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Session 1: Statistical literacy

How to reach the young
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Why do we want to reach the young?

Young people are the future: future employers and employees, future journalists and readers who want to keep up with the news. Whatever their role, we want them to know us, the statistical office. We want them to participate in our surveys in later years, we want them to know our products, and also to know how to interpret our data. However, the statistical office is not usually on the radar of children and young adults. We are not automatically interesting for them. Therefore we want to reach them through schools, via their teachers.

So, how do we get these teachers to include the statistical office in their lessons?

Reaching them through school

Although as a national statistical office we may not automatically be interesting for pupils, we are for teachers. Teachers are always looking for ingredients for interesting lessons, and they value the high quality of data from the statistical office. They are willing to learn how our tables, visualisations and articles can be applied in their lessons.

We want to reach teachers and present them with ingredients they can apply directly in their lessons. At the moment we have three ways of reaching them:

1. Online lesson materials
2. Our annual “Predict the economy” competition
3. Direct contact with teachers

1. Online materials for lessons

Teachers are very keen to use our free online material. However, the general website of Statistics Netherlands is not always very accessible for teachers. They – and their pupils - cannot always find the material that they are looking for, and sometimes do not even know if it exists. And when they do find something, it is not completely clear how it can be used.

We therefore introduced a separate website (www.cbs.nl/cbsindeklas) with a selection of our material, grouped into subjects suitable for the classroom. In this way the material is easier to find for teachers and more easily accessible in the classroom during lessons. In addition, we introduce most of the material with a brief explanation of the contents and how it can be used in the lesson.

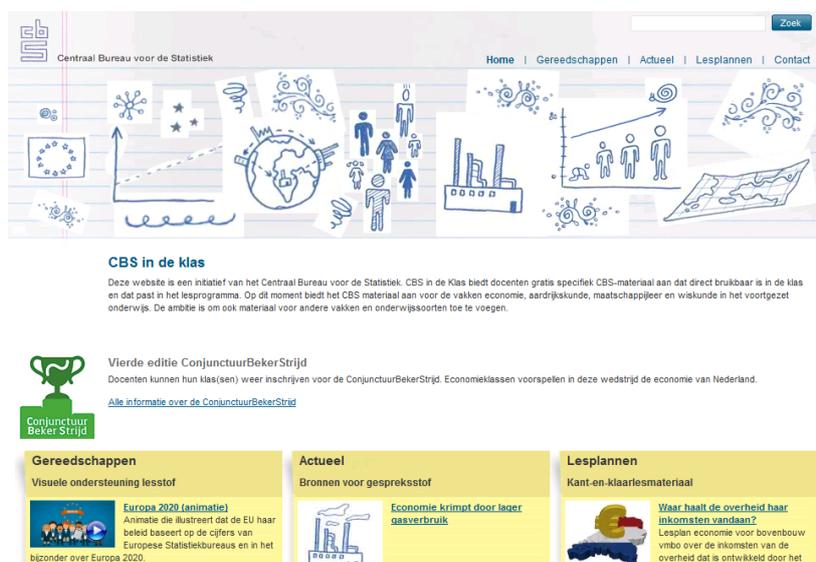


Figure 1. Home page of www.cbs.nl/cbsindeklas

We cover various subjects on the website, ranging from geography and social studies to mathematics and economics. The website is free of charge, so teachers can use it whenever they want, without having to worry about budget. No login is required for the website or for the different sections. This lowers the threshold for using the website in the classroom – no time is lost and there is no hassle through either the delay of a login, or lost passwords of pupils while trying to access the material.

The website has three main sections, applicable for all subjects covered.

- a) **Modular content.** As an addition to a lesson already prepared about a certain subject, some modular content can be added in the class. With this modular content, teachers can show more recent data or investigate different viewpoints with a more elaborate visualisation of the topic. For geography and social sciences, for example, we have an interactive population pyramid; for mathematics we have some predesigned datasets (with applied confidentiality) to be used for different exercises or calculations; and for mathematics and social sciences we have instructions on “How to read graphs” and “How to set up a basic survey”. A lot more material is present, to be used by teachers as an addition to the lesson and sometimes supplementing out-of-date books. We have also included some posters (size A0) which can be hung up in the classroom as decoration, visualising some

of our data in infographics of the subject concerned (e.g. geography, social sciences).



Figure 2. Classroom posters for Geography

- b) **Recent information.** The statistical office publishes a continuous flow of articles. Although the language used in these general articles might not be suitable for adolescents, the information may be useful to illustrate the topical situation. The economic crisis that started in 2008 was covered only years later in economics textbooks, when a new edition was published. Topical articles were, however, clearly revealing the remarkable decline in western economies. As an economics teacher you might want to use this recent information as background material for your lessons.
- c) **Predesigned lessons.** Some teachers look for material that they can apply directly in their lessons, with information and step-by-step questions to lead their pupils through the contents. We hired an external company to make some predesigned lessons for us, using material from the statistical office. As there is a direct connection with current textbooks and other teaching methods, these lessons can substitute some of the planned lessons. The lessons have different levels and are suitable for pupils with various study rates. For geography, for example, they look into differences between cities and rural areas, differences between neighbourhoods within cities – using recent data from Statistics Netherlands.

2. Annual competition: “Predict the economy”

An element of competition and topicality is introduced with our annual competition between economics. Teachers are invited to take part in the competition with their classes. The classes have to apply their basic knowledge of economics to predict the values of key economic indicators. These indicators go beyond their outdated school books. Pupils have to predict things like employment, inflation, export growth and household consumption. Predictions are sent in in October, and in the following March the results are announced and the winning class is awarded a prize. Last year the winners won an economics master class at their own

school, and cinema tickets for the pupils. In the space of three years the competition has grown from a dozen classes in the first year to 170 classes participating last year.

“The best application of what they have studied last year”



Figure 3. The winning class of the competition, 2014

3. Direct contact with teachers

We contact teachers directly in two ways.

- a) **Education fairs.** We regularly visit fairs and conferences organised to keep teachers up- to-date with developments in their field. We visit general education fairs every two years, and are present at annual fairs directed at a specific subject (e.g. geography, economics). We present our material with an online demonstration, offer them recent publications of the national statistical office, and distribute printed posters to hang up in the classroom. In this way, we become more familiar to our target group: teachers. If they show interest, we ask them to join our teachers panel, our second way of contacting teachers.
- b) **Teachers Panel.** Some 180 teachers are now registered in our panel. The list is based on contacts made at the education fairs, with other members joining after participating in the of *Predict the economy* competition. During the initial development of the website four years ago, we frequently asked some a number teachers for their opinions about our plans. We now maintain contact by e-mailing our panel when new information is available. Now and then we contact them with questions about their expectations or experience with our products.

Besides this direct contact with teachers, we increase our visibility by advertising our website once in a year in specialist journals directed at teachers.

Evaluation of the website

We get a lot of feedback on our products from the teachers panel and the *Predict the economy* competition. However, the website does not automatically reveal how the products are received in the classroom. Therefore after some years we asked a non-profit education organisation to evaluate our website.

By conducting a survey on the website (n = 23) and some additional in-depth interviews with teachers, they drew a number of conclusions. The recent data on the website were highly

valued. The quality of the data was also a positive point. However, although the predesigned lessons were judged positively, the connection with the prescribed study subjects was not clear for all teachers, and they were not the most used part of the website. For the modular content on the website, teachers wanted more adjacent explanatory text.

In the future, therefore, we shall continue to offer recent publications, we shall maintain the current predesigned lessons, and add more modular content where possible, making sure it is accompanied by short manuals.