

Keynote Upper Intermediate – TED Talks

UNIT 7 The sore problem of prosthetic limbs

0.13

I was born and raised in Sierra Leone, a small and very beautiful country in West Africa, a country rich both in physical resources and creative talent.

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However, Sierra Leone is infamous for a decade-long rebel war in the '90s when entire villages were burnt down. An estimated 8,000 men, women and children had their arms and legs amputated during this time. As my family and I ran for safety when I was about twelve from one of those attacks, I resolved that I would do everything I could to ensure that my own children would not go through the same experiences we had. They would, in fact, be part of a Sierra Leone where war and amputation were no longer a strategy for gaining power.

1.07

As I watched people who I knew, loved ones, recover from this devastation, one thing that deeply **troubled** me was that many of the amputees in the country would not use their **prostheses**. The reason, I would come to find out, was that their prosthetic sockets were painful because they did not fit well. The prosthetic socket is the part in which the amputee inserts their residual limb, and which connects to the prosthetic ankle. Even in the developed world, it takes a period of three weeks to often years for a patient to get a comfortable socket, if ever. Prosthetists still use conventional processes like moulding and casting to create single-material prosthetic sockets. Such sockets often leave intolerable amounts of pressure on the limbs of the patient, leaving them with **pressure sores** and blisters. It does not matter how powerful your prosthetic ankle is. If your prosthetic socket is uncomfortable, you will not use your leg, and that is **just simply** unacceptable in our age.

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So one day, when I met Professor Hugh Herr about two and a half years ago, and he asked me if I knew how to solve this problem, I said, "No, not yet, but I would love to **figure it out**." And so, for my PhD. at the MIT Media Lab, I designed custom prosthetic sockets quickly and cheaply that are more comfortable than conventional prostheses. I used **magnetic resonance imaging** to capture the **actual** shape of the patient's anatomy, then use finite element modelling to better predict the internal stresses and strains on the normal forces, and then create a prosthetic **socket** for manufacture. We use a 3D printer to create a multi-material prosthetic socket which relieves pressure where needed on the anatomy of the patient. In short, we're using data to make novel sockets quickly and cheaply. In a recent trial we just **wrapped up** at the Media Lab, one of our patients, a US veteran who has been an amputee for about 20 years and worn dozens of legs, said of one of our printed parts, "It's so soft, it's like walking on **pillows**." (Laughter)

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Disability in our age should not prevent anyone from living meaningful lives. My hope and desire is that the tools and processes we develop in our research group can be used to bring highly functional prostheses to those who need them. For me, a place to begin healing the souls of those affected by war and disease is by creating comfortable and affordable interfaces for their bodies. Whether it's in Sierra Leone or in Boston, I hope this not only restores but **indeed** transforms their sense of human potential.

4.29

Thank you very much.

4.31

(Applause)

UNIT 8 How to make the work-life balance work

0.14

What I thought I would do is I would start with a simple request. I'd like all of you to pause for a moment, you wretched weaklings, and take stock of your miserable existence. (Laughter)

0.31

Now that was the advice that St. Benedict gave his rather startled followers in the fifth century. It was the advice that I decided to follow myself when I turned 40. Up until that moment, I had been that classic corporate warrior -- I was eating too much, I was drinking too much, I was working too hard and I was neglecting the family. And I decided that I would try and turn my life around. In particular, I decided I would try to address the thorny issue of work-life balance. So I stepped back from the workforce, and I spent a year at home with my wife and four young children. But all I learned about work-life balance from that year was that I found it quite easy to balance work and life when I didn't have any work. (Laughter) Not a very useful skill, especially when the money runs out.

1.30

So I went back to work, and I've spent these seven years since struggling with, studying and writing about work-life balance. And I have four observations I'd like to share with you today. The first is: if society's to make any progress on this issue, we need an honest debate. But the trouble is so many people talk so much rubbish about work-life balance. All the discussions about **flexitime** or **dress-down Fridays** or **paternity leave** only serve to mask the core issue, which is that certain job and career choices are fundamentally incompatible with being meaningfully engaged on a day-to-day basis with a young family. Now the first step in solving any problem is acknowledging the reality of the situation you're in. And the reality of the society that we're in is there are thousands and thousands of people out there leading lives of quiet, screaming **desperation**, where they work long, hard hours at jobs they hate to enable them to buy things they don't need to impress people they don't like. (Laughter) (Applause) It's my **contention** that going to work on Friday in jeans and [a] T-shirt isn't really getting to the nub of the issue.

3.06

The second observation I'd like to make is we need to **face the truth** that governments and corporations aren't going to solve this issue for us. We should stop looking outside. It's up to us as individuals to take control and responsibility for the type of lives that we want to lead. If you don't design your life, someone else will design it for you, and you may just not like their idea of balance. On the one hand, putting **childcare facilities** in the workplace is wonderful and enlightened. On the other hand, it's a nightmare -- it just means you spend more time at the bloody office. We have to be responsible for setting and enforcing the boundaries that we want in our life.

3.57

The third observation is we have to be careful with the time frame that we choose upon which to judge our balance. We need to be realistic. You can't do it all in one day. We need to elongate the time frame upon which we judge the balance in our life, but we need to elongate it without **falling into the trap** of the "I'll have a life when I retire, when my kids have left home, when my wife has divorced me, my health is failing, I've got no mates or interests left." (Laughter) A day is too short; "after I retire" is too long. There's got to be **a middle way**.

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A fourth observation: we need to approach balance in a balanced way. A friend came to see me last year - - and she doesn't mind me telling this story -- a friend came to see me last year and said, "Nigel, I've read your book. And I realize that my life is completely out of balance. It's totally dominated by work. I work ten hours a day; I commute two hours a day. All of my relationships have failed. There's nothing in my life apart from my work. So I've decided to **get a grip** and sort it out. So I joined a gym." (Laughter) Now I don't mean to mock, but being a fit ten-hour-a-day office rat isn't more balanced; it's more fit. (Laughter) Lovely though physical exercise may be, there are other parts to life -- there's the intellectual side; there's the emotional side; there's the spiritual side. And to be balanced, I believe we have to attend to all of those areas -- not just do 50 stomach crunches.

5.51

I truly understand how that can be daunting. But an incident that happened a couple of years ago gave me a new perspective. My wife, who is somewhere in the audience today, called me up at the office and said, "Nigel, you need to pick our youngest son" - Harry - "up from school." Because she had to be somewhere else with the other three children for that evening. So I left work an hour early that afternoon and picked Harry up at the school gates. We walked down to the local park, **messed around** on the swings, played some silly games. I then walked him up the hill to the local café, and we shared a pizza for tea, then walked down the hill to our home, and I gave him his bath and put him in his Batman pajamas. I then read him a chapter of Roald Dahl's "James and the Giant Peach." I then put him to bed, tucked him in, gave him a kiss on his forehead and said, "Goodnight, mate," and walked out of his bedroom. As I was walking out of his bedroom, he said, "Dad?" I went, "Yes, mate?" He went, "Dad, this has been the best day of my life, ever." I hadn't done anything, hadn't taken him to Disney World or bought him a Playstation.

7.07

Now my point is the small things matter. Being more balanced doesn't mean dramatic upheaval in your life. With the smallest investment in the right places, you can radically transform the quality of your relationships and the quality of your life. Moreover, I think, it can transform society. Because if enough people do it, we can change society's definition of success away from the moronically simplistic notion that the person with the most money when he dies wins, to a more thoughtful and balanced definition of what a life well lived looks like. And that, I think, is an idea worth spreading.

7.54

(Applause)

Keynote Upper Intermediate – Readings

UNIT 7 THE REAL VALUE OF DIGITAL TOOLS

A recent European Commission event (European e-Skills Week) focused on the lack of skills in digital technology among young people. While most young people use digital media for recreation - games and social networking - they are not necessarily competent in the skills needed to work in the digital economy, according to the European Commission.

Digital technology is an increasingly familiar part of the school environment. Tablets have been introduced into many schools as the prices have dropped and versions for schools become available. Traditional chalkboards have been replaced by digital whiteboards in classrooms across Europe. In short, there's been a massive investment in both hardware and software in education. Nevertheless, there is still a shortage of people who are skilled and qualified in information and communication technologies (ICT). So where does the problem lie?

For some education experts, the issue is that pupils are not taught about how digital resources work. These experts are in favor of teaching computer coding and programming in the same way as other traditional subjects. Others point out that the potential of the digital classroom has not been fully exploited yet: in effect, the argument is more about how the new technological tools can be used to revolutionize learning rather than the actual tools themselves. One expert, Gareth Mills, points out that an interactive whiteboard might still be used with a traditional teaching style where the teacher talks to a passive group of students. This is to ignore the possibilities that putting the tools into the hands of the pupils can lead to. In Wales, a recent report recommended that, despite fears that students would be distracted if they had access to social networking sites, such sites should not be blocked in schools - they can in fact be used as a platform for sharing learning materials.

The reality is that digital media can truly inspire and enable new approaches to teaching and learning. For example, when students can view the content of a lesson before and after the class via a computer or mobile device, this frees timetabled class time for interactive and more focused work with the teacher. Gareth Mills explains the benefits of working together on practical tasks and inter-school or even inter-country projects where students can develop problem-solving skills. This is precisely the type of skill that is needed to understand how ICT works, as the European Commission points out.

In addition, sharing learning materials can give schools more flexibility in the traditional organization of school timetables. For teenagers in particular, changing the school days so that lessons start later can have an important impact on how well they learn. One UK school ran a trial where lessons began at 10 am instead of 9 am. The exam results at the end of the year showed improvement across all subjects, with pass rates going up by 20 per cent in English and by 34 per cent in ICT.

The real value of digital tools, therefore, lies not only in the way they can deliver content to students but in the way they can change the whole landscape of classroom interaction. Events like the European e-Skills Week are key opportunities to show that where digital skills are concerned, schools need to look not only at what but also how they teach.

computer coding (n) writing in language of computer programs

e-skills (n) the skills needed to work in digital technology

neuroscientist (n) an expert in how the human brain works

platform (n) a computer system or program

UNIT 8

weekend business blog -

LEISURE TIME AROUND THE WORLD

September 24 | Janet Barker

It's the weekend, you're not at work. So what are you doing? If you're in Switzerland, you might be hiking through the countryside, or if you're in the UK, you might be hiding from the rain in your local shopping center. If you're in Japan, you're possibly travelling to see family, or if you're in South Korea, entertaining friends. Where you live and the culture you live in affects what you choose to do with any leisure time you have.

But if we're looking at leisure, the key question is whether 'leisure' is essentially a Western concept. Or are there different meanings for the idea of leisure in different cultures? Some writers have highlighted the contrasting views of leisure as a route to fulfillment in Western and Eastern cultures. In other words, traditional Asian cultures see fulfillment as something which comes from work. In the West, on the other hand, there is a clear distinction between work and leisure, and Westerners are more likely to associate fulfillment with leisure.

However, as well as these cultural influences on the concept of leisure, there are many factors that affect the actual leisure activities that people engage in. Things like climate, infrastructure and gender come into play in different cultures. The idea is that people who live in places with cold or wet weather might be more likely to spend their free time indoors, for example. According to a study by the Organization for Economic Co-operation and Development (OECD) in 2009, people in France spend twice as much time eating and drinking, at home and in restaurants, as people in Mexico.

Other studies show that live music and dancing events are more popular in African countries, where many populations have limited electricity supplies, compared to North America, where TV and the Internet are among the top leisure interests.

For companies in the leisure and recreation industry, this kind of information is not simply interesting but key to their growth. An American theme park developer, for example, can't assume that the Western leisure model will be automatically successful in another culture. On the contrary, the assumption should be that activities with such strong cultural influences will be much harder to get right without extensive research into the market. The picture is complicated even further by the fact that trends in leisure activities are changing all the time.

What's interesting is, age and social background also influence the kinds of activities people choose to do: visiting historic sites is popular in Europe but not, perhaps, among the young so much as the older generations. Perhaps now more than ever, the real division in cultures from all around the world is that of age. The generation that has grown up with the internet is more likely to be spending free time in online activities such as gaming, chatting or watching videos, no matter what their cultural background is. Take a look around you - can you predict what your friends and family are up to this weekend just by their age? I have a feeling you can!