

From scientists, for scientists, and beyond: a method to develop a comic based on your research

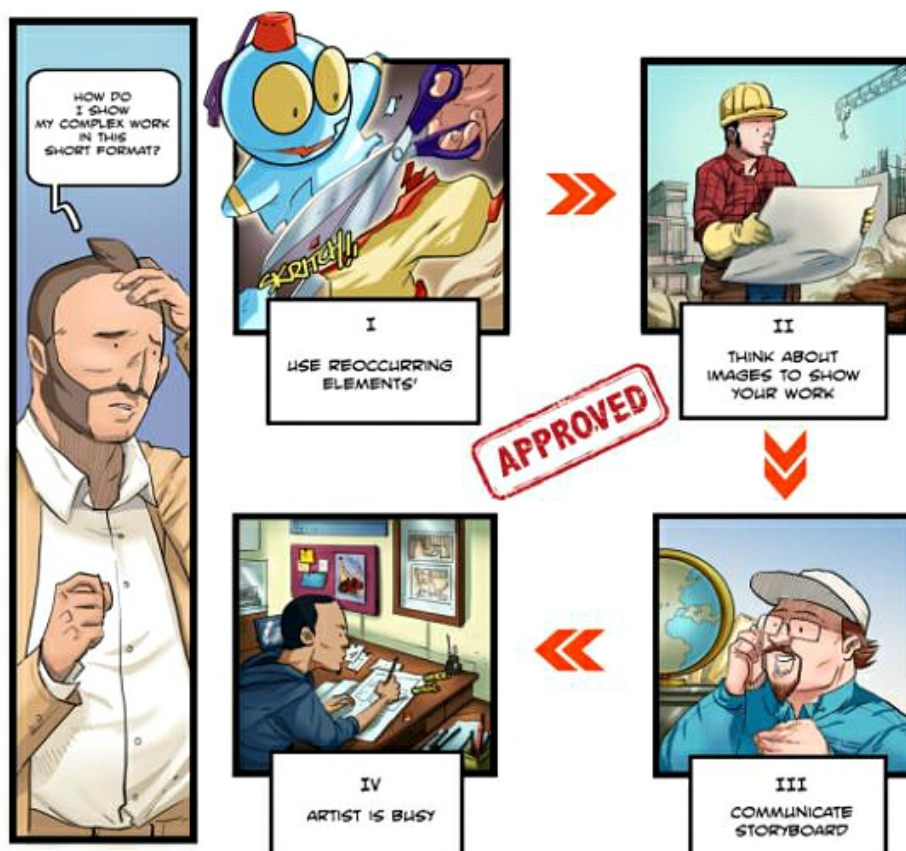


Scientists are increasingly challenged to communicate their work to broader, more varied audiences. Responding to this imperative, **Jan Friesen** and **Skander Elleuche** have developed a method that provides a simple, flexible framework to translate a complex scientific publication into a broadly accessible comic format.

“Even amongst scientists, communication across disciplines is tough. But to communicate scientific findings to the general public is a whole different story.” So says the AGYA Science Jinn, right, a science communicator and honorary member of the [Arab-German Young Academy of Sciences and Humanities](#).



Scientists are expected to write highly specialised texts and formulae to communicate amongst themselves. However, they are now challenged to also communicate their work to broader audiences, ranging from the general public to specialists in other disciplines. To secure funding, to introduce and even justify, research to society, it is becoming more and more important for scientists to enter the field of science communication. We have developed a [method](#) that provides a simple and flexible framework to translate a complex scientific publication into a broadly accessible comic format.



How to develop a conceptual foundation?

We start by identifying the main message and extracting the research highlights of our chosen scientific research publication. In parallel, we filter out any extraneous information that is not intended to be converted into the comic format. Such key concept components will have to be settled on as early as possible in the progress of developing a conceptual foundation. Based on these simplified key topics, a range of significant themes are identified that are then used as storyline vehicles for the transmission of scientific facts. Relating these to well-established figures or icons, such as having a superhero as your main character, for instance, will be more easily understood by readers.

Development of a scientifically-relevant setting

Next, we develop a fictional setting that will enable the reader to identify her/himself with the topic and also convey some kind of scientific relevance. As natural scientists, we mainly work on topics related to real-world problems, including medical, environmental, or technological issues. That obviously means we can identify stakeholders who are affected by such topics. In the context of our own research, we have recently published a [comprehensive review article](#) that deals with halophytes, aka salt tolerant plants, and their potential to be used as an alternative renewable energy source. The topic is rather complex and involves botanical, geographical, chemical, and biotechnological approaches that are described in detail in several sections within the review paper. To turn this into a proper comic narrative we embedded our main message and disciplinary work within a background story. Saline environments and high energy consumption fit the symbolism of arid, oil-rich countries, which we chose as the setting for our background story. The actual science is embedded into the story using stereotypes of the different work environments; e.g. depicting the work of a botanist in a green house. It is important to be true to the comic format by thinking about images to represent scientific processes, such as Asterix's magic potion or Popeye's spinach to visualise energy and power.

Development of characters

Characters that fit into the story are of tremendous importance during the development of a science-based comic. A readjustment of the original focus of the scientific article is often necessary and sometimes even essential to perfectly fit a highly recognisable character into an easy-to-read and humorous comic story that covers all information in illustrations and speech bubbles.

"I was developed as a recurring element", says the Science Jinn in our science comic based in a fictional Arab realm. "I am an ancient being who has served mankind since the beginning of time. I can translate any technical and scientific words so they can be easily understood by everyone." We use the Science Jinn character to explain technical terms and to summarise our findings.

The Science Jinn is one of a pair of contradicting buddies. The other main character is a ruler of a fictional wealthy, desert country, who contracted four scientists representing our four disciplines mentioned previously. He is interested in state-of-the art bioenergy technologies to be implemented in his realm for a sustainable and environmentally friendly future.

Development of a detailed storyboard

Since neither of us is a talented illustrator, we decided to contact a professional artist. Here we faced our first problem: communicating scientific details to a layperson. Consequently, we developed a detailed storyline where we described the meaning of a specific scene, the imagery, and suggested iconic elements, which was then sent to our artist, [Tyas Seta](#). This is, of course, a highly dynamic process with several discussions and rounds of revisions.



If you're interested in reading the full story you can read our full comic, "[The Rise of the Incredible Salty Salicornia Power Plant](#)", on the AGYA website. Our method has also been used to develop a new comic, "[Urban Forestry – Taming Precipita](#)", based on a book chapter about [urban forestry](#).

This blog post is based on the authors' article, "[Communicating Science through Comics: A Method](#)", published in *Publications* (DOI: 10.3390/publications6030038).

Note: This article gives the views of the authors, and not the position of the LSE Impact Blog, nor of the London School of Economics. Please review our [comments policy](#) if you have any concerns on posting a comment below.

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