TED talks: A multimodal tool for students of technological English
TED talks: Una herramienta multimodal para estudiantes de inglés tecnológico

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Abstract

This article presents an overview of online videos TED talks and how these can be used in a course of technological English to teach students how to communicate effectively. Skilful personalities trained in the art of public speaking from a wide range of fields exemplify good models of public speaking for ESP students. The article describes the different modes at play in many TED Talks. It is by addressing the different verbal and nonverbal modes that contribute to meaning making that lecturers can expose to students how speakers at TED achieve one important objective: to captivate and persuade their audience. Students, in turn, if able to realize how different modes are orchestrated in these talks, might be encouraged to voice their ‘Ideas worth spreading’ in a Ted-style and might be also emboldened to disseminate technical and scientific knowledge to a wide audience, contributing this way to the popularization of science. In the context of an ESP technology classroom, TED talks allow teacher and student to revisit to the very origins where TED techniques root from: delivering a precise concept in a succinct manner that aims to intertwine the speaker's words with diagrams and written instructions. Concurrently, students might visualize their desired language selves portrayed in TED speakers and be motivated to learn Technological English.
Keywords: technological English, verbal mode, nonverbal modes, TED Talks, ESP, desired language selves

Resumen
Este artículo presenta una visión de las charlas TED y cómo éstas pueden usarse en un curso de inglés tecnológico. Las personas que dan charlas TED son personalidades pertenecientes a una amplia gama de campos (tecnología, educación, ingeniería, cultura) que han sido entrenadas en el arte de hablar en público y pueden constituir a día de hoy modelos apropiados de buena oratoria para estudiantes de Ingles para Fines Específicos (IFE). El artículo describe los diferentes modos en juego en muchas charlas TED. Al abordar los diferentes modos verbales y no verbales que contribuyen a la creación de significado, los profesores pueden exponer a los alumnos cómo los oradores en TED logran un objetivo importante: cautivar y persuadir a su audiencia. Los estudiantes, a su vez, si observan la forma en la que diversos modos se orquestan en estas charlas, pueden llegar a expresar 'Ideas que vale la pena difundir' en un estilo TED, a la vez de poder difundir el conocimiento técnico y científico a una amplia audiencia. Los estudiantes, pueden de esta manera contribuir a la popularización de la ciencia, y, adicionalmente, pueden llegar a visualizar sus ideales del yo en L2 representados en hablantes de TED. Esta visualización puede motivarlos para seguir estudiando inglés tecnológico.

Palabras Claves: Inglés tecnológico, modo verbal, modos no verbales, charlas TED, el Ideal del yo L2.

TED talks: An emergent genre in teaching
TED began in 1984 as an annual conference in Monterrey, California. Richard Saul Wurman was the former organizer who aimed at bringing together a group of designers, entertainers, and technology leaders so that they could share the most interesting, unusual and ground-breaking ideas.

In 1990, the topics covered in TED expanded beyond the initial technology, entertainment and design fields and included talks given by scientists, business leaders, and politicians. Included among the speakers that attended TED in those years were Bill Gates, Adobe cofounder John Warnock, as well as MIT professor and expert on artificial intelligence Marvin Minsky. For many attendees, TED came to be one of the main intellectual and inspiring events of the year.

Wurman directed Ted until 2001 when Chris Anderson bought the organization and took over. Social issues such as poverty, environment, and climate change were now also on the conference agenda giving the event great
popularity. TED changed from being conceived as an elitist event to being a global ideas platform.

In June 2006 TED launched its website www.ted.com and made the talks visible for everyone. By September they had been watched by more than 1 million people. In 2012, TED Talks surpassed a billion video views. Nowadays, TED Talks are viewed at a rate of 1.5 million times a day, a billion followers every year. TED hosts political figures, TV personalities, musicians, academics, scientists, and writers, among others. The common feature that links these talks is that each of them aims at offering one compelling idea that is worth sharing. A TED Talk pursues to communicate an idea in an appealing way, to inspire curiosity and encourage peoples’ unquenchable pursuit of answers.

The range of ideas offered in TED is multiple. From a powerful personal story to a reminder of what is important in life. It must be compelling and captivating enough to arise public interest, to motivate the audience to embrace enthusiastically the core idea. TED talks therefore revolve around an idea that firstly is worth sharing with the audience, and secondly is communicated properly. In the field of technology, TED talk’s strategies train speakers to gain dexterity at distilling essential technological information to then use their own personas as vehicles for the efficient transmission of the concept or procedure.

TED talks structure

With 2,900 talks online to date and more being added every day, together with the diversity of fields being covered, establishing a unifying organizational pattern for all of them is a somewhat difficult challenge. This, however, does not mean that TED Talks are unstructured. Speakers undergo a ‘pre-conference coaching and training’ process that can take up to six months. Their presentations must follow ‘a specific presentation formula’ (Romanelli, Cain & McNamara, 2014, p.1). Talks in TED, as stated before, are of different types. Many TED talks are built around story with a linear structure, with one event after another. Other talks revolve around a problem and follow a problem-solution pattern. There are also demonstration talks, where the audience needs to see the invention or the brand-new process at work. This type of talks requires a dynamic structure and the focus falls on the device, gadget, or process that is going to be shown. Many of these talks allow for some kind of theatrics as speakers try to transmit to the audience their excitement about the device they are about to show. In a context where a visual component of the verbal message might hold particular relevance, these
Theatrics and prosody in general gain further significance as they become stepping stones for both speaker and audience. In view of the significant speed at which technological improvements occur, TED speeches are the ideal milieu to explicate information about implements or procedures still unfamiliar to the audience and market.

An illustrative speaker that began his talk with this kind of thrilling-transmittable effect is Jeff Han at TED 2006 (*The radical promise of the multi-touch interface*). In this talk, this computer interface designer aimed at showing the potential for multi-touch technology two years before the iPhone was launched. He began this talk in this intriguing way:

I’m really excited to be here today. I will show you some stuff that is just ready to come out of the lab, literally, and I’m glad that you guys are going to be among the first to see it in person, because I think is going to really change the way we interact with machines from this point on.

Demo talks follow a similar structure: 1) Provision of intriguing hints and excitement to the audience, 2) Background, and context, explanation of the technology behind the device, 3) Demo, 4) Implications of the new technology.

There are other talks at TED that come close to being wonder walks. Speakers give their talks through the revelation of a series of images and videos. This is the type of talks that artists, designers, photographers, and architects use. Speakers unveil their work through a succession of slides and videos while commenting with an accessible language any remarkable aspect related to these slides and worth sharing. These noticeable aspects might have to do with the creative process, the difficulties speakers found along the way, or the mistakes they made.

A common variable in most TED Talks is the speaker’s goal to persuade their audience. Besides the stream of verbal input to communicate, the speaker’s presence onstage makes it possible for the audience to create significance on the ideas they transmit (Carter-Thomas & Rowley-Jolivet, 2003). Different kinesic (i.e. gesture, facial expression, head movements) and paralinguistic (voice qualities) semiotic modes (i.e. a set of socially and culturally shaped resources for making meaning that has different affordances) might have a determining role in providing meaning to the content of the speaker’s ideas and in persuading the audience (Lakoff, 1982; Perloff, 2003). The contribution that the orchestration of modes has in meaning making is something that educational institutions should acknowledge. Modes, though in an uneven manner, work together to express meaning. Rowsell (2013, p.146) urges
lecturers and researchers to stretch their present views of meaning making in education:

Though most texts are multimodal and often have dominant modes, all modes are partial in expressing meaning because modes contribute to meaning in different ways. Yet certain modes are more powerful than others. The more or less powerful nature of modes has significant implications for conceptions and processes or learning. As it stands, within education, there continues to be a strident belief that competence with words has the most value in preparing students for the future.

Next sections aim at closely examining all the salient modes that configure TED talks and enable them to become guiding tools to approach the speaking skill in a Technological English course and that might motivate students in the act of public dissemination.

**Multimodal TED talks**

The multimodal nature of conference presentations has long been acknowledged (Dubois, 1982; Carter-Thomas & Rowley-Jolivet, 2003; Hyland, 2009; Crawford-Camiciottoli & Bonsignori, 2015). Dubois (1982) pointed to the pivotal role of visuals in medical conferences. Carter-Thomas and Rowley-Jolivet (2003) also drew attention to the necessity to study conference presentations from a multimodal approach that accounts for language, visual communication, and gesture. The important role of visuals in particular had been previously emphasized by Rowley-Jolivet (2002). Visuals, she noted, could provide presentations with novelty and immediacy. Hyland (2009, p.292) stated that visuals meet the three metafunctions that the Systemic Functional Linguistic establishes (ideational, textual, interpersonal). Accordingly, visuals can provide information, contribute to structuring the talk, and might attract the audience’s imagination.

Regarding the influence of kinesic and paralinguistic features in enhancing speakers’ ideas, numerous authors (Morell, 2015, Ruiz-Madrid & Fortanet-Gómez, 2015; Zhang, 2015) have studied its contributing role in communicating, in engaging with the audience and in meaning-making. Busá’s (2010) findings are also relevant to the present study. The multimodal approach to the teaching of English communication skills, allowed her to state that students’ communication skills improved when they could realise the multimodal character of communication.

TED talks incorporate kinesic and paralinguistic modes (e.g. language, gesture, body language, voice quality, intonation, visuals, and videos) that work together ‘in order to produce a greater meaning than either mode could
on its own’ (Rowsell, 2013, p.147). It is by watching speakers onstage, by perceiving a specific volume, pace, intonation, and prosody, by tracking facial expression and body language, and by noticing speakers’ intention to make some kind of eye contact connection when feelings of curiosity, understanding, empathy, excitement, and conviction might arise among viewers/listeners, and among the students of Technological English. The viewer/listener makes meaning not just from language but also from this set of modes and the relation that might arise between them. This interrelation contributes to building the ‘what’ of the talk, but also, the ‘how’ of the talk, that is, the way the audience receives the message. Most TED Talks, as Ludewig highlights (2017, p.7) “are perfectly designed ‘knowledge sacks’, whose delivery is as important as their content”. The following sections give an account of the different ways each mode at play in these talks contributes to the creation of meaning, to communicate, and to captivate the audience. The interrelation that takes place between some of these modes is also detailed. When dealing with L2 students, who are facing the challenge of understanding complex technological concepts, the support provided by extra-linguistic modes becomes precious for their learning progress.

**Verbal Mode**

**Words**

The role played by words in each talk is crucial. It is one of the most important modes partly because it is a mode shared by the speaker and the listener allowing the recreation of the speakers’ ideas in the audience’s minds. Rather than starting with one’s own language and concepts, however, speakers often start their talks with the audience’s language, concepts and values. Speakers in most cases deliver their speeches with clarity and in a natural way and give the audience a feeling that their talks are really felt and their sentences meant. To achieve this clarity, however, technical terms and acronyms should be used warily. Anderson (2016, p.81) notes that speakers must be cautious about using jargon or being too technical and they should use accessible language and give specific examples to reinforce their narrative. The use of jargon might dissuade the audience from following the talk:

It’s especially important to do a jargon check. Any technical terms or acronyms that may be unfamiliar to your listeners should be eliminated or explained. Nothing frustrates an audience more than to hear a 3-minutes discussion of TLAs (Three Letter Acronym) when they have no idea what TLAs are. Maybe one such transgression can be handled, but when jargon terms pile up, people simply switch off.
When concepts and terms are unfamiliar to the audience, metaphors, which might draw on an idea the audience already knows, can contribute to consolidate understanding the main concepts behind the talk as metaphors can disclose the shape of the pattern showing how the different pieces fit together. Accordingly, metaphors might be crucial to the act of explanation.

The use of examples and analogies (Lischinski, 2008) can contribute to enhancing the speaker’s credibility. Examples help the speaker share some kind of practical knowledge with the audience. Vivid examples give the speaker’s information a touch of likelihood, desirability, and importance (Zillman, Perkins & Sundar, 1992). TED speakers often resort to examples to build understanding.

For professionals in the field of technology, efficient delivery of clear instructions is centre stage. Students of Technological English are required to work on their speech competence, often by presenting their findings in front of their classmates. The talks that the students of Technological English must prepare during the semester are illustrative examples of talks that are likely to contain a considerable amount of jargon and technical terms and that may need constant explanation with the use of metaphors and examples. Melisa Marshall, a communication teacher, urged scientists and people from technical fields to clearly share their complex scientific ideas with a general audience at TEDGlobal 2012:

We desperately need great communication from our scientists and engineers in order to change the world. Our scientists and engineers are the ones that are tackling our grandest challenges, from energy to environment to health care, among others, and if we don't know about it and understand it, then the work isn't done, and I believe it's our responsibility as non-scientists to have these interactions. But these great conversations can't occur if our scientists and engineers don't invite us in to see their wonderland (...). First question to answer for us: so what? Tell us why your science is relevant to us. Don't just tell me that you study trabeculae, but tell me that you study trabeculae, which is the mesh-like structure of our bones because it's important to understanding and treating osteoporosis (...). I want to summarize with an equation. Take your science, subtract your bullet points and your jargon, divide by relevance, meaning, share what's relevant to the audience, and multiply it by the passion that you have for this incredible work that you're doing, and that is going to equal incredible interactions that are full of understanding.

TED speakers focus on transmitting knowledge while conveying immediacy, dynamism, enthusiasm, excitement, and emotion. As already stated, speakers
achieve all of this relying heavily on language. Many speakers, fully aware of the importance of the first minutes in their speeches to captivate the audience, and to persuade them that their talks are worthy of their attention, start using alternative openings. Some start asking the audience a question, others asking them to do something or giving them some unexpected information. Asking the audience to think on what the human brain entails is how neurologist Vilayanur Ramachandran started his talk in TED 2007 (3 clues to understanding your brain):

I study the human brain the functions and structures of the human brain. And I just want you to think for a minute about what this entails. Here is this three-pound mass of jelly you can hold in the palm of your hand, and it can contemplate the vastness of interstellar space. It can contemplate the meaning of infinity and it can contemplate itself contemplating on the meaning of infinity.

Giving the audience unexpected data about important topics which they already have knowledge of, is another way of starting strongly. At the beginning of her talk in 2007, Emily Oster, an economist and professor at the University of Chicago, gave stunning statistics about AIDS in Africa. She began her talk challenging the audience’s knowledge about AIDS:

So I want to talk to you today about AIDS in sub-Saharan Africa. And this is a pretty well-educated audience, so I imagine you all know something about AIDS. You probably know that roughly 25 million people in Africa are infected with the virus, that AIDS is a disease of poverty, and that if we can bring Africa out of poverty, we would decrease AIDS as well. If you know something more, you probably know that Uganda, to date, is the only country in sub-Saharan Africa that has had success in combating the epidemic.

Language also is a powerful mode to increase the impact of the concepts and ideas speakers introduce in their talks. Accordingly, a considerable number of speakers use different rhetorical devices such as rhetorical questions, adverbs of degree, parallelism, and repetitions as deliberate means of adding emphasis to their arguments. Repetition, for instance, in the form of parallel structures or circular structures is frequently used by speakers to achieve maximum rhetorical impact. These rhetorical devices, as Ludewig (2017, p.6-7) notes ‘bestow upon many TED talks a polished and sometimes poetic feel and contribute to the impression of a finely composed story’.
Regarding the register commonly used at TED, most speakers resort to an informal register, which is predominantly characterized by the use of contractions, informal expressions, and the frequent use of first and second pronouns ‘I’ and ‘you’, the latter to refer to the audience (Ludewig, 2017, p.7). The use of these pronouns is something the speaker makes purposely to bring the audience closer and to create an intimate environment. Ludewig (2017, p.7) describes this atmosphere of intimacy as follows:

By rhetorically stressing speakers, participants, and the connection between them, TED talks create a moment of collectivity, which, coupled with an often-informal tone, invokes a bonding experience among a group of strangers. TED talks thus become communal events where listeners and presenters are ritually turned into peers. (…) While the speaker presents a relaxed and spontaneous face, the audience can be sure to see a perfectly orchestrated talk in which no relaxedness and spontaneity threatens their entertainment.

**Rhythm, Intonation, Register, and Prosody**

Voice can be trained to evoke curiosity, passion and engagement from the audience. Julian Treasure, a sound and communication expert, gave a talk at TEDGlobal in 2013 (*How to speak so that people want to listen*) on how to communicate powerfully. He also encouraged the audience onstage to do some useful vocal exercises, which, if regularly applied, could lead them to communicate with empathy.

According to this sound expert, children have traditionally been taught to read and to write, but not how to speak and listen. He advocates that listening must be taught in schools as a skill. If people speak powerfully, he notes, they might make change in the world. Treasure encourages people to use ‘their amazing toolbox’ that will help them increase the power of their speaking, being focused on the ‘how’ the message is said, and on the way they deliver their messages. This box contains six valuable tools: Register, timbre, prosody, pace, pitch, volume.

With register, for instance, speakers might choose to transmit some air of power or authority if they lower their voice by going down to their chest. With variations of timbre speakers show how their voices feel. They can feel warm, rich, or smooth. Prosody refers to singsong rise and fall, ‘the meta-language’ people use to convey meaning and that allows them to distinguish a statement from a question. Prosody can have a relevant role in public speaking as it might influence how the audience perceives the liveliness of a talk. People
who speak on one note are referred to as ‘monotonic’, and are more difficult to follow. As Hincks and Enlund highlight (2009, p.46):

‘[i]t is vital to use one’s voice well when speaking in public. It is the channel of communication, and when used poorly, communication can be less than successful. If listeners stop listening, or fail to perceive what is most important in a speaker’s message, then all actors in the situation are in effect wasting time.

Pace refers to the speed people speak. The ideal pace, Treasure notes, is varied and according to what is being spoken. Key ideas or complex concepts should be delivered at a slow pace accompanied with pauses, being this a crucial aspect for students of technology to be in command of in their speech. Good speakers know when and where they should pause to create greater impact (Bell, 2014). Students therefore, in order to take control of their presentations, must be encouraged to make deliberate pauses in their speeches and look at their audience, so that the delivery of information may run as smoothly as possible. A bit of silence in a talk can be really powerful and can help replace the ‘um’ and ‘ahs’, and might grant the listener just the necessary time to visually figure out the concept. Young and Travis (2012, p.184) refer to these repeated audible habits as ‘vocalized pauses’ and state that it is preferable to fill natural pauses with a ‘thoughtful silence’. Anecdotes, and lighter moments, should be delivered at a higher speed. Volume can be loud, involving a feeling of nervousness on the part of the speaker, or quiet, involving the speaker’s desire to get the attention of the audience. An excess of any of these volume types is not recommended. Too loud speakers, who try to impose their sound on people, might be perceived as careless and inconsiderate.

Students’ attention might be directed to how TED speakers stress some words and not others making all the difference between a presentation that might be easy to follow and another in which the audience might get lost. It is equally important to underscore the role of intonation and how this can vary according to what is going to be conveyed (i.e. a fact, or a question). Intonation, students should also be aware of, might help the audience to know if the speaker is concluding a section in their presentation or if they are moving to another idea/section. The emotional state of the speakers can also be perceived through intonation. A sharp rise or fall is indicative of a strong emotion (i.e. enthusiasm, surprise) whilst flat intonation indicates boredom and emotional distance (Bell, 2014, p.26).

Training, rehearsing, instilling variety into the way the message is conveyed, having in mind the parts that must be highlighted and those that must not,
avoiding being someone else or mimicking another speaker’s style, are important features students should keep in mind while they are working on their oral presentations.

**Nonverbal modes**

Stage presence, posing, eye contact, hand and facial gesture, and visuals are parts of nonverbal communication. This type of communication often helps people to communicate, adding layers of extra significance to the words that are being uttered. Nonverbal communication might indeed, provide the essential framework for any interaction. Young and Travis (2012, p.58) note that nonverbal communication performs four different functions: Substituting for a verbal message, emphasizing a verbal message, contradicting a verbal message, or regulating conversation.

Relevant nonverbal modes in TED Talks that lead to the comprehensive set of communication are body language (e.g. eye contact, gestures, and facial expressions), and visuals. If skilfully used and effectively combined, these nonverbal modes can have a very positive effect in regulating the verbal part of the message (Philippot, Feldman & Mcgee, 1992). In Morell’s (2014, p.154) terms ‘it appears to be that having the ability to orchestrate semiotic resources or modes such as images, writing, layout, sound, gesture, speech, and 3D objects may be more important than having a good command of the spoken language or verbal mode’.

**Facial expression, head movements, hand and arm gestures**

Extensively studied in relation to the influence they might have on the processing and acceptance of verbal messages (Burgoon, Birk & Pfau, 1990), facial expressions, and gestures are claimed to have a key role in making or worsening human connection with the audience. A good use of body posture might show confidence. The timely use of hand gestures and head nods in oral presentations, as Carney (2014, p.413) highlights, can be beneficial in “enhancing recall of speech and allowing learners to embody meaning, thus deepening the understanding of their own speech”.

Many TED speakers give their talks standing tall and putting equal weight on both feet. They use their hands and arms to highlight relevant parts of their message. Other TED speakers instead, opt for walking on stage and stop to elaborate on some important part of their talk. This alternating rhythm might lead to hold the audience’s attention.
Regarding gestures, most TED speakers use their hands to emphasize or purposefully highlight important parts in their messages. Gesture and speech are closely connected. McNeill (1992) claims that gesture and speech are so tightly related because both originate from the same process of utterance formation. Gestures that go with speech are varied and as Camiciottoli (2016) notes, they are not easy to classify. The study of gestures in communication has long relied on the classification of McNeill (1992; 2005), who identifies four different types of gesture: iconic, metaphoric, deictic, and beats. Iconic gestures represent images of concrete objects or actions. Metaphoric gestures represent abstract notions and ideas. Deictic gestures point at referents that can be present or absent. Finally, beats refer to various regular and quick hand movements that endow emphasis to the speech. Beats are often lined up with the stress peaks of speech. Beats help speakers punctuate important stretches of their discourses, and regulate the flow of speech. Speakers’ up-and-down movements of hands and fingers hit the beat of the stressed syllable in the phrases they utter and mark the prosody and rhythm of the talk. Beats’ relevance in endowing the speaker’s speech with meaning lies, as McNeill (1992, p.15) notes, in the fact that the beat “indexes the word or phrase it accompanies as being significant (...) for its discourse pragmatic content”. Krahmer and Swerts (2007, p.396) also contend that “a visual beat leads to a change in how prominence is realized in speech (...) and how it is perceived by observers”. Speech-synchronized beats, the authors also claim, strengthen the persuasiveness of discourse compared to words and sentences that are uttered without them. Deictic gestures to direct the audience to the slides in their presentations are also commonly used.

Regarding head movements, Briñol and Petty (2003) have researched the way head shakes and nods can have an influence on peoples’ own confidence in their thoughts when they have to reply a message. Accordingly, nodding might reinforce peoples’ attitudes towards a message. As the authors note ‘manipulation of head movements affects confidence in the validity of one’s thoughts, not confidence in the validity of the persuasive message per se’ (Briñol & Petty, 2003, p.1135). Head movements, though often culturally specific, are, as McClave (2000) notes, valuable since listeners are extraordinary sensitive to them and respond within a second.

Carney’s (2014) research on the reinforcing and complementing role of gestures in educational contexts was motivated by the underexplored question of the suitability to teach gestures to foreign and second language learners. In his small exploratory study, he researched the effects of guided instruction in the use of gesture for five Japanese undergraduates presenting rehearsed oral presentations. The interviews that followed oral presentations to unveil
students’ own perceptions on how gestures had influenced their talks covered four different questions: 1. Do you feel gestures help you speak better when presenting? 2. Do you feel gestures improve your English pronunciation? 3. Do you feel gestures help you understand your own English speech better? 4. Do you feel learning gestures changes how you speak outside of class? To the first question the students unanimously mentioned that gestures had helped them recall what they aimed at conveying. To the second question only one student reported that gestures had helped him to improve his pronunciation, especially when it came to stress the right words. To the third question three out of the five participants said that gestures had at times helped them embody the meaning of their presentations. Finally, to the fourth question, none of the students stated that they had thought about gestures whenever they had to speak in other classes. Two students however remarked that the use of gestures in future oral presentations required to be performed in different courses might be of remarkable use.

Despite the small scale of this study, it brings to light the need to raise students’ awareness of the use of gestures in their oral presentation. These can have positive effects “in the students’ ‘conceptualizations of English meaning-making’ (Carney, 2014, p.419). Furthermore, in the field of technology, effective transmission of visual concepts is a primary concern when delivering instructions directly to other workmates. Because of this reason, mastery of multimodal signal supporting the speaker must be promoted and practised in the ESL technological classroom.

Body language might play a decisive role in capturing the audience’s attention towards the verbal message. However, it can be likewise crucial to help the speaker feel comfortable and confident. A memorable TED talk, is Harvard’s professor Amy Cuddy’s, ‘Your body language may shape who you are’. Her research on body language has revealed that speakers can change other peoples’ perceptions just by changing body position. Variation of speakers’ body language can also raise their confidence level. Standing in a posture of self-reliance even when speakers feel insecure can boost feelings of confidence and influence chances of success. Her investigation on power posing became very popular after her TED talk in 2012. To date, this talk has been watched 44.361,508 times. She interspersed her speech with categorical statements such as this:

So when we think of nonverbals, we think of how we judge others, how they judge us and what the outcomes are. We tend to forget, though, the other audience that's
influenced by our nonverbals, and that's ourselves. We are also influenced by our nonverbals, our thoughts, our feelings, and our physiology.

It might be significant to direct students to track how TED speakers synchronize the dynamics of gaze, gesture, body movement, with the dynamics of voice quality and articulation. It is this orchestration of modes that allow speakers manipulate their affordances and achieve maximum effect, impact and salience. If students’ attention while listening and watching is directed to the great significance embodied in these modes, they might listen thoroughly and make meaning through this crafted ensemble of modes.

**Visuals**

Visuals can be used to supplement the spoken words in oral presentations and could even be indispensable in the field of technology. Visuals, as Hyland notes (2009), can provide information, help to structure the talk and draw the audience’s attention.

Photographs, graphs, animation, video, illustrations are commonly used in TED Talks achieving in the majority of cases a twofold objective: they increase the aesthetics of the presentation and upgrade the explanation. Students of Technological English are encouraged to use well-thought-out visuals in their presentations as these can help explain and clarify engineering concepts and processes that are hard to describe. The visualization of part of the content of the oral presentations offers students a “range of genres of texts to appreciate and interpret, and an awareness of visual supplies a more critical understanding of the complexities of images” (Rowsell, 2013, p.45). TED speaker and data journalist David McCandless, refers to the enhancement and to the effectiveness of conveying important information and relevant concepts through images, tables, and charts. He gave in 2010 a guiding talk (*The beauty of data visualization*) on turning complex data into simple diagrams that might make people visualize relevant patterns and connections. Good design, he notes, is a good way to navigate the excess of information:

This is your senses, pouring into your senses every second. Your sense of sight is the fastest. It has the same bandwidth as a computer network. Then you have touch, which is about the speed of a USB key. And then you have hearing and smell, which has the throughput of a hard disk. And then you have poor old taste, which is like barely the throughput of a pocket calculator. And that little square in the corner, a naught .7 percent, that's the amount we're actually aware of. So a lot of your vision --the bulk of it is visual, and it's pouring in. It's
unconscious. The eye is exquisitely sensitive to patterns in variations in colour, shape and pattern. It loves them, and it calls them beautiful. It's the language of the eye. If you combine the language of the eye with the language of the mind, which is about words and numbers and concepts, you start speaking two languages simultaneously, each enhancing the other. So, you have the eye, and then you drop in the concepts. And that whole thing -- it's two languages both working at the same time.

The audience’s understanding might be also enhanced by punctual combination of words and images. Speakers however, must be cautious about the amount of what is said and what is shown. They must also decide when to favour the affordances of visuals, when to use other modes in a complementary way, and when to replace visuals. As Rowsell notes (2013, p.59), “images/visuals should not always substitute other modes of making meaning but should be considered as a way to supplement and enrich what a text offers”.

The potential of visuals is also highlighted by Melisa Marshall at TEDGlobal 2012. In a four minutes talk, she shares useful tips on presenting complex engineering and scientific ideas to a general audience:

And when presenting your work, drop the bullet points. Have you ever wondered why they're called bullet points? (Laughter) What do bullets do? Bullets kill, and they will kill your presentation. A slide like this is not only boring, but it relies too much on the language area of our brain, and causes us to become overwhelmed. Instead, this example slide by Genevieve Brown is much more effective. It's showing that the special structure of trabeculae is so strong that they actually inspired the unique design of the Eiffel Tower. And the trick here is to use a single, readable sentence that the audience can key into if they get a bit lost, and then provide visuals which appeal to our other senses and create a deeper sense of understanding of what's being described.

Visuals, it might be stated, can offer an engagement experience to the audience. In the era of digitization, Brian Kennedy, director of Dartmouth’s Hood Museum of art and also TEDx speaker in 2010, highlights that people need visual literacy as this is as necessary as textual or computer literacy. Visual literacy is important so that people can read and write visual language, encode and decode visual language. Visual literacy, he advocates, empowers people to construct meaning from images and to think critically. People need to be able to read the world through the process of vision.
Students, therefore, must be highly encouraged to use visual images in their oral presentations. If coupled with words, with intonation, with rhythm, with gestures, with body language, visuals can contribute to the meaning making process. In an engineering context, moving images, diagrams, photographs, maps, might be the most suitable modes to show proportion, create contrast, and in short, bring complex ideas to life in ways words cannot.

**Conclusion**

This article has offered a description of TED Talks from a multimodal perspective. Having become a highly popular tool for online information delivery in all subjects and areas, this article also aims to reclaim TED Talks into the classroom of Technological English as a Second Language. Different modes co-occur in the majority of TED Talks making meaning and enhancing the ‘what’ and the ‘how’ of the message. The conspicuous combination of language, gestures, body language in many TED Talks, might lead the English lecturer to appraise the rationale behind a multimodal pedagogy: the contribution that different modes can have in communication and in creating significance. This joint and at the same time uneven collaboration of different modes can make a greater impact on the audience if compared to the influence that either mode could on its own. The meticulous construction of communication from this interwoven of modes might have a strong influence on how the message is received. Speakers at TED stand out because they transmit inventiveness and genius. It seems no coincidence that this effective type of speech originated precisely in the area of technology, where conveying new and complex innovations was a challenge to their inventors. The lecturer is advised to bear this in mind, as TED Talks disseminate knowledge in an unrivalled manner. TED talks therefore unveil as suitable communication guidelines undergraduates of engineering can emulate. Motivation to improve students’ speaking skills might arise if these are encouraged to visualise their desired language selves portrayed in TED Talk speakers. In fact, taking into consideration the unquestionable popularity of web-supported information tools among the younger generations, the introduction of TED talks in previous educational stages such as secondary school would be in all probability advantageous for the prospective undergraduate. An awareness of, as Julian Treasure phrased it (2013), an undiscovered ‘amazing toolbox’ that helps increase the power of the own speaking, is something from which not only learners with an interest in technology would benefit, but something from which all students in general would profit, regardless of their academic or career orientations.
References


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