

Encouraging engineering undergraduates to voice their ideas worth sharing

Arazazu García-Pinar

Universidad Politécnica de Cartagena

Email: arancha.garcia@udc.upct.es

ORCID: 0000-0003-4287-6521

Received: 2019-12-01; Accepted: 2019-04-18

Abstract

TED Talks have these days become a valuable tool for online information dissemination in a wide range of areas of expertise. The use of TED Talks in a course of Technical English offers numerous advantages. TED teaches how to communicate by linking different modes (i.e. the visual, gestural, verbal, written and spatial) to technological production. Students can construct communication when they attentively observe and make meaning from this ensemble of modes which go beyond the verbal. TED Talks might also give rise to different tasks that entail some type of critical multimodal analysis, by which students can study the aptness of modes. They can explore why the speaker says something visually and not verbally, or which mode is best for which purpose. Yet, TED and its zeal for sharing and transmitting ideas to a wide audience should not be regarded as a means incompatible with more traditional models of information. As Jewitt highlights (2005), rather than asking what is best, the book or the screen”, it seems more reasonable to ask “what is best for what purpose”.

Keywords

TED Talks, mode, engineering, communication, multimodal analysis.

1. Introduction

This article outlines an overview of inspirational and influential online TED Talk videos, and how these can be considered by lecturers as challenging and valuable tools not only to be viewed and listened to, but also to be analysed in terms of multimodality. TED Talks might be regarded as optimal artefacts of visual media, and as new forms of speech delivery to be emulated. Additionally, these talks might find their way into the course of Technical English as a source of ideas and information that engineering undergraduates can use to delve into a wide range of topics of their interest, and to propel and inspire their course essays. This article mainly aims to draw attention to the multimodal nature of TED talks. TED talks are multimodal to the extent that the speakers on stage need fluency in different verbal and nonverbal modes (i.e. the power of speech, visual design, gesture, facial expressions and proxemics). Verbal and non-verbal communication co-occur in these talks, and students construct meaning by tracking speakers' gestures, posture and real and natural language. L2 lecturers have the challenging role of showing students the ways these talks can be deconstructed, so as to introduce them to the ways semiotic resources interact and function in digital multimodal texts. In this way, they can learn how speakers use linguistic, visual and audio resources to involve and captivate their audiences. This article will detail the multimodal character of TED Talks. It will also offer an overview of some empirical studies that have researched the effect of TED Talks on student motivation. The last part of the article will explain how a TED Talk can be analysed in the course of Technical English so that students realise the salience and aptness of both verbal and nonverbal modes.

The common pattern shared by different TED events is that all of them must spread thought-provoking ideas. The mission of TED is, as Surgimoto and Thelwall point out (2013: 664), "one of change and engagement". Ideas are understood as influential patterns of information that can shape human culture. TED curator Chris Anderson (2017: 12-13) gives ideas a relevant role in the following terms:

The only thing that truly matters in public speaking [...] is having something worth saying. [...] An idea is anything that can change how people see the world. If you can

conjure up a compelling idea in people's minds, you have done something wondrous. You have given them a gift of incalculable value.

Anderson's words, therefore, might be encouraging for anyone aspiring to speak in public, as the key prerequisite seems to be having an idea worth sharing. Lecturers' experience may lead them to think that other elements beyond the possession of a compelling idea are necessary. The next section is concerned with non-verbal modes onstage. If aptly combined with verbal modes, non-verbal modes can give compelling and original ideas greater emphasis, while at the same time capturing the attention of the audience. This modal interweaving is precisely what one finds in many TED Talks.

2. Multimodal TED Talks

TED Talks are multimodal insomuch as these confer a prominent role to not only the verbal mode. TED speakers have been coached to be fluent in different modes beyond the verbal. In many talks, the emotional load is communicated with a specific tone of voice, a hand gesture, or an impacting visual. While words build and develop ideas, explain complex concepts or simply narrate, visuals, gestures and voice qualities transmit emotion and can arouse the audience's curiosity and infuse a speech with variety.

2.1 Verbal model

The verbal mode is certainly the most important mode in TED Talks. As Anderson highlights, "language works its magic only to the extent that it is shared by speaker and listener". Words are basically the tool that TED speakers use to recreate their ideas in the minds of their audiences. It is a tool that, if cautiously used, can ensure the talk's success. Speakers have the difficult task of turning their sets of ideas into words, and in this process, they must ensure that their audiences understand the logical relationships among their sentences. Upgrading the audience's mental model of the world through the masterful use of explanation in any kind of talk is relevant. Yet, many undergraduates find it difficult to establish effective connections between sentences in order to express similarity, contrast,

cause and effect or exemplification. Cognitive psychologist and Harvard professor Steven Pinker, also a TED speaker on several occasions, highlights that to achieve full understanding, the whole hierarchical structure of an idea must be clearly communicated. In his work 'The Sense of Style: The Thinking Person's Guide to Writing in the 21st Century' (2014: 39), he offers some guidance on how to use language more efficiently, and to communicate ideas hierarchically:

No writer can leave the macroscopic organization of a text to chance (...) No sentence is an island; nor is a section or a chapter. All of them contain links to other chunks of a text. A sentence may elaborate, qualify, or generalize the one that came before (...) People, places and ideas may make repeat appearances, and the reader must keep track of them as they come and go.

Though clearly focusing on writing, Pinker's guidance might well apply to oral communication with writer being replaced by speaker and reader by listener. Speakers need to join their ideas and make sure that these are linked in a logical manner.

Another relevant aspect with regard to the verbal mode in TED Talks has to do with the simplicity and explicitness of the language used. Most TED speakers deliver their talks in simple language, totally devoid of technical terms or acronyms that might cause the audience to be confused, and in consequence, to switch off. For this reason, TED speakers often start their talks using their audiences' language, and mentioning their assumptions and concepts, and from there they start building new ideas inside their audiences' minds. Speakers, as Anderson notes (2017: 85), must be able to explain:

You can't give a powerful new idea to an audience unless you can learn how to explain [...]. Each step builds on what the listener already knows. Metaphors and examples are essential to revealing how an idea is pieced together.

Metaphors and examples, as evidenced by Anderson's quote, play a relevant role in illuminating and simplifying more sophisticated and complex technical talks. Although student oral presentations might be addressed to a specific audience (i.e. their peers), it might be appropriate to encourage them to resort to examples whenever these can enhance

understanding. Likewise, students must be cautious with acronyms and make sure these are explained. The manner in which specialised talks are communicated is of great relevance, and students should be aware of the fact that they might be required to disseminate knowledge not just to a specialised public in their future careers, but also to a lay public.

2.2 Non-verbal modes

While one cannot underestimate the efficacy of language, nor can its supreme status be denied in any oral interaction, it seems quite legitimate to state that on some occasions, different modes beyond the verbal can fulfil different purposes. Language, therefore, in some instances might be less resourceful and have less potential for making meaning than, for instance, the use of a beat gesture, a specific posture, different voice qualities or a carefully considered image.

Paralinguistics includes the features of spoken communication that do not involve words. The Common European Framework of Reference (CEFR) (2001: 89-90) makes a distinction between paralinguistic body language (i.e. gesture, posture, facial expression, proxemics and eye contact) and prosodic qualities (i.e. voice quality, pitch, loudness and length).

All these paralinguistic features form what is known as non-verbal communication, and often play a key role in speaking, as they can add layers of significance to spoken words. Young and Travis (2012: 58) identify four different functions of non-verbal communication:

It can replace a verbal message: Pointing to something instead of explaining where it is using words.

It can highlight a verbal message: The use of hand gestures is a clear example of a way to enhance a verbal message.

It can express the opposite of a verbal message: Particular care should be taken to not contradict verbal with nonverbal communication.

It can direct people's conversations: Noticing speakers' intentions to make some kind of eye contact, for example, can guide people in recognising their turns to speak.

It seems appropriate and necessary to make students aware of the fact that different non-verbal modes (i.e. gestures, facial expressions and prosodic features) may contribute to the whole communication process (Campoy-Cubillo, 2016) and to listening comprehension (Sueyoshi and Hardison, 2005).

2.2.1 Gestures

Gestures play a pivotal role in communication, as these can enhance listening comprehension, clarify verbal meanings and convey additional information. Gestures can contribute to listeners' comprehension by building an internal cognitive simulation or mental representation of the message (Hostetter and Alibali, 2010).

McNeill's (1992) classification of hand gesture has been frequently used to study gestures in communication. Iconic, metaphorical, deictic and beats are used by speakers to facilitate communication so that listeners can focus their attention on the relevant information in the message, and in consequence, derive meaning.

A quick look at a representative sample of TED Talks shows that speakers recurrently resort to the use of hand gesture throughout their talks. The most viral talks have been found to have been given by speakers who extensively use gestures (van Edwards, 2015). TED speakers often resort to beat gestures (i.e. a rapid movement of the hand or the finger, produced to the rhythm of the accompanying speech which does not communicate semantic content) and to deictic gestures (i.e. pointing gestures commonly used to refer to specific objects, events, notions and ideas). These types of gestures help speakers punctuate important stretches of their discourses, regulating the flow of speech and coherently integrating the overall discourse. Beat gestures also perform a social pragmatic function (Weinberg, Fukawa-Connelly & Wiesner, 2013) that contributes to enhancing audience awareness of the key ideas in speakers' talks. Speakers address their audiences with a beat to get them involved with an issue that concerns all of them (i.e. environment, technology,

politics, poverty). TED speakers also use deictic gestures extensively to call attention to some specific points in any visual that accompanies their talks. These gestures perform a referential and indexical function (i.e. indicate a position), as they refer to the image, concept, figure which is being described.

Head movements (i.e. nods, lateral head sweeps and head shake) is another type of gesture closely connected to speech in the process of communication (Briñol & Petty, 2003; Kendon, 1980; 2002). Research on head nods and shakes (Briñol & Petty, 2003), for instance, has focused on the influence these can have on people's confidence in their thoughts when having to give response to a message. The authors contend (p.1135) that "manipulation of head movements affects confidence in the validity of one's thoughts, not confidence in the validity of the persuasive message per se".

Lateral sweeps can 'co-occur with concepts of inclusivity such as the words 'everyone' and 'everything' (McClave, 2000: 860). The narrative functions include marking direct quotes, portraying mental images of characters, performing deixis, and indexing items on lists. According to the cognitive function, head movements might be involved in cognitive processing. Head movements, in relation to the interactive function, can be used for backchannelling purposes (i.e. reaction to your interlocutor, showing interest). Head movements, though often culturally specific, are, as McClave notes (2000), quite valuable, since listeners are greatly sensitive to them.

TED speakers' habitual use of lateral sweeps is worth highlighting, particularly in talks that delve into topics of major global concern (i.e. activism, social change, the environment, education, recycling, technological advance). The lateral sweep concurs with concepts of inclusivity (i.e. everyone, everything) and express intensification when they co-occur with words such as "very", "great", "a lot", among others.

2.2.2 Facial expressions

Regular eye contact with members of the audience can also enhance positive connections while reflecting interest, and transmitting caring and courtesy (Young and Travis 2012: 60). The audience, in turn, by tracking the speaker's gaze, might predict what the speaker's intentions are, and what he or she is planning to convey next. Additionally, eye contact accompanied with specific facial expressions (e.g. a smile, nod, or frown) can even have a captivating effect. Speakers' facial expressions are another channel for successful communication. These expressions allow the audience to sense speakers' feelings and moods. Changes in facial expression can anticipate changes in tone and mood. Examples of TED Talks that combine eye contact and facial expressions are countless.

2.2.3 Proxemics

Proxemics is the study of the ways in which people organise and use their space (Norris, 2004: 19). People might adopt different distances both in relation to others and to concrete objects. It is the specific distance of a person from others in different interactions that may allow one to deduce the person's understanding of the formality or informality of the situation. Hall (1966) established four distinct distances: (1) intimate distance (15-45 cm) denotes a close relationship; (2) personal distance (45-120 cm) takes place among friends and family members; (3) social distance (1.20m-3.50 m) occurs among acquaintances, and (4) public distance, which is the distance frequently used in public speaking (i.e. classroom lectures, TED Talks).

It is relevant to note how proxemic behaviour can contribute to understanding the type of social interaction that is taking place. Regarding this, speakers at TED know how to arrange and use their space to enhance meaning-making. Even though they keep their distance from the public (i.e. public distance), and the size of the stage indicates their high status, they know how to get closer to their audience while maximising their stage presence. They rarely stay put on stage. TED speakers have carefully studied how to move around a stage

with the flow of their speeches, and when they should stop to emphasise meaningful parts in their talks.

2.2.4 Prosodic qualities

“conventionalised meanings that are related to attitudes and states of mind” (CEFR, 2001: 89). Prosodic qualities, also referred to as nonverbal voice qualities (Poyatos, 1983) include: pitch range, loudness and prosody.

In the 1960s and 1970s, voice quality was conceived as an arbitrary mark of individual or social identity, and was merely depicted in articulatory and acoustic terms. Van Leeuwen (1999), still drawing on phonetics and linguistic work, semioticised and theorised that voice quality might be used to convey meaning. He built on Lakoff and Johnson’s (1980) metaphor theory, according to which metaphors can be understood on the basis of concrete experiences. The authors postulated (p.19) that “no metaphor can ever be comprehended or even adequately represented independently of its experiential basis”. This assertion refers to physical, bodily experience, such as tensing the voice. Voice tension is commonly associated with situations of nervousness, anxiety or threat, and is therefore a voice quality with meaning and metaphor potential that can signal certain states of mind.

Other resources for vocal meaning are different components and features that shape the quality of voice, lead to the construction of meaning, and effect how people might perceive the speaker’s message: pitch range and degrees of loudness. Leeuwen notes (2011: 71) that pitch range, for instance, with men using higher regions of their pitch range to convey dominance or assertion and women using the lower end of their pitch range to be assertive, can be deliberately modified to convey other types of intentions. Some men who tend to speak with a low pitch might not aim to dominate but to make themselves small. Some women might opt to speak softly, using a low pitch to evoke the ‘dangerous woman’ stereotype or loudly and in a high pitch, which might invoke the stereotype “of the shrill and strident fishwife” (Kress and van Leeuwen, 2001: 84).

The loudness range of the voice is significant to conveying distance. At close range, people's voices are associated with intimacy and confidentiality. Vocal loudness might relate to power and dominance, and it is this quality of voice that is pervasive in TED Talks. Speakers are centre stage and generally give talks to a considerable number of people whose attention they try to capture.

Prosody encompasses the group of speech properties that influence more than one sound segment (i.e. stress, intonation, rhythm) (Valeiras-Jurado, 2017). The fact that prosody can help listeners process and understand a message has made research on this topic particularly fruitful. It has been widely acknowledged that many of the difficulties L2 students face have to do with these non-verbal characteristics of communication (Chun, 2002). Prosody has also been researched in connection with public presentations and how this might affect the audience's perception of vivacity (Hincks, 2009: 46):

It 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 either 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.

Rhythm can play a significant role in spoken interactions, creating structure in communicative situations. Rhythm and the alternation of accented and unaccented moments articulate meaning. Rhythm, according to van Leeuwen (2005), is along with layout in composition in space, a major resource to create cohesion in any communicative event. Rhythm and layout, the author also highlights (p.181), create the link between semiotic articulation and the body:

Human action is by nature rhythmically coordinated, and, as micro-analytical studies have shown, so are human interactions (...). Rhythm does not just provide some kind of formal structure, some kind of scaffolding to keep the text from collapsing, or some kind of cement to hold it together. It also plays an indispensable part in getting the message across.

Rhythm, therefore, comes to join and integrate all the different modes (e.g. body movement, language, gesture) involved in the communicative event as these unfold in time. Rhythm can also be achieved with stylistic devices such as parallel structures (i.e. the repetition of a series of words and phrases which share a grammatical form and length). It is quite relevant to observe how some TED Talk speakers resort to parallel structures to achieve a specific cadence. TED speaker Simon Sinek resorted to parallel structure repeatedly in his talk (How great leaders inspire action). He used this device accompanied with stress on specific words and with gestures to finish his talk:

We follow those who lead, not because we have to, but because we want to. We follow those who lead, not for them, but for ourselves.

Paralinguistic features may enhance the passionate and enthusiastic style of delivery many speakers at TED have. Lecturers cannot underestimate the relevance of all these features, and must call attention to the fact that it is not so much the ‘what’ of the idea they want to transmit but the ‘how’. The next section focuses on the role of visuals in oral presentations and on how these can often make the difference between success and failure. Different types of visual support are frequently found in many TED Talks.

2.2.5 Visuals

An extensive number of TED Talks use photographs, graphs, tables, and illustrations to upgrade the verbal message and to strengthen the aesthetic appeal of the speaker’s oral performance. It might then be useful to direct engineering undergraduates to the opportunities offered by these visuals and to raise their curiosity regarding the specific reasons that might have led a speaker to choose a specific type of visual over another. This might, in turn, lead students to consider some important issues when they design the power points for their oral presentations. Issues such as the salience of some resources and the aptness (Kress 2005: 19) of representing different types of content, the type of roles different illustrations might play, the kind of content that might be expected from headings

and illustrations, the type of information images facilitate, and where the visuals they use make a complex phenomenon easier are all relevant issues and must be carefully attended.

A common practice among students is to load their slides with more than one idea. Regarding this, Tom Rielly, one of the members of the coaching group in TED, warns (Anderson, 2017: 116) about the dangers of cognitive load in presentation slides:

With a talk and slides you have two streams of cognitive output running in parallel. (...). Talking about theoretical physics has a high cognitive load (...). In these circumstances, the audience member's brain has to decide whether to focus on your words, your slides, or both, and it's mostly involuntary. So you must design where attention is going and make sure a high cognitive load on a slide doesn't fight with what you're saying.

The choice of a particular visual in student oral presentations can be, as stated above, an issue that should be carefully considered. Multimodal concepts such as modal affordance (i.e. different modes can present different potentials for making meaning), aptness (i.e. some modes may be more suitable for a specific purpose than others) and visual salience (i.e. the specific ways different elements in a visual layout such as colour, size and contrast appear in order to capture the viewer's attention) are key concepts students should be aware of when designing their power points, as these will have a determining role in the overall performance (van Leeuwen & Kress, 1996: 183).

3. The influence of TED Talks on student motivation

Relevant studies have also incorporated these online talks in different educational contexts to motivate students. Rubenstein (2012) focused on the study of TED Talks that can upgrade teachers' understanding of student motivation and teaching procedures. Throughout her article she proposes different TED Talks that can be used in the classroom for different purposes; to promote student motivation and to initiate teachers into novel instructional practices. Her selection of talks about motivation, as she suggests, can lead educators to raise important questions. The first TED Talk she discusses is Dan Pink's

(2009). This talk, which revolves around workplace motivation, can promote meaningful debate and reflection among teachers (p.263): How can teachers encourage autonomous learning? How can teachers ask questions in class so that students are freer to research content? How can teachers guide students to recognise problems and work to find their solutions? Another TED Talk she analyses is psychologist Csikszentmihalyi's. This talk focuses on the psychological movement of flow, and explains the contributing role that performing a challenging task may have on facilitating one's happiness. Drawing on this talk, Rubenstein urges teachers to promote flow in the classroom in order to both provide motivation and transform the classroom into an enjoyable context.

Takaesu's (2013) study explored how the extensive use of TED Talks as listening resources affected the listening skills of 468 tertiary Japanese students in a course of English for Academic Purposes (EAP). Qualitative data obtained through surveys and journal entries showed that students positively assessed the effectiveness of the listening activities designed from TED Talks. This fact contributed to raising their feelings of self-efficacy and encouraged them to research the topics included in the talks.

Elk's article (2014) describes the way she designed different listening tasks from TED Talks, with the aim of focusing attention on the shortcomings she and her students had found in an EAP course book. One of these deficiencies had to do with the lack of authentic materials in EAP textbooks. The regular use of TED Talks in the classroom provided authentic listening tasks, and allowed the researcher to improve strategies for "processing visual input that is synchronous, but not identical to aural input" (p.219). Students listened to these talks, wrote about they had heard, verified comprehension with the help of the talk transcription, and finally wrote about the listening difficulties they had encountered. These tasks were mainly intended to promote students' autonomy and to draw their attention to the errors they made in bottom-up and top-down processing.

4. TED Talks multimodal analysis

The website www.ted.com has launched 3,000 online talks to date. The process of analysing all the modes at play in these talks is unattainable. This section focuses on one of the most viewed TED Talks to date (*Do schools kill creativity?* by Sir Ken Robinson), and intends to offer a closer look at how speakers achieve impact through efficient handling of the modes detailed above. Different gestures, facial expressions and appealing slides when working in synergy with words might enhance comprehension and achieve emphasis.

The speaker transmits passionately, persuasively and emphatically, key educational notions and concepts with the help of features such as rhetorical questions, repetition, parallelisms, intensifying adverbs and punctual hand gestures, different types of facial expression and a particular rhythm.

***Do schools kill creativity? (19'22'')*. Sir Ken Robinson**

Link: https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity

About the speaker: Sir Ken Robinson is a British author, speaker and international advisor on education, non-profit organisations, and art institutions. He was Director of the Arts in Schools Project (1985–89) and Professor of Arts Education at the University of Warwick (1989–2001). He is currently Professor Emeritus at the same institution. In 2003, he was appointed Knight Bachelor by Queen Elizabeth II for Services to the Arts.

Year of the talk: 2006

About the talk: In this talk, Sir Ken Robinson challenged the way current educational institutions are educating children, and urges a radical transformation of school systems into those where creativity is cultivated and multiple types of intelligence are acknowledged. This educational reform discourse is sprinkled with anecdotes and humour, which conveys informality to Robinson's presentation. His talk is full of poignant points,

and he achieves his intended emphatic tone through various modes: verbally, through hand gestures, and with facial expressions.

Modal interplay: Students’ attention can be particularly directed to the way Sir Ken Robinson repeatedly resorts to the use of hand gestures when he wants to highlight important parts of his discourse. On several occasions, he also tilts his head to raise his audience’s awareness of important educational issues.

Table 1. *Modal interplay in the TED Talk ‘Do schools kill creativity?’*

Minute	Transcript of Talk	Non-verbal mode	Rhetorical strategy
5:22	<i>I don't mean to say that being wrong is the same thing as being creative. What we do know is, if you're not prepared to be wrong, you'll never come up with anything original -- if you're not prepared to be wrong</i>	<p>Beat gesture: The speaker uses a beat gesture with an extended finger that entails two phases of movement. When the finger goes downwards, it points to the discourse flow, emphasising keywords that receive prosody stress as well.</p> <p>Gesture function: Social to attract the audience’s attention and to give emphasis to keywords</p>	The speaker uses the rhetorical strategy of repetition of the phrase “If you are not prepared to be wrong”. This repetition helps Sir Robinson to reinforce his key idea. He also uses paralinguistic stress on the word “wrong”, repeated three times.
8:16	<i>Every education system on Earth has the same hierarchy of subjects. Every one. Doesn't matter where you go. You'd think it would be otherwise, but it isn't. At the top are mathematics and languages, then the humanities, and at the bottom are the arts. Everywhere on Earth.</i>	<p>Beat gesture: The speaker uses a finger beat with fast flicks whose downward movements fall on the words ‘same’, ‘hierarchy’, ‘subjects’</p>	<p>Rhetorical strategy</p> <p>The speaker resorts, in this statement, to the use of repetition. This rhetorical device helps him to hold his ideas cohesively and make the message clearer. He repeats the adjective ‘every’ twice.</p>

		Gesture function: Social. The speaker intends to highlight the importance of his idea	The use of adverbs 'everywhere' and 'on Earth' contributes to emphasising the part he wants to focus on. 'Every' and 'everywhere' are also given prominence.
17:28	<p><i>Our education system has mined our minds in the way that we strip-mine the earth: for a particular commodity.</i></p> <p><i>And for the future, it won't serve us. We have to rethink the fundamental principles on which we're educating our children.</i></p>	<p>Beat gesture / Lateral head sweep</p> <p>The speaker resorts to the finger beat gesture with a repetitive downward movement that falls on <i>we, have, rethink</i>, punctuating important stretches in his discourse. Finger beat gesture is also accompanied by a lateral head sweep which might convey inclusivity: education concerns all of us.</p>	<p>Rhetorical Strategy</p> <p>He uses the inclusive pronouns 'we' and 'us' to make his talk more intimate and inclusive. This strategy helps him to raise his audience's awareness about the current educational system.</p>

5. Conclusion

This article has focused on the multimodal character of TED Talks and on how the accurate construction of communication from the interweaving of modes might have a strong influence on how students receive, interpret, and ultimately, prepare and deliver their classroom technological oral presentations. Speakers at TED stand out because they transmit creativity and brilliant ideas. The way they disseminate knowledge has no equal. TED Talks, therefore, can provide suitable communication guidelines for undergraduates of engineering, and can help them to transmit their complex innovations and ideas. To this end, the last section of this article focused on one of the most viewed TED Talks to date, in order to offer a closer look at how the speaker achieves impact through efficient handling of the modes detailed above. Different gestures, facial expressions and appealing slides, when working in synergy with words, might enhance comprehension and achieve emphasis. If students' attention is directed towards the modal salience and aptness in these talks, they might be encouraged to incorporate a set of modes in their classroom oral presentations and to voice their ideas worth sharing. This, in turn, can make this speaking activity less daunting, and might encourage students to visualise their L2 speaking selves.

5. References

Anderson, C. (2017). *TED: The Official TED Guide to Public Speaking*. Boston: Houghton Mifflin Harcourt.

Brazil, D. (1985). *The Communicative Value of Intonation in English*. Birmingham: The University Printers, University of Birmingham.

Briñol, P. & Petty, R. E. (2003). Overt head movements and persuasion: A self-validation analysis. *Journal of Personality and Social Psychology*, 84, 1123-1139.

Campoy-Cubillo, M.C. (2016). Multimodal Listening Skills: Issues in Assessment and Implementation. In V. Bonsignori & B. Crawford Camiciottoli (Eds.), *Multimodality across Communicative Settings, Discourse Domains and Genres* (pp. 14-36). Cambridge: Cambridge Scholars Publishing.

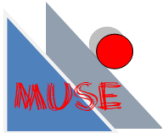
Chun, D. M. 2002. *Discourse Intonation in L2: From Theory and Research to Practice*. J. Benjamins.

Council of Europe. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge, U.K: Press Syndicate of the University of Cambridge.

Elk, C. K. (2014). Beyond mere listening comprehension: Using TED Talks and metacognitive activities to encourage awareness of error. *International Journal of Innovation in English Language Teaching and Research*, 3(2), 215.

Hadar, U., Steiner T.J., Grant E.C. & Rose, F.C. (1984). The timing of shifts of head postures during conversation. *Human Movement Science*, 3(3), 237-245. doi:10.1016/0167-9457(84)90018-6

Hall, E.T. (1966). *The Hidden Dimension*. New York: Doubleday.



Halliday, M.A.K. & Greaves, S. (2008). *Intonation in the Grammar of English*. London: Equinox.

Hostetter, A. B., & Alibali, M. W. (2010). Language, gesture, action! A test of the Gesture as Simulated Action framework. *Journal of Memory and Language*, 63, 245-257, doi:10.1016/j.jml.2010.04.003

Hincks, R., & Edlund, J. (2009). Promoting Increased Pitch Variation in Oral Presentations with Transient Visual Feedback. *Language Learning & Technology*, 13(3), 32–50.

Kress, G., & van Leeuwen, T. (1996). *Reading Images: The Grammar of Visual Design*. London: Routledge.

Kress, G., & van Leeuwen, T. (2001). *Multimodal Discourse: The Modes and Media of Contemporary Communication Discourse*. London: Arnold.

Kress, G. (2005). Gains and Losses: New Forms of Texts, Knowledge, and Learning. *Computers and Composition*, 22(1), 5-22, doi:10.1016/j.compcom.2004.12.004

Lakoff, G. & Johnson, M. (1980). *Metaphors We Live By*. Chicago and London: University of Chicago Press.

Lee, A. (2013, April). *Angela Lee: Grit: The power of passion and perseverance* [Video file]. www.ted.com/talks/angela_lee_duckworth_grit_the_power_or_passion_and_perseverance.

Loya, M. & Klemm, T. (2016). Teaching Note-Using TED Talks in the Social Work Classroom: Encouraging Student Engagement and Discourse. *Journal of Social Work Education*, 52, 4, 518-523, doi: 10.1080/10437797.2016.1198291

McClave, E. (2000). Linguistic Functions of Head Movements in the Context of Speech. *Journal of Pragmatics*, 32, 855-78.

McGregor, A., Zielinski, B., Meyers, C., & Reed, M. (2016). An Exploration of Teaching Intonation Using a TED Talk. In J. Levis, H. Le., I. Lucic, E. Simpson, & S. Vo (Eds.),

Proceedings of the 7th Annual Conference of Pronunciation in Second Language Learning and Teaching (PSLLT) (pp.143-159). Ames IA: Iowa State University.

McNeill, D. (1992). *Hand and mind: What gestures reveal about thought*. Chicago: University of Chicago Press.

McNeill, D. (2005). *Gesture and Thought*. Chicago: University of Chicago Press.

Norris, S. (2004). *Analysing Multimodal Interaction: A methodological framework*. New York: Routledge.

Kendon, A. (1980). Gesticulation and Speech: Two Aspects of the Process of Utterance. In Mary. R. Key (Ed). *The relationship of verbal and non-verbal communication* (pp 207-27).The Hague: Mouton.

Kendon, A. (2002). Some Uses of the Head Shake. *Gesture*, 2(2), 147-82.

Pink, D. (2019, July). *Dan Pink: The puzzle of motivation are* [Video file]. Retrieved from https://www.ted.com/talks/dan_pink_on_motivation.

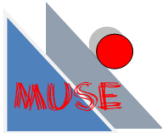
Pinker, S. (2014). *The Sense of Style: The thinking Person's Guide to Writing in the 21st Century*. New York: Penguin Books.

Poyatos, F. (1983). Language and Nonverbal Sign Systems in the Structure of Face to Face Interaction. *Language and Communication*, 3(2), 129-40.

Robinson, K. (2006, February). *Ken Robinson: Do schools kill creativity?* [Video file]. Retrieved from https://www.ted.com/talks/ken_robinson_says_schools_kill_creativity.

Rubenstein,L. (2012) Using TED Talks to Inspire Thoughtful Practice. *The Teacher Educator*, 47(4), 261-267, doi: 10.1080/08878730.2012.713303.

Sinek, S. (2009, September). *Simon Sinek: How great leaders inspire action* [Video file]. Retrieved from www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action.



Sueyoshi, A., & Hardison, D. (2005). The role of gestures and facial cues in second language listening comprehension. *Language Learning*, 55(4), 661-699, doi: 10.1111/j.0023-8333.2005.00320.x

Sugimoto, C., & Mike T. (2013). Scholars on Soap Boxes: Science Communication and Dissemination via TED Videos. *The Journal of the American Society for Information Science & Technology*, 64(4), 663-74.

Takaesu, A. (2013). TED Talks as an Extensive Listening Resource for EAP Students. *Language Education in Asia*, 4(2), 150-162, doi:10.5746/LEiA/13/V4/I2/A05/Takaesu

Valeiras-Jurado, J. (2017). *A multimodal approach to persuasion in oral presentations : the case of conference presentations, research dissemination talks and product pitches*. Universitat Jaume I ; Ghent University. Faculty of Arts and Philosophy, Castellón de la Plana, Spain ; Ghent, Belgium

van Edwards V. (2015). 5 Secrets of a successful TED talk. Retrieved from: <http://www.scienceofpeople.com/2015/03/secrets-of-a-successful-ted-talk/>.

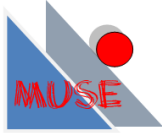
van Leeuwen, T. (1999). *Speech, Music, Sound*. London: Macmillan.

van Leeuwen, T. (2005). *Introducing Social Semiotics*. London/New York: Routledge.

van Leeuwen, T. (2011). *The Language of Colour*. Oxon/ New York: Routledge.

van Lier, L. (2007). Action-based teaching, autonomy and identity. *International Journal of Innovation in Language Learning and Teaching*, 1(1), 46-65, doi: 10.2167/illt42.0

Weinberg, A., Fukawa-Connelly, T., & Wiesner, E. (2013). Instructor gestures in proofbased mathematics lectures. In M. Martinez, & A. Castro Superfine (Eds.), *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1119). Chicago: University of Illinois at Chicago.



Multidisciplinary Journal for Education,
Social and Technological Sciences

<https://doi.org/10.4995/muse.2019.11370>
ISSN: 2341-2593

Young, K. & Travis, H. (2012). *Oral Communication: Skills, Choices and Consequences*.
Long Grove, IL: Waveland Press, Inc.