

REPORT  
2020

# RESEARCH. FORESIGHT

A study investigating how research is communicated in Sweden and Europe today and in the future.

# Collaboration a good basis for Swedish science communication

**As we write, in spring 2020, the coronavirus pandemic is making its mark on the world, science and everybody's daily life. Rarely has easily accessible and reliable science communication and science journalism been as urgently needed.**

The Swedish Research Council has an important task in coordinating communication about research and research results in Sweden. In the report *Future choices for the Swedish research system* from 2019, the Swedish Research Council highlights science communication as a main task.

Among other factors, the report describes opportunities for synergies: "To strengthen the work with science communication, we need joint national platforms for editorial collaboration between researchers and knowledge communicators.

By better utilising parts of the work carried out by actors within the research system, prerequisites exist for developing such infrastructure for knowledge dissemination to both decisionmakers and the general public."

To investigate the opportunities for increased collaboration on making Swedish research accessible, the Swedish Research Council tasked the magazine *Forskning & Framsteg* and the association VA (Public & Science) to conduct a study in 2019. They mapped and interviewed actors that fund, produce, communicate and/or use research in Sweden. They read investigations and reports produced by others, conducted study visits, mapped models for payment of journalist articles, carried out an opinion poll about interest in science journalism, and investigated what the readers of *Forskning & Framsteg* thought of the magazine.

They also gathered examples from other countries of collaboration for communicating research.

This report in English summarises the work carried out, and the conclusions drawn, in the report *Forskning.framsyn*, which was published in Swedish. The section with initiatives abroad was also translated in its entirety, as many international actors wish to read this mapping.

I would like to thank the authors of the report, Cissi Billgren Askwall, Secretary General of VA (Public & Science), and Viveka Ljungström, Chief Editor of *Forskning & Framsteg*. I would also like to thank all those who contributed and took the time to participate in surveys and interviews.

Interest in collaboration is a good basis for continuing the work on a Swedish initiative. There are suitable platforms that we can develop and continue building on. The current pandemic clearly shows that openness, collaboration and access to good science communication and science journalism are more important than ever.

STOCKHOLM, APRIL 2020

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# How to make research and science more accessible

**This report is the result of a study conducted in 2019, aimed at investigating how research and science can be made more accessible for the general public and other target groups outside academia in Sweden. The work was conducted by the magazine *Forskning & Framsteg* and the non-profit association VA (Public & Science) on behalf of the Swedish Research Council.**

**CHAPTER 1** describes how we worked: We mapped and held discussions with Swedish actors, read investigations and reports done by others, conducted study visits, investigated various models for payment of journalist articles, carried out an opinion poll and investigated how the readers of *Forskning & Framsteg* and *forskning.se* regard them. We also collected and provided examples of how different parties collaborate in other European countries to communicate more and better about research.

**CHAPTER 2** summarises some recently completed studies, which show that Swedes are interested in science and have great confidence in research and trust in researchers. How Swedes get access to news in general and science in particular varies, depending on age and background. Older people prefer traditional media, such as newspapers and television, while younger people use digital and social media more often.

Sweden's higher education institutions shall "cooperate with the world around them and inform about their activities, and work towards research results obtained at the higher education institution being of benefit," according to the second paragraph of the the act governing higher education (Högskolelagen 1992:1434). To investigate more closely to what extent and how this is done, a specific investigation of the views of researchers on communication and open science was conducted by VA (Public & Science) in 2019:

Nine out of ten researchers in Sweden want to communicate and collaborate. More than half want to spend more time than they currently do on communicating their research to the world around them. The most important reason for communicating their research is to ensure that the results can be of benefit to society. The second most important reason is to let research contribute to the public debate, followed by to increase awareness of research in society.

Based on the reports we have read and the discussions we have had, we have identified five trends:

*A new media landscape* is the result of digital technology, internet and artificial intelligence. A number of new formats have been developed, and traditional mass media are challenged, when everybody can get access to and themselves contribute to communication and debate in society. New models for funding journalism are needed and are being developed.

*More science communication – less science journalism.* Science communication is a growing field, and one that is moving from spreading information through one-way communication towards two-way communication through dialogue, and collaboration through interaction between researchers and other sectors of society. Science communication can become more strategic in nature, and the purpose can be to establish relationships that lead to common values for all those involved.

*Open science* is an umbrella concept that aims towards more open, transparent and inclusive processes in research and innovation. With the EU's decision to transfer to a system for open science, insight into research and innovation will increase. But for research to become accessible in practice, it needs to be communicated in ways that ensure it can be found, accessed, and understood by people other than researchers.

*Resistance to facts and questioning of research.* Digital development is making it easier to spread 'alternative facts' and false news. But it also results in increased opportunities for researchers and others to share and get access to research-based knowledge, to communicate and to act together. Through more accessible science, democracy can be reinforced.

*Stimulating interest in research.* Developing young people's 'science literacy' or 'science capital' are common aims and concepts. This means increasing knowledge of what science is, and how research is done, and also developing ways of looking at the world through a 'scientific lens'.

**CHAPTER 3** describes existing media and channels where several Swedish actors collaborate to disseminate information about research. These are the magazine *Forskning & Framsteg*, the website *forskning.se*, and the service *Expert svar/Expert Answer*, which arranges contacts with researchers for journalists and politicians. The internet magazine *Curie*, which is published by the Swedish Research Council, is also looked at.

**CHAPTER 4** describes how the actors communicate about research today, and how they think in relation to different channels. We have mapped and contacted 230 national actors that fund, produce, communicate and/or use research in Sweden. These are:

- Academia and learned societies
- Sector organisations and trade unions
- Public education and cultural organisations
- Research-intensive major companies
- Interest organisations linked to research
- Higher education institutions
- Media companies
- Public agencies, research councils and governmental research institutes
- Foundations and other organisations that fund research and science communication.

Higher education institutions (HEIs) communicate about research, for reasons such as positioning themselves. For many HEIs, the recruitment of students and international researchers is the highest priority task. Disseminating knowledge about research then becomes a way of strengthening the HEI's profile and attractiveness. Other purposes of communication are to increase opportunities for funding, collaborate with other ac-

# SUMMARY

tors, participate in societal debate, and increase legitimacy. Addressing the public's interest and need of new knowledge is also mentioned, but not as frequently.

The most common communication channels used by HEIs are their own websites, newsletters, social media and various ways of influencing media, such as press releases and personal contacts. Blogs, podcasts and films are also common, as are various types of meetings and events. Many have at least one magazine; digital and/or printed. A priority task for most HEIs is to educate, help and support researchers to communicate in various ways. However, many say that they do not have sufficient resources and time to do this.

Research funding bodies communicate primarily to spread knowledge about calls they are issuing, and to inform about the researchers and the research that they are funding. Showing politicians and decision-makers that their own particular field is important is a pressing matter for those who distribute public funds. Some wish to increase interest in the areas that they fund through communication, and several conduct knowledge overviews.

The communication channels most commonly used by funding bodies are the same as those used by HEIs, primarily internet, newsletters and media influencing. Films and blogs are also used. Most funding bodies consider that the researchers' own organisations have primary responsibility for communicating their research.

**CHAPTER 5** investigates the interest among Swedish mass media to get or buy increased access to science journalism, by interviewing 17 media representatives. The larger mass media would probably not be interested in publishing articles paid for by the research community. For public service companies, this is particularly clear. On the other hand, the major daily newspapers may possibly be interested in a model similar to that offered by TT, that is to say a service where you get access to science news items, written by independent journalists. The printed editions of the daily newspapers are primarily interested in acquiring material as cheaply as possible, without compromising credibility. Daily newspapers with paywalls may possibly be slightly more willing to pay.

**CHAPTER 6** investigates whether there are preconditions for using income from readers to fund the publication of a digital popular science magazine, such as *Forskning & Framsteg*, and describes various models for charging for journalism. Our conclusion is that no magazine or journalistic digital product has, as yet, succeeded well in this.

**CHAPTER 7** investigates what is done in other European countries to coordinate communication and reporting about research. We describe 20 initiatives that both communicate research to the general public and also use different ways to support and implement science communication. In particular, we highlight the national platforms for research in Denmark: *Videnskab*.

**RECURRING ARGUMENTS FOR COLLABORATION ARE THE IMPORTANCE OF OPENING UP SCIENCE, COUNTERACTING RESISTANCE TO FACTS, AND GIVING RESEARCHERS MORE SPACE IN THE DEBATE.**

dk, and in Norway: *Forskning.no*, and also the international website *The Conversation*, where researchers themselves write about their research.

**CHAPTER 8** describes ideas, reflections and views about possible expanded collaboration on science communication and science journalism in Sweden. 53 out of 65 actors in the research system say that they are interested in having access to a website where researchers can get popular science articles and contributions to discussions published. By far the majority also see opportunities for synergies, enabling Swedish actors together to achieve more science communication, popular science and science journalism. Among the HEIs, most think that a model similar to *forskning.no/Videnskab.dk* would be interesting to try. Other types of actors are rarely aware of these platforms. When it comes to what a joint research website should contain, which target groups it should address primarily, and how it should be organised, there are many different proposals, and no uniform picture therefore emerges.

**CHAPTER 9** has our analysis, our conclusions and our thoughts about the next steps. We can see that there are great opportunities to make journalism and communication about research and its results more accessible in Sweden. We think that there are good opportunities for increased collaboration between Swedish actors, aimed at giving the general public and other groups outside academia better access to research.

Recurring arguments for collaboration are the importance of opening up science, counteracting resistance to facts, giving researchers more space in the debate, mustering strength for visibility and credibility, continuing to build on established collaborations, developing networks and education courses, utilising resources more efficiently, working together to achieve the sustainability goals, and offering ideas and material to the media.

Some actors have reservations and fears of what increased collaboration on making research and research results more accessible could mean. The most common arguments are that the actors compete against each other and therefore need to profile themselves, that portals have played out their role, that it is difficult to find common areas of cooperation, that the range of science communication is sufficient, and that it would be difficult to finance.

Two thirds of the 65 Swedish organisations interviewed in the investigation have a positive attitude towards the opportunities for collaboration, and are interested in taking part in a continued process to work out what the collaboration could focus on, and how the collaboration could be designed. A quarter express reservations, and want to delay giving an answer, while four say no to taking part in a possible future collaboration. Interest exists among all categories of actors, but is particularly strong at HEIs.

Collaboration should begin using existing channels, rather than starting something completely new. A possible model is a website that gathers science journalism from *Forskning & Framsteg*, news from HEIs, research institutes and research funding bodies via *forskning.se*, and also a forum for researchers' own stories in articles, films and podcasts that are re-published from other channels, and that can be reinforced through collaboration with *The Conversation*. Such a website can also be linked to a competence centre that provides support to researchers and communicators in the form of digital and physical courses, advice and tips. The website could simultaneously provide schools with access to high-quality resources relating to research, and also give Swedish mass media more ideas for science news items. Some media might also be interested in re-publishing parts of the material on the website.

# How other countries collaborate to disseminate research

We have investigated what is done in other European countries to coordinate communication and reporting about research. The ambition was to find innovative and inspiring initiatives that both communicate research to the general public and also use different ways to support and implement science communication.

We have chosen not to describe individual journals, television programmes and websites about research aimed at the general public that are also available in other European countries. Instead, we present those that we think are the most interesting collaboration initiatives with the greatest impact, where different actors at national level work together to make research and research results more accessible. These initiatives are described briefly in terms of purpose, content, target group,

content/working method, organisation and funding. A common factor is their striving to be and be perceived as independent and non-political. Many of them are, however, fighting to find greater and more long-term funding.

### AUSTRIA

#### APA – Science, [science.apa.at](http://science.apa.at)

Austria Press Agency (APA) aims to make news available in simple language, where difficult terms are explained. APA – Science is a network and a portal to reflect Austria's research and disseminate important international research news. The portal includes information and news, both from APA and also from actors in the scientific community.

### BELGIUM

#### Daily Science, [dailyscience.be](http://dailyscience.be)

The portal aims to help readers to better understand and appreciate research, and to increase the visibility of researchers in Belgium. Daily Science publishes science news, primarily from Belgium, in various formats: articles, films, audio clips and infographics.

#### Ik heb een vraag, [www.ikhebeenvraag.be](http://www.ikhebeenvraag.be)

Ik heb een vraag is a website where the general public can ask questions to researchers, who answer questions within their own research field. Researchers from 36 universities take part. There are more than 17,000 answered questions in the archive (summer 2019). The website is searchable, and is divided up into subjects.

### CZECHIA

#### VedaVyzkum (ScienceResearch), [vedavyzkum.cz](http://vedavyzkum.cz)

The portal publishes independent information about research, development, innovation, higher education, intellectual property rights and commercialisation in Czechia. The website is aimed at all who are interested in science, but primarily researchers and others who need information as part of their work.

### DENMARK

Denmark has [Videnskab.dk](http://Videnskab.dk) (described in more detail below), which offers independent news about science. The country also has [Astra.dk](http://Astra.dk), a knowledge node and a centre for teaching natural sciences, technology, engineering sciences and mathematics (STEM) at primary and secondary schools. Many activities are conducted via physical meetings, but Astra also offers digital resources.

### ESTONIA

#### Research in Estonia, [researchinestonia.eu](http://researchinestonia.eu)

The aim is to present Estonia internationally as an attractive country for researchers and for research collaboration. The website has news about Estonian research, and also information about the Estonian research and innovation system.

### FINLAND

Finland does not have a national collaboration website about research as Denmark, Norway and Sweden do. However, the research funding body Academy of Finland has a website with news and information about research and science: [Tietysti.fi](http://Tietysti.fi) (see below). Also under construction is the website [Research.fi](http://Research.fi), which will gather and share information about research in Finland, primarily for professional users. It will include information about researchers, publications, datasets, projects, infrastructure, and results from publicly and privately funded research.

#### Tietysti.fi, aka [fi.fi/tietysti](http://fi.fi/tietysti)

This website wants to awaken curiosity and talk about research, thereby making young people more interested in a career as a researcher. The website provides both information on academy-funded research and links to news on other websites about science and research in Finland and around the world.

### GERMANY

#### NaWik GmbH (Nationales Institut für Wissenschaftskommunikation), [nawik.de](http://nawik.de)

The company NaWik helps researchers to communicate, and operates the portal [wissenschaftskommunikation.de](http://wissenschaftskommunikation.de) (see below) together with the organisation Wissenschaft im Dialog and Karlsruhe Institute of Technology. NaWik also runs projects, conducts inquiries and arranges training courses in science communication and collaboration.

#### Wissenschaftskommunikation.de

The purpose of the portal is to improve communication about research in Germany. It has five sections: A journal with news about science communication, a research section with scientific articles, a format section with descriptions of communication formats, a practice section with communication advice and a working world section with training courses and job opportunities.

#### RifReporter, [rifreporter.de](http://rifreporter.de)

RifReporter is a cooperative that supports, provides and develops German-language quality journalism. The portal has both

## NORWAY

has since 2002  
a national  
website for science  
journalism:  
[Forskning.no](http://Forskning.no)

# INITIATIVES IN OTHER COUNTRIES

freely available texts and pay-to-access material. Private individuals can support individual journalists, subjects or investigations to promote reporting, irrespective of the news logic at large editorial offices.

## LUXEMBOURG

### Science.lu

The website aims to show what research is being conducted in Luxembourg, and to make the general public learn about and become fascinated by research. The website has news about research, explanations of scientific phenomena, experiments to try out at home, press releases, a calendar and description of the various actors in Luxembourg's system for higher education and research.

## NETHERLANDS

### NEMO Kennislink, nemokennislink.nl

The website aims to show that research and technology are part of the core of Dutch culture by offering information about events and activities, news, information about research and innovation policy, science communication projects and projects for teachers, as well as links to universities, science centres, museums and business partners.

## NORWAY

Norway has a website for science journalism where most of the actors within Norwegian higher education and research are members. It is described in greater detail below. There is also an independent national internet magazine, Khrono, with news and discussion from and about higher education and research. The website Viden.no distributes digital resources in natural sciences to primary and secondary schools.

## POLAND

### Science in Poland, scienceinpoland.pap.pl

The internet portal disseminates knowledge about Polish researchers' work and the results they generate.

The website has information and journalism about research, universities, innovation, grants and events, prizes and awards, scientific advances, grant awards, science communication and international news.

## SLOVAKIA

### Veda na dosah (Science to Reach), vedanadosah.sk

The purpose of the portal is to popularise and increase awareness among the general public of science and technology, and also to stimulate the interest of young people to study natural sciences and technology.

The website includes information about projects and events, scientific articles, press releases, information on research funding, conferences quizzes for young people, and also links to universities and research institutes in Slovakia.

## SLOVENIA

### Kvarkadabra – Magazine for Interpretation of Science, kvarkadabra.net

The portal is an independent non-profit project that aims to make science accessible to all in a simple and fun way. On the website, researchers can publish articles, comments and essays about their research, and about the preconditions and role of science in society. It also has information about events, podcasts and books about research and internet publishing.

## SPAIN

### SINC, agenciasinc.es

SINC is a news agency focusing on science and technology in

Spain. The purpose of the portal is to contribute to scientific understanding and promote scientific culture through supporting quality journalism. SINC's articles, reports, interviews, analysis and discussion input can be freely re-published.

## UNITED KINGDOM

The United Kingdom invests heavily in science communication and public engagement (collaboration). We found three particularly interesting initiatives for promoting communication and dialogue about research. **The Conversation.com** is described in greater detail below. The other two are: National Co-ordinating Centre for Public Engagement and Science Media Centre.

### NCCPE, publicengagement.ac.uk

NCCPE aims to support universities to increase the quality and impact of their collaboration with other parts of society. The centre offers tools, training courses, resources and advice, networks, exchange of experiences and consultancy services. It also coordinates initiatives for promoting collaboration, and publishes the open access journal Research for All.

### Science Media Centre (SMC), sciencemediacentre.org

The centre offers help and support to national news media and communicators when they report on research, controversial subjects and major news events. Researchers can get support in contacts with the media, and be included on SMC's database of experts. The centre also arranges courses, briefings to the media, and other meetings.

The following pages describe those initiatives in Europe that we consider particularly interesting: the Norwegian forskning.no, the Danish Videnskab.dk and the British The Conversation. We have visited their editorial offices and interviewed journalists and managers in charge.

## FORSKNING.NO

Forskning.no is a Norwegian website that publishes journalistically independent science journalism on the internet. It is Norway's largest scientific publication. The website has news, background articles, in-depth articles, discussion forums and blogs. It reports on all fields of research and science, primarily Norwegian research. The website is open and free to all.

In its mission statement, forskning.no writes that it will "publish news about research, be absorbing and awaken curiosity, function as a resource bank for readers, and contribute to new insights and increased understanding".

Forskning.no is operated by the association Foreningen for drift av forskning.no. It was established in 2002 at the initiative of the Research Council of Norway. Following a three-year trial period, the website became a permanent publication. The association aims to increase interest in and knowledge about research. It also works towards making more people choose to study and conduct research, by having young people as an important target group.

The publication is operated according to the Norwegian "redaktørspilakaten", an agreement on the independence, duties and responsibilities of editors, and other journalistic principles. The members (more on which follows below) have no influence over the journalism, and the editorial team is free to both describe and scrutinise research, researchers and the institutions that conduct research. Over the years, forskning.no has now and then criticised and revealed irregularities among members, but no member has to date stated it wishes to stop funding. Despite its journalistic freedom, forskning.no also has very good collaboration with Norway's higher education institutions and research funding bodies, which are described in greater detail below.

# INITIATIVES IN OTHER COUNTRIES

## FUNDING

Forskning.no is owned by Foreningen for drift av forskning.no, which is a non-profit association with 77 Norwegian research and educational institutions as members. Each member/owner pays a fee based on the number of employees in the member organisation. These fees make up 64 per cent of forskning.no's income. Fees range from 50,000 NOK to 500,000 NOK. In addition, the Research Council of Norway contributes around 4.5 million NOK (2019 figures).

The association runs on a non-profit basis. The members state that they support the association in order both to reach out with their own research, but also because it creates goodwill to contribute to an open and democratic society. Through their membership, the members make it possible for the broad general public to access knowledge and insight into advances in research.

The members also consider that they get a platform that is widely disseminated and has many readers, and in this way also see it as an extension and reinforcement of their own channels and their own work on spreading science communication. All owners/members have a presentation page on forskning.no where visitors can also read about what their particular researchers have written.

## ORGANISATION

The magazine's chief editor and responsible publisher since 2007 is Nina Kristiansen. Forskning.no has its central editorial office in Oslo. The editorial team currently consists of 18 people: journalists, editors, managing editor, membership desk and marketing department.

The board of the association is elected by the association's general meeting, and is responsible for the financial framework and strategy. On the other hand, it has no influence over the editorial work. The chair of the board is Jan Børge Tjäder, department director at the University of Oslo. The vice chair is Thomas Evensen, from the Research Council of Norway.

Since the start, forskning.no has collaborated with the Danish sister website Videnskab.dk. The websites exchange content, and in 2009 established the joint platform, ScienceNordic.com, which publishes texts in English to an international audience. They would also like to collaborate with Sweden and Finland.

## TRAFFIC AND VISITORS

The number of website visitors has increased steadily year by year. Today, the website has 1.5 million visits per month, and during the year 2018 it had 17.9 million visitors and 27 million page views. 25 per cent of the readers are under 29 years of age, but the average reader is approximately 35 years old. 80 per cent of the readers have a degree. An equal number of men and women visit the website. The readers are distributed across the whole of Norway. 13.5 per cent of all readers are researchers, and they particularly appreciate the Forskerzonen section, where researchers write about their own research. Forskning.no is cited in other media around 360 times per month, excluding mentions on radio and television.

60 per cent of the traffic arrives at the website via searches. 20

per cent comes from Facebook, and 20 per cent via direct links from others, newsletters and people who actively write forskning.no in the address field.

## CONTENT

To create width and full content, the editors publish 16 shorter articles each week. These consist of news about current research, and are written by two journalists on a rolling rota. To create depth, the other ten journalists work with two longer reports per week, and are thus expected to publish two news items per week, preferably with a critical or exposing angle. In exceptional cases, journalists also work on reports taking up to two weeks, in parallel with other work. During 2018, the twelve journalists wrote a total of 1,000 articles. Through the collaboration with videnskab.dk, 188 articles originally written in Danish were translated and published in 2018. The editorial team always write to ensure the content are topical today, but many of the articles and reports have very long useful lives and score highly on searches made using the Norwegian version of Google.

In addition to the material written by the magazine's science journalists, around 50 scientists also write blogs. They write more or less regularly. During 2018, 59 bloggers – researchers and research teams – contributed 436 blogs.

In the Forskerzonen section, researchers and subject specialists can publish popular science articles. In 2018, 75 such texts were published, and during 2019 they are expected to increase slightly in number. 173 columns and discussion contributions were published on the discussion pages.

Ung.forskning.no started in 2019, and is an initiative to reach young people up to the age of 19.

## TEXTS AND PRESS RELEASES FROM MEMBERS

Members of the association are entitled to publish texts under the heading "Saker fra våre eiere" ("Items from our owners"). In 2018, the 77 member organisations published 931 press releases. Forskning.no helps researchers and communicators with writing tips and editing before texts are published. The articles from members are clearly marked, and differentiated from the material written by the editorial staff. Those who work with this science communication do not do any journalistic work at forskning.no, to ensure no conflict of interest arises. The number of articles from members received by forskning.no varies between members.

## SOCIAL MEDIA

Today (2019), forskning.no has around 89,000 followers on Facebook, which is the social media the editorial team invests most effort in. The high number is the result of a goal-oriented initiative, with publications several times per day.

## OTHER PERIFERAL SERVICES/INCOME

### FORSKERZONEN

During 2019, forskning.no is making a major initiative with the Danish Videnskab.dk relating to researcher-authored material to be published in the Forskerzonen section. Here, researchers linked to the owners/members can publish their own texts and receive extra help with editing them, so that they reach a larger audience. Inspired by The Conversation (see below), additional efforts are made to highlight this type of material. A separate editor helps the researchers with writing advice and editing.

### ONWARD SALES OF MATERIAL

Forskning.no has an agreement with ADB Nyheter, which pays 15,000 NOK per month to pick and publish any news items they wish, but are not allowed to show them on their website for more than one month.

**FORSKNING.NO IS A NON-PROFIT ASSOCIATION WITH 77 NORWEGIAN RESEARCH AND EDUCATIONAL INSTITUTIONS AS MEMBERS.**

# INITIATIVES IN OTHER COUNTRIES

## COURSES

Forskning.no arranges writing courses, columnist training courses, courses for experienced communicators and a course in writing blogs. In addition, each autumn the seminar *Kommunikasjonsdagerne* runs for two days. The target group for both courses and the seminar are researchers and communicators.

## ADVERTISING

Every page of the website has job advertisements, and also programmatic advertisements (placed by advertising companies). *Forskning.no* previously had its own advertising seller, but this was not profitable.

## HISTORY

*Forskning.no* was established in 2002 at the initiative of the Research Council of Norway. 12 research institutions participated with funding at the start. The idea was to establish a place for science communication, and to then hand over control to an independent editing team, working according to the rules in the Norwegian 'redaktørplakaten' editing rules and standard journalistic principles.

The editorial team started out with three, and shortly thereafter five members. One of them was the journalist Erik Tunstad, who had many years of experience from science journalism at the public service NRK. Today, the editorial team consists of 18 people.

## VIDENSKAB.DK

*Videnskab.dk* is Denmark's largest science media, and the most read science publication in Denmark. Every day, the editors publish free research news and in-depth studies, based on scientific foundations and Danish research. Texts, podcasts and films are intended to give visitors an 'aha' experience, and make them better informed.

The editors monitor everything from technology, medicine and natural sciences to culture, economics and society.

The vision is to make the Danes wiser and to create greater interest in science and knowledge – in society as a whole and in particular among young people.

## FUNDING

The board of the Ministry of Higher Education and Science provides 5.4 million DKK per year to support *Videnskab.dk*. This represents just under half of the website's income. Just over one quarter of the income comes from services and communication commissions for research councils and higher education institutions. Just over one quarter consists of project grants, for features such as a YouTube channel for young people and for *Forskerzonen*, where researchers write popular science texts. A very small proportion comes from banner advertising.

## ORGANISATION

*Videnskab.dk* is an independent and non-affiliated publication. All publishing decisions are made by the editorial team, which is

led by Vibeke Hjortlund, Chief Editor. In legal terms, the organisation is linked to the Danish School of Media and Journalism (DMJX). Due to both Danish legislation and EU rules, it is not possible to operate *Videnskab.dk* as an independent legal entity, which has been a challenge. The website started as a project at the Technical University of Denmark (DTU), and was transferred in 2013 to DMJX, which functions as payment recipient and runs the administration, finance and HR aspects.

Since the start, *Videnskab.dk* has collaborated with the Norwegian website *forskning.no*, which was also the inspiration for the Danish project. The websites exchange content, and in 2009 established the joint platform, *ScienceNordic.com*, which publishes texts in English to an international audience. This website would like to establish collaboration with Sweden and Finland too, but has been operated by *forskning.no* alone since 2020.

## TRAFFIC

*Videnskab.dk* is one of the 20 most visited journalistic websites in Denmark, according to Kantar Gallup. In 2018, traffic to *Videnskab.dk* increased for the tenth year running, in terms both of users and of unique visitors and page views.

- In 2018, the number of users increased by 9.8 per cent to 15.5 million.
- The number of unique users rose by 3.1 per cent to 7.1 million between 2017 and 2018.
- In 2018, the number of page views was 27 million, which is an increase of 9.2 per cent compared to the previous year.

The development has been very positive since the start, and now seems to have stabilised in terms of growth, which is to be expected from a niche product.

## MANY USERS ARE YOUNG

Around 40 per cent of the readers are under 30 years of age. The largest age group is 20–29 year-olds, who make up 21 per cent. Many teachers at lower and upper secondary school level think that the content provide good inspiration and serve as complement to their teaching. Teachers often refer pupils to search on *Videnskab.dk*. The number of young visitors increases during exam periods at lower and upper secondary schools. It can also be seen that many young persons search for facts and information about physical and mental health.

## HOW READERS FIND VIDENSKAB.DK

Almost 59 per cent of visitors arrive via search engines. The editorial team is very focused on setting headings and indexing, in order to score highly in searches.

It is also interesting to note that as much as 16 per cent of the traffic is direct, via the user writing in the internet address. 9 per cent of the traffic comes from social media, which is a reduction of 5 percentage points compared to 2017. 10 per cent comes from media partners, and 4 per cent from the editors' daily newsletter.

## CONTENT

*Videnskab.dk* monitors and writes about all subject areas. Even though most of the traffic comes from search engines, there is a clear division into subjects on the starting page, plus a function that makes the page suggest further reading in areas that the algorithm thinks might interest the reader.

The editors monitor the news daily, and writes about both new research and topical issues, where they turn to researchers for answers.

To reach young visitors, the journalists are creating editorial material about topical issues that many young people are looking for answers to. *Videnskab.dk* has built up an archive of

**SINCE THE START VIDENSKAB.DK AND FORSKNING.NO HAVE EXCHANGED CONTENT AND EXPERIENCES WITH EACH OTHER.**



# INITIATIVES IN OTHER COUNTRIES

encyclopaedic character, with descriptions of research methods, scientific theory, science journalism and criticism of sources. The following are a few examples of articles that many young people use on Videnskab.dk:

- Korrelation eller kausalitet: (Correlation or causality:) Hvornår er der en årsagssammenhæng (When is there a causal connection)
- Pas på disse faldgruber, når du læser statistik (Look out for these pitfalls when you read statistics)
- Sådan undgår du at blive snydt, når du ser dokumentarfilm (How to avoid being tricked when you watch a documentary)

In 2017, a starting page for schools was created, where they can read about things like how the editors work, and read articles in selected areas. The themes were developed together with a group of teachers. Two popular themes that are continuously updated are those about scientific theory and about computing and mathematics. The editors exert themselves to use text, image and film to explain and increase the understanding of what conclusions can be drawn from the research presented.

This has been particularly important within research into health, where they have tried to explain and investigate the sometimes questionable and unscientific claims made by influencers and bloggers about matters such as how to ‘cure’ autism using a certain diet. To ensure the material is published in the right channels, Videnskab.dk collaborates with actors such as Lectio and Astra, which are network organisations for teachers.

In 2018, Videnskab.dk published a total of 2,116 articles on the website. The content is divided up into four sections, plus the category “Spørg Videnskaben” (Ask the science), which is written by researchers with the help of an editor.

4–5 articles per day on weekdays, and 3 per day during weekends are published. In addition. They also provide summaries of stories reported in other media, refer to press releases and also monitor international websites. In this way, readers get a good overview of what is going on in research and science. Since 2018, articles written by researchers under ‘Spørg videnskaben’ have been gathered under the main heading Forskerzonen.

The Forskerzonen project, which increased on Videnskab.dk during 2017 and 2018, grew from 405 to 465 articles during 2018.

## PODCASTS

In 2017, Videnskab.dk produced 50 podcast episodes, each lasting between 20 and 30 minutes. The focus is on highlighting the best articles on the website that week as a news review, and to bring up a central subject that has set the tone for the week. During autumn 2018, each episode was downloaded between 5,000 and 10,000 times, and the podcast service ended up in the top 50 downloaded podcasts on iTunes. Videnskab.dk has agreements with most major podcast suppliers, and is available in all places where podcasts can be downloaded. In 2018, a podcast series about the brain was also produced, funded by the Lundbeck Foundation.

## SOCIAL MEDIA

Part of the editors’ work focuses on reaching out to users via social media, and some of the content is selected for use on these platforms. The aim is to drive traffic to the own website, to increase knowledge about it and its visibility, and to maintain a dialogue with the users. The most important platform is Facebook, where the website has 67,900 followers (in comparison, in 2019 Forskning & Framsteg had 10,100, and forskning.se had 5,900). On average, each update was shown to around 15,500 users during 2018, which is a reduction from 23,000, caused by Facebook changing its algorithms in 2018. Each posting generated 800 clicks on the website on average. Visitors accessing the website via Facebook rarely click onwards to other articles.

Twitter is also a priority channel, and a way of profiling towards journalists, researchers, decisionmakers and other stakeholders. During 2018, the account had around 12,400 followers. During the same period, the University of Copenhagen had 7,900 followers (Forskning & Framsteg 4,600 and forskning.se 9,500). In addition to Videnskab.dk, several of the editors have their own accounts where they also share content from Videnskab.dk.



## CITATIONS AND MEDIA PARTNERS

Videnskab.dk is often cited by other media, which use the material as the basis for their own articles about research. On average, the internet publication was cited 14 times per day during 2018. Added to this are also citations and references on radio and television, which the editors have no means of keeping track of numerically.

Since 2016, collaboration has been in place with Denmark’s largest news agency Ritzau, which receives a daily news article from Videnskab.dk for publication, primarily in local papers.

A longer report is also supplied for the weekend supplements to some of Denmark’s daily newspapers, and a long list of other media, primarily the web editions of daily newspapers, are provided with articles every week. The material is free of charge for the media to publish, and is seen as a way for those backing the website to reach out to more people with reading about Danish research.

The largest media collaboration is with Jyllandsbladet, which receives two articles per day from Videnskab.dk. Others that regularly receive material for publication free of charge are Extra Bladet, BT, Kristeligt Dagblad, Avisen.dk, Nordjyske.dk, Fyens.dk, Søndagsavisen, Politikens Lokalaviser, and Sermitsiaq og Grønlandsposten.

The collaboration with forskning.no meant that 292 Danish articles were translated and published in Norway in 2018. These articles were read 1.3 million times on the Norwegian sibling website.

## CENTER FOR FAGLIG FORMIDLING

To fund the journalistic activities, Videnskab.dk has broadened its range of services that they either charge for, or apply for project grants for. Since 2018, many of the peripheral activities have been gathered into a separate organisation, primarily to enable work as independent journalists. The journalists who write on Videnskab.dk do not work with the sponsored assignments, or with Forskerzonen for example.

Videnskab.dk arranges courses for researchers and journalists under the name ‘Center for faglig formidling’ (Centre for professional training) in subjects such as storytelling and communication. Many of the courses are conducted together with other actors, such as Informations Medieskole, the Danish Tech Alliance, Engineer the Future and Novo Science Ambassadører. The centre has also held courses and workshops at research organisations.

Videnskab.dk also administrates and markets the project “Bestill en forsker” (Order a researcher), enters into agreements with other media for further publication and operates Forskerzonen.

## FORSKERZONEN

In 2016, Videnskab.dk received funding from the Lundbeck

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Foundation for a three-year project focusing on researchers' own texts on the website section called "Forskerzonen". Extension of the funding means that it is secured up until the second half of 2020.

Forskerzonen is the researchers' own platform, where they can report on the results of their own research via popular science-adapted texts, videos, book excerpts and discussion inputs. Videnskab.dk helps the researchers with coaching and editorial work. Thanks to the platform, individual researchers can reach many readers.

In 2018, 367 researchers contributed content that resulted in 550 text-based articles and 64 video reports. Each article was read 2,775 times on average. Articles in natural sciences, health and technology are among those read the most.

During 2019, the focus was on spreading knowledge about the website, which was relaunched with a newsletter that is published 15 times per year. There is also a plan to enter into agreements with other media, so that they can freely use material from Forskerzonen. Analysis of the first two years shows that the reception has been good, from both researchers and readers. The researchers feel that they have received good and relevant support. Forskerzonen has its own space on Videnskab.dk, with its own visual identity. It remains on the website, as this has a number of benefits, such as Google searches and technical operation.

## EVIDENCE BAROMETER

Videnskab.dk, in collaboration with the IT University of Copenhagen and supported by Google Digital News Initiative, has developed an 'Evidence Barometer'. This is a feature on the website that gives users a simple and visual indication of any research that underlies claims about health, in particular. The Evidence Barometer was launched in 2019.

## YOUKNOW - YOUTUBE CHANNELS WITH FILMS FOR YOUNG PEOPLE

2018 saw the launch of the two-year project YouKnowHow, as a continuation of the project YouKnow, which started in 2016. Both projects are aimed at young users who do not read books, and is funded by Nordea-fonden. The project fits well with Videnskab.dk's aim to use good storytelling to reach young people with knowledge about research.

The background is that there is a lack of good content about research and science for young people on Danish YouTube, at the same time as YouTube is an important search engine for the younger generation – in some target groups it is bigger than Google. Both the YouKnow projects are based on a film format with evidence-based content, adapted for YouTube, which appeals to a younger audience that is not automatically interested in science, but asks questions that research can answer.

During the initial project period, YouKnow had two focuses – gaming and beauty. Newgame supplied research and facts via games, while Skønhedslaboratoriet (Beauty laboratory) passed

on knowledge via evidence-based films about beauty, personal care and health. Both target groups are among those that are often exposed to personal views or commercial messaging when they search for information.

In 2017, 92 films were published in the YouKnow project. The total number of viewings was 446,337, and each video had an average of 3,381 views. The channels have around 10,000 subscribers in total, and the statistics show that the users are young, but not children. The main target group is 18–24 year-olds.

In addition to video production, the project also includes analyses relating to YouTube, a YouTube academy and lectures at production schools aimed at giving pupils tools for relating critically to information and facts.

## THE CONVERSATION

The Conversation UK is an independent, English-language news website that publishes news, comments and in-depth articles. It is aimed primarily at the interested general public.

What makes the website differ from other news media is that all articles and reports are written by active researchers at universities and research institutes. The content is written in close collaboration with and support from professional editors and journalists. Many texts are published as reactions to or more in-depth information on topical subjects. The editors, who are all science journalists, work like a traditional news editorial office in evaluating news and angles. The difference is that they then ask researchers to write, and do not do the journalistic work themselves. The editors help the researchers to write in a way that engages and encourages reading.

During the last year, around 2,000 articles from around the same number of researchers have been published. The texts are 700 words long, and the aim is for the language, tone and level of difficulty to be adapted so that a 16 year-old can read and understand.

The fundamental values of The Conversation are based on the idea that access to independent, fact-checked and understandable journalism underpins a democratic society. The website is also intended to contribute to better understanding and knowledge of topical events and complex developments in society, and in this way contribute to more fact-based and rational societal debate and more well-informed conversations between people.

The Conversation is aimed directly at the general public, but most of the reading is done on other news websites, in magazines or printed newspapers, because all the material is free to use and re-publish under a creative commons licence.

The website also collaborates with printed newspapers, which regularly publish full pages or spreads with material from The Conversation.

According to The Conversation's charter, it shall:

- Inform public debate with knowledge-based journalism that is responsible, ethical and supported by evidence.
- Unlock the knowledge of researchers and academics to provide the public with clarity and insight into society's biggest problems.
- Create an open site for people around the world to share best practices and collaborate on developing smart, sustainable solutions.
- Provide a fact-based and editorially independent forum, free of commercial or political bias.
- Support and foster academic freedom to conduct research, teach, write and publish.
- Ensure the site's integrity by only obtaining non-partisan sponsorship from education, government and private partners.

**VIDENSKAB.DK ARRANGES COURSES FOR RESEARCHERS UNDER THE NAME 'CENTER FOR FAGLIG FORMIDLING' IN SUBJECTS SUCH AS STORYTELLING AND COMMUNICATION.**

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- Protect editorial freedom in all commercial agreements.
- Ensure quality, diverse and intelligible content reaches the widest possible audience by employing experienced editors to curate the site.
- Be open, transparent and accountable.
- Where errors occur correct them expeditiously.
- Work with their academic, business and government partners and their advisory board to ensure operation for the public good.

## CREDIBILITY

Authors are only allowed to write on subjects on which they have proven expertise. This expertise must be clearly stated alongside their articles. The authors' funding and any conflict of interest shall also be made clear.

All researchers/authors and editors sign a contract and thereby undertake to abide by The Conversation's Community Standards policy.

## OTHER MEDIA CONTRIBUTE TO CIRCULATION

The Conversation regards itself as a resource for other media, which can find good ideas for their own work by following The Conversation. They can also find experts via the website who are used to collaborating with media.

All the material published is free to spread or re-publish under creative commons licencing.

All authoring researchers are also available to other journalists following publication. Contact information is easily available next to the article, where the researcher is also presented briefly.

There is also a database where journalists and others can search for experts in all possible fields. The database currently holds 30,000 academics. The Conversation also likes to help other media finding experts in topical fields using its network of researchers.

## TARGET GROUPS - IMPACT

Readers come from all sectors of society, and are relatively young. The Conversation UK states (summer 2019) that it has 4 million unique visitors to the website per month, and 10 million page views of material, including the texts re-published on other platforms. There are nine editions of The Conversation. All the material published on all the different national platforms in all current languages is accessed by 38 million readers per month. Half of the traffic to the website comes from search engines, and 17 per cent are direct visitors. In addition to the websites, The Conversation also has a number of Facebook and Twitter accounts, plus daily newsletters that reach around 70,000 readers. The Facebook account for the British website has 85,000 followers, and the international account just over 262,000. (Figures for 2019.)

## BACKGROUND

The Conversation started in 2011, after the British-Australian journalist Andrew Jaspan was tasked to investigate how the University of Melbourne could communicate with the public in new and engaging ways.

The basic idea was – and is – that the knowledge and results of researchers should be presented in popular science form straight to the general public, without taking the detour via traditional media.

Since its start in Australia, The Conversation has also been launched in the United Kingdom, USA, South Africa, France (in French), New Zealand, Indonesia (in Indonesian), Spain (in Spanish) and Canada.

## ORGANISATION

The website is established in nine countries, and each country has its own organisation but is owned by The Conversation Trust in England. The Conversation Media Group, which operates the websites, is a non-profit organisation, owned by The Conversation Trust, with head offices in London.

The British version of the website has 22 employed journalists and three persons looking after members and funders. The organisation's board consists of people from universities, media and business. The editorial board consists of representatives from higher education institutions in the United Kingdom, and one representative from Lund University.

## FUNDING

The Conversation has the expressed policy to provide free and open access to information to as many as possible, manifested by the statement "We will never go behind a paywall".

The website is funded via support from universities and research clusters, and through governmental grants and contributions from private individuals, businesses and foundations. According to an interview with Chris Waiting, Chief Executive Officer, in February 2019, each university pays an annual fee of 16,000 GBP.

In addition to the universities' membership fees, which represent just under 80 per cent of the income, the organisation receives grants from bodies such as Research England, corresponding to around 15 per cent of income. Donations from readers make up around 5 per cent of income.

## THE ROLE OF AND BENEFIT TO UNIVERSITIES

In 2019, The Conversation had links with 84 universities, of which 75 were in the United Kingdom and Ireland, two in Sweden (Lund and Stockholm universities), plus a dozen in total in Australia, South Africa, Canada, New Zealand, France and Spain. The expressed goal is that members (universities) receive help to strengthen their profiles through enabling their researchers to address a global audience as experts. The website is therefore also in one way a marketing channel for the universities.

Researchers at the universities in question get access to a publication system with a publication tool that helps the author to check the readability of a text, but also shows statistics that the author can monitor about where and how the author's text is being disseminated and read.

Researchers belonging to universities that are members can themselves pitch ideas, and are more often asked to write articles than researchers who are not part of universities linked to the website. Some training for researchers at member universities is also included, where The Conversation's staff teach them how to write to achieve circulation within The Conversation.

The Swedish Research Council coordinates communication about research and research results in Sweden.

To investigate the opportunities for increased collaboration to make Swedish research more accessible, the Swedish Research Council commissioned the magazine *Forskning & Framsteg* (in English: *Research & Progress*) and the non-profit association *Vetenskap & Allmänhet* (in English: *Public & Science*) to do this. This work has involved mapping and interviewing actors producing, financing, communicating and/or using research in Sweden. They have read other

investigations and reports, undertaken study visits, mapped payment models for journalistic articles, conducted an opinion poll on interest for science journalism, and investigated how the *Forskning & Framsteg* readership views the magazine. They have also collected examples of collaborations to communicate research in other countries. This English report summarises the findings. The authors are Cissi Billgren Askwall, Secretary General *Vetenskap & Allmänhet*, and Viveka Ljungström, Editor-in-Chief *Forskning & Framsteg*.