Publication data collection instructions for researchers 2021

Contents

1.	. Purpose of the guide	1
2.	. Publication data collection of the Ministry of Education and Culture	1
3.	. Utilization of Publication Information	2
4.	. Definition of publication	2
	Publicity	2
	External publisher	3
	Novelty	3
	New editions, updates and abstracts	3
	Translations	3
	Author's connection to an organization	3
	Based on research work	4
5.	. Types of publications	4
	Definition of a scientific publication (publication type main categories A, B and C)	4
	Definition of a professional publication (publication main category D)	5
	Definition of a popular publication (publication main category E)	5
	Definition of an artistic publication (publication main category F)	5
	Definition of peer review	6
	Conference publication	7
	Publication type classification	7
	Selection of the publication type for the publication	11
6.	Publication Forum	12
7.	. Field of science classification	12
8.	Open access	12
9.	Data collected on publications	13

1. Purpose of the guide

The Ministry of Education and Culture (OKM) instructs research organizations (universities, research institutes, university hospitals) on data collection on publication data in a separate data collection manual (www.tiedonkeruu.fi). The Ministry updates the content of the handbook annually together with the research organizations. The technical data collection guidelines for the publications of the separate data collection manual are aimed primarily at those responsible for data collection.

This guide is based on the data collection manual, but does not include technical guidance. The instructions are grouped and expressed slightly differently than in the manual to make the instructions as clear as possible from the researcher's perspective. The purpose of the guide is to reduce the need for the organizations to maintain their own detailed guidelines and to harmonize the description of publications. Each organization organizes the collection of publication data in a preferred manner, but in such a way that the minimum information required by the Ministry is reported. Organizations may therefore have guidance that complements this guidance.

The guidelines will be updated as necessary when the data collection of the Ministry of Education and Culture changes.

The purpose of this guide is to identify scientific, professional, popular and artistic publications. Theses (publication type G) as well as patents and invention announcements and audiovisual publications and IT and communication technology applications (publication types H and I) are defined in more detail in the Ministry of Education and Culture's annual data collection guidelines (www.tiedonkeruu.fi).

Depending on the data collection method of the organization, either the publication type classification presented in this guide is used or the publication information is provided using a set of attributes (so-called attribute-based publication type classification) to define the type of publication to be reported. If your organization uses attribute-based classification, see Attribute-Based Publication Data Collection Guidelines for Researchers 2021.

2. Publication data collection of the Ministry of Education and Culture

The purpose of the Ministry of Education and Culture for collecting publication data from higher education institutions, research institutions and university hospitals is to produce a knowledge base on the research activities and the social impact of the Finnish research system. The Ministry uses the publication data collected from higher education institutions not only as a knowledge base for calculating the basic funding allocated to universities and universities of applied sciences, but also for otherwise monitoring research and development activities. Statistics on the number of publications are available in the Vipunen statistics service of the Finnish National Board of Education (www.vipunen.fi).

For data collection, the publications are classified based on features such as their format (<u>publication</u> <u>type classification</u>), scientific quality (<u>Publication forum</u>) and contents (<u>field of scientific</u> <u>classification</u>). Classifications are used in an attempt to harmonise the knowledge base required for evaluating the publication activities of Finnish research organisations. The purpose of the publication data collected and the classifications applied to them is also to serve as a general national standard

for outlining publication activities not only in the monitoring of research activities, but also in materials such as researcher CVs or publication lists attached to funding applications.

3. Utilization of Publication Information

In addition to science policy and statistical objectives, data collection serves the purpose of making publication data available for wide-scale utilisation. The publication data collected can be openly viewed in the JUULI publication data portal (www.juuli.fi) and in the Research.fi -portal (www.research.fi). In addition to this, the national information resource (VIRTA-publication data service) which was implemented in 2016 makes the information produced by publications within the Finnish research system available for other services as well. The information resource enables using the information in the services of, for example, research funders, in a way that researchers can transfer their publication information stored in the system of their home organisation to applications and project reports easily and automatically.

4. Definition of publication

The Ministry of Education and Culture publication data collection applies to publications that are significant for monitoring research and development activities. The data collection procedure does not apply to all publications derived from research activities. For instance, researchers give presentations and lectures as well as present their research at various events (e.g. posters), in the press and electronic media, but these performances and outputs are not part of the publication data collection by the Ministry of Education and Culture. Research organisations may collect information on the expert duties and researcher activities mentioned above, for their own needs.

The publications reported within the framework of the Ministry of Education and Culture data collection must meet the following criteria:

- The publication must be publicly available to anyone.
- The publication channel must have an editorial board or a publisher independent of the author, who makes decisions on publications published on the channel.
- The publication has not been previously published in a format which can be reported on in the data collection system.
- The author is linked to the organisation.
- The publication is based on research or expert activities carried out by the author.

The aforementioned criteria also apply to documents that are distributed only in **electronic form** (such as online newspapers and platforms).

The definitions mentioned above only apply to scientific, professional and popular publications (publication types A to E). The art publications and artistic outputs, theses, patents, invention notifications, audiovisual publications and IT and communication technology applications (publication types G to I) reported on will be defined in the annual data collection manual of the Ministry of Education and Culture.

Publicity

The publication is **of a public nature** if it is available to anyone without a charge or for a fee. For instance, a publication only distributed to conference participants or to those with limited online access is not publicly available, and therefore it cannot be reported on in the data collection procedure. The existence of an ISSN or ISBN identifier is regarded as an indication of a publication which was originally intended to be publicly available.

External publisher

Reportable publications must always have an **external publisher**. Thus, for example, documents published on the author's or project's own website will not be reported unless the publication has been decided by an independent party. On the project website, this means that the website has an editorial board with at least one independent person who is not member of the project. Also, for example, publications made public by the author through an individual library's publication archive will not be reported, unless the publication has been decided by a third independent party.

Novelty

The publication must contain **new** scientific, professional or artistic content in such a way that it has not previously been published in the form to be reported in the data collection. Thus, for example, a publication stored in a publication archive (e.g., arXiv.org) can be reported as it appears in a journal or other reportable format.

New editions, updates and abstracts

New editions of own or other texts are not reported if the publication has not been significantly modified compared to the previous edition. Updates to online publications are also not reported as new releases.

Summaries of a publication or report shall not be reported if it is clearly indicated that it is a summary of another publication.

Translations

Translations of own or other texts are also generally not reported. An exception is made in the case of the so-called scientific translation (e.g. an original translation of ancient texts, inscription or classic works in the field), which is accompanied by an extensive introduction or preface by the editor/translator and/or the translator comments, and then may be reported as a translated publication. Translations can also be part of a compilation, i.e. a book can have one or more translations and a related introduction or preface from one or more different translators. The translation and the introduction form one publication, if eligible.

The translation of the entire work can also be accepted in the case of the so-called scientific translation (includes translator comments and/or extensive introduction, likely peer-reviewed). In this case, the work is compared to the edited book.

Fictional translations are another exception. The translation work of a fictional text can be recorded as an art publication if the other data collection requirements are met.

No other translations than scientific or fictional are reported. Other translations are considered as an activity, cf. Types and roles of activities and awards; Subsection <u>2.2: Translation work</u>.

Author's connection to an organization

The author's connection to the organization generally means that the organization (higher education institution, research institute or university hospital) has enabled creation of the publication and the research required for it. In practice, this means that the author is in the service of or has another contractual relationship with the organisation (post-graduate students according to the criteria given below) or that the organisation has otherwise enabled the publication.

In the case of postgraduate students at universities, publications are recorded from those postgraduate students who A) actively attend teaching aiming for a post-graduate degree and B) have been receiving a regular grant for at least 6 consecutive months. If the author of the publication is not linked to the organisation based on a service contract or the right to a post-

graduate degree, the author must have received the resources and the working environment (equipment, materials, research group) which enabled the active research from the organisation. As a result of the new status of universities, a docentship will become an honorary title and thus is not an adequate proof of affiliation to a university on its own.

The affiliation with the organisation is primarily established on the basis of affiliations cited by the author in the publication (in other words, the author gives the name of the institution as the author's home organisation in the publication). For this reason, researchers must be particularly careful to include the name of the organisation in the publication in the correct format. Publications will be recorded for the organisation in which the research associated with the publication was mainly carried out, even if the researcher had moved on to another organisation before the publication came out.

A dissertation can be recorded both for the university where the degree was gained and for the organisation with which the researcher has a service contract or another contract.

Undergraduate student publications are not taken into account in the publication data collection by the Ministry of Education and Culture. Publications of persons in vocational specialization training are also not taken into account.

Based on research work

The publication must be based on **research or expert activities** carried out by the author. For instance, publications exclusively related to extracurricular, third sector or business activities and not based on research activities will be unreported. Nor will publications exclusively intended for marketing communications be reported on.

5. Types of publications

Depending on their intended use, publications can be roughly divided into six groups, which are determined by the primary target audience of the publication channel.

Publication types A, B and C are publications intended to promote science and to produce new information primarily for the use of researcher's own scientific community. They fulfil the definition of a scientific publication.

Publication types D are publications intended to disseminate research-based information to the professional community. They meet the definition of a professional publication.

Publication types E are publications that disseminate scientific and professional information to the surrounding society.

Publication types F are public outputs of artistic activities.

Publication types G are theses.

Publication types H-I are other publications resulting from research activities (e.g. information and communication technology applications) that differ in their format from the previous groups.

Definition of a scientific publication (publication type main categories A, B and C)

The common feature of scientific publications is that they fulfil the following three conditions:

1. The publication must produce new information in relation to previous research data on the same subject.

- 2. The publication must be presented in a format that enables the verification of the research results and/or use of the research results in a new research, thus allowing other researchers to assess the research results and use them in their own work.
- 3. The publication channel for the publication specialises in publishing scientific research results, and it has an editorial staff consisting of experts in the field of science as well as a <u>peer review practice</u>. (Note: non-refereed publications may also be published on scientific publication channels).

All criteria are applied according to the established practices for each field of science.

Definition of a professional publication (publication main category D)

Professional publications refer to publications that disseminate information based on research and development for the use of the professional community. The readership of professional publications mainly includes persons trained in the field who apply the information to their practical work. The target audiences of scientific and professional publications may be partly the same, and individual articles published in both groups may be very similar.

Professional publication channels include the following trade journals:

Metsälehti, Käytännön maamies, Sosiaalitieto, Kehittyvä elintarvike, Acatiimi, Journalisti, Arkkitehti, Sairaanhoitaja, Puutarha & kauppa, Ulkopolitiikka and Opettaja.

Trade journals are an exception to this rule in that they also publish refereed scientific articles. Refereed scientific articles published in trade journals classified on levels 1 to 3 (e.g. Duodecim, Finnish Medical Journal, Exercise and Science, Finnish Dental Journal and Finnish Veterinary Journal) are marked as A1 or A2, despite the fact that the magazines are aimed primarily at the professional community. Non-peer-reviewed articles in these journals are marked as publication type D1 (article in a trade journal).

Various studies and reports based on scientific research and development, produced in support of political or professional decision-making and typically subscribed and published by a public body, such as a ministry, agency or government research institute, are also reported as professional publications. They are marked with publication type D4.

Peer review practices may also be used in professional publications. If a publication has been evaluated but its target group is professional, the publication will be marked as type D, despite being peer-reviewed.

Definition of a popular publication (publication main category E)

Popular publications refer to publications that disseminate information based on research and development to the public. Understanding their contents does not require particular familiarity with the field. Examples of popular publications include popular books, newspaper articles, popular magazine articles and network articles on online platforms taking a stand in public discussions.

Definition of an artistic publication (publication main category F)

Artistic publications refer to the public outputs of artistic activities. They can be either independent artistic outputs or partial realisations of collections following the conventions of different fields of art. The latter ones can be, for example, set design of a play, a painting in a joint exhibition or a role of an actor/actress. In addition, the publication type also contains those artistic partial realisations that are part of a publication which context is not primarily artistic. Such can be, for example, plans of an architect or designer. Publications that are produced for marketing purposes are not reported.

An artistic publication must always exceed the threshold under copyright law. For artistic publications, a connection with a higher education institution means that the author is employed by the higher education institution during the preparation, training and / or making of the publication and that the artistic activity is related to the person's employment description at the higher education institution. Having an artistic activity related to a person's employment description means that the activity is part of the person's work plan or has been agreed with the supervisor, for example, in development discussions. To the extent that artistic activity has not been agreed with the employer and this artistic activity forms a person's main job description outside the university, then this artistic activity is not to be reported in data collection. This may be the case, for example, for a part-time teacher. In the case of postgraduate students at universities, publications are recorded from those postgraduate students who A) actively participate in postgraduate teaching and B) have received a regular grant for at least 6 consecutive months during the preparation of the publication.

Definition of peer review

The peer review of scientific publications refers to a procedure by which a journal, conference or publishing house publishing research results requests that experts in the field of science carry out a preliminary evaluation of the scientific fitness for publication of manuscripts intended for publication. Publication data collection requires that the peer review meets the following criteria:

- The publication evaluators were independent in terms of the manuscript to be evaluated.
 Independent evaluators refer to accomplished researchers or other experts who are not editors of the publication series (journal or book series) or the publication (research book, journal special issue, conference publication).
- The process assesses the completeness of the material and the management of the theoretical framework, the reliability of how the research has been carried out and its accuracy, the originality of the results and their novelty value in relation to previous research, as characteristic of the field of science.
- The evaluation has covered the entire manuscript offered for publication rather than just an abstract or extract.
- The author has received a written referee statement of the peer review (original statement or a summary by the editorial staff/editor in chief).

In unclear cases, it must be possible to verify the peer review based on a written statement. As for the publications covered by reporting, peer review is required for publication types A1, A2, A3, A4, C1 and C2. If a Finnish science publisher uses the FFLS peer review identifier, only articles and separate books containing the identifier will be reported under the publication types mentioned above (http://www.tsv.fi/tunnus).



Peer review by independent experts should not be confused with editorial review, which assesses the suitability of a text, e.g. to the other contents of the compilation. Nor can an evaluation made by another author of the same book be regarded as an independent evaluation, unless it is anonymous in both directions, the so-called double-blind-review - evaluation. If the publication is peer-reviewed but its target group is the professional or public sector (decision-making), it is marked as type D despite the peer review.

Conference publication

Scientific conference papers are typical mainly in computer science and engineering. In most other areas, conference publication is an intermediate stage before publication in another publication channel. Articles in a compilation of presentations from a one-time event are marked as compilation articles (A3). Articles published in scientific journals, even if based on a presentation given at a conference, are marked as journal articles (A1, A2). In the above cases, the level of the publication forum is also determined by the according to the type of publication.

The publicity of a conference publication is determined in the same way as for other publications, i.e. the publication must be publicly available. A publication that is only public in the collection of an individual library (e.g. the publication archive) or on the researcher's website is not publicly available. Also, a publication distributed only to conference participants or publications that have a limited online access are not publicly available. For publications distributed on CD-ROM or USB stick, the existence of an ISBN indicate that the publication is intended public.

Conference publications cover a wide range of publications. The Ministry of Education and Culture's data collection takes into account the full written versions of the conference presentations (full paper) and the so-called Short paper / Work - in - Progress type of papers. Other types of conference publications (e.g. conference presentations abstracts, extended abstracts or posters) can also be entered into the Virta publication information service, but these are not taken into account in the statistics on publishing activities. Only the types of publications used by the scientific community in the evaluation of publishing activities are taken into account in the statistics on publishing activities. Other forms of conference presentations are considered to be the researchers' expert tasks, which are collected, displayed and transmitted in the Virta Publications Information Service and, more broadly, in the research.fi's data repository as part of the researcher's expert profile, but are not used in official statistics. Peer review in conference proceedings means peer review based on the entire manuscript, not just the abstract.

Publication type classification

The criteria on page 3 apply to all types of publications (public availability, external editorial board, novelty, author's connection to the organization, and research-based nature of the publication). The table below shows the minimum requirements for each publication type:

A Peer - reviewed scientific articles

- Fulfil the definition of a scientific publication;
- Fulfil the definition of peer review;
- The journal/series publishing the article has an ISSN identifier, and research books have an ISBN identifier.
- If the article is an introduction to a book or a journal, the author must provide a research contribution to it and the writing must be related to the author's work. Introductions or prefaces that merely describe the editorial work or table of contents of a publication are not reported.

A1 Journal article - refereed

- Article in a scientific journal, series or yearbook;
- Consists mainly of unpublished material;
- Also Medical Short report-style publications that undergo a peer review similar to the original articles;
- Also articles presenting original research published in the trade journals mentioned in the list of publication forums (e.g. Duodecim, Finnish Medical Journal, Sports and Science, Finnish Dental Journal and Finnish Veterinary Journal). Non-original articles and review

	articles are marked in category D1, regardless of whether the article is peer-reviewed.	
A2 Review article in a scientific journal	 A review article (e.g. review, systematic review, meta-analysis) in a scientific journal, series or yearbook; Fulfils the definition of a scientific publication with the exception of the requirement to generate new information; Is based on key original article material on the subject; 	
A3 Book chapter	 An article, introduction, or preface to a published scientific compilation of several articles by different authors and a yearbook with their own ISBN and unique title. 	
A4 Article in conference proceedings	 Published regularly in the printed or otherwise publicly available publication of a scientific conference; A complete written version of a conference presentation (full paper); Conference publications are typical in the fields of IT sciences. In other fields, conference articles are mainly research books or special issues of journals; The refereed articles in research books consisting of one-off conferences are entered under category A3 and the refereed articles of special issues in journals under categories A1 to A2. 	

B Non-refereed scientific articles

- Fulfil the definition of a scientific publication;
- The journal/series publishing the article has an ISSN identifier, and research books have an ISBN identifier.
- If the article is an introduction to a book or a journal, the author must provide a research contribution
 to it and the writing must be related to the author's work. Introductions or prefaces that merely
 describe the editorial work or table of contents of a publication are not reported.

B1 Journal article	- Writing in scientific journals as well as short case reports, short review articles, editorials, book reviews, discussion letters and commentary in scientific journals. The above article types are assigned to category B1, even if they are peer-reviewed.
B2 Book chapter	 An article, an introduction or a preface in a published scientific research book consisting of articles by various authors
B3 Article in conference proceedings	 Published regularly in the printed or otherwise publicly available publication of a scientific conference; A complete written version of a conference presentation (full paper); Conference publications are typical in the IT field. In other fields, conference articles are mainly published in research books or special issues of journals; The non-refereed articles in research books consisting of one-off conferences are entered under category B2 and the non-refereed articles of special issues in journals under category B1;

C Scientific books (monographs)

- Fulfil the definition of a scientific publication;
- Fulfil the definition of peer review;
- The book has an ISBN number.

C1 Scientific book	 The entire book was written by its author(s); A new edition of the book may be reported on if the book has been modified sufficiently compared to the previous edition.
	Note. Non-refereed monographs are entered under category D4, D5 or E2
C2 Edited book	 Edited scientific book or special issue of journals consisting of various articles by different authors; The authors have been in charge of editing the book, and their names are indicated among the editors.
	Note. Non-refereed edited books are entered under category D6 or E3

D Publications intended for professional communities

- Fulfil the definition of a professional publication;
- These also include publications in journals with no ISSN identifier or scientific books with no ISBN identifier
- If the article is an introduction to a book or a journal, the author must provide a research contribution
 to it and the writing must be related to the author's work. Introductions or prefaces that merely
 describe the editorial work or table of contents of a publication are not reported.

- Article in a trade journal;
- An article in a scientific journal that does not have an ISSN.
 An article in a professional manual or guide, information system or research book, text book material or short articles in an encyclopaedia.
 Published regularly in the printed or otherwise publicly available publication of a scientific conference; A complete written version of a conference presentation (full paper)
 A published development or research report or study based on research or expert work that is publicly available; The publisher is generally a non-scientific publisher, usually a public party such as a ministry, a financier, a higher education institution or research institution.
 A published professional book, text book, a professional manual or guide or a dictionary. The book has an ISBN number. (The category does not include handouts, online or other similar material created solely for a single course)
 An edited, published professional research book consisting of articles by various authors or an editorial in a thematic issue of a professional journal; The authors have been in charge of editing the book, and their names are indicated among the editors.

E Publications intended for the general public

- Fulfil the definition of a popular publication

E1 Popularised article, newspaper article	 An article, review or editorial in a journal, series, research book or online platform for the general public (e.g. alusta.uta.fi). The category does not include brief comments or letters to the editor. Long addresses in which the individual often uses the name of the home organisation will be taken into account in the data collection procedure (e.g. expert articles in Helsingin Sanomat, the Tebatti addresses in Talouselämä magazine). Articles written by the author while working for the newspaper or magazine are not included in the category. 	
E2 Popularised monograph	- A published non-scientific, popular book	
E3 Edited popular book	 An edited, published popular research book consisting of articles by various authors; The authors have been in charge of editing the book, and their names are indicated among the editors. 	
F Public artistic and design activi - Fulfils the definition of an artis	ties tic publication, see the definitions in the Ministry of Education and	
Culture data collection manua		
F1 Published independent work of art	- An independent art publication that is not part of another work of art or does not contain elements that can be considered independent artistic publications.	
F2 Partial implementation of an artistic work	 An art publication can have a close, inseparable relationship with a co-publication, but it can still be valued as a separate work as per field-specific practice (for example, the staging of a play, a painting in a co-exhibition, a chamber musician's part in a concert, an actor's performance). The compilation work for a publication is also entered under this category, i.e. the selection of parts, defining general artistic policies and working on the partial publications with the authors to make them fit within the publication (for example, directing a dramatic work, artistic directing/production of concerts). 	
F3 Artistic part of a non-artistic publication	- An artistic part of a publication whose context is not primarily artistic but whose artistic part is valued in the art community in question. For example, the plans of an architect or designer.	
G Theses		
G1 Polytechnic thesis, Bachelor's thesis	- Not part of the data collection	
G2 Master's thesis, polytechnic Master's thesis	- Not part of the data collection	
G3 Licentiate thesis	- Not part of the data collection	
G4 Doctoral dissertation (monograph)	Note: If the work consists of articles, the articles will be entered separately under categories A to E; - A doctoral dissertation (monograph) published in a university or institutional series, a published doctoral dissertation (monograph) or	
G5 Doctoral dissertation (articles)	 privately printed doctoral dissertation (monograph); Note. If it consists of articles, the articles are marked separately in categories A-E; 	
	· · · · · · · · · · · · · · · · · · ·	

	- Published dissertations can be reported, even if the dissertation articles are also recorded separately as independent publications				
H Patents and innovation announcements					
- Meet the definition of a patent / invention notification, see more detailed definitions from the OKM Data Collection Handbook.					
H1 Granted patent	 The exclusive right granted by society to the inventor for the professional exploitation of the invention, in return for which the inventor must allow the publication of her/his invention. 				
H2 Invention announcement	- A written notification (invention notification form) to a higher education institution, which the inventor must make immediately after she/he has made an invention falling within the scope of the Higher Education Invention Act (369/2006).				
- Fulfil the definition of audiovisual publications and ICT applications, see the definitions in the data collection manual of the Ministry of Education and Culture.					
The author can be, for example, a journalist, a screenwriter or person who produced the material. Information about the authors of the publication can be found in the publication itse the publication platform; - A multi-part or continuous plot is marked only once.					
I2 Information and communication technology program or software applications	 Information and communication technology software or algorithm published as commercial or free software; The author can be, for example, an application developer or designer; Any artistic part related to the application may also be recorded as an artistic publication in category F3. 				

Selection of the publication type for the publication

		ARTICLES				SEPARATE BOOKS		
		IN JOURNALS		IN	IN			
			Revie	RESEARCH	CONFERENCE	MONOG	EDITED	REPORTS
		Original		BOOKS	PUBLICATION	RAPHS	BOOKS	
			W	BOOKS	S			
REFEREED	Scientific	A1	A2	A3	A4	C1	C2	
	Scientific	B1		B2	В3	D5/E2	D6/E3	
NON- REFEREED		D3	D5	D6	D4			
	Popular		•	E1		E2	E3	

6. Publication Forum

The publication type classification classifies individual publications according to their format and target audience, while the <u>Publication Forum classification</u> assigns a level classification to the publication channel (magazine, series, conference or publishing house) in which the publication has appeared. Publications under various publication types may be published on an individual publication channel (e.g. both refereed and non-refereed publications may be published in a journal).

Publications published in channels listed for levels 1 to 3 are scientific publications (A to C), with a few exceptions: Some trade journals (e.g. Finnish Medical Journal, Duodecim, Exercise and Science, Finnish Dental Journal and Finnish Veterinary Journal) publish both refereed scientific articles and articles targeting the professional public.

However, a publication may be scientific and may be recorded in publication types A to C, even if its publication channel has not been approved at level 1-3 in the Publication Forum. These include, for example, new or local publication channels (e.g. universities' own publication series).

7. Field of science classification

In publication data collection, fields of science refer to the subject matter of the publication. The field of science is not primarily determined based on the publication channel or the home department or unit of the authors but rather on the content of the specific publication.

One to six fields of education are given for the publication in the order of relevance of each field to the publication. The first field is the so-called primary field of science used, for instance, for the compilation of statistics on publications. Information on the field of science is essential for monitoring research activities.

The 2010 <u>Field of science classification by Statistics Finland</u> applies to the classification of publications.

8. Open access

With regard to the open availability of a publication, data on the (current) open availability of the publisher's version of the publication, the type of open access to the publication channel and the green open access of the publication are collected separately in the publication data collection. Based on this information, it is possible to determine the open availability of the publication. In addition, in connection with the open access to the publication, information is collected on the open access fee paid to the publisher and on the open access of the PrePrint version of the publication. Regardless of the open access status of the publication channel, all publications should be self-archived to ensure long-term access to them Open access to the publication can be achieved through the openness of the publisher's version or parallel recording.

The open availability of a publisher's version of a publication means that the publication is immediately and permanently available on the publisher's service. The publication may have been made available free of charge or the publisher has been paid for the transparency of the publication. If the publisher's version is only openly available after the embargo period specified by the publisher, the publisher's version of the publication is not considered open according to the data collection definition, but information on delayed transparency can be reported as part of the data collection.

The open availability of a parallel recording version of a publication means that a parallel recording of a publication (green OA) is permanently available in an organizational or disciplinary publication archive, either immediately or after an embargo period specified by the publisher. In the case of both the publisher's version and parallel published version, open access to the publication means that the following conditions are met:

- 1. The publication can be read, printed out and copied on the Internet free of charge and in an accessible way, at least for non-commercial use.
- 2. The publication is publicly available in a service offered by the publisher or the research organisation which enables harvesting the publication's metadata and indexing its content for other search services and supports making references to the publication and linking it to website addresses that are based on permanent identifiers (DOI, URN, Handle).
- 3. The publicly available version of the publication is either the final self-archived version of the publication or the final version published in the publisher's service, depending on the publication contract or the publisher's policy. If the publication is <u>refereed</u>, the open access version must also be refereed.

In particular, the interpretation of condition 2 must consider the different development stages of the technical systems and their possibilities to provide a website address that is based on permanent identifiers. If the publication has not been given a permanent address, a non-permanent web address can be reported instead. For parallel storage services maintained by domestic research organizations, the fulfillment of condition 2 is not yet necessary.

The possibility to indicate the availability of an open version of the PrePrint publication in an organizationor discipline-specific publication archive has also been added to the data collection. However, the open version of PrePrint is not considered to be equal to an open publication as defined in the data collection.

As a general rule, so called Free articles, that are opened by magazines for marketing purposes and might only be open temporarily, are not be reported as open access publications, unless there is certainty that they will remain permanently open.

9. Data collected on publications

The reference data collected on the publication types A-E and G4-G5 for 2021 have been listed in the table below:

Reference data

1 Publication type*	Category under the Publication type classification.	
2 Field of science of the publication*	One to six fields of science according to the <u>field of science</u> <u>classification of Statistics Finland</u> in the order of relevance of each field to the publication. The first, so-called primary field of science is mandatory.	
3 Organisation authors*	Researchers at the organisation involved in producing the publication.	
4 Organisation sub-unit*	Faculties, departments or units of the organisation whose staff includes the authors of the publication.	
5 Organization ID *	The five-digit code of the university announcing the publication (see the university numbers 2021). In the case of joint publications, each participating organization will indicate its own organization ID when publishing.	

6 Publication authors*	Full-length information about the author(s) of the publication in the format and order in which they were listed in the original publication or source database.
7 Number of authors in publication*	The total number of authors in the publication. If the number of authors exceeds 50, it is sufficient to enter '50'. If the authors comprise groups, the group members will be included as authors following the common practice in the field of science in question, or as agreed between the research groups.
8 International co-publication* (yes/no)	At least one author of the international co-publication is affiliated to a non-Finnish organisation (the author may also be affiliated to both a Finnish and foreign organisation). The foreign editor of the publication channel does not yet meet the criteria for international co-publications.
9 Co-publication with a company* (yes/no)	At least one author of the publication is affiliated to a national or international company (the author may also be affiliated both to a research organisation and a company). Company refers to an enterprise other than a state-owned group carrying out specific government tasks (such as VTT Technical Research Centre of Finland Ltd).
10 Publication name*	Publication name as given in the article or the book. If necessary, the name of a foreign-language publication may be reported on as a transliterated version.
11 Year of publication*	The year in which the publication was first published with a complete reference data. In the case of scientific journal articles in particular, the year of publication can be defined in two different ways, cf. For more information on marking the year of publication.
12 Volume	Volume of the journal or series in which the article appeared.
13 Issue	Issue of the journal or series in which the article appeared.
14 Pages	Publication page numbers on which the article was published in the same format as in the original article or source database.
15 Article number	Article number used for the publication of the article (if applicable) in the same format as in the original article or source database.
16 Publication language	The language used to write the publication according to the Languages 2003 classification of Statistics Finland
	Full list, see Koodistot (suomi.fi) Code=languages
17 Journal / series name**	Full list, see <u>Koodistot (suomi.fi) Code=languages</u> Journal/series name, as complete as possible, and spelled out (no abbreviations).
17 Journal / series name** 18 ISSN**	Journal/series name, as complete as possible, and spelled out (no
	Journal/series name, as complete as possible, and spelled out (no abbreviations). The ISSN number of the series publishing the journal, monograph or parent publication according to the primary printed version. If there is no printed version, the ISSN number of the electronic
18 ISSN**	Journal/series name, as complete as possible, and spelled out (no abbreviations). The ISSN number of the series publishing the journal, monograph or parent publication according to the primary printed version. If there is no printed version, the ISSN number of the electronic version will be indicated.

22 Publisher**	Publisher's name, as complete as possible, and spelled out (no abbreviations).
23 Place of publishing	The place or places given in connection with the publication's publisher.
24 Internationality of publication* (domestic/international)	A Finnish publication means a publication that is published by a Finn or is primarily published in Finland. An international publication means a publication that is not published by a Finnish publisher or is primarily published elsewhere than in Finland. A more specific Country of Publication may be indicated for an international publication as a country of publication reference. For conference publications, publisher means the publisher of a conference publication.
25 Country of publication	Country of publication of the publisher of the magazine, series, monograph or parent publication. The Country of Publication information can be used to refine the Publication Internationality reference information.
26 DOI	The DOI of the publication.
27 Permanent website address	Website address based on permanent identifiers (e.g. DOI, URN or handle) of the publication that takes the user directly to the full text version of the publication (a publicly available version or a limited access version on the publisher's server).
28 Open access publication* (publication OA status) (new)	Open access to the publication according to the following code: 0 = Not open 1 = Openly available Indicates the open access status of the publication in the publisher's service at the time the publication is registered.
29 Open access publishing channel *** (publishing channel OA status)	Open access to the publication channel according to the new data model according to the following code: 0 = No answer 1 = Fully open publishing channel (all publications in the publishing channel are open) 2 = Partially open publication channel (both open and non-open publications are available in the publication channel) 3 = Delayed open publishing channel (appeared in a publishing channel whose publications are open after the publisher-specified embargo time) For a transitional period, it is also possible to provide only van-ha open access information, cf. more detailed instructions on reporting open availability during the transition period. Open access to the publication according to the old data model according to the following code: 0 = No answer 1 = Publication in the Open Access publishing channel (all publications in the publishing channel are openly available)

	2 = Open publication in the hybrid publication channel (both open and non-open publications in the publication channel)
30 Open access publication fee	The amount of the same fee paid to the publisher for open access to the organization's publication
31 Open availability publication fee year ***	The year in which the publisher was paid for the transparency of the publication.
32 License	Publisher's license to publish.
33 Source database code	Publication identifier or ID number in the database from which its record was harvested (e.g. Web of Science, Scopus, Pubmed, ArXiv, Cab Abstracts, Arto, Fennica).
34 Publication channel ID (JUFO-ID)	Publication channel identifier according to the codes of the Publication forum (JUFO-ID).
35 Higher education institution- specific ID of publication *	The higher education institution's organisation-specific ID for the publication.
36 Established conference name**	The established name of the conference applies to those conference publications in which the information exists. The information is used to determine the publication levels of conference proceedings.
37 Key words	Key words that describe the content of the publication as accurately as possible.
38 ORCID-ID	The ORCID identifiers of authors from the reporting organisation, e.g. 0000-0000-0000-0000, refer to http://www.orcid.org
39 Self-archived publication * (yes/no)	The publication is self-archived in the publication archive of the organisation or the field of science, whether immediately or after a reasonable embargo specified by the publisher. The publication may be a so-called publisher's version or so-called final draft version, ie the author's final (refereed) version.
40 Website address of the self- archived version***	The website address of the self-archived version of the publication stored in the organisation- or field-specific archive (e.g. URN).
41 Version of a parallel recording	Version information of a parallel recording according to the following codec: 0 = Final draft, ie the researcher's own final (peer-reviewed) version 1 = Publisher version
42 Embargo on parallel recording	The date of expiry of the embargo period of a co-recorded publication in a situation where the co-recording is only open after the embargo period specified by the publisher.
43 Concurrent License	License information for a co-stored publication.
44 PrePrint	An open version of a manuscript available in an organization- or discipline-specific publication archive that has been submitted to the publisher by the author of the publication and has not yet been peer-reviewed.
45 PrePrint Address ***	Web address (e.g., URN) for the PrePrint version of the organization or discipline-specific publication archive.
46 Abstract	Brief description of the content of the publication, research methods, main results, etc. The copyright license of the publication must allow further use of the summary of the publication.

^{*)} Mandatory for all publications.

**) Mandatory depending on the type of publication, see data-requirements-publication-types-A-C and publication types D-E

***) Mandatory depending on other information reported, see a more detailed description of the data to be collected on page Data content of the publication data collection: publication types A-E and G 2021.

The reference data collected on the publication type F for 2021 have been listed in the table below:

Reference data

1 Dublication tune*	Catagony undoutho Dublication turns also ification
1 Publication type*	Category under the Publication type classification.
2 Field of science of the	One to six fields of science according to the <u>field of science</u>
publication*	classification of Statistics Finland in the order of relevance of each
	field to the publication. The first, so-called primary field of science is
2.0*	mandatory.
3 Organisation authors*	Researchers at the organisation involved in producing the publication.
4 Organisation sub-unit*	Faculties, departments or units of the organisation whose staff includes the authors of the publication.
5 Organization ID *	The five-digit code of the university announcing the publication (see
	the university numbers 2021). In the case of joint publications, each
	participating organization will indicate its own organization ID when
	publishing.
6 Publication authors*	Full-length information about the author(s) of the publication in the
	format and order in which they were listed in the original publication
	or source database.
7 Number of authors in	The total number of authors in the publication. If the number of
publication*	authors exceeds 50, it is sufficient to enter '50'. If the authors
	comprise groups, the group members will be included as authors
	following the common practice in the field of science in question, or
	as agreed between the research groups.
8 International co-publication*	At least one author of the international co-publication is affiliated to
(yes/no)	a non-Finnish organisation (the author may also be affiliated to both
	a Finnish and foreign organisation). The foreign editor of the
	publication channel does not yet meet the criteria for international
	co-publications.
9 Co-publication with a company*	At least one author of the publication is affiliated to a national or
(yes/no)	international company (the author may also be affiliated both to a
	research organisation and a company). Company refers to an
	enterprise other than a state-owned group carrying out specific
	government tasks (such as VTT Technical Research Centre of Finland
10 Publication name*	Ltd). Publication name as given in the article or the book if necessary the
to Publication name*	Publication name as given in the article or the book. If necessary, the name of a foreign-language publication may be reported on as a
	, ,
	transliterated version.
11 Year of publication*	The year in which the publication was first published with a complete
	reference data. In the case of scientific journal articles in particular,
	the year of publication can be defined in two different ways, cf. For
	more information on marking the year of publication.
12 Publication language	The language used to write the publication according to the
	Languages 2003 classification of Statistics Finland
40 10001	Full list, see Koodistot (suomi.fi) Code=languages
13 ISSN	The ISSN number of the series publishing the journal, monograph or
	parent publication according to the primary printed version. If there

	is no printed version, the ISSN number of the electronic version will
14 ISBN	be indicated. Publication or parent publication ISBN number.
15 Parent publication name	Name of the edited book in which the article was published. The name of the parent publication of conference publications will be written as indicated on the publication.
16 Publisher	Publisher's name, as complete as possible, and spelled out (no abbreviations).
17 Place of publishing	The place or places given in connection with the publication's publisher.
18 Internationality of publication* (domestic/international)	A Finnish publication means a publication that is published by a Finn or is primarily published in Finland. An international publication means a publication that is not published by a Finnish publisher or is primarily published elsewhere than in Finland. A more specific Country of Publication may be indicated for an international publication as a country of publication reference. For conference publications, publisher means the publisher of a conference publication.
19 Country of publication	Country of publication of the publisher of the magazine, series, monograph or parent publication. The Country of Publication information can be used to refine the Publication Internationality reference information.
20 DOI	The DOI of the publication.
21 Permanent website address	Website address based on permanent identifiers (e.g. DOI, URN or handle) of the publication that takes the user directly to the full text version of the publication (a publicly available version or a limited access version on the publisher's server).
22 Open access publication* (publication OA status) (new)	Open access to the publication according to the following code: 0 = Not open
	1 = Openly available
	Indicates the open access status of the publication in the publisher's service at the time the publication is registered.
23 Open access publishing channel *** (publishing channel OA status)	Open access to the publication channel according to the new data model according to the following code: 0 = No answer 1 = Fully open publishing channel (all publications in the publishing channel are open) 2 = Partially open publication channel (both open and non-open publications are available in the publication channel) 3 = Delayed open publishing channel (appeared in a publishing channel whose publications are open after the publisher-specified embargo time)
	For a transitional period, it is also possible to provide only van-ha open access information, cf. more detailed instructions on reporting open availability during the transition period.

	Open access to the publication according to the old data model according to the following code: 0 = No answer 1 = Publication in the Open Access publishing channel (all publications in the publishing channel are openly available) 2 = Open publication in the hybrid publication channel (both open and non-open publications in the publication channel)
24 Open access publication fee	The amount of the same fee paid to the publisher for open access to the organization's publication
25 Open availability publication fee year ***	The year in which the publisher was paid for the transparency of the publication.
26 License	Publisher's license to publish.
27 Source database code	Publication identifier or ID number in the database from which its record was harvested (e.g. Web of Science, Scopus, Pubmed, ArXiv, Cab Abstracts, Arto, Fennica).
28 Higher education institution- specific ID of publication *	The higher education institution's organisation-specific ID for the publication.
29 Key words	Key words that describe the content of the publication as accurately as possible.
30 ORCID-ID	The ORCID identifiers of authors from the reporting organisation, e.g. 0000-0000-0000-0000, refer to http://www.orcid.org
31 Self-archived publication * if applicable	The publication is self-archived in the publication archive of the organisation or the field of science, whether immediately or after a reasonable embargo specified by the publisher. The publication may be a so-called publisher's version or so-called final draft version, ie the author's final (refereed) version.
32 Website address of the self- archived version**	The website address of the self-archived version of the publication stored in the organisation- or field-specific archive (e.g. URN).
33 Version of a parallel recording	Version information of a parallel recording according to the following codec: 0 = Final draft, ie the researcher's own final (peer-reviewed) version 1 = Publisher version
34 Embargo on parallel recording	The date of expiry of the embargo period of a co-recorded publication in a situation where the co-recording is only open after the embargo period specified by the publisher.
35 Concurrent License	License information for a co-stored publication.
36 Field of art	1-7 field of art are reported for artistic publications
37 Role of the author	Roles of the author or authors of the reporting organization. Especially in the case of partial implementations, the role of the author is important. For example, the director of a theater performance, the curator of an art exhibition, the singer of a band, etc.
38 Additional information: Art type	Type category according to JURE. Art type categories can be reported if they are collected in the system of the reporting organization. Type categories resemble a role, but they are an output property where the role is an author property. Reporting a role is recommended.
39 Additional information: Event	Information on the event in which the publication was presented. The name of the event is reported, such as the Sodankylä Film Festival, the Kaustinen Folk Music Festival, etc.

40 Additional information: Publication year	Dates (e.g. time slots), number of shows, etc.
41 Additional information: Place of publication	Place of publication at the country of publication.
42 Additional information: Other identifier	For example, the product identifier or identifiers of a CD, notes, etc.
43 PrePrint	An open version of a manuscript available in an organization- or discipline-specific publication archive that has been submitted to the publisher by the author of the publication and has not yet been peer-reviewed.
44 PrePrint address**	Web address (e.g., URN) for the PrePrint version of the organization or discipline-specific publication archive.
45 Abstract	Brief description of the content of the publication, research methods, main results, etc. The copyright license of the publication must allow further use of the summary of the publication.

^{*)} Mandatory for all publications.

**) Mandatory depending on the type of publication, see data-requirements publication type F