**Abstract**

Designing digital learning materials for the most experienced online learners HE has yet to encounter requires more than embedding videos and quizzes into VLEs. It is more important than ever to create content in an engaging and fully interactive way, cover key concepts but make sure that each section is not too long and use clear and concise language. Breaking up text using photographs that show a range of ethnicities, ages, genders, and abilities is vital but not easily achieved.  Academic and critical thinking skills need to be embedded and scaffolded throughout.

**Key words**

**Author Biography**

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**Case study**

**Designing inclusive digital materials for "generation lockdown" students – an author's story.**

**Intro and rationale**

The first cohorts of students born in the 21$^{st}$ century have now been in the Higher Education system for a couple of years and some are already graduates. True digital natives, they are much more likely to seek information from online sources and from social media rather than from traditional textbooks and newspapers. This coming academic year will see the first group of UK students enter HE who did not sit public examinations at 16 and who started their sixth form (US Key Stage 5) experience with home schooling due to the various lockdowns caused by Covid 19. Recent UK research carried out by Renaissance Learning and the Education Policy Institute (2022) found that the impact of this disruption has caused a learning loss of almost 3 months in reading levels in secondary school pupils. In addition, this group, more than any previous cohort, are experienced online learners, have a clear idea of what they like and what they don't with the process and, it is safe to assume, have had varying experiences of it from very positive to "Zoom overload". With home schooling being the norm and with libraries shut, this group more than any other are most unlikely to seek out paper-based materials to help them learn and universities and colleges need to be ready for them.

They also need to be aware that many of this generation of learners are also accomplished content creators. Statista (2022) show that in the UK, 30% of 18 to 25-year-olds have Instagram accounts and 24% of TikTok's global audience is made up of young women aged 18 – 24 and with 18% being young men in the same age bracket. This means they have an advanced understanding of what is engaging and the standards that they expect to see.

With all this in mind and having grown tired of hearing the complaints of students about paper-based textbooks being too expensive, too heavy, too big, and too full of chapters that are not used during a module, I was ready to accept Pearson's invitation to design a new digital learning resource to support lecturers delivering an Organisational Behaviour module to business and Human Resource Management students in the UK.

**Why me?**

My background in teaching professional general and Human Resources management qualifications in a Further Education college (US Community college equivalent) and undergraduate and post graduate students in a university business school meant I have a good idea of what works for a diverse audience. With many professional courses being blended (the total number of required learning hours being split between face-to-face contact hours and online content to be completed remotely), I also have had experience in designing materials for students to use and ensuring these appealed to a wide variety of learning styles and wide variety of levels of students, from apprentices starting out to experienced senior managers pursuing a post-graduate qualification later in their careers.

**The design objective**

From the start, it was clear to me that when designing digital materials, they had to be interactive, have links to the real world of employment and represent the widest audience possible so that every student would recognise themselves or someone like them at some point in their learning journey. It was also important that materials could be accessed from and completed on a wide range of technologies and be able to compete with the professional standard of content found on YouTube, Tik Tok and other social media.  Appreciating that many students are now living at home and commute to HE institutions, online materials need to be accessible on 'phones and tablets as well as from laptops and PCs so that learning can be done "on the go".

My experience of setting pre-reading from a textbook to be completed in advance of a lecture or workshop session and it *not* being completed, meaning I had to then spend valuable contact time teaching content, informed my desire to create interesting materials that would engage students and which they would want to complete.  I wanted to cover the key topics of a ten-week module in such a way that a lecturer would be able to rely on students gaining the required knowledge in advance of taught sessions which would then free up face-to-face contact time for the application of this knowledge and the development of much needed transferable skills.

**First steps**

To make sure that the main topics taught in a standard first year (freshman year) Organisational Behaviour module were covered, a comparison of the content within the most used paper-based textbooks was completed.  The ten most common topics were then chosen as most teaching blocks are ten weeks long and if any institution has longer terms or semesters, this would give teaching staff time to cover their specialist topics or to provide revision or assignment preparation workshops.   These topics were approved by Pearson who have many contacts in various universities who agreed the chosen ones were the most appropriate and widely taught.

The world of work was changing on an almost weekly basis as the writing process started. Lockdown number one was announced and the great working from home period started.  This needed to be reflected in the content.  It was here that the benefits of creating digital content became even more obvious as relevant articles were able to be included, current points of view discussed and in time, research papers on the pandemic and its effect on work referred to as they were published.

**The format of each chapter**

Each chapter starts with a clear statement of its objectives (which were limited to 6 so as not be overwhelming) and then, to hook readers into each topic, these are followed by a case study, a scenario, or an anecdote that students can identify with.  This made it possible to work in an activity as soon as possible to get students thinking about the topic, whilst acknowledging their current level of knowledge of it, and pushing them to go further.

Students have commented to me that they find pages and pages of dense text off-putting and hard to read and understand.  I have had many sessions where I have given out a short article or part of an article, often only one side of A4, and have been surprised how long it took students to complete. Given that the finished work needed to look appealing on a 'phone screen, it was important to me

that space was used wisely in the layout of each chapter and that photographs, graphics, tables, and white space were used to break up the page.

It was also vital for me to include study and critical thinking skills into the content. These are no longer covered in a separate module in my own university and students seem to arrive for university level study with underdeveloped ability in these areas. Using a scaffolded approach and building on them as the content progressed seemed the best way forward but I realised that I could not always be sure that topics would be addressed in a fixed order. Sequencing the topics in a logical order whereby individuals, groups and lastly the organisation itself are addressed went someway to mitigate this.

Throughout the design and writing of each chapter I was conscious of making sure that each one followed a clear, well-defined structure but I did not want this to become formulaic and repetitive. My fear was a student logging on to complete a chapter and having a feeling of "not again – more of the same". Therefore, although each chapter starts and finishes in a similar way, the rest of the content takes different approaches. Different types of interactive games, different free writing tasks and different types of media links are all inserted in different orders and at different points to make each chapter as fresh and as engaging as possible.

**The language used**

To try to make sure that the materials are accessed in advance of teaching sessions and the learning activities are completed, I aimed to make the language as clear, concise, and as conversational as possible. Mindful of being accused of "dumbing down", but at the same time being aware of the high numbers of overseas and home students who speak English as a second language, I also wanted to be able to include pop up glossary to extend the vocabulary of all students. Key words or phrases are highlighted in the text and a short, clear explanation pops up if this word is hovered over.

Transcripts have been provided of the embedded video clips and being digital, auto reading software can be used by students who need it.

**The interactive elements**

One of the main benefits of designing a fully digital learning resource was the ability to embed videos at the most relevant points to break up text and to illustrate a point. YouTube content, videos from the Financial Times, Ted Talks and material from other Pearson sources were all able to be inserted once the relevant permissions had been sought meaning that students have a seamless experience as they work through the chapters and are not simply given links to copy and paste into their browsers. It has also been possible to split longer sections of videos up and to ask questions to test comprehension at key points. Others have been carefully edited to ensure they are also not too long yet cover the main points.

A wide range of interactive activities have also been included to task knowledge and understanding. There are drag and drop exercises, matching activities, which are useful to use with key concepts and definitions, and hot spots are used with diagrams and illustrations of key models. This means students can hover over each section of a diagram and read a detailed explanation of each stage as it appears on screen. Academic skills are featured with exercises around finding reliable sources and referencing also being included within the content.

To add to these academic skills, there are also free writing tasks included where students are asked to reflect on what they have read and learned and, in some instances, are asked for their opinion. This has been very useful when working with students from Asia as the teaching methods used in secondary schools in India and China favors a more didactic approach to learning and students from these cultures are often nervous and unsure about expressing something that may not be the "correct" answer. For students from the UK and Europe this is also a useful exercise in engaging them with critical thinking. There are some chapters where two or more models are presented and then students are asked to compare them and suggest which they feel is the most appropriate given their understanding.

At the end of each chapter there is a series of multiple-choice questions to check learning. Feedback to these is given automatically and if a student answers incorrectly, they are encouraged to go back to the relevant content to have another look.

In addition to all the above, there are a range of assignable tasks, mostly case studies, which can be made available by tutors to develop more able students, or which can be used for assessment purposes, both formative and summative. If these are not assigned, they are not visible to students and so there is no more complaining about paying for content that is not used.

**The companies featured**

For the resource to be as interesting and as engaging as possible it was important to use a wide range of companies throughout the text to illustrate key points in a real workplace environment. Given that the student body is now so diverse, it was also clear to me that I needed to include both international that all students would have come across as well as some more local ones to develop an understanding of UK culture. They needed to be both large and small and to focus on entrepreneurs as well as huge multinationals and they needed to be run by a wide range of people with managers of colour and women in positions of power.

After a lot of work trying to find companies that both met my criteria, and which were happy to be included, the list now includes IBM, Ali Baba, Netflix, Lego, Pizza Hut, Lush cosmetics, and Montezuma's Chocolate amongst others.

I was initially hesitant to include Adnams Brewery in Suffolk given the need for sensitivity around alcohol with Muslim students but having thought hard about it, I realised that white, middle-class students also need to see recognisable and relatable content and so left it in. The points made in the video relate to workplace culture and there is no marketing type content that promotes alcohol in any way.

**The people featured**

As stated above, the people featured in this learning resource needed to represent the student body and so all ethnicities needed to feature in photographs, videos and in exercises. I was also conscious to include the full range of those of working age (given that many of this generation of students may well work into their late 70s and even beyond) and to demonstrate, where possible, women of all ethnicities in positions of power.

This proved difficult as most of the photographs held by Pearson (which feature in current textbooks) and for which the permissions were already in place, were dominated by white males. I had to look hard to find photographs from other sources (which were then bought by Pearson) that

showed women of all ages and ethnicities sitting at the "top of the table".   Although this proved expensive, I can only hope it will include the diversity in other paper-based texts produced by Pearson in the future as they now have license to use these photographs again.

In case studies and exercises I was careful to make sure that any names used were representative of all nationalities and genders.  Throughout the chapters I tried to use Asian, Middle Eastern, Eastern European, and British names and some which could be attributed to several of these groups.  I also included a fair split of obviously male and female ones and have tried to include as many gender-neutral names as I can. For example, Sam, Jo, Max, and Nicky.

**How has it been received so far?**

During the writing process, each completed chapter was sent out to a range of lecturers in a broad range of several universities, both older, traditional research intensive and newer and more vocational and  teaching focused for formative feedback. This was acted upon as it was received.  It was due to this feedback that the number of women seen in positions of power was increased and the range of companies was expanded to include some more global ones. Most, however, commented positively on the fact that the materials were more diverse and inclusive than current print texts and liked the genuine interactivity of the product. All commented on its suitability for use with international students who find more traditional textbooks daunting and are therefore hard to engage.  Clearly, it is impossible to produce a learning resource that will suit every student and it is fair to say that given my background and the institutions I have worked in, this may well be more suited to less academically able students, those with a broader range of backgrounds than traditional A' levels and those for whom English is not a first language.

Once several chapters were complete a group at Kingston University agreed to use the Motivation chapter as a pilot cohort.  Out of 108 students, 60 enrolled to use the optional online materials. 60% of those enrolled completed the assigned reading. Students commented that they found the layout easy to use and liked the engaging videos and interactive features. However, some still thought the chapter was too long which is somewhat disappointing but shows the need to make content as engaging as possible so that it is completed. The majority of students agreed or strongly agreed that completing the chapter had a positive impact on their learning (65%) and that it was more engaging than a print textbook (74%).

Clearly this shows there is still more to do to get students to engage in out of classroom activities and there is more to do in the period of transition to Higher Education to create a culture and an expectation of individual learning outside of taught sessions.

**What now needs to happen?**

The resource is complete with ten chapters written and published.  Whilst it is now for sale and, hopefully, will be adopted by some universities, I am aware there are things that can still be done to improve it when it is updated.  My priority from a presentation perspective is to continue to build on diversity and inclusion by finding gender neutral names from other cultures and by making those with visible physical disabilities more prominent.

Being digital, content can be updated quickly and easily with pages being swopped in and out

relatively easily meaning that up-to-date research and news stories can be added. Whilst it contains Covid 19 content now and discusses how it has impacted workplaces and those within them, this can be reduced as it becomes less current and new topics that are relevant can be added. I am already starting to work out what key themes may be going forward and saving relevant materials for potential use. For example, the treatment of trans people in the workplace and the challenges and opportunities this creates is a potential for future updates.

**What have I learned that others can benefit from?**

The main lesson learned in creating this digital resource is that it is time consuming. I was lucky in that I was working on it during lockdown and had already reduced my teaching load before Covid struck. I could therefore dedicate the required time to designing activities, creating case studies and to finding materials to include. I was also very grateful to have Pearson behind me collecting all the necessary rights and permissions. As I have stated above, it was also hard and time consuming to find easily accessible and useable diverse and inclusive photographs and videos. Sadly, many still feature predominantly white people or men and often, both.

From the feedback I received from the pilot student cohort, even the most interactive of chapters is still seen as too long. This is a challenge. I felt as though I had pared content down as much as I could and had broken it up so that it did not look dense, but it seems there is still more to do to find an acceptable balance that suits both learners and educators.

In an ideal world, I would recommend working with a diverse and inclusive team to make sure that all viewpoints are taken on board. As I worked, I was aware of the need to actively counter my own unconscious bias as much as I could, but this is hard to do and potentially impossible to achieve completely. I also worked hard to put myself in the shoes of my students and to try and write in a style they would appreciate but to try and stretch and develop them at the same time. It is a hard balance to find. So far, I am confident I have achieved my goal but only time will tell!

**Word count – 3246**

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