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Apocalypse? No! Maintaining traditional educational values in a disrupted environment

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Abstract

Over recent years, there has emerged an increasingly apocalyptic vision of the traditional teacher-student education model. University lecture rooms are emptying in favour of massive open online courses (MOOCs). Social media, virtual classes, chat rooms, online teaching and artificial intelligence are creating ongoing disruption.

This paper aims to look at the current climate of disruption in education worldwide, brought on by technological change, to reflect on the changes and to suggest that they have had, and will continue to have, less impact on the English language teaching sector than on other sectors. This is primarily because English language teaching is essentially and compellingly rooted in human interactivity, and does not lend itself to digital modernisation or virtual delivery. The traditional English language teacher will remain the Omega Man of international education.

Key words: innovation, artificial intelligence, machine learning, disruption, English language teaching, ELT, international education

Introduction

In the last forty years or so, technological changes have had a significant impact on work, education and leisure. Since, say 1984, the year of the introduction of the Apple Macintosh, the world has progressively been influenced by computers, the internet, smartphones, social media, and Artificial Intelligence, among many other technological developments.

Most present-day people last went to a bank a long time ago, and yet, less than a generation ago, it was a regular feature of people's lives. Increasingly

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our work, particularly in the field of education, is driven by the conflicting demands of innovation and disruption. According to West (1963), "For Leone, Dean of the Sacred College, innovation was the first step towards heresy." We are more enlightened now, but increasingly forced to change in order to survive.

Disruption is what happens if you do not innovate, and Artificial Intelligence (AI) has become one of the most significant media for innovation. Williams (2017) illustrates this with recent examples: Uber has announced plans to buy 24,000 Volvo SUVs as a driverless fleet; Peter Cushing appeared in the 2016 film *Rogue One: A Star Wars Story*, although he died in 1994; and Google's AlphaGo software defeated a Chinese master at Go, considered the world's most complex board game.

BoardRoom (2017) quotes AUT University's AI research director Albert Yeap: "AI is about figuring out how the mind works and then working out how to reproduce it on a computer", and cites an example from early in 2017, when Fukoku Mutual Life Insurance made 34 of its staff redundant, replacing them with the AI system IBM Watson.

But AI still has weaknesses, as exemplified in The Economist (2015), where AI conspicuously failed to identify patterns, as shown in Figure 1.

Figure 1: AI pattern recognition
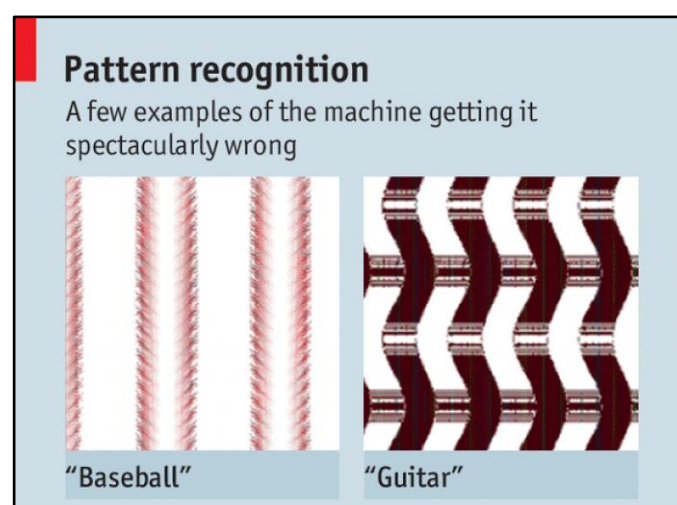
The article goes on to explain that computers can now do some narrowly defined tasks which only human brains could manage in the past. The

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original "computers", after all, were humans, often women, employed to do the tricky arithmetic, the key theme of a recent movie about the NASA space shots in the 1960s and 70s, *Hidden Figures* (2016). Edsger Dijkstra, a pioneer of AI, once remarked that asking whether a computer can think is a bit like asking "whether submarines can swim" (1984).

A subset of AI is machine learning, which according to The Economist (2017) allows computers to pick up on patterns they were not explicitly programmed to perceive, such as Google Translate, which uses pattern recognition to translate a fresh piece of language, based on what is already in the database. In order to perform a test, the Spanish song "Ojala", written by the Cuban poet and singer Silvio Rodriquez, was entered into Google Translate. Although much of the English was readable, there were several phrases, underlined below, where the translation or grammar function failed:

Ojalá que las hojas no te toquen el cuerpo cuando caigan para que no las puedas convertir en cristal.
I hope the leaves do not touch your body when they fall so you cannot convert them into glass
Ojalá que la lluvia deje de ser milagro que baja por tu cuerpo.
I hope the rain stops being the miracle that goes down your body
Ojalá que la luna pueda salir sin ti.
Hopefully the moon can <u>raise</u> without you
Ojalá que la tierra no te bese los pasos.
May the earth not kiss your steps.
Ojalá se te acabe la mirada constante, La palabra precisa, la sonrisa perfecta.
I wish your constant look <u>will end the precise word</u>, the perfect smile
Ojalá pase algo que te borre de pronto: Una luz cegadora, un disparo de nieve.
I hope something happens that erases you suddenly, a blinding light, <u>a shot of snow</u>
Ojalá por lo menos que me lleve la muerte, para no verte tanto, para no verte siempre
I hope at least death takes me <u>not to see you so much</u>, <u>not to</u> always see you
En todos los segundos, en todas las visiones:
in all seconds, in all visions
Ojalá que no pueda tocarte ni en canciones
I hope I cannot even touch you in songs
Ojalá que la aurora no de gritos que caigan en mi espalda.

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I hope *the aurora does not scream that fall on my back*
Ojalá que tu nombre se le olvide a esa voz.
I hope your name will forget that voice
Ojalá las paredes no retengan tu ruido de camino cansado.
I hope the walls do not hold your *weary road noise*
Ojalá que el deseo se vaya tras de ti, a tu viejo gobierno de difuntos y flores.
I hope the desire goes after you to your old government *of deceased and flowers*

And most significantly, Google fails to give real impact to the repeated *ojalá*, which means much more than a hope or a wish, but an invocation of spiritual intervention (see To Be Fluent, 2016).

The Economist (2017) goes on to point out that, while in 1984, the year of the Macintosh, US schools averaged one computer per 125 pupils, and that by 2012 there was one for every 1.8 pupils, this "big bang" of access to IT had "little or no positive effect" on outcomes such as test scores. Further, they quote the OECD's finding no link between what countries spend on IT and their 15-year-olds' abilities in maths, science and reading.

Thus, the jury is still out on some of the technologically-driven educational advances of the last generation.

Social media

One of the key qualities of social media (Facebook, Messenger, SMS, Snapchat, WeChat, Twitter etc) is that they depend on brevity. President Donald Trump has written policy in 140 characters, including typos such as "Despite the constant negative press covfefe", and we may ask ourselves whether another flawed tweet may have unintended political consequences. It is important to communicate accurately, and accuracy often depends on punctuation. Examples are the panda story from Truss (2003), where a surplus comma changes the very definition of the animal in "Eats, shoots and leaves".

A similar case is that of Sir Roger Casement, a distinguished British diplomat, knighted for his work on human rights abuses in Peru, but who became involved in Irish republicanism during World War I. He sought help in Germany to recruit Irish prisoners of war to form an Irish brigade and was

landed by a German submarine three days before the 1916 Easter Rising. He took ill, was arrested and tried under the 1351 Treason Act, a section of which included the words, "… if a Man do levy War against our Lord the King in his Realm, or be adherent to the King's Enemies in his Realm, giving to them Aid and Comfort in the Realm or elsewhere …". The court decided that a comma should be inserted into the text, crucially altering the sense so that "in the realm, or elsewhere" referred to where war was levied and not just to where the King's enemies might be. Although the defence had argued that acts performed outside the UK could not amount to treason within the UK, the comma changed that, and so Sir Roger Casement was convicted of treason and "hanged on a comma" in August 1916.

While brevity and punctuation are not by definition dangerous, mistakes can be made more easily in an environment where accuracy is prejudiced. A further example is the perils of corrective text: when preparing a speech for the thirtieth anniversary of English New Zealand in 2016, using an iPhone as my note source, my introduction, following Maori tikanga (custom, albeit in English), had my Scottish-islander grandfather converted from a "crofter" into a "drifter", by the corrective text function; a very different provenance! In summary, language cannot always be trusted to technological developments.

Technological change in education

An apocalyptic vision of the current and future state of education worldwide was manifested at the New Zealand International Education Conference 2016:

- University lecture rooms were emptying in favour of MOOCs.
- Social media was changing communication.
- Changes in social media were rapid.
- Virtual classes were replacing real ones.
- Online teaching was increasing.
- Chat rooms were replacing tutorials.

In the last two years the pace has quickened. An example cited by ICEF (September 2017) was that two corporate giants – Google and Bertelsmann – have launched a large-scale scholarship programme for MOOC studies,

through Udacity. The programme will fund 75,000 students from the European Union, Egypt, Israel, Russia, and Turkey, and builds on a successful 2016 pilot that saw 70,000 students apply for 10,000 funded spaces. MOOCs were estimated at 58 million enrolments in 2016.

However, there has always been change in educational technology, or tools: from slate, to dipping pen, to overhead projector, to data projector, to laptop/PC, etc. The change in tool however does not require or indicate change in teaching or learning. Although changing from a blackboard to a whiteboard may minimise skin conditions brought on by chalk dust, or increase costs because of the price of board pens, these variables exist outside the learning process.

English language teaching

There has also always been change and innovation in English language teaching (ELT). Until the late 19th century most teaching was through the Grammar-Translation method. Then in 1878 Berlitz introduced the first generally known example of the Direct Method. This crucial innovation allowed students from more than one language background to study in the same class, and a shift subsequently began towards learning in an English-speaking environment, rather than the home country, laying the foundations for study travel, which is the bedrock of the ELT industry worldwide today. Linguaphone started commercial language-teaching recordings in 1901.

The greatest developments in ELT and study travel were polarised around the activities of three pioneers: Frank Bell, John Haycraft and Louis (LG) Alexander. Bell (1990) describes his first steps in "creative education", when he and his colleague Japanese prisoners of war in Malaya set up what became known as the "Undercover University". On his return to Britain, Bell established the Bell School in Cambridge in 1955, the first of a group which developed in the post-war years to become one of the forerunners of ELT.

At the same time, recounted in Haycraft (1958), radical and innovative ELT methods were being established in Cordoba, Spain. Haycraft's vision led to the establishment of International House, now with branches in over 50 countries worldwide.

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New Concept English was written by Alexander (1967) and provided energetic, colourful and dramatic ELT material. Since then a range of sets of material and teaching methods have come and gone, such as Functional English and The Silent Way, each one leaving traces which have contributed to the rich and varied methods in which ELT is delivered today, summed up in what is generally described as "Communicative English". Communicative English is:

- Interactive
- Mobile
- 5% presentation, 95% reinforcement (generally speaking)
- Much more than just what happens in the classroom

Timothy Blake, Chairman of London School of English, established in 1912, says (personal communication): "People like people, especially when it comes to a process in which motivation is very important, because no one has yet made it quick and easy. Tape recorders, language labs, videos, computers, the Internet, Skype, Social Media – they come along one after the other, and all of them have their impact, certainly, but none of them has yet rendered what we do completely out of date."

Dictation has been a traditional language-teaching technique for hundreds of years. With the availability of easily-available playback equipment – open-reel tape recorders from the 1950s onwards – dictation could be enhanced by a range of voices, well beyond the sole voice of the classroom teacher. Listening comprehension exercises were developed, including pre-questions, repeated playings, listening for gist, etc. With cassette players, CDs and digital recordings, the only thing that changed was the mechanism. And more recently, with YouTube and classroom-based TVs/monitors, the teacher can offer visual stimulation as well as audio. But there is no material change to the class and lesson construction, or indeed the cognitive processes of the English language students.

Study Travel Magazine (2017) quotes Sprachcaffe, one of the largest European study travel agencies, on the benefits of language trips abroad, one of which was in-person learning, with 90% of participants citing "interaction with others" as the most useful resource for improving language skills. This is clearly something that cannot be delivered remotely or virtually.

ICEF Monitor (August 2017) presents a similar finding in their report of an analysis of student motivations for studying abroad. They quote Daniel Obst, CEO of AFS, one of the largest international youth exchange organisations in the world, moving over 12,000 students annually between 100 countries. Obst says, "Gen Z youth want to go out and experience a world that is larger and different than their own. … they don't just want to simply travel to other countries; they are looking for authentic experiences through the eyes of local people. These are the adventures and stories they want to experience and share with others." Again, this is something that cannot be experienced remotely or virtually.

Perhaps one of the most telling statements, which was admittedly in the context of the marketing of international education, was given by Kim Harase, Marketing Director of Academic Colleges Group, who said simply (personal communication): "You can't create trust electronically."

Conclusion

The ELT profession should face off against the apocalyptic vision of MOOCs, social media, virtual classes, online teaching and Artificial Intelligence. Students are looking for authentic experiences through the eyes of local people, adventures and stories, and they are highly social animals who need to engage.

Virtual Reality is virtual; it is not real. In New Zealand, the statistics demonstrate that among English New Zealand members only 24% of learners are on a pathway to education or migration; 76% are here for the experience and will then go home. For them, English language learning is a form of study travel, in which the extra-curricular activity is arguably as important as the classroom learning. Therefore we must ask:

- Can you imagine a virtual bungy jump?
- How tasty is your virtual pizza?
- What colour is your virtual parachute?
- How bumpy is your virtual mountain bike ride?
- How cold is your virtual snowboard environment?

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English language students are here in New Zealand for a total experience, not just to improve their English.

Perhaps there is room for compromise: the New Zealand Productivity Commission Report, Productivity Commission (2017) concludes that:

> Digital technologies will not cause the disappearance of the campus-based university. Campuses will still exist as places of teaching and learning, research, community engagement, and varied forms of student experience … But digital technologies will transform the way education is delivered and supported, for example through applications that enable real-time student feedback.
>
> Productivity Commission (2017, p. 309)

The Economist (2017) offers further comment on what may be described as blended learning: "10-year old Amartya is studying at the Khan Lab School in California. His Maths is "pretty strong" but he needs to work on his writing. He will practise grammar online [using machine learning], book a slot with an English teacher and consult his mentor." Here, technology is not replacing the teacher(s), but changing the model. Although the change in computer-to-student ratios at schools has increased geometrically between 1984 and 2012 with no appreciable improvement, as noted above, it does appear that the stasis is finally starting to shift, with Edtech interacting in much more sophisticated ways, and schools using technology to change how students and teachers spend their time. But above all, education software is not making the teacher obsolete; if anything it is making the craft of teaching more important.

While technological change will by all means continue to affect academic education in many fields, the ELT professional, like Charlton Heston in 1971 will be *The Omega Man* of international education.

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