

Science Today in social networks: a successful case in science communication

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Abstract

Since its foundation in 1982, the magazine Science Today has marked its pioneering role in the field of science communication. One of the consequences of this feature is its presence in electronic media since the early 1990s, even before the internet was available for Brazilian users. The first version of its site was created in 1996 and, since then, its presence on the web has expanded. With the popularity of social networks, Science Today started to work on other fronts on the internet. Today it maintains a channel on YouTube with over 700,000 views and another channel directed to children with more than one million views; a Twitter account with over 50,000 followers (plus another to cover events in real time); a page on Tumblr with about 130,000 followers; a Facebook page with over 260,000 likes and another page in the same social network – with content turned to children – that have 7,000 likes. This study aims to present the strategies of Science Today in the different social media and the excellent results achieved, especially on Facebook, which has been experiencing exponential growth rate and has been established as an important tool for directing readers to the site. The numbers show, in general, the great potential of social networks for science communication.

Science Today magazine is a pioneer vehicle dedicated to the disseminating of science in Brazil, created in 1982 by a group of scientists aiming to promote science and get the scientific community closer to the general public, helping to form new generations of science advisers in the country. Over the past 30 years, national research has grown immensely as well as activities of public communication of science. Science Today led to the creation of the Science Today for Children magazine, launched in 1986, directed to children and this successful project stimulated the creation of an Institute, the Science Today Institute, which also maintains pages on the internet of both publications and profiles on various social networks.

Throughout this period, the Science Today has established itself as one of the most traditional vehicles in Brazil in the area and continued to play its role of presenting science to the public in a correct, interesting and stimulating way. To do this, the Institute is always looking to remain innovative, using all available means to reach their readers, especially students (of all levels), teachers and researchers.

In the early 1990s, even before the internet be available for Brazilian users, Science Today started to tread electronic paths. In 1993 created one of the first electronic hypertext publication in Brazil, Science Today Hypertext (CHH), which contained a summary of best materials of the printed magazine. The CHH was available for free via the Bulletin Board System (BBS), accessed through the telephone line, and within its pages readers could follow flagship scientific events, such as the impact of the Shoemaker - Levy 9 with Jupiter in July 1994. This virtual project was expanded with the launch of Electronic Science Today for Children, an adaptation of the children's printed magazine, with pictures and games, available on floppy disks.

In 1996, went on the air the first version of the Science Today On-line, another milestone in electronic science dissemination in Brazil. Reformulated for the last time in 2009, today the portal provides part of the contents from the ICH publications and also publishes exclusive reports daily, offering the reader a dynamic coverage of science news in Brazil and in the world, besides hosting a blog (Bússola), a podcast (Estúdio CH) and many columns written by scientists.

In the new century, the popularity of social networks showed that there were new opportunities for use of the Internet for the dissemination of science. The ICH has also

entered these environments through a number of initiatives. The oldest 2.0 tool used is YouTube, where the ICH maintains a channel since 2009 and that today has more than 700,000 views. The videos available are audiovisual compositions produced for specific reports or videos transferred by researchers, besides some more elaborate productions, as the special series 'CHats of science', the videocast 'Bioconexões', and the documentary 'Science Today: 30 years'. Science Today for Children also has its own channel on Youtube (CHCnaTV), with over a million views, where there are a lot of videos produced as parts of reports and various experiments and activities, published periodically in the internet.

Pioneering: Twitter and Tumblr

On Twitter, Science Today maintains a profile since 2009. The platform serves as an important tool for direct interaction with readers, through which are disclosed the news published on the website and also on Tumblr. With over 50,000 followers, Twitter is one of the fastest pathways of interaction with the portal readers, thanks to its own speed and our constant monitoring of the microblog - there are common, for example, doubts about issues such as the circulation of print magazine, compliments and, of course, some criticism.

In mid-2013, we changed the publishing dynamic adopted in twitter: up to that point, our policy was tweeting only once each content in the microblog, what gave us a less constant presence on that network, with at most three to four tweets per day with our own content, in general. Then we adopted the standard of retweet more than once each link, in order to allow more people who follow us receive our updates. We believe that the measure has been well received by the public - which is reflected in an increase of 15 thousand followers of the profile between March 2013 and March 2014 , which is 50 % more compared to the same period in the previous year.

Besides promoting its own content, the goal of Science Today is to use the platform to perform a kind of curatorial job, retweeting news and interesting articles on science, technology and culture published by other profiles, aiming the popularization of science. Importantly, Science Today also has another Twitter account used for coverage of real time events. In 'CHTempoReal', we broadcasted, live, relevant scientific events

like Rio +20, Higgs' Boson announcement, Ig Nobel's choice and the annual meeting of SBPC, for example.

Another social network in which Science Today can be considered a pioneer is Tumblr - an expanding tool that focuses images and videos. Founded in late 2011, our profile on Tumblr had gained prominence in 2012 and 2013, being one of the forerunners in the use of this social network to promote science in Brazil. Today we have about 130 thousand followers on the platform and our operations in these media differs greatly from the work done in other social media due to the exclusive character of all our publications on Tumblr - all content is published only in this platform (but linked on Facebook).

Thus, our objective on Tumblr is to use this media to cover in a more informal way relevant issues in fields like archeology, astronomy, biology, history, and other scientific subjects. Moreover, it stands out on Tumblr a try to give more visibility to initiatives that have a playful look at the relationship between science, culture and art, oft which often left a little aside for science news.

Success on Facebook

On Facebook, Science Today popularity has shown a dramatic growth in recent months. The page, created in 2011, ended that year with tanned 5 thousands, exceeding 20 thousand at the end of 2012. In mid-2013 we already had more than 50.000 fans and ended the year with nearly 100.000 likes. In 2014, we already accumulate 260 thousands likes even in early April.

Just for comparison purposes, we can see the numbers of other Brazilian scientific publications: the FAPESP Research has about 38.000, Scientific American Brazil, 99.000, Galileu, 241.000, and Superinteressante, 2,2 million. Other Brazilian sites of scientific dissemination, as the Rationalist Universe and Coffee History, for example, have about 350.000 and 224.000 likes in their Facebook pages, respectively.

Beyond Science Today Online page, we also have another fan page, from Science Today for Children. Despite having a much smaller number of likes, it has shown very significant growth in the last year: from just over two thousand followers in mid-2013 to about 7 thousand followers in early April of this year.

The work performed by Science Today on Facebook involves the use of various strategies. In this social network we focus in promoting every material that is published in the Institute's other channels - website, print magazine and Tumblr, besides the printed magazine and website of children. After many tests, we chose the 'image' format as the main form of dissemination of page updates, due to a higher range of dissemination, according to Facebook statistics. Facebook data indicates that between January and early April 2014, the average range of 'images' was 31.4 thousand people , compared to 30,700 of 'video' format and only 21 400 for 'links' - anyway , after the most recent changes in the network , in March 2014, we plan to conduct further tests to reevaluate the option for picture format.

We have also invested in producing own content to Facebook, including the creation of new special sections. An example is the 'Picture of the Week', an initiative adopted after the social network layout change in 2012, that created of the cover photo for pages and profiles (1). The new section consists of weekly publication of an image related to a historical socio-cultural, scientific or artistic event that has marked that period. Among the topics covered in this section we can quote, for example, the discovery of Chagas disease, the isolation of the AIDS virus in Brazil, the Week of Modern Art in 1922, the discovery of the tomb of Egyptian pharaoh Tutankhamun and the publication of 'The Origin of Species' by Charles Darwin.

From 2013 we also invested in creating other exclusive content to Facebook, generally related to recent events that would not receive space on our website or on Tumblr. Such stories are presented as images with short texts, complemented with links to related material previously published in any Science Today media. This option has been very helpful to reflect new developments of issues already addressed, such as the controversy over Stem stem cells (2) and failure of the launch of the Brazilian satellite CBERS 3 (3) – issues already addressed on our site shortly before and that had a vast material reference in our library. This type of use also allows us to therefore give visibility to older but relevant contents, previously published on these topics.

Growth and strategies

To illustrate the success of the performance of the Science Today on Facebook, we can analyze some increasing numbers of the page. From the end of 2013, there is a clear shift in its demographics: the daily likes increased from 316 to 1400, on average, while the reviews have risen from 43 to 123, and shares from 157 to 480. There is a very significant change too in the origin of these likes: until that time, the overwhelming majority were originally from the 'In your page' but, from October, there was a reversal in the statistics and the main source became 'Pages suggestions' - which represent up to 80% of new likes in some periods, always followed by 'in your page' and mobile likes.

Apart from changes in the Facebook itself, some modifications we made in our strategy mid-2013 may help to understand the growth of page numbers. Firstly, we increased the interaction with Science Today Children Facebook's page: a decision of a strategic nature, aiming to approximate the two pages (that were isolated), to stimulate the growth of children's page and because we understand that there was a possible interest among readers of Science Today (many of them parents and educators, for example) for the subjects addressed by the other page.

The strategy was restrained not to suffocate our public with children content: currently we share just one update of Children's Science Today per day, on average, just in the weekdays. The impact was very positive, some shared posts of CHC were among the 100 publications of greatest impact in the last trimester (see figure 2) and children page has doubled its number of likes in about six months - the strategy also allowed joint campaigns in this period, as #CHC5mil, which helped Science Today for Children page to exceed 5 thousand likes (see Figure 1).

Another important factor in explaining the growth of our Facebook page is the change in frequency of publications. We realized that our audience was very similar in both weekdays and weekends and we decided to invest in publishing content on Saturdays and Sundays too. We chose to replicate highlights of the week, like the posts that made more success and themes that we believe important enough to be presented once more to the public.

All these measures were central to achieving another goal we consider important to increase the interaction with the public: since the end of 2013 we updated our

Facebook page at least 4 times a day. Considering the recent (and constant) changes in Facebook's post-delivery policies (4), restricting the visualization of page updates only a small number of followers (what intends to stimulate promoted posts, a decision by which Facebook has received a lot of criticism (5) this strategy seems essential to expand the scope of the page and helps explain the recent success. All changes, however, could only really sustain this growth if we consider the quality and relevance of the content published on our website and other Medias.

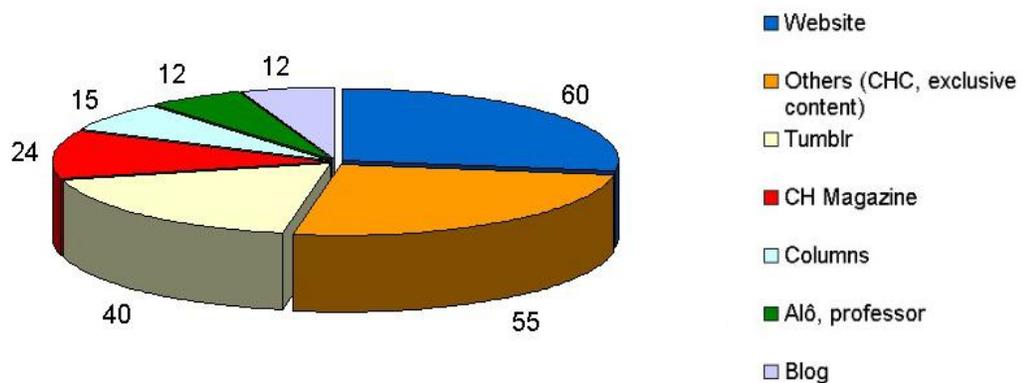


Figure 1

Note that the Science Today itself has tested the possibility of boosting posts on Facebook. The initiative was taken only times until March 2014, with total investment of just R\$ 300. However, because of the good results presented, we consider a more continuous application of this feature in the future, since all the posts were among the

greatest impact between January and March this year, one of them in the first position (see Figure 2).

All content posted on Facebook from January to March 2014, without republications



100 posts of greater reach on Facebook from January to March, considering republications

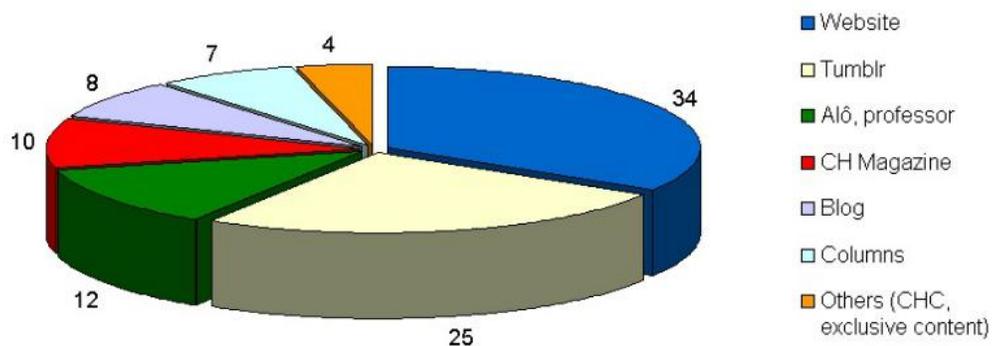


Figure 2

The list of the most successful posts of this period also shows the wide variety of material that had made success during this period, with popular posts linked to the website, to the magazine, to the blog and to Tumblr. The average range of 100 greatest impact publications was 58,328 people, with a report from Science Today On-line reaching the maximum range of 253 thousand. The second position in the rank is occupied by a blog post that had range of 153 thousand people.

In terms of reversal of hits for Science Today On-line, Facebook has become the third most important in directing the flow of readers to the source site, behind Google search engine and direct links. The numbers show that Facebook is consolidating its leading role in the dissemination of our content and shed light on the great potential of this network as a tool for scientific communication.

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