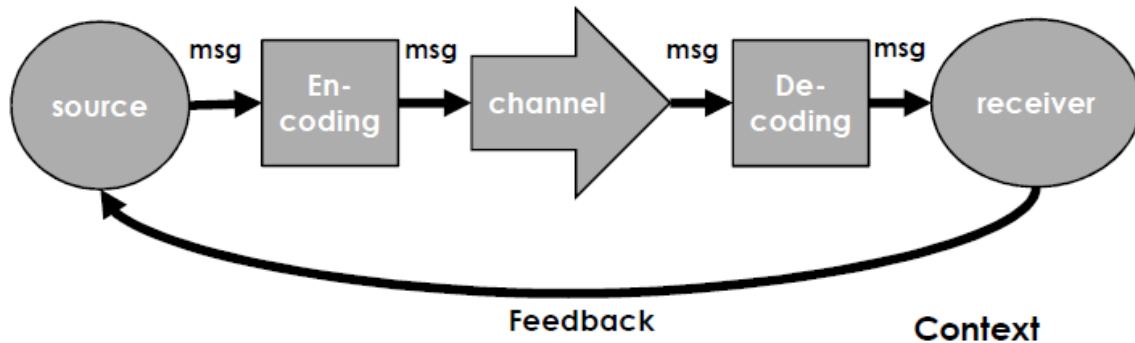


Models for effective communication/science communication

In order to have an effective communication, it is important to know your audience, the purpose of your message and how you should present it.

The diagram below shows the communication process in which the message coming from a source goes to a receiver through a channel.



Now let's look at each part of the process and how you can improve each component to make your communication effective.

Source: The source is you. It is important you understand why and what the message is. It is also important to send a useful and an accurate message.

Encoding: This process involves the transferring of information into a form that can be sent and correctly be decoded at the other end.

Success at this stage is determined by your ability to eliminate sources of confusion such as cultural issues, mistaken assumptions, and missing information.

Channel: Messages are conveyed through different sources. These sources can be verbal such as face-to-face meetings or written including letters, emails and reports.

Different channels have different strength and weaknesses depending on the message you are trying to communicate. For example, a complex issue should be communicated face-to-face than via email. Therefore it is important to know the best channel to get your message across.

Decoding: This is a skill which involves taking time to read a message carefully or listening to it actively. Just like the encoding, confusion can arise in decoding as well. This can occur in instances where the audience does not have enough knowledge to understand the message.

Receiver: Your message is delivered to individual members of your audience.

Feedback: Your audience will provide you with feedback which can be verbal or non-verbal reactions. Hence it is important to pay attention to their feedback. If their feedback is good, then you can proceed in discussing your message further. However if your audience looks confused, it is good to think of ways that make your message clearer and more accurate.

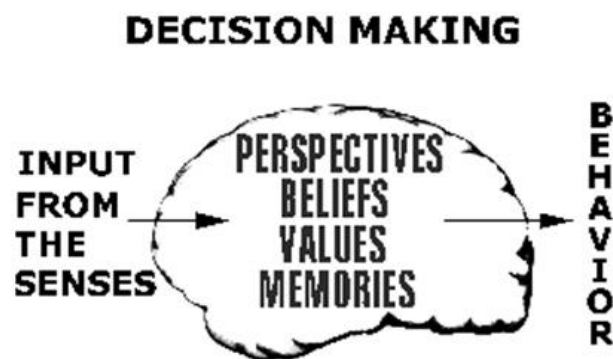
Context: The situation in which your message is delivered is the context. This may include the surrounding environment or broader culture (corporate culture, international culture, e.t.c.)

When your message aims for behavioural change

There are two types of communication models; deficit (tell them all about it) and engagement model (engage them with it).

The deficit model is a one way communication which is mainly facts based and does not consider the values, beliefs or any previous experiences of the audience. Hence it often leads to no action.

The engagement model however is an ongoing interaction which addresses the perspectives, beliefs and values of the audience. As seen in the model below, when addressing the perspectives, beliefs and values of the audience, it is likely to lead them to behavioural change. The engagement model also creates relevant memories and builds them up. Hence it often leads to taking action.



The table below will provide you with more information on both models.

Aspect	Deficit model	Public engagement model
Major influence(s) on public beliefs and decisions	Science literacy or the lack thereof	Values, trust, identity, and social networks
Proposed solution to societal inaction	To improve science literacy (ie to fill in the "deficit" in the public's technical understanding of an environmental problem)	To connect an environmental problem to public values while building trust and empowering public participation
Communication is a process of...	...transmission, which means "popularizing" and "simplifying" technical information that flows from experts to the public	...dialogue and the two-way exchange of perspectives; both the public and experts learn from this process
The definition of "reaching the public"	Increasing the amount and technical accuracy of science news coverage, focusing on traditional outlets such as the newspaper science beat, popular science magazines and books, or public television programming	Reframing a complex issue around relevant and familiar dimensions; engaging in local community forums and dialogue; partnering with opinion leaders and other societal groups; and complementing traditional science coverage with novel entertainment genres and social-media initiatives
Scientists and their organizations...	...are under attack in society; any communication failures are blamed on public ignorance, the media, or "politicization" and "anti-science"	...hold almost unrivaled trust, authority, respect in society; scientists need to use communication capital effectively and wisely; otherwise scientists share some of the blame for communication failures
The ultimate goal	To improve science literacy – once the public is brought up to speed on the science, they will view issues and decisions as scientists do, controversies will go away, and progress will occur in dealing with environmental problems	To motivate, enable, and empower the public to make decisions about environmental problems – yet, no matter how accurately communicated and understood the science, public decisions cannot be separated from values, political context, and necessary tradeoffs between costs, benefits, and risks

Source: <http://rogerpielkejr.blogspot.com.au/2010/11/nisbet-on-deficit-model-vs-engagement.html>

In conclusion, an effective communication relies on knowing the purpose of your communication. Regardless of who you work for, it is important to understand where your information goes and what it is used for.