Developing interdisciplinary communication skills through plain language principles and strategies

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The sciences often regard communication as a ‘soft skill’. Nevertheless, developing effective communication skills has become critical as rapid technological advances necessitate cross-collaboration between several sectors. Despite universities offering targeted communication training programmes, a survey completed by PPS[1] in 2013 revealed that most engineers and scientists still struggle with the writing and communication process. I propose that Plain Language can be useful in interdisciplinary science communication. Most prior research on Plain Language and science communication has focused on rewriting science for the general public, including school learners, and ensuring that an outside audience (often not scientifically literate) can understand the science that is presented. In a PhD study completed in 2022, several interviewed engineers indicated that they often need to communicate to specialists outside of their own fields to apply for project funding. This is one example of how effective interdisciplinary communication skills are crucial for the sciences. Besides communicating with the public I suggest that Plain Language can also benefit interdisciplinary communication with peers. Carefully applying Plain Language strategies when communicating is one possible solution to ensuring clear and unambiguous communication across disciplines. By focusing on a definition of Plain Language and breaking down the elements that make up a Plain Language text, I believe scientists and engineers will be able to communicate more effectively. I also consider the argument that it may be more effective for scientists and engineers to work alongside a language practitioner familiar with Plain Language principles rather than to try to and teach scientists and engineers another soft skillset.

Key words: Plain Language, communication skills, science story

INTRODUCTION

Technology is advancing at a rapid rate and complex global problems often require scientists and engineers to work collaboratively on projects (Phillip, 2012). They also need to rely on the findings of research from different disciplines. English is currently the *lingua franca* of science, and even though most scientific research is published in English, scientists and engineers who seemingly use a shared set of technical terms can still experience difficulties in communicating clearly. One problem arises from the degree of specialisation required in the sciences and in the application of scientific findings and inventions. Additional obstacles include a restricted vocabulary, uncertainties related to idiomatic usage, and the complexities of “code-mixing and code-switching [that…] establish identity and belonging to a speech community” (Kirkpatrick and McLellan, 2012) in different “Englishes” around the world, and differences in how a specific term might be used in each specialization.

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[1] According to its website, https://www.pps.co.za/our-story, PPS is a financial services company that focuses exclusively on graduate professionals.

Therefore, when cross-collaboration is necessary, it can be difficult for scientists, including those in the applied sciences, such as engineering, to communicate seamlessly with one another.

THE PLAIN LANGUAGE MOVEMENT

Plain Language principles are connected to the notion of a *lingua franca* in the sense that Plain Language, like a *lingua franca*, is about access to information. The notion of using a *lingua franca* as a bridge to make ideas accessible goes back thousands of years, and the issues related to language access were a consideration even in religious texts, as is suggested, for example, by the choice of Koine Greek for the New Testament and the Septuagint, and popular Latin for the Vulgate. According to Firth (1996), English as a lingua franca is "a contact language between persons who share neither a common native tongue nor a common (national) culture and for whom English is the chosen foreign language of communication". Kirkpatrick and McLellan (2012) point out that, globally, there are more speakers using English as a lingua franca today than mother-tongue speakers.

The Plain Language movement is gaining popularity but the ideals that the movement promote are not new (Cutts, 2004). Both the concept of a *lingua franca* and Plain language have interesting interfaces with the realm of science communication. This type of communication is admittedly an elite form of communication, but has long had international reach. Before English became the dominant language of science, top-level scientists were expected to be well-versed in more than one language and scientific research was conducted in an array of different languages. According to Gordin (2015), "most of humanity for most of its existence has been to a greater or lesser degree multilingual" but in the twentieth century, English came to be the preferred language for science globally.

Defining Plain Language

There is a misunderstanding about Plain Language that it generally focuses on removing 'difficult' words and 'dumbing down information'. However, I believe that Plain Language is more of a holistic strategy that looks at all the elements of communication to ensure that a message is as clear as it can be. Martin Cutts (2004) defines Plain Language as follows, in the second edition of his widely used publication, *The Oxford Guide to Plain English:*

> The *writing and setting out* of essential information in a way that gives a cooperative, motivated person a good chance of understanding it *at first reading*, and in the *same sense that the writer meant it to be understood* (my emphases).

This definition indicates that Plain Language contains elements of both 'writing' and 'setting out'. Plain Language is a philosophy not focused just on vocabulary as such, but rather on evaluating a document holistically to ensure that all the elements within the text work together. Elements like clearly scaffolding and signposting information and that every paragraph provides enough context so that the information that follows is clear and accessible. By doing this, scientists and engineers can ensure that the science story is as clear as possible.

According to James (2008), the principles of rhetoric (communication in practice) are comparable to those of Plain Language. Like Plain Language, rhetoric has always focused on the effect on the audience to accomplish specific practical objectives. Early examples of Plain Language show that the principles were also included in the spoken word. Greece's democracy used rhetoric as a way for citizens to argue for a certain idea or action publicly. Clear effective communication allowed citizens to gain power and influence. Hence, the first teachers of public speaking made their mark on Greek citizens.

The Greek philosopher Aristotle developed the 'techne', or craft of rhetoric. Cicero, the Roman statesman, lawyer, scholar, and writer, divided the discipline of rhetoric into five canons (James, 2008) - the canons of invention, arrangement, style, delivery, and memory. Of these, arrangement and style are arguably the most applicable in applying Plain Language techniques and guidelines, but other aspects also have some modern equivalents. Table I provides a summary of these canons and their modern-day Plain Language equivalents.

Table ***Error! No text of specified style in document.****I. Cicero's canons and their modern-day equivalents*

Traditional canon	Traditional application	Modern equivalent and Plain Language application
Inventio	Discovery of arguments	Content: accuracy, completeness, and logic
Dispositio	Arrangement of a speech	Structure: effective sequencing of a document structure for its purpose
Elocutio	Setting the style to a level appropriate to audience and context	Expression: elements such as word choice, syntax, sentence length, efficiency, and tone
Pronunciatio	Delivery of a speech	Document design: typography, layout, and other visual elements
Memoria	Memorising techniques for long passages of text	Databases, manuals, help files, and content management systems

Source: Adapted from James (2008:4)

Sir Ernest Gower published Plain Words in 1948, his ABC of Plain Words in 1951 and then a compilation of the first two publications in 1954 as The Complete Plain Words. In the prologue to this combined volume, Gower ([1954] 1966) states: "Writing is an instrument for conveying ideas from one mind to another; the writer's job is to make his [or her] reader apprehend his [or her] meaning readily and precisely." Gower's statement seems obvious in its simplicity, but how should a writer convey this message? Exactly how should a writer support the reader and ensure that the reader understands the meaning easily? What is plain to one set of readers could be confusing to another. The different Englishes around the world also affect understanding, and, as English develops, what might be plain in meaning today might not be understandable in future (Cutts, 2013). In the case of science, a specialist term might mean one thing to one specialisation and another thing to other disciplines.

In a South African context, we face the challenge of a multicultural and multilingual society with 11 official languages[2]. Many discussions and investigations to date around Plain Language principles and guidelines have taken place in societies where it assumed that a single language is spoken by most citizens, such as the United Kingdom and the United States. Because South Africa is a multilingual society, the Plain Language guidelines and principles that would be effective in South Africa may need to differ slightly from those for a more homogeneous society. The cultural differences in South Africa will also have an impact on how Plain Language develops in future (Viljoen-Smook, 2020).

Critics of Plain Language: 'Technical cannot be plain'

Critics of Plain Language argue that it is not always easy to focus just on writing documents plainly. In this regard, Bekink and Botha (2007) point out that there are several considerations in the field of law when it comes to Plain Language. One of these considerations, according to Assy (2011), is that the complexities of law cannot be reduced to mere elements of language and style. Assy argues (2011) that complexity is what makes legalese necessary in the field: "By suggesting this [the use of Plain Language], it presumes that persons who are not legally trained are capable of fully understanding the law and availing themselves of its protections without a lawyer, if only the language is stripped of its unnecessary complexity." I suggest that Plain Language principles go beyond just looking at vocabulary.

[2] Sign language South Africa's twelfth official language (Thomas, 2022), but is concerned mainly with interpersonal and in-person communication, rather than with scientific communication in written form, so it is not discussed here.

Where scientific communication is concerned, Halliday and Martin (1993) believe that the nature of science does not make it viable, or even desirable, to present scientific or technical information in any other way than how the research is done: "...you cannot separate science from how it is written or rewrite scientific discourse in any other way". They claim that the highly technical vocabulary of scientific writing is not just a set of impressive-sounding words that replace everyday words, but contains complex scientific concepts that have been developed over many years and have come to represent abstract ideas and processes. (This is broadly true but should not preclude the possibility of explaining those concepts.) According to Halliday (1989), learning science is about more than just these abstract ideas and processes – it is also about learning the language of science. And the difficulty with the 'language' of science is not just a result of the words themselves but the inherent nature of science and, therefore, the subject matter is the source of the problem and not the language.

Plain Language and public science communication in South Africa

The fact that scientists are sharing information with the public suggests an awareness of the need for science to be simplified for non-scientists. Gastell (1983), a medical doctor, in the preface to Presenting Science to the Public, explains why it is important to educate the public on the sciences:

> "... science is an integral part of our culture. We would not tolerate locking the musically untrained out of concert halls; we would not banish all but art historians from art museums; nor would we restrict Shakespeare and Dickens to scholars of drama and literature. Rather, we have program notes, gallery tours, popular lectures, and more. The public deserves similar help in understanding and appreciating science."

Ground-breaking research is being done in the sciences in South Africa, and institutions such as the Council for Scientific and Industrial Research (CSIR), the various universities and Creamer Media communicate scientific research and big projects to the public. They do this via social media and publications such as ScienceScope, UP's Innovate and commercial media such as Engineering News.

In terms of the Plain Language principles that I could identify from all these publications, the focus seems to be a general attempt to use everyday language and easy-to-understand vocabulary. Several articles are still relatively technical, especially if one considers that the aim is to communicate with a possibly 'scientifically illiterate' audience. In an undated online article, Lily Whiteman posits that "Plain Language is one of our best tools for improving scientific literacy and encouraging wise decision-making by the public on science-based issues". I agree with this statement and appreciate the importance of this, but I believe that Plain Language principles can also be valuable for peer-to-peer science communication. Whiteman also claims that "scientific information conveyed in Plain Language invariably reaches bigger scientific audiences than information conveyed in technical language".

If Plain Language can benefit this type of communication, the question remains to what extent these principles are then explicitly part of science communication teaching, to those with limited (but growing) scientific knowledge, and writing for peers, who may be experts (albeit not in the same discipline).

Plain Language and teaching science

According to Huttner-Koros (2015), teaching science in English creates a disadvantage for those who are not first-language speakers. She argues that learning science in a second language can result in less confident learners that need to invest considerable time and energy into absorbing and understanding the content. This then could also impede the communication process later when such scientists attempt to present their findings either to peers, or to a more general audience. This has wide implications for South Africa, where English first-language speakers are in the minority. A census conducted in 2011 showed that only 9.6% of South Africa spoke English as a first language (Statistics South Africa, 2012). Although this number is low, most South African universities require that instruction be given in English; and some offer science communication courses in English as well.

The aim of university communication modules for scientists and engineers is not only to train them adequately on the technical requirements of the qualification, but also to prepare them for working in their respective industries, where "soft" skills such as communication are just as important as technical expertise (Fouché and Müller, 2021). According to Nudelman and English (2016), most professional communication courses that universities offer focus on

> "… a wide range of skills, including research methodologies, referencing, report-writing, executive summaries, business proposals, business correspondence, curriculum vitae, letters of application for work, presentation skills, visual literacy, graphics, posters and team work and negotiation skills. Courses to post-graduates also focus on writing proposals and theses. This content includes research methods, creating hypotheses, reviewing the literature, writing academic text, and, overall, managing the thesis writing process from first draft to final submission."

Nudelman and English (2016) explain that writing is one of the most important activities that engineers complete in their day-to-day tasks

Prior Plain Language awareness in the sciences

Scientists and engineers are becoming more aware of the importance of Plain Language for reaching a broader audience. Many scientific journals, encompassing a range of specialties, require researchers to submit articles accompanied by a Plain Language summary. One such example is PLOS (2021), a non-profit, open-access journal focused on science and medicine. PLOS actively promotes the inclusion of Plain Language summaries in submitted journal articles to enhance accessibility and understanding.

Kerwer *et al*., (2021) and Locke *et al*., (2001) have discussed the importance of Plain Language summaries in the scientific community. They believe that Plain Language summaries have the potential to communicate complex (critical) scientific concepts to a wider audience that might otherwise not have had access to this information. According to Gudi (2021), one of the benefits of writing Plain Language summaries is that it helps to promote "knowledge transfer" to everyone, from the general public to the expert. With regard to the writing of Plain Language summaries, Gledhill et *al.,* (2019) have investigated the editorial guidelines of the Cochrane Organisation, which specialises in communicating specialised medical knowledge to both professionals and the general public. They comment on the vagueness of Plain Language summary guidelines to scientists and the issues that these scientists encounter in trying to communicate this specialised knowledge in a more simplified manner. Dormer *et al.,* (2022) attempt to provide scientists with a practical "how-to" guide on how to draft Plain Language summaries.

Plain Language and the use of AI

There is a worldwide hype around artificial intelligence (AI) as a substitute for language practitioners and translators. ChatGPT is one example but has well-known flaws. If you are a technical specialist, you will be able to evaluate and review the content that ChatGPT generates and discard the information that is not relevant or not correct. Similarly, if you are not comfortable with a topic or not a communication specialist, how would you be able to use the tool and evaluate its accuracy and its effectiveness? Although AI tools are extremely useful, it is important to know how to use the tool and also have enough specialist knowledge to understand how the content impacts your message.

There are several Plain Language principles that are accessible through various platforms and resources. As I have already mentioned, the ability to communicate effectively is a skill that can be developed but it is not an easy feat. It takes practice and self-awareness. It requires the 'writer' to be able to put him/herself into the shoes of the reader to try and understand what might be hampering the message. I have curated a list of strategies that scientists and engineers could use that would have a more immediate impact on their communication as opposed to some of the more technical skills that would need more intervention.

TELLING THE SCIENCE STORY

In the Plain Language definition above, the setting out of information is an instruction aimed at helping scientists and engineers to tell their science story. Several sources directed at scientists and considering this 'how' of Plain Language communication refer to the concept of telling the "science story" (Greene, 2013). This can be a daunting task for scientists, as this might not be the traditional way that they think they are trained to communicate (Turbek *et al.*, 2016), because they tend to think of "stories" as imaginative fictions that have nothing to do with science, that narratives imply "fantasy" or imaginary "facts" (Greene, 2013). However, in the sense that the research process has a beginning, middle and end, and follows a sequence, the process follows a storyline, which the Western mind has long been socialised to expect. Therefore, I argue that storytelling elements can help scientists to convey complex information in a manner that might tap into the story pattern, thus creating a schema for the reader to follow. In this regard, Greene (2013) states:

> [W]riting stories about science doesn't mean making it up or dumbing it down. Rather we can hang complex ideas on the scaffolding of good, simple stories and make our science as exciting to our audience as it is to us.

Understanding how to structure information effectively will help scientists to ensure that they provide a Plain Language 'setting out' of information that will support telling the science story. Through honing these skills and critically being aware of what scientists and engineers are trying to say with every piece of communication will help develop these communication skills needed to ensure that the message is as clear as possible. To enable this development further, I propose a short elaboration on these elements that make a good story.

What is a story?

Nathanson (2006) says the following about stories:

> "Story, or narrative, is a powerful – perhaps the most powerful – tool for teaching and learning because of its ability to hook audiences, activate the pleasure principle, and facilitate retention."

Bamberg (1987) considers the ability to narrate (tell) a story as a skill: the skill of being able to combine words, lexical knowledge, with grammatical structures, syntactical knowledge to create meaning. The word "narrative" is derived from the Latin gnarare, which means "to know" (Nathanson, 2006). According to Thornbarrow (2012), "storytelling is integral to the way we structure, account for, and display our understanding of our human condition and experience". A story has a recognisable structure of a beginning, middle and end. The order or sequence of the events that a writer describes in a story creates the context and has a definite impact on what the story means. As a story continues, the more relevant detail is revealed, the reader is oriented in respect of the importance of the who, what and where of the story. Stories are shaped by "the local, situated context in which they occur" (Thornbarrow, 2012). The way one tells a story largely depends on what the story is. If a story lacks that element of 'tellability' and a clear reason why the story is important or relevant, the reader is left with a sense of "so what?" When it comes to effective communication, that sense of so what is critical for a reader to assess the value of the science properly.

According to Nathanson (2006), there are four main advantages to writing in a more narrative style: stories are universally enjoyed; it is easier to understand stories than random details; narrative structure provides a familiar organisational structure that allows readers to know what to expect of the text; and stories create interest by involving a reader or listener. Stories could allow scientists to convey complex scientific ideas by scaffolding the information in a structure that will feel familiar. Olson (2009) admits that most scientists are not great storytellers, but suggests that a story is

> "… an enormously powerful means of communication. With good storytelling you end up both arousing and fulfilling at the same time, which allows you to sustain interest over much larger amounts of material".

I argue that new scientific breakthroughs often require new vocabulary and descriptions of ideas that are not yet familiar. If complex information is presented in a narrative form, it gives readers familiarity, involves and interests them, and invites them to continue reading to find out what happens next.

Familiar sequencing in scientific writing

One example of how to structure this story is a summary of a research proposal by Kelsky (2011). She suggests that the story should start with a statement on the topic that is of interest to a wide audience. As part of this brief introduction in order to provide the reader with some context to the topic, there should be a short reference to the literature on what has already been done (a form of brief narrative flashback with some foreshadowing in the form of which gaps in the literature will be addressed). It is crucial that the essence of what the research is proposing should then be included as close to the start of the proposal as possible (the what and why). This is what journalists also refer to as "the hook" (Hartz and Chappel, 1997). This gives the reader a sense of what to expect from the rest of the text as early on in the proposal (story) as possible.

This approach provides readers with a familiar order to follow when they need to evaluate new information and this familiar order is called a schema. Knowing what schema is and how it is activated can help develop communication skills by ensuring that communicators are constantly aware of and considering their readers; a key aspect of the Plain Language definition that helps to support a cooperated motivated reader to understand the message at first reading.

The schema

When reading any text there will always be experience and knowledge that the reader already has. This stored knowledge and experience is called a schema. The association that a reader has with a particular word or phrase is individual schemata. Everything that a reader knows about a specific concept or topic is the schema. Words have specific meanings and infer specific images and ideas based on the reader's own values and experience. This also results in the reader excluding the information not related to a specific schema (Anderson and Pearson, 1984).

To ensure that the correct knowledge is recalled in the reader's mind, it is crucial to provide the correct perspective to a reader. Anderson and Pearson (1984) give the example of readers' different schemata, activated in an exercise by assigning each reader a different 'character' and instructing each to read the exact same text from the various perspectives. This resulted in readers' remembering different parts of the same text, based on what they were inherently told to focus on by being assigned different perspectives (Anderson and Pearson, 1984). This suggests that by providing readers in science communication specific aspects to focus on in a text from the start will aid their understanding of difficult information and unknown concepts.

Schemata and inference

The goal of any form of communication is for the reader to understand the message that the writer has sent. An inference is implied knowledge that the writer does not explicitly state. According to Goetz (1977), it is impossible to make all the possible inferences when you are reading a document. Inferences allow the sender to communicate more information than is explicitly stated on the page, because it is also difficult to state everything explicitly. The example Goetz (1977) uses, "I saw John driving down the road", relies on the reader's knowing what a road is, and the most plausible inference is that John is driving a car. The question then is how, if people only make some inferences but do not consider all the possible variations, the writer (or editor) would ensure that the reader will make the correct inferences?

Technical literacy

To be successful in a professional career such as the sciences, literacy and numeracy skills are not sufficient. Individuals now also need so-called soft skills such as the ability to communicate effectively, work in a team, and think critically to complement hard skills that require deliberate instruction and training (Nudelman and English, 2016). Although it is assumed that all scientists and engineers are technically literate, technical literacy goes beyond the ability to read, write, and functionally use a language. It is fair to say that the literacy to understand, read, and play music is different to the literacy needed for mathematics, even if the two fields overlap in certain areas.

Gee (2012) argues that it goes further than merely being able to recognise words on a page. In this definition of literacy, 'reading' is a transitive verb, so Gee (2012) defines reading as not "just the action of focusing on letters that forms words and the grammar of a language". He argues that, in fact, anything can be read. A 'tex', from this viewpoint, can range from anything in the media (visuals) to poems and advertisements. A reader needs different skills for each of these texts and may need to activate different schemata to access prior knowledge. A text might become inaccessible to a reader (now rendering the reader illiterate where that text is concerned) if the reader does not know how the text works, or the type of text is unknown. This links back to providing schemata for readers by focusing on telling the science 'story'.

Understanding the reading process is also crucial when applying the Plain Language definition for effective communication. The reading process is centred around an understanding of how a schema is activated and how readers comprehend information.

THE READING PROCESS

There is not a single profession today that does not need and use reading skills. Strang (1978) describes the process of reading as "a creative act. As the writer creates a structure of thought, so the reader re-creating the pattern of words, discovers for himself [or herself] the essence of the author's idea". To enable a reader to recreate meaning from words, the writer must take the reader into account. Reading is more than just being able to recognise words and pronounce them. It is more than just merely understanding words in isolation. Reading requires thinking, feeling, and using imagination. For reading to be effective, there must be a purpose to the reading. Why should a reader be reading a specific text? This links back to telling the science story and ensuring that the purpose of a text is mentioned as soon as possible, at the start of the document. Understanding the heart of a communication is critical for a reader to be able to understand what the message is in all its complexities. Strang (1978) describes the reading process as "intake" and "output". The process starts when readers are confronted with a text (the input) and then responds (the output), either through thoughts or mental images of what they are reading.

Ultimately in any communication there is a need to increase the effectiveness of the output in the reading process. To increase the effectiveness of the output, a text needs to be as unambiguous as possible, and the purpose of the communication must be clear. The reading process happens in four steps (Strang, 1978):

- Step 1: Visual reception;
- Step 2: Perception;
- Step 3: Conceptualisation; and
- Step 4: Higher levels of association.

In the initial phase of visual reception, the eye physically moves along a text and registers the words and all their possible meanings (Strang, 1978). As the process advances to perception, the visual impressions gain greater significance. At this stage, the reader not only comprehends the content but also organises the visual input. How easily a reader can access a text depends on the quality of the text, the purpose of the reading, and the reader's needs and expectations of the text.

The third step of the process happens after the reader has visually processed the text, starting the conceptualisation process. When perceptions are grouped together into patterns and associations, the mind can mentally visualise the described concept leading to the fourth step in the process. A crucial relationship exists between perception and conceptualisation, where concepts act as filters for the impressions forming in the mind during the reading process. This helps the reader to form only images related to the specific concept presented by the words, as opposed to being completely overwhelmed with each perception in isolation. This conceptualisation can also be called decoding. With all fluent readers the process of conceptualisation, or decoding, happens automatically. This automatic processing is called unconscious or implicit memory, allowing the reader to focus on extracting meaning from the words rather than grappling with their deciphering (Wolfe and Neville, 2004).

The last step in the process is when higher levels of association happen. Here there are patterns, schemata, and interrelated memory subsystems. The memory activated at this level is not just focused on storing impressions over a lifetime, but also on being able to retrieve what is relevant when the information is needed.

WHAT NEXT?

In order for scientists and engineers to communicate effectively across disciplines, it is critical that they are able to structure information in such a way that the science story becomes clear. However, developing these communication skills can take years and I argue that given the technical language expertise that is needed to ensure that communication is clear and effective, it might be more beneficial for scientists and engineers to work alongside an experienced language practitioner. Previous research (Van Staden, 2022), indicated that participants were positive about the possibility of collaborating with language practitioners, although several mentioned various obstacles like vocabulary as a reason not to engage in such a collaboration. Many participants also equated language services with checking spelling and grammar, whereas telling the science story requires more specialised communication skills. Keeping the reader in mind and ensuring that all aspects of the reading process are considered is also important if Plain Language as a strategy is to benefit science communication.

I also argue that providing a how-to-guide on the details of these communication skills would be ineffective. It is easier to analyse and judge other writers' work as opposed to the writing habits that you develop over time. A more hands-on approach where a language practitioner acts as a writing mentor to a scientist or engineers ensures that these skills are developed through practical application.

Although this would be the ideal in a perfect world, there are practical challenges. Language practitioners might not be comfortable working with technical content or specialised in Plain Language principles. Time will remain a factor as there might not always be time for collaboration between a scientist or an engineer and a language practitioner as deadlines are normally quite tight. For now it seems that the best option remains training. I do however believe that a working knowledge of the principles and strategies mentioned above is at least the first step!

CONCLUSION

When telling the science story, while it is critical to consider how technical terminology can have different meanings, depending on the specialisation of a reading, following a familiar structure of events can help guide a reader through complicated text. Applying Plain Language strategies by ensuring that the text is structured in a way that gives a reader the chance to understand a text at first reading supports clear communication. To develop these communication skills, it is important to understand the importance of schema and the reading process and also how to apply these principles. Learning the how of developing these skills can be daunting and it might be more effective for scientists and engineers to collaborate with a language practitioner that can act as a writing mentor.

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