

**Ministry of Education  
Publication Type Classification**

**Manual 2010**

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## Introduction

Publications constitute the most important form of communication in nearly all academic research. Exceptions to this are research areas typified, for example, by patents and commercial applications. Publications make scientific information publically available, and allow the rest of the academic audience to evaluate the quality of the research. Through publishing their findings, researchers gain recognition and become identified with scientific results. Publications are also a significant way to disseminate academic knowledge to the surrounding social environment. Alongside research, artistic activities form one of the three main duties of higher education institutions.

The Ministry of Education has gathered information on the publication activities of universities since 1994 and polytechnics since 2006. Classification of the collated data has differed according to the sector, and the types of publication used have not covered the entire publication activities of higher education institutions.

The publication type classification presented in this manual creates a basis for a common classification within the entire higher education sector, and seeks to provide a sufficient level of accuracy to encompass the publication activities of the entire field. For improved scope, the publication type classification also includes separate categories for theses. The publication type classification has been developed in cooperation with universities and polytechnics during 2007-2009.

From 2010, the Ministry of Education will be implementing the publication type classification presented in the manual for the purposes of its own data collection. Further instructions on the data collection will be published separately. The publication type classification will also be adopted for the joint data warehouse of higher education institutions, which is under preparation. Higher education institutions may utilise more accurate classifications as necessary, but their internal data collection will be enhanced if the adopted classifications can be made compatible with the classification presented in this manual.

## Definitions of data collection

The key concepts adopted for the publication type classification and for the Ministry of Education's data collection instructions are defined below.

### *Definition of a scientific publication*

All publications by researchers and other staff at higher education institutions are based to some extent on the scientific activities of the author. In general, publications can be divided into two categories according to their purpose: A) publications intended to advance science and generate new information, and B) publications intended to disseminate information to the social environment. The publication type classification adopts the term *scientific publication*, which refers to publications in the aforementioned group A. *Scientific publications* share the following four conditions.<sup>1</sup>

1. The publication must generate new information. The definition applies the established practices of each scientific field regarding new information produced by the publication in relation to existing publications.
2. The publication must be presented in a form that allows the research results to be verified and/or used in a new study. The importance of verifying the research results depends on the field. Fields that do not consider this to be very important are more interested in the publication allowing research results to be evaluated and used by other researchers.
3. The publication and at least its bibliographic data must be presented in a language and published through a channel that makes it available to all interested researchers. The publication language is evaluated in relation to the research field. Some fields may make the publication available to all interested researchers in Finnish or Swedish. The publication channel must be evaluated in the light of both the date of publication and the future (especially regarding electronic publications).
4. The publication channel must have an evaluation practice in place, whereby the text intended for publication is evaluated by at least one external party familiar with the field. The publication channel must comply with evaluation practices in relation to the examined text. In some instances, the publication's editorial board may also be considered as evaluators.

### *Definition of artistic and design activities*

Artistic activities comprise part of the statutory duties of higher education institutions. In order to compare the scope of artistic activities of higher education institutions with that of their research activities, the artistic and design activities have been included as a separate category in the publication type classification. Established practices do not exist for defining artistic activities. Three nominal conditions are presented below for defining artistic and design activities and their outcomes.

1. The outcome of artistic and design activities is the result of purposeful activities by the author or authors.

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<sup>1</sup> Definitions of The Norwegian Academy of Science and Letters have been applied in the definition of the conditions.

2. The outcome of artistic or design activities must be public or used by some other party. The publication or public presentation of the work has, in principal, been the decision of a party other than the author him/herself, such as the commissioner, curator, producer or publisher. The public presentation of the work must be verifiable afterwards.

3. The outcome of the artistic or design activities is considered to constitute the first public presentation of the work, as well as each presentation that requires artistic input on the part of the author. The definition of artistic input varies according to the field.

When recording the outcome of artistic and design activities, particular attention must be paid to the third condition defining the number of times this is done.

### ***Peer review***

Peer review refers to the evaluation of manuscripts sent for publication by external experts selected by the editorial board of the publication series. In some instances, the editorial board of the publication may also be considered as comparable with peer reviewers. The peer review evaluates issues such as whether the article complies with the stylistic standards of the scientific community, whether the work is placed in the right framework (e.g. whether previous publications have been cited correctly), and any obvious errors. The minimum requirements for a peer review include:

- The evaluation covers the entire manuscript (not just a summary or extract)
- The peer review is conducted prior to publication
- The peer review is conducted by a distinguished expert independent of the author of the publication.

### ***Scientific publisher***

The definition of a scientific publisher is used to ensure the scientific nature of books and research books in instances where a separate peer review is not carried out.

Scientific publishers include commercial scientific publishers as well as domestic and international scientific associations. Scientific publishers also comprise higher education institutions and their research departments as well as public research institutes, in so far as their publication activities fulfil the criteria for scientific publishing. Commercial scientific publishers are considered to be those whose main field of operations are the publication of books and journals. The membership list of Suomen tiedekustantajien liitto ry (the Finnish Association for Scholarly Publishing), for example, can be used as an aid for defining scientific publishers.

The following publishers do not in general constitute scientific publishers in accordance with the definition adopted for the publication type classification:

- Companies responsible solely for printing and distributing the publication, but which do not essentially publish or edit books
- Publishing units at galleries or museums

### ***The author's affiliation with a higher education institution***

Researchers at higher education institutions have different contract levels and durations. For the data describing the publication activities of higher education institutions to be reliable and comparable, the institution that submitted the publication must have an established connection with the author.

The above connection exists in instances where the author has received remuneration or other assistance from the higher education institution (e.g. the provision of premises or guidance). However, if the author has conducted most of the research for the publication elsewhere, yet the study is published under the name of the higher education institution where he/she is temporarily employed, the data does not genuinely depict the publication activities of the institution. The mere title of adjunct professor (dosentti) does not indicate an employment relationship with a university.

For the publication data to genuinely describe the research activities of higher education institutions, the affiliation of the author must be indicated in the publication. If for some reason the publication does not clarify the affiliation, the author must state in writing that he/she is in an employment relationship or a postgraduate student of the higher education institution. The affiliation can also be verified by the personnel manager or from the employment register.

Publications are recorded of those postgraduate students who A) participate actively in postgraduate teaching, and B) have received a regular grant for a minimum of 6 consecutive months.

### ***Joint publications***

The criteria for joint publications between researchers vary according to the scientific field. For some fields, it is regular practice to mention all of the researchers who have participated in the project in some way, while for others only the name of one researcher is mentioned in the publication data, even if he/she has received considerable assistance from other researchers.

For this reason, joint publications are registered under each author, but recorded only once per higher education institution within the data collection of the Ministry of Education for the sake of comparability. (E.g., the same publication has 3 authors from university Xx and 1 author from university Y, so in data collections the publication is entered once per university).

### ***Electronic publications***

The publication type classification does not separate electronic publications from other publication formats. Electronic publications do, however, require ISSN codes and ISBN numbers, if the printed publication also requires them. Each publication is entered only once even if it appears in several formats (e.g. electronic and printed).

Online media includes a great deal of non-traditional types of publication, such as blogs, Wikipedia articles and other websites. These new formats also publish a large number of important scientific publications. However, it is not possible to separate scientifically or socially important publications from these new types of publication, and they are thus excluded from the data collection.

## ***Publication country***

Currently, a large part of scientific publishing takes place in English, which has established its position as the main language for most scientific communities. Nevertheless, most fields publish scientific journals also in Finland and in Finnish. On the other hand, some of the publications published in Finland are in languages other than Finnish.

The publication type classification does not differentiate between domestic and international publishing. The data collection of the Ministry of Education, however, is categorised into domestic and international publications. Domestic publications refer to those with a Finnish publisher, or which are primarily published in Finland. International publications refer to those with a non-Finnish publisher, or which are primarily published in some country other than Finland.

## ***Publication year***

The publication year refers to the year when the publication was published for the first time as a version with full reference data (volume, number, page numbers). The online and printed versions of a journal article can be published in different years. The publication year is generally displayed in the publication. If this is not the case, (e.g. in the case of some electronic material), the publication year must be verifiable by the publisher.

## ***Open Access***

Open access generally refers to a publication that is downloadable and readable via the Internet free of charge and which can be redistributed in a non-commercial manner without restrictions or charges. Open access publications do not refer to open access copies of subscription publications available for reading, e.g. via the digital archive services of research organisations.

The Ministry of Education's publication type classification does not separate open access publications from subscription publications. In other words, open access does not constitute a publication type definition in itself. The scientific peer review procedure is also a requirement for open access publications for them to be registered as a peer-reviewed publication.

The publication data collected by the Ministry of Education includes open access-type publications as one of the characteristics taken into consideration.

## ***Data collection by the Ministry of Education***

The Ministry of Education collects data on the publication activities of higher education institutions on an annual basis, in accordance with the types of publication defined in this manual. Category G, i.e. theses, remains outside the data collection carried out by the Ministry of Education.

Data collected from each publication:

- Publication type
- Publication country (domestic / international)
- Open access-type publication (yes / no)

- Field of science of the publication (Field of Science and Technology (FOS Classification of Statistics Finland))
- Field of education of the publication (universities: Study Administration's field of study classification from 1995, polytechnics: Study Administration's field of study classification from 2002)

Further instructions on data collection will be published separately in 2010.

## **Types of publication:**

### ***A Peer-reviewed scientific articles***

#### **A1 Journal article (refereed), original research**

- Fulfils the definition of a scientific publication
- Mainly includes unpublished material
- Peer-reviewed article
- Journal in which the article is published has an ISSN code

##### The category includes:

- Articles presenting the results of original research

##### The category does not principally include:

- Review articles (Category A2)
- Chapters in research books (Category A3)
- Conference proceedings (Category A4)
- Brief research reports or brief review articles (Category B1)
- Editorials, book reviews, discussion papers, comments (Category B1)
- Articles not based on original research intended for application by the professional community (Category D1)

NB!

Articles published in special issues of journals that fulfil the above-mentioned criteria are entered in either Category A1 or A3. Conference proceedings published in a special issue of a journal are entered in either Category A1 or A4.

#### **A2 Review article, Literature review, Systematic review**

- Fulfils the definition of a scientific publication with the exception of the requirement to generate new information
- Based on the most important refereed journal articles
- Article is peer-reviewed
- Journal in which the article is published has an ISSN code

##### The category includes:

- Reviews of a specific field of science based on original publications or other results presented in research

##### The category does not generally include:

- Refereed journal articles (Category A1)
- Chapters in research books (Category A3)
- Conference proceedings (Category A4)
- Brief research reports or brief review articles (Category B1)
- Editorials, book reviews, discussion papers, comments (Category B1)

- Articles not based on original research intended for application by the professional community (Category D1)

### **A3 Book section, chapters in research books**

- Fulfils the definition of a scientific publication
- Mainly includes unpublished material
- Peer-reviewed by editorial board or equivalent
- The book has an ISBN number
- The book is published by a scientific publisher (see definition on p. 5)

#### The category includes:

- Articles published in scientific research books
- Articles published in scientific yearbooks or equivalent

#### The category does not generally include:

- Non-refereed book sections or chapters in research books, see the more detailed definition, Category B2
- Articles in a professional manual or guide or professional information system, textbook material (Category D2)

### **A4 Conference proceedings**

- Fulfils the definition of a scientific publication
- Conference proceedings printed or otherwise made publically available
- Full paper, not just an abstract
- Peer-reviewed

#### The category includes:

- Articles based on invited scientific seminar presentations or posters

#### The category does not generally include:

- Articles other than refereed journal articles in conference proceedings
- Abstracts of conference presentations, posters or PowerPoint presentations
- Brief research reports or brief review articles (Category B1)
- Non-refereed conference proceedings (B3)
- Articles not based on original research intended for application by the professional community (Category D1)

### ***B Non-refereed scientific articles***

#### **B1 Non-refereed journal articles**

- The category includes non-refereed journal articles. It also includes brief research reports or review articles, editorials, book reviews, discussion papers and comments in scientific journals.

- The journal has an editorial board, but is not necessarily required to comply with peer review procedures
- The journal in which the article is published has an ISSN code

The category includes:

- Non-refereed articles
- Brief research reports or brief review articles
- Editorials, book reviews, discussion papers, comments, etc. in scientific journals

The category does not generally include:

- Refereed journal articles (Category A1)
- Review articles (Category A2)
- Chapters in research books (Category A3)
- Conference proceedings (Category A4)
- Articles not based on original research intended for application by the professional community (Category D1)

## **B2 Book section**

- Non-refereed book sections, which possibly have an editorial board, but are non-refereed.
- The book has a scientific publisher (see the definition on page 5)
- The book has an ISBN number

The category includes:

- Non-refereed book sections
- Book sections closer to a scientific article than a report and funded by research institutes
- Book sections closer to a scientific article than a report and funded by government departments

The category does not generally include:

- Chapters in research books (Category A3)
- Articles in a professional manual or guide or professional information system, textbook material (Category D2)
- Published development or research reports or studies (Category D4)
- Textbooks, professional manuals or guides, dictionaries (Category D5)
- Brief forewords or introductions

## **B3 Non-refereed conference proceedings**

- Conference proceedings printed or otherwise made publically available
- Full paper, not just an abstract

The category includes:

- Non-refereed articles based on invited scientific seminar presentations or posters

The category does not generally include:

- Conference presentation abstracts, posters or PowerPoint presentations
- Brief research reports or brief review articles (Category B1)
- Peer-reviewed conference proceedings (Category A4)

- Articles not based on original research intended for application by the professional community (Category D1)

## ***C Scientific books (monograph)***

### **C1 Book**

- Fulfils the definition of a scientific publication
- Mainly includes unpublished material. New editions considered, if the book has been significantly modified compared with the previous edition.
- One or more authors responsible for the entire book
- The book has a scientific publisher (see the definition on p. 5)
- The book has an ISBN number

#### The category includes:

- Monographs by commercial publishers
- Monographs in publication series of scientific associations or the equivalent

#### The category does not generally include:

- New editions, unless the text is significantly modified
- Editing a book (possibly Category C2)
- Translations (possibly Category C2)
- Development or research reports or studies (Category D4)
- Textbooks, professional manuals or guides, dictionaries (Category D5)
- Popularised monographs (Category E1)
- Doctoral dissertations or other theses (Category G)

### **C2 Edited book, conference proceedings or special issue of a journal**

- Edited publications in which the editor also has individual scientific input, such as an extensive introduction or foreword. The introduction or foreword is not entered separately under Categories A or B.
- The book has a scientific publisher (see the definition on p. 5)
- The book has an ISBN number

#### The category includes:

- Edited books, conference proceedings or special issues of journals
- Translations which include an extensive introduction or foreword by the editor

#### The category does not generally include:

- Edited books without an extensive introduction or foreword by the editor
- Translations without an extensive introduction or foreword by the editor
- Edited textbooks, professional manuals or guides, dictionaries (possibly Category D5)
- Edited popularised books (possibly E2)

## ***D Publications intended for professional communities***

### **D1 Article in a trade journal**

- Trade journals refer to journals with a readership mainly including persons trained in the field who apply the information to their practical work. Often domestic journals.
- The articles are not required to be based on original research
- The journal has an editorial board, but is not necessarily required to comply with peer review procedures
- The journal in which the article is published has an ISSN code

#### The category includes:

- Articles intended to be applied by a professional community published in a trade journal. The articles are not required to be based on original research.

#### The category does not generally include:

- Refereed journal articles (Category A1)
- Review articles (Category A2)
- Chapters in research books (Category A3)
- Conference proceedings (Category A4)
- Popularised articles, newspaper articles (Category E1)

### **D2 Article in a professional manual or guide or professional information system, textbook material**

- Professional manuals refer to journals with a readership mainly including persons trained in the field who apply the information in their practical work. Often domestic journals.
- The book/information system publisher may be a scientific publisher (see the definition on page 5) or a publisher that does not fulfil the definition
- The book has an ISBN number

#### The category includes:

- Articles intended to be applied by a professional community published in a professional manual or guide or information system. The articles are not required to be based on original research.
- Textbook material intended for professional use

#### The category does not generally include:

- Chapters in scientific research books (Category A3)
- Conference proceedings (Category A4)
- Published development or research reports or clarifications (Category D4)
- Entire textbooks, professional manuals or guides, dictionaries (Category D5)
- Brief forewords or introductions

### **D3 Professional conference proceedings**

- Professional conference proceedings.

The category includes:

- Professional conference proceedings

The category does not generally include:

- Scientific conference proceedings (Category A4)
- Published development or research reports or studies (Category D4)
- Brief forewords or introductions

## **D4 Published development or research report or study**

- A published development or research development report or publically available study based on scientific work
- The publisher usually a non-scientific public party, such as a ministry or government research institute

The category includes:

- Studies conducted as commissioned research
- Published research reports
- So-called white papers
- Working paper and discussion paper-type publications

The category does not generally include:

- Publications intended solely for internal use.
- Book sections or chapters in research books (Category A3 or B2)
- Monographs by commercial publishers (Category C1)
- Monographs published in publication series of scientific associations or the equivalent (Category C1)
- Textbooks, professional manuals or guides, dictionaries (Category D5)
- Popularised monographs (Category F1)

## **D5 Textbook, professional manual or guide, dictionary**

- Published textbooks or dictionaries.
- The book has an ISBN number

The category includes:

- Published textbooks or professional manuals or guides
- Dictionaries

The category does not generally include:

- Handouts, online or other similar material created solely for a single course

## ***E Publications intended for the general public***

### **E1 Popularised article, newspaper article**

- Articles, reviews and editorials in publications targeted at the general public
- The text must be connected with the work of the author

The category includes:

- Published popularised articles that are generally available in newspapers and journals targeted at the general public

The category does not generally include:

- Articles in trade journals (Category D1)
- Brief comments or opinion letters
- Articles written by the author while working for a newspaper

## **E2 Popularised monograph**

- Published non-scientific, popularised works. Excludes the author's editions.
- The text must be connected with the work of the author
- The monograph must have an ISBN number

The category includes:

- Published non-scientific, popularised works

The category does not generally include:

- Professional manuals or guides (Category D5)

## ***F Public artistic and design activities***

### **F1 Published independent work of art**

- Fulfils the definition of artistic and design activities

The category includes:

- Compositions, lyrics, libretti
- Plays
- Public works of art
- Other independent works of art

### **F2 Public partial realisation of a work of art**

- Fulfils the definition of artistic and design activities
- Public partial realisation or part of a group's public work of art or performance

The category includes:

- Scripts
- Stage sets
- Costumes
- Choreographies
- Visual design, visualisation, lighting
- Other production (media production, online implementation, art education production)

### **F3 Public artistic performance or exhibition**

- Fulfils the definition of artistic and design activities
- The author is a clearly identifiable person responsible for the performance

The category includes:

- Music performances
- Performances of a play, film or dance piece
- The performance or exhibition of some other work of art or design

### **F4 Model or design adopted for production/use**

- Fulfils the definition of artistic and design activities

The category includes:

- Visual design (e.g. product design, graphic design, layout design, collection, games)

## ***G Theses***

### **G1 Polytechnic thesis, Bachelor's thesis**

### **G2 Master's thesis, polytechnic Master's thesis**

### **G3 Licentiate thesis**

- Published licentiate theses (article) are recorded even if the articles of the licentiate thesis have already been entered in Category A

### **G4 Doctoral dissertation (monograph)**

- Doctoral dissertations (monograph) published in the series of universities and university departments, published doctoral dissertations (monograph) or doctoral dissertations (monograph) published as the author's edition

### **G5 Doctoral dissertation (article)**

- Published doctoral dissertations (article) are entered even if the articles of the doctoral dissertations have already been entered in Category A

## ***H Patents and invention disclosures***

*Detailed data on patents and invention disclosures are not notified; only numerical data are entered.*

### **H1 Granted patent**

A patent is a set of exclusive rights granted by the state to an inventor for the professional utilisation of an invention, in return for which the inventor must allow public disclosure of the invention. A patent can be granted for an industrially applicable invention, which is new and differs significantly from previous ones.

Only a single international patent that has been granted is entered per invention. In other words, patents granted for different areas/countries are not entered separately.

### **H2 Invention disclosure**

An invention disclosure refers to a written notification (invention disclosure) submitted to a higher education institution, which the inventor must complete without delay subsequent to making an invention under the scope of the Act on the Right in Inventions made at Higher Education Institutions (369/2006).

The following figures related to invention announcements are notified separately:

- The number of invention disclosures
- The share of the above worked on further
- The number of utilisation rights assumed by the higher education institution
- Utilisation rights transferred further

## ***I Audiovisual material, ICT software***

### **I1 Audiovisual material**

- Audiovisual material which on the basis of its content cannot be entered in other sections
- The author is usually the editor or producer of the material
- Material which is in a serial form is entered only once, e.g. radio programme series

The category includes:

- Television and radio programmes as well as audiovisual presentations documenting research results
- Multimedia publications

The category does not generally include:

- Television or radio interviews
- Artistic audiovisual material (possibly Category F)
- Audiovisual teaching material (possibly Category D2 or D5)
- Multimedia software (possibly Category I2)

### **I2 ICT software**

- ICT software published either commercially or freely

-Only the first version of the software is included, unless recent versions include significant changes

The category includes:

- ICT software

The category does not generally include:

- Artistic ICT material (possibly Category F)

- Multimedia publications (possibly Category I1)