
	PLoS Biology
	JBC
	PLOS Computational Biology

Name of organization	Name of OA journal
	Web AE (Web Journal of Art Education)
	Directory of Open Access Journal
	Journal of Molecular Biology
	Economics Bulletin

10 Self-archiving experience of respondents by subject area

(1) Pre-print

- By subject area, although the number of respondents was small, 25% of respondents in economics, commerce, and business administration have deposited 1–3 articles either on their institutional websites or in institutional repositories, which is a greater proportion than in other subject areas.

Question 22 In the past 3 years, how many times have you deposited full copies of a pre-referring draft version of a research paper in the following ways?

(%)

	n =	Personal websites			Institutional websites or institutional repositories			Subject-based repositories		
		0 times	1–3 times	4 or more times	0 times	1–3 times	4 or more times	0 times	1–3 times	4 or more times
Overall	613	92	2	2	92	3	0	93	2	1
Subject area										
Literature etc.	95	95	2	1	93	4	1	97	1	0
Law and political science	12	★ 67	0	0	★ 67	△ 8	0	★ 75	0	0
Economics, commerce, and business administration	16	● 81	6	6	★ 75	☆ 25	0	▼ 88	6	0
Pure science	186	91	4	3	93	3	1	90	4	3
Engineering	123	89	2	4	93	1	1	93	1	1
Agriculture	47	△ 98	0	0	96	4	0	96	2	0
Medicine, dentistry, and pharmaceutical science	131	95	0	0	95	1	0	95	0	1

(Note) “Literature etc.” include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

(2) Post-print

- By subject area, 15% of respondents in agriculture have publicized 1–3 articles on their personal websites, which is a greater proportion than that published on a pre-print basis. 13% of respondents in literature etc. have deposited 1–3 articles either on their institutional websites or in institutional repositories. Although the number of respondents was small, 26% of those in economics, commerce and business administration have deposited 1–3 articles either on their institutional websites or in institutional repositories, and not a few respondents have publicized their articles on their personal websites or in subject-based repositories.

Question 22-1 In the past 3 years, how many times have you deposited full copies of a refereed, published version of a research article in the following ways?

(%)

		n =	Personal websites			Institutional websites or institutional repositories			Subject-based repositories		
			0 times	1–3 times	4 or more times	0 times	1–3 times	4 or more times	0 times	1–3 times	4 or more times
Overall		613	87	6	3	89	7	1	92	2	0
Subject area	Literature etc.	95	△ 92	5	0	▼ 83	△ 13	0	95	1	1
	Law and political science	12	● 75	▼ 0	0	● 75	▼ 0	0	★ 75	0	0
	Economics, commerce, and business administration	16	● 75	○ 19	0	● 75	☆ 26	0	● 81	○ 12	0
	Pure science	186	84	7	6	90	5	2	91	4	1
	Engineering	123	84	6	7	89	3	1	92	2	1
	Agriculture	47	83	△ 15	0	△ 94	6	0	94	4	0
	Medicine, dentistry, and pharmaceutical science	131	△ 93	2	1	91	5	2	95	1	1

(Note) "Literature etc." include literature, philosophy, educational science, psychology, sociology, history.

☆: Over 15% higher than overall average ★: Over 15% lower than overall average
 ○: 10%–14% higher than overall average ●: 10%–14% lower than overall average
 △: 5%–9% higher than overall average ▼: 5%–9% lower than overall average

11 The time when researchers started self-archiving by subject area

- By subject area, in pure science and engineering, the sum of respondents who have been self-archiving either “from 4 to 5 years ago” or “from 6 or more years ago” account for around 50% of the respective population.

Question 23 If you have done any of the above, for how long have you been doing this?
(Choose 1 statement.)

