SISSA – International School for Advanced Studies Journal of Science Communication
ISSN 1824 – 2049 http://jcom.sissa.it/

Comment

INSIGHTS ON THE FUTURE OF SCIENCE JOURNALISM

The future of science journalism in Ghana: evidence-based perspectives

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ABSTRACT: Despite the boom in science journalism in developing countries, little is known about the views of reporters in Sub-Saharan Africa on the future of science journalism. This commentary, based on a recent survey of 151 Ghanaian journalists, focuses on the journalists' wishes for the future of science journalism in Ghana and on ways that the power of the Web can be harnessed to help achieve those wishes. Many of the surveyed journalists indicated that the inadequate access to contact information for scientific researchers was a barrier to science reporting. Most journalists (80.8%) indicated that they would like to increase the amount of science journalism in Ghana in the next decade. Two specifically mentioned that information and communication technology can help increase the amount of science journalism in the next decade. We believe that use of the Web can increase the quantity and quality of science journalism in Ghana, both by facilitating information gathering and by serving as a medium of science communication. Education of journalists regarding use of the Web will be important in this regard.

Introduction: context and methods

Science journalism seems to be booming in developing countries.[1] In Sub-Saharan Africa, many new science journalism associations have been formed.[2] However, scholarly works on science journalism in Sub-Saharan Africa do not yet seem to have reflected the boom. Very few studies in Africa have characterized the practice of science journalism.[3] Those studies that have been done have been based mainly on content analyses of newspaper reports, thus missing the perspectives of journalists and excluding science journalism practiced in other media.

In the West, many studies have characterized science journalism — both from the perspectives of journalists[4,5,6,7,8,9,10,11] and those of contents of news reports.[12, 13,14,15] Some recent discussions of the future of science journalism have centered around loss of science journalism jobs. Reasons for this loss have included the closure of science departments of some major news media, the infiltration of non-journalists into science journalism through science blogs,[16] and the move from print to online media.[17]

However, perspectives on the future of science journalism from developing country-journalists are largely lacking. Helping to fill this gap is one of the main motivations for this commentary, which is based on a study, in Ghana, a country in West Africa. In Ghana, science journalism usually is practiced by general journalists. These journalists typically have little or no background in science journalism.[18] The Ghana Institute of Journalists (GIJ), established in 1959, has trained more than 60 percent of communication professionals in Ghana.[19] In the late 1980s, the GIJ offered such science journalism courses as agricultural reporting, aviation reporting, and environmental reporting. However, it has not offered them since the 1990s, when the sponsoring entities, such as Ghana's Ministry of Food and Agriculture and the Ghana Civil Aviation Authority, stopped funding them.

Training as a journalist is a major requirement for membership of the Ghana Journalists Association (GJA), the main professional body of journalists in Ghana. However, many journalists do not belong to the GJA. Some journalists belong to smaller associations with memberships usually less than 50.

To our knowledge, no study has explored the future of science journalism in Ghana from the perspectives of journalists. In the current study, we used a self-administered questionnaire to identify, among others, (a)

the media in which journalists in Ghana work, (b) barriers perceived in gathering information, (c) the relative amount of science reporting in Ghana that journalists would like to have in the next ten years and why, and (d) what they perceive the status of science journalism in Ghana to be. In all, 300 questionnaires were distributed via worksite visits and at a central location from January 20 through February 1, 2010. Of the questionnaires, 151 (50.3%) were completed and returned. This study resulted in a master's thesis that described science journalism in Ghana.[20]

The media in which journalists in Ghana work

Of the 148 respondents who indicated their main area(s) of practice, most (80, or 54.1%), worked in newspapers, 45 (30.4%) worked for radio, 29 (19.6%) worked for television, 20 (13.5%) worked for Internet media, and some worked for other media including magazines and a wire service. Many journalists (56, or 37.8%) cited more than one medium. The respondents' areas of journalism practice seem in some ways to resemble those found in previous studies elsewhere. As in the United States,[21] United Kingdom,[22] and Uganda,[23] many journalists worked in the print media.

In both the study in the United Kingdom and the current study, many journalists cited more than one type of mass media organization. Journalists may work in more than one area of practice for several reasons. First, low salaries may spur some journalists to do so. Second, some journalists do freelance work. For example, in Ghana some journalists freelance for international media such as *SciDev.Net*. Thus, a journalist who works for a newspaper in Ghana but occasionally contributes to *SciDev.Net* may cite both newspaper and the Internet. Third, some journalists may enjoy working for various media.

Several factors may have contributed to the finding that relatively few journalists (13.5%) indicated that they worked in Internet media. First, there may be structural barriers to working in Internet media such as lack of Internet access, low bandwidth in some places, occasional electrical outages, cost of access to the Internet, and lack of jobs in Internet media. There may also be educational and psychological barriers, including lack of technological literacy, especially in older journalists; the perception that when newspapers are available online, readers won't buy the print versions; and lack of awareness of the power of the Web as a hub of knowledge where power is re-distributed among different actors.

Barriers to information gathering

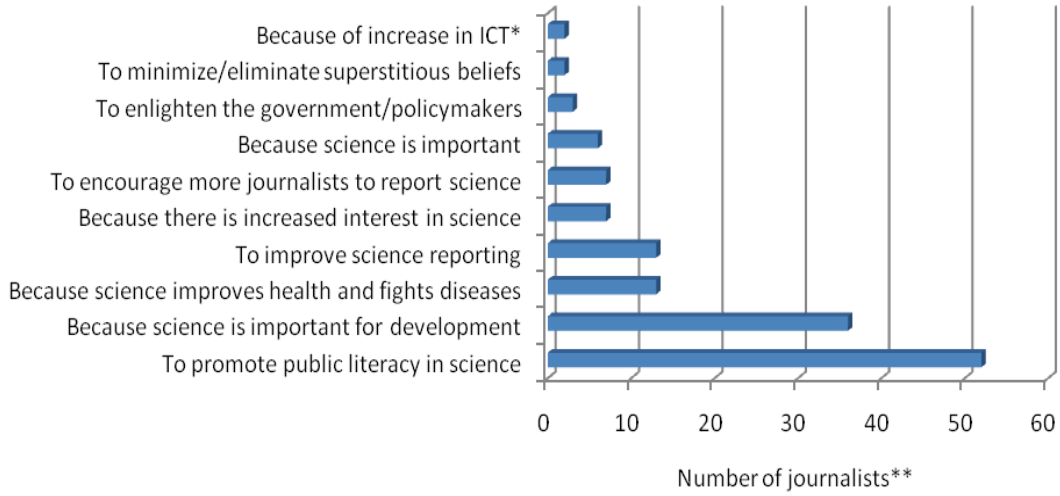
The questionnaire included a section on barriers to science reporting. When asked whether lack of the contact information for scientific researchers was a barrier to science reporting, 47 of 140 respondents (33.6%) said so. We believe the Web can facilitate access to contact information of scientific researchers. For example, scientific institutions can publish the contact information of researchers on their Web sites. Also, as part of an initiative titled "Building Bridges: The Health Professionals and MediaResource Project" (http://cshealthcom.org/projects/), the Centre for Science and Health Communication, a non-profit based in Ghana that promotes public engagement in science, has an online database that has contact information of health professionals and journalists. Currently, only health professionals and journalists in Ghana trained in health reporting as part of the project register their contacts in the database. We hope this database will expand to include other researchers and journalists. We can also envision the development of other databases that would help journalists in Ghana and elsewhere in Sub-Saharan Africa to identify researchers and learn about their research.

The future of science journalism in Ghana

Of the 151 respondents, most (122, or 80.8%) said the amount of science reporting in Ghana in the next decade should be more than it is today. Only 1(0.7%) said the amount of science journalism should be less than it is today, and 14 (9.3%) said the amount of science journalism in the next decade should be equal to the current amount. In addition, 5 (3.3%) indicated they did not know how the amount of science journalism should compare with that today, and 9 (6%) did not respond to this item.

Respondents gave many reasons for their responses. The reasons and the comments that respondents gave on the status of science journalism were analyzed together. The four dominant reasons that respondents said

that the amount of science journalism should remain the same or increase were (a) to promote public literacy in science, (b) because science is important for development, (c) because science improves health and fights diseases, and (d) to improve science reporting by providing more experience (Figure 1).



*ICT = Information and communication technology.
**Some respondents gave more than one reason.

Figure 1. Journalists' reasons for wanting the amount of science journalism to stay the same or increase in Ghana in the next 10 years (n = 142).

Two journalists said they wanted the amount of science journalism to increase because advances in information and communication technology (ICT) would facilitate such reporting. In advanced countries, some scientists are reaching the public through science blogs, thus possibly supplanting some science journalism.[24]Although in the current study, only two journalists mentioned the power of the Web in facilitating science journalism, other Ghanaian journalists may also see advances in ICT as a boon to covering science. Greater use of ICT could benefit such coverage in two main ways. First, as more Ghanaians use the Internet, more journalists may be motivated to consider using the power of the Web to educate their audiences on science-related issues. Second, the Web may also help journalists report science by aiding in information search.[25] For example, the difficulty in information gathering, as noted, can be overcome through initiatives on the Web that can provide contact information of scientific researchers.

However, despite the usefulness of the Web in aiding science reporting, there are some limitations to use of ICT for science communication in Ghana. First, in the Ghanaian culture, people value face-to-face communication more than other forms. Thus, scientists may prefer to meet with the public through science cafés instead of using the Web for interacting with the public. Finally, most Ghanaians live in rural areas where access to the Internet is limited. Thus, journalists in such areas may not have Internet for information gathering, and scientists may not be motivated to use the Web to communicate science with the public.

Nevertheless, we believe that use of the Web can enhance journalism in general and science journalism in particular in Ghana in the future. Some Ghanaian politicians now have Web blogs that promote their ideas. More scientists in Ghana may be blogging in the future. It is unclear whether such blogging will compete with science journalism. If specialized science journalists in Ghana become more numerous, such science blogs could be a useful information source for them.

Most journalists surveyed preferred an increase in the amount of science journalism in the next decade. These journalists need to be empowered through effective science journalism training. We think such training should focus on a wide range of topics related to science and technology so that each graduate could report on a variety of areas of science. Ghanaian journalism training institutions should explore avenues for tapping the expertise of international journalism institutions to develop science and technology journalism. Also, to develop science journalism courses in Ghana, journalism training institutions should consider consulting relevant local institutions such as the Council for Scientific and Industrial Research, the

Ghana Science Association, and the Ministry of Environment, Science, and Technology about communicating with scientists or policymakers.

Given the power of the Web, courses and workshops in science journalism should include instruction in writing about the sciences for online media and using the Web to aid science reporting. Already, such instruction has begun. For example, at a workshop on health reporting for journalists and health professionals held November 21-23, 2011, in Ghana, and facilitated by two of the authors (BA and BG), there was a session titled "Using the Internet to Aid Health Reporting." Participants at the workshop discussed, among others, use of e-mail to schedule interviews, request materials, and to make brief inquiries. Also, the Web may be useful for training journalists in science reporting. For example, the World Federation of Science Journalists has freely accessible online science journalism course modules (http://www.wfsj.org/course/en/), which have been useful for journalists in Ghana and elsewhere.

Conclusion

Overall, most (80.8%) of journalists in the study population wanted more science reporting in Ghana in the next decade. Many of the surveyed journalists indicated that the inadequate access to contact information for scientific researchers was a barrier to science reporting. Two journalists specifically mentioned the power of ICT in facilitating more science reporting. We believe the Web has the potential to facilitate science reporting in Ghana and other Sub-Saharan African countries. Given this potential, there should be more education and resources to promote science reporting in Ghana and other Sub-Saharan African countries, especially as related to the Internet. Our study did not specifically examine the influence of the Web on the practice of science journalism in Ghana, but studies on this subject should be conducted in Ghana.

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HOW TO CITE: B. Appiah, B. Gastel, J.N. Burdine and L.H. Russell, *The future of science journalism in Ghana: evidence-based perspectives*, *Jcom* **11**(01) (2012) C04