CREATING LEARNING RESOURCES IN THE PLURAL CONTENT ERA – THE CONTENT CREATOR'S PERSPECTIVE

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ABSTRACT

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This research looks at the current situation of project management in educational publishing setting. The world of educational publishing is in a state of transition: book production requirements differ from how content is delivered in a multiplatform environment, not only through the selection of output channel – printed or digital – but also how project management within educational publishing is challenged. Traditionally, book publishing has followed the traditional 'Waterfall' type of collaborative project management.

Through four interviews with industry experts in both UK and Finnish educational publishing settings, the thesis gives the reader a snapshot of the current situation and what the industry is facing in the new plural content era of content creation, and the challenges to business – not only to the wider book industry but in day-to-day management of projects in the ever-growing landscape of educational publishing.

Key words: education, publishing, qualitative research, project management, Waterfall, Agile

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1   INTRODUCTION

1.1   Educational publishing in transition

Through working in publishing for the past 10 years and most of that in educational and academic publishing, I have witnessed the seismic shift in how learning resources and content is created. The aim of innovative educational resources has always been to support and engage learners. But now, in the 'plural content era', the emphasis is on innovating beyond what textbooks, workbooks, teacher's guides and revision guides can offer. The transition has pretty much happened in the last 10 years. The first products I worked on in educational publishing (in the UK) were often in the following order of importance: (1) textbook/student book, (2) teacher guide, (3) workbook (optional) and – depending on the subject; CD-ROM – the token 'interactive' element to give the product a competitive edge when schools and educational institutions make selections on which book series they are going to run with over the coming school term. Now, the order is becoming almost reversed, more like, converged; resources are now bundled into one complete package, on an online platform, which provides access to the teacher and learners alike; depending on the user's login credentials, they can access the type of content assigned to them.

Printed books are still important, however. They act as sort of a cornerstone, a tangible asset to sell and display, and allow publishers to provide a more comprehensive learning solution. Textbooks are the beacons of content delivery to which online and interactive resources are connected. As publishers see it, increasingly, is that online resources offering is what makes the money – often in the form of subscription services, continuously updateable content delivery made possible. Or, at least that is the aim.

> 'Maybe the biggest thing that I know that has changed is that we used to be sellers of "pieces". So we'd just sell books and when we sold the books, it never came back to us. But now when we are dealing with the services, so we are working with the licensing and it's a yearly licence or whatever they are, and then you are having the service, so you have to be there 24/7 to serve the customers.' (Publishing Director of Otava Publishing Ltd)

It might be soon that one does not need to aim for delivering content in a cyclical 'first-in-the-market' rush for the start of the school term but, in fact, throughout the year, 'as and when' the content is needed. Although, it must be noted that this working model of aiming for the start of the term is still prevalent in most educational publishing environments, as it is almost the tradition and it is used as the underpinning drive by publishers to deliver the content for a certain 'deadline', whether that is printed or digital materials, and the deadline is the start of the school year or a specific term. Also, due to periodical curriculum changes by changing governments, and how the new content is being delivered, is very much dictated by the educationalists.

But, the world of educational publishing is in a state of transition. Working with textual content in book production is a different ball game to delivering content in a multiplatform environment, not only through the selection of output channel – printed or digital – but also from the perspective of running such process: project management within educational publishing. Traditionally, book publishing has followed – and still continues to do so – the traditional 'Waterfall' type of collaborative project management.

> 'The Waterfall model is the most well-known method of managing a project that fits well to most project types. It was taken from the engineering community and adapted to the software industry. … The stages in the project are sequential and linear and it requires that the system requirements are understood well before the design and implantation stages.' (Cork 2015)

It is very normal to deliver printed content in this model, as the very nature of content creation and delivery for a printed product lends itself ideally for Waterfall project management. At its most basic the structure is as follows. Content is:

- conceptualised (as per market need)
- commissioned (according to a curriculum specification)
- authored
- developed and edited
- designed and typeset
- reviewed and proofread

- corrected and finalised
- printed and published.

This linear 'start-to-finish' model is Waterfall through and through; each stage has a preceding stage that needs to be completed in order for the next stage to begin, and so on.

Even the way publishing company management is structured is a very top-down approach to management and delivery. First, at the top, company strategy is conceptualised, then the strategy and direction is commissioned into 'action points' – essentially, the product offering of the company – and it is then planned, developed and disseminated to the internal departments according to predetermined value chains.

> 'A value chain describes the sequence of primary value-adding activities that converts inputs into products or services, along with a set of support activities: Procurement, Technology, Human Resources and Firm Infrastructure ... In the context of educational publishing, the activities performed or more likely, the respective weightings applied to them will vary with the strategies of competing publishers.' (Xuemei & Martin 2013)

Each department is a silo with its own set of behaviours, which then work together, side by side not necessarily collaboratively as such but with a collective aim. The aim, at its simplest, is to bring the product offering to the market as a specific set of products, to time and budget.

1.2   The new challenges

The new challenges in the world of publishing are not even that new anymore. The digital 'revolution' has been in full swing for best part of 20 years or more… Ever since the first internet websites were widely published and the world of academia began to produce and use online content as a credible source for research and learning in earnest. There has been the claim that the textbook is dead – or is about to die.

'Besides cost, traditional paper textbooks have other disadvantages. They are easily damaged, and their subject matter can become outdated or obsolete in just a few years. And any student can testify to how textbooks are heavy and inconvenient to carry around. … Paperless digital textbooks, or e-textbooks, don't have these problems. They cost significantly less than traditional textbooks, are relatively vandal-proof, and many can be regularly updated online. E-textbooks can incorporate video, online connectivity, and other features that can't exist on the printed page.' (Rapp 2008)

However, despite these opinions and predictions, while the very existence of textbook is certainly challenged, it does not show signs of dying out. It is still, at this moment, the single most reliable way of delivering learning content that is researched and proven. But, its position *is* challenged; what remains to be seen if it will be completely surpassed.

'One consequence the new technology has already produced is an awareness of the limits traditional print has imposed on educational publishers. There are several. First, printed materials require long development periods, but once published they are static and quickly outdated. Second, in attempting to be all things to all teachers and reach the broadest possible audience, authors and editors may create large, unwieldy texts, from which professors must excerpt what they need. At the K-12 level, the challenge is to prepare materials for nationwide consumption while accommodating different localities, who may use different frameworks for teaching reading or math or whose preferences for coverage may differ starkly on such topics as evolution and sex education.

A third limitation of print is that it can only present information in a two-dimensional format. Some students learn better through auditory, kinesthetic, or other means. Because the Web offers such a rich variety of visual and auditory displays, it can accommodate students who have "other ways of knowing".' (Marion & Hacking 1998)

But publishing companies still have a place in all of this; publishing through a *publishing company*, means the text – whether it is on a digital platform or printed on a

page of a book – has been authored with intent. It has been reviewed and it has been produced to fit a purpose.

1.3   Theoretical framework

[In theoretical framework] 'Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions. The theoretical framework is the structure that can hold or support a theory of a research study. The theoretical framework introduces and describes the theory that explains why the research problem under study exists.' (Swanson & Chermack 2013)

Most of learning is still gained from the textbook and the purpose of this study is not to dispel the importance of any printed product (or an e-book). In fact, the purpose of this study is not to place any kind of content in a juxtaposition, but the theoretical framework of this study is to try to look at the mechanics of content production – whether it is print, digital or interactive – in the educational publishing setting and in creation of learning resources, as well as the challenges the new type of content production of digital content introduces to the industry, which is the core research 'problem', or issue, which this study aims to discuss. The study concentrates on learning more the prevailing project management practices within educational content delivery setting and how new strategies are affecting how publishing projects are managed, and how they could be or should be developed.

1.4   The setting

The qualitative research was carried in the form of literature research as well as – the main part of the research – four interviews with industry experts. These interviews were conducted with three different companies, so two of the four interviewees worked for one company. The conversation was a relaxed interview rather than a strict question and answer session. The first interview paved the way to the other interviews, which enabled the interviewer to hone the questions further with the other interviewees. The

questions were not altered much but some questions were noticed to be not as useful and also not as relevant to all interviewees.

To retain purity of information, as much as it is possible for a qualitative interview enquiry, all of the interviews were recorded and transcribed from audio into text for evaluation. The data research questions are discussed in more depth in Section 2 Method.

1.5   Existing research

The first important area of research for establishing the theoretical framework was, of course, in understanding various project management methods, the understanding the types of project management 'styles' that apply to book and content production, and the general study of business setting project management. An excellent source of base study and understanding is the book by Artto, Martinsuo and Kujala (2011) called 'Project business', which lays the fundamentals in terminology of project management and the theory of running a project-based business – which publishing also, in effect, is.

When researching for the topic it became very apparent that it is fairly easy to pertain many pieces of work in the academic arena on print media and publishing. Books and papers have been published in field, discussing the history of print media, media convergence and, ultimately, the move to digital and how these have been playing out so far and continue to do so in the coming decades. There is a raft of research and discourse on how media is transforming to serve the new consumer landscape.

'We are witnessing constant, and at times rapid, transformations in media and communications industries brought about by digitization, convergence, interactivity and the general business operations of global media corporations. These developments are reconfiguring personal, local, regional and national media spaces and audiences. The way we use media is changing along with our patterns of living in an Information Economy.' (Dwyer 2010)

There is an overwhelming understanding that, despite challenges, traditional media outlets are still holding their position as the go-to media providers, even in the dispersed online-led landscape. Through successful mergers, acquisitions and alliances between different media sectors have joined forces to take advantage of the converging markets (Dwyer 2010). While media convergence and the shifting paradigms within can be reflected to educational publishing at large – not only because many educational publishers are owned by large media companies, or, even that large media companies *are* first and foremost educational publishers. 'Education publishers are also much bigger than other media companies that attract much more attention. Pearson is far bigger than AOL or The New York Times Company (and much more profitable).' In fact, 'education publishers dwarf trade presses. Only the top trade press, Random House (itself owned by Bertelsmann) is bigger than Cengage, the little-known education publishing division that Thomson spun off in 2008 before merging with Reuters.' (Carmody 2012)

Education is big business. However, the research into book or learning content publishing and, especially, *the mechanics and processes of it*, is relatively scarce. To make tangible comparisons between magazine/newspaper, or even academic journal publishing, is somewhat problematic, as, while there are many overlapping features and the methodologies are somewhat similar, the settings are too different. As, for instance, book publishing is 'slower', in comparison to magazine publishing, and it is not naturally cyclical; what is produced, is done in a linear way – from manuscript to a finished, bound book, and then started again from scratch to an entirely new book edition (which can be totally different from the previous book the person – editor – has worked on), unlike the cyclical publishing of magazines and newspapers, where editions of the same are reproduced time and time again (there are of course editions in books as well, but the gaps in between them are years, so the thinking does not fully apply).

However, given the increase in digital content delivery and what the author has researched here, and posed as the research question within the theoretical framework of the *mechanics of content production in the educational publishing setting and in the creation of learning resources,* some of the theories of business management in the magazine publishing perhaps are soon applicable to the book and educational resources publishing, as the direction is towards cyclical methods of production. Digital content creation gives educational publishing companies the opportunity (or the burden?) of scaling to reproduce learning resources on a mass scale – something which before was made in a fairly bespoke manner, like a book, almost tailored to the final purpose or the user himself (e.g. a very specific age group or class). This brings 'the *economies of scale* concept developed by economists to describe the fact that cost per unit can be reduced by taking advantage of opportunities' (Anderson & Elloumi 2004) and mass customisation – which 'aims to deliver customized products with near mass production efficiency. … The paradigm of mass customization is imperative for many companies to survive in the fragmented, diversified, and competitive marketplace' (Mitchell, et al. in Laperriere & Reinhart [eds.] 2014) – into play here, and something which publishing companies are increasingly looking into, in order to create learning resources that are bespoke enough to serve the end user but cost effective enough to meet the demands of the business in terms of profit. So it has been useful to research economies of scale within the context of manufacturing (Mitchell, et al. in Laperriere & Reinhart [eds.] 2014) and compare the principles to educational publishing process. This research has therefore also focused on the fundamentals of business administration in a production setting (publishing or otherwise) and the author has also examined value chains within business.

'Value Chain is linear and one-way; it is operative in a stable, predictable environment, and accommodates mass production. This traditional Value Chain is evolving into a new Value Circle, which is iterative, with shorter product cycles, interaction between customers, authors and publishers to develop products and services, and "mass customization". Today, custom publishing efforts are already well underway.' (Marion & Hacking 1998)

As previously mentioned, academic research in the fields of publishing and media, in general, has often concentrated on the concepts of media convergence and the

challenges of this based on the industry's survival in terms of profitability (Dwyer 2010). Research also in value chain adjustments are brought in to the landscape, as researchers are explaining the adjustments the industry has performed – and will continue to do so – to keep afloat and streamline its production processes. A good piece of research in the actual field of educational publishing and value chains within it was the article by Xuemei and Martin (2013) which looks at 'the impacts and implications of new technology for educational publishing in the context of major growth in e-Learning. Although it acknowledges the continuing influence of textbooks both on how emerging technologies will drive changes to courses and the pace at which courses evolve, the major focus is upon the impact of technological and organisational change upon the value chains for e-Learning and educational publishing.'

However, what is hard to find is existing research on is the area in which this research lies, and that is how project management methods affect the productivity of publishing process in terms of content creation and production, and while the author of this research has been able to find literature on value chain adjustments in educational publishing, the field is not filled with explorations in the production of educational content in a multiplatform setting. It seems project management, while important on an organisational level in any larger publishing company (there are job titles called 'project manager' to be found in these places), it seems the concept of project management in editorial setting is rarely the focus – however, the author did come across another study by Sozio (2011) which examined 'the relationship between eBook technologies and the strategic motivations of different actors operating within the publishing industry.' The study was an interesting base read for the author of this study, but it did not talk about the mechanics of content production or creating content in the plural content era. So, it must be assumed that while project management and content creation methodologies exist in publishing operations, there is no blanket framework or ideology for it. It is treated as a given; almost, it is not explored but it exists (as clearly some project management, albeit linear, has to be deployed to take a manuscript through a process to a finished book), but it has not been harnessed or quantified or explored for its efficiency or purpose. Perhaps, this research will make step in the direction of looking at project management in educational publishing environments.

Until now, in the dawn of digital and interactive publishing – in which elements of production and project management are increasingly integrated from the software and

IT production settings – the convergence of traditional publishing (by which we mean print) and digital has almost forced some of the forerunners of digital publishing to begin looking at adopting set project management methodologies within editorial team environments to enable a more collaborative project management environment – as software developers have arrived in the publishing picture – to work alongside the editors and illustrators and designers. Previously, a book was produced in a linear fashion from manuscript to a published, bound book, so all that was needed and, at the very end, was the printing house to finalise the process. Now, there is the often-iterative IT development cycle preceding this – software and online – part to most published products, especially when interactive learning content is in question. So, the process has had to undergo adaptions to bring in the 'new kids on the block' to the process, as well as increasingly amalgamate production methodologies, such a Lean, Agile and Scrum, into the industry lexicon. As, one interviewee put it: 'So we are following Agile methodology, we are having stand-ups every day, you know, we are having retrospections, we are working in sprints, we are working in sprint planning sessions, and we are having – what they call demos … we have those Agile demos, but all in small delivery teams, and we are replacing the old Waterfall methodology wherever possible.'

One of the key points, which were uncovered by this research has been the challenges new 'software-like' production methodologies and practices have posed on the everyday landscape of an editor working in publishing – resulting in 'reducing' the said editor from being an editor to a 'mere' project manager or administrator without use for their specialism. This is a drastic change to the core of an industry where many (editors) still enter the industry for the love of creating excellent content and being part of the creative process, and then being allocated to an 'editorial role' but actually being a project manager without any input except for managing outside suppliers – such as freelance editors – and managing the project schedule. This can be seen as something that would alienate a die-hard editor from the process and ultimately, the industry. The question that remains – if all skilled specialists, such as editors, have been eradicated from the core business and replaced by project managers (with no subject specialism*) and work outsourced to external suppliers, how long can a publishing company call themselves a publisher or provider of reliable content? One of the interviewees interviewed for this paper was experiencing this change first-hand and was not only concerned for the change in their own work role but also the future of the skills base within that company.

In the discussion part of this paper, the themes that arose from the interviewees are examined in more detail.

* In educational publishing especially, it is often an imperative for an editor to have a subject specialism, for example, in science, maths, life sciences, physics, chemistry, English, Modern Foreign Languages, etc.

2   METHOD

'Qualitative research is an umbrella term for a wide variety of approaches to and methods for the study of natural social life. The information or data collected and analyzed is primarily (but not exclusively) nonquantitative in character, consisting of textual materials such as interview transcripts, fieldnotes, and documents, and/or visual materials such as artifacts, photographs, video recordings, and Internet sites, that document human experiences about others and/or one's self in social action and reflexive states.' (Saldana 2011)

The qualitative method is not perhaps perceived as scientific as the quantitative method of research, which includes often-extensive data collection and analysis to find out answers to the research questions in order to build up a picture of patterns and phenomena. Qualitative by its nature is a possibly a bit more 'flexible' but it also leads discovery from observation.

2.1   Research questions

The method chosen for this research was to conduct qualitative interviews. The reason for choosing a qualitative path for research was two-fold. First, there was a fairly limited time to conduct the research and develop conclusions, which meant it was not possible to facilitate large-scale data collection process. The second reason was the apparent closeness and somewhat expertise in the field that the author wants to utilise in this research. Taking advantage of the personal, professional contacts in the field and apparent insight into the subject through working knowledge was something that the author wanted to utilise as well; having lived through the processes and been the first-hand witness of the changes within the industry with the increase of digital publishing and the challenges it poses to the workflow were fundamentals for wanting to carry out this research. The author of this research has been a content creator and editor for over a decade. While it is important to preserve the integrity of academic study by removing oneself from the focus and concentrating on being the observer, the expertise and personal interest in the matter should be accounted for as well. For example, without the personal and professional contacts, it might have not been possible to reach the 'candid'

state of interviews with the interviewees had they have been total strangers, so mutual acquaintance and trust was required to strike up a relationship with the interviewees.

The research questions are essentially about *how to manage projects within the (educational) publishing sector in plural content era.* How, if at all, has the arrival or digital and interactive elements to the 'traditional' textbook publishing affected the workflow and ultimately the performance of those developing the content into a published product, the editors and content producers, and, ultimately, the publishing companies. The outline research question therefore is:

> *'What are the challenges in creating learning resources in the plural content era –*
> *and what are project management methods being used?'*

The full list of questions used during the interviews is provided in the Table 2.1 below. The list of questions is a fairly exhaustive one and it must be noted that not all of the questions were used during the interviews. The author used the questions in the form of a 'prompt sheet' to initiate conversation with the interviewees and the order of the questions also varied depending on the interviewee and they role in the industry, as well as their character and how the conversation was flowing.

TABLE 2.1 *Research interview questions*

Name and company - also describe the company briefly.
What is your position in the company you work in?
Do you deal directly with content production, namely elearning and interactive content production?
What kind of content/products does the company you work in produce – for example (if lots)?
Do you lead a team or are you a member of a team?
Which team?
Who do you report to?
The person you report to, is he/she someone who works with content production directly?
Do you have a say in how the products developed function or look like?
If yes, describe the latest product/project you worked on. One example is fine.
Was the project successful? How was this measured?
Challenges within the project?
Describe the work process that a typical project you or your team work on goes through from initiation to completion. Or if you don't work directly within such project, please describe a process generally in use at the company you work in.
Describe the benefits of the current project management working methods in use.
Describe the challenges of the current project management working methods in use.

Which project management tools does your team/dept use? *E.g. MS Project, Trello, etc.*
What is your experience of using these tools? Pros and cons.
Which one(s) would you recommend to others and why?
If something does work or goes well within a team's project, does this practice get (quickly) disseminated to other teams? I.e. is there cross-team knowledge share in good and in bad? Is the knowledge used, do you think?
If something doesn't work within a project life cycle, e.g. a process or the order of certain things, are adjustments made during or after the project? Who decides/has the final say?
Does the company/team carry out 'retrospectives/lessons-learned' type debriefing within projects or knowledge share internally or with other teams/depts?
If it does, are these 'lessons learned' carried out during or after the project – and if during how often/many times?
Do you directly manage or liaise with external stakeholders - e.g. contributors, authors, freelancers, suppliers?
Working with outside stakeholders (e.g. authors, freelancers and suppliers, tech providers, etc.)... First list any outside stakeholders you work with on a regular basis.
Describe any benefits of working with outside stakeholders. (Why?)
Describe any challenges of working with outside stakeholders – in general. (Why?)
In your experience describe tasks in content production that can be outsourced. (Why?)
In your experience describe tasks in content production that can't be outsourced. (Why?)
How much thought do you have to give to the end user / customer when working on content or a product – or has e.g. functionality been predetermined by the time you work on the content or are you in a deciding role?
How important is UX do you think?
Has the role of learners/end users changed since move to digitised products from books-only publishing? Yes/no, how?
What kind of products do you think learners expect to have nowadays?
Do you think the role of publishers has changed since move to digitised products from books-only publishing? Yes/no, how?
What would you describe are the 3–5 main qualities a good educational resource should have in post-textbook era – be it a printed or digital product?
Do you think the company (or team) you work in achieves these qualities in their products on a regular basis?
Are you genuinely enthused about the stuff you work on? What in particular gets you going, if any?
Are terms Waterfall, Agile/Lean or test driven development familiar to you?
Do you recognise any of the above Project Management methods being used in the company you work in?
In the future, how do you see technology and editorial working alongside each other but remain separate or do you see any convergence? What, how, why? Describe.
How do you see your job role developing in the next 10 years, say?
How do you see the industry will look like in 10 years' time?
Anything else you'd like to add?

The questions that have been emboldened in the Table 2.1 are questions the author deemed to be the most important ones to cover during the interviews (in a form or another) and to build a good picture of editorial project management methods in each company and setting featured in the interviews.

The easiest questions to answer for many of the interviewees was to explain the editorial process in their company or team, and the interview was often started by asking the interviewee to describe the team or setting they work in and at what level they were within it and what their role responsibilities were and if they worked in a linear management setting or not. Two of the interviewees were in overseeing and managerial roles (one of those in an actual directorial role) and two interviewees were project leads with no line managerial duties.

Establishing an overview of their working environment by asking interviewees to describe it was an easy way in and to get into the subject of project management in their setting, which then included discussion on actual project management methods used – their pros and cons – as well any challenges the interviewees faced through working with possible outside stakeholders (such as writers and authors or external developers), and how they perceived the work they were hired to do overall.

The hardest questions to answer, as it was discovered by the author quite soon – after as much the first interview – was the questions of asking the interviewees to make predictions about the future; how they saw their job role or industry changing in the next 10 years. In fact, it became fairly obvious that it was hard to predict what might happen in the next 5 years, let alone 10 – so the question was often asked at the end of the interview as a way of wrapping up the conversation, but the predictions were not really fruitful, as all interviewees were hesitant to make them.

Also, quite interestingly, the question on what project management tools the interviewees were using in their work was also proven a bit of a red herring, as while they were able to list tools that they knew and possibly had tried in the past, but it is still a reality that often in editorial project management the tools used are limited to standard spreadsheets (such as Microsoft Office Excel) and no actual project management software (which could help manage multifaceted projects) are very commonly used. How many opportunities are missed by not integrating appropriate tools to match the work – and could this be one of the reasons why editorial staff at publishing companies might feel overwhelmed because of the tools they lack? This is a thought that has arisen from the author's own experiences as well as from this research.

2.2   How the research was carried out

The qualitative research in this study was carried out using one-to-one interviews with people working within the industry. The interviewees – four in total – were selected using the author's own contact book and the interviewees were professionally acquainted with the author. The aim was to have one or more interviewees on top of the four, but contact was lost or no suitable time for the interview could be arranged in the timeframe provided.

The interviewees are existing acquaintances. The relationship the researcher has formed with the interviewees has been over the course of several years and often through working with or for the interviewees. The relationship could be described as mutually appreciative and, in most cases, friendly.

The purpose of the interviews was to discuss the perceptions the interviewees had on the subject of creating content and project managing workflow in a multimedia environment, as well as exploring the possible challenges or conflicts in priorities – or even preferences held, as 'textbook publishers', towards the more traditional forms of publishing, namely, print publishing.

Some basic assumptions about the interviewees, which is useful to be aware of: all of the interviewees had entered the industry during time when there was only print publishing and they have all lived through the transition from print-only to plurality, namely digital and interactive publishing alongside traditional print. It was also assumed that the original project management skills these interviewees held at the start of their careers in publishing were tilted towards print management processes and editorial production within that. So they have experience of the period of transition within the industry where they have had to adapt to new technologies and adopt new working models, as digital process has become more prevalent. Of course, we know that changes occur overtime and are often so gradual that most of us during our lifetime will need to learn new and change our processes. Sometimes the changes are so subtle there is no realisation of it happening.

3   DATA COLLECTION

At the time of carrying out the interviews, the author of this research was living in Finland, but had regular contact with publishing professionals in the UK, too, as majority of the author's own company's clients were in the UK. The author has lived and worked in the UK since 2002, but moved to Finland for duration of 18 months from May 2014 until November 2015, after which when she returned to the UK.

At the time, it was possible, thus, to meet with only one of the interviewees in person, as he worked for a well-known publishing company in Finland. The rest of the interviews were carried out via Skype or Google Hangout, which are online video call applications. Only one of the interviewees was unable to get the application (Skype) to work, so opted for telephone instead. The interviews were all recorded using a voice recording application on the researcher's laptop. All interviews were later transcribed, in verbatim, to serve as written records of the conversations that took place and as the basis for the data analysis. From these interview record transcripts, outline summaries and conclusions were drawn into findings that will be presented in the latter part of this paper.

Most of the interviews lasted a minimum of half an hour but were mostly closer to 45 minutes and up to an hour in length. Most interviews achieved the levels of depth of information the author had hoped for has often, due to the familiar nature of conversation with the interviewees, surpassed the levels of candour one would have hoped for – to the point that it is important to retain the anonymity of the interviewees. However, it must be pointed out that none of the interviewees divulged any sensitive business information about the companies they served, but simply expressed mainly opinions as well as facts during the interviews.

3.1   How the interviewees were selected

The interviewees were selected using a simple method of going through the author's contact book and finding people who the author knew to have insight within their area of publishing. Also, the author did favour people who she knew would be 'friendly' enough to accept the invitation to talk with her about publishing processes outside their normal working hours. And, of course, it was important to select people with experience

over a fairly long period of time in the positions they held, as only those people would be able to answer effectively questions that asked them to compare past and present to a degree within their realm of expertise.

The author also wanted to select people that worked for companies that were big enough to produce content in the scale that warranted use of project management as a tool of delivering a set of, well, deliverables. The ones that were big enough players in the field of educational publishing and who produced varied content within their editorial and project management teams.

3.2   The companies represented

The companies represented were:

- **Pearson Education –** which is a British-owned education publishing and assessment service to schools and corporations, as well as directly to students. (www.pearsoned.co.uk)

- The **City and Guilds of London Institute** (**City & Guilds**) is a vocational education organisation in the UK. City & Guilds offers qualifications over the whole range of industry sectors through colleges and training providers worldwide. (www.cityandguilds.com)

- **Otava Publishing Company Ltd** (Kustannusosakeyhtiö Otava) is a major publisher of books in Finland. It publishes fiction, non-fiction, books for teenagers and children, multimedia and teaching resources. (www.otava.fi)

Out of the four interviewees in total two of the persons interviewed were from Pearson Education and held different posts in the company. The author deemed that is was beneficial to interview two different people from Pearson Education, as it is the biggest educational publisher in the world at the time of writing. The company has also made more of an effort to streamline its operations towards content production and seeing itself as more of a content producer of educational content, rather than a traditional publisher. In fact, in the time of working with the company (as a freelance supplier), the author has noted a paradigm shift from 'editorial' and 'textbooks' thinking to content

production and technology under the Pearson Education umbrella. One does not even have to dig too deep on Pearson Education's own website to see a testament of this thinking:

'Whether it's at home, in the classroom or in the workplace, learning is the key to improving our life chances. To this end, Pearson provides a blend of content, curricula, assessment, training and information systems to make learning more engaging and effective. Technology underpins everything we do, from the latest resources for personalised learning to data analysis tools to measure progress and aid teaching. By putting technology at the heart of learning, we aim to support, motivate and inspire every educator and every learner.' (Pearson UK website)

The company has eradicated the words 'editor' and 'editorial' from its job monikers; there are no longer, for example, Managing Editors and Publishers but Product and Project Managers, Digital Producers, Content Creation Specialists… This is not obviously to say that all these job titles are all editorial positions at heart, and the author has not researched the nuances these positions entail, but she witnessed the change personally while working at Pearson Education as an employee from 2008 to 2010, given she had started her job at Pearson Education as Managing Editor in 2008 but left as a Product Manager in 2010, even though the job role itself had not changed dramatically, if at all, in this time.

The other companies interviewed were selected on the basis of finding variety in the companies and settings researched. City & Guilds by its tradition is an awarding organisation and that offers qualifications from vocational and technical qualifications to apprenticeships. The company does produce its own educational resources for the market and the author has worked extensively in the past on one series of vocational education resources available on the company's website called City & Guilds SmartScreen. 'SmartScreen provides online teaching and learning support for tutors, learners and assessors of City & Guilds' qualifications.' (City & Guilds, SmartScreen website) The person interviewed at City & Guilds works in the publications department and is closely involved in content production of learning materials.

The third company is a large Finnish publishing and educational publishing company, Otava Publishing Company. A well-known publisher in Finland, the company is one of

the leading educational publishing companies and 'is one of the keen players in the digitalization drive of educational resources.' (Otava Publishing Company Ltd 2015) The person interviewed sits at the top of the educational publishing branch, so having the opportunity to interview and gain some of his insight to the market both domestically (in Finland) as well as globally was a very useful for the overarching elements of this research.

4   DISCUSSION AND ANALYSIS

The purpose of this research was not to view publishing processes historically or to assess how we have come to the situation we are now in. Nor was the purpose to look into the future extensively and make predictions of what it will hold. The assumed span of this research can be thought to be in the minds of the author and the interviewees possibly a decade in the past and maximum a decade into the future, possibly shorter – but, essentially: 'where we were not so long ago and where we are heading'… The aim is to concentrate more on the *status quo* and to cast a view to the near future and what it means to content producers in educational publishing. In order to gain a view in our minds, we always need to consider the market we function in, where it is at and how it is affecting the decisions we make to produce something of use. 'Any consideration of adjustments to educational publishing value chains must of necessity take account of related developments and commercial opportunities in the market…' (Xuemei & Martin 2013)

The 'market' is also unpredictable to an extent; while education policies and curricula do not change every year, governments change every few years. General election is held in the UK every 5 years and government policy affects education almost every time a new government is elected. It is one of those fairly easy arenas for implementing new policy and for a new government to 'mark its territory'.

'Political theorist William Connolly identifies four criteria that make an institution in society an easy target for attack by policy makers. … First, the institution can be easily portrayed as a threat to a common identity. Second, the institution can be used to deflect what would otherwise be seen as defects or failings in the political or the business communities. Third, the institution is strategically weak enough to be subjected to punitive measures. Finally, the institution is resilient enough to emerge again as a scapegoat if the proposed reform remedies fail. The educational system meets all four of Connolly's criteria.' (Madaus, et al. 2009)

But changing market and circumstances are valid in any area of business and publishing is not exception, so change is a given state of affairs. Rather than discuss the wider market as a whole, the discussion with the interviewees was guided towards more day-to-day activities as well as 'generalisations' about their roles within the work

environment and how they perceived the wider picture surrounding their roles – mostly from the vantage point of project management in educational publishing. However, obviously those who held managerial roles were in a better position to cast a more of an overview of the market as a whole and their own company strategies (without divulging business secrets!), and what challenges they faced from the vantage point of content delivery.

During the discussions, distinct themes bubbled up, which have been listed and summarised below, which also form the basis for this Discussion part.

1. **Needs of the market – the users**
2. **From product to service**
3. **The provider of reliable content**
4. **Project managing publishing projects**
5. **Benefits of Agile in publishing projects**
6. **Challenges of Agile in publishing projects**
7. **Project management tools (software)**
8. **The role of external suppliers vs. in-house skills base**
9. **The future – outlook**

Next, we will examine each point individually.

4.1   Needs of the market – the users

Ultimately, for any business to thrive is to deliver products that are fit for purpose and engage their users – which is imperative when the business of learning and education is in question. Most of the interviewees acknowledged the importance of this, but it is more true that even though the persons with most hands-on responsibility in forming the content, i.e. the editors, these people often – rather perversely – have the least say in how the look and feel of the product should be; the 'features' would have been decided long before the desk editor starts on the project, by the people above, in commissioning and publisher roles. Rather interestingly, this is widely accepted by most in educational publishing. In fact, when speaking to one interviewee it was quite obvious they were not 'expecting to' even have a say (*Appendix 1*). What has been decided has been developed into a template that is then delivered through the set parameters in which the editors are the gatekeepers and 'finalisers' of content… So, decisions about needs of the market are made above the content producers – including authors, in many cases, as authors tend to write 'to order', which is to a predetermined template – and it is down to the editors and project managers to execute the plan – to make the jigsaw pieces fit…

So, when interviewing the only person out of the interviewees who holds a directorial post, it was important to find out how the needs of the market are determined:

Interviewer: *So you work in the management team. Do you have a say in how the products developed function or look like? So do you have a say in the actual on what you, sort of, 'churn out'?*

Interviewee: Mainly it is about the strategy, so we are thinking about how to make the main points, so we are looking for the customer's point of view. So we try to figure out what the customers need. What we what we don't exactly want to see, what they want, because want and need is different things… But I want to be sure that we will get to answer what they really need.

For larger, often flagship products (e.g. when a new product with some new features is brought to market to meet, for example, the needs of a new set of curricula), publishers tend to carry out research as in-school pilot projects. This means that schools are given

the resources in development to use in the classroom and report their user experience to the publisher. Increasingly, also, the use of digital resources enables publishers to gain insight through data analytics – features which are embedded in the resource algorithms to provide round-the-clock instant reports on which features are being used and to what extent; where students are excelling and what they are finding difficult; and if some elements are not used at all (and possibly why that is). By receiving this data, the publisher can take the information in an instant, ask the right questions, and develop the product without having to wait, for example, the end of the school term to find out if students excelled or failed their end-of-terms exams, to which the learning resources were linked. This is where digital content delivery and data analytics have distinct advantages over textbook resources, as, we enter the iterative approach to content delivery – a bit like software development, as mentioned before – where version delivery and instant improvement is possible without having to wait for feedback a school year down the line. The person in the directorial role said as much:

'… It is possible for us to collect data. So we will have their results ... we have made the questions ready, so the teachers cannot modify the questions, but they can choose what questions they want to use. But during, for example, we have used this for a few months, we can get data, so which part of the question has been used and we can also get the feedback how they are managing if you compare their results to others [students not using the resources] ... So it's data mining, somehow.'

Another important element that arose from in couple of these interviews was the perception of the dangers of over-engineering the resources. Still, often, all that is needed is a good textbook. One of the interviewers so succinctly put it:

'I sometimes wonder if it is, what I wonder is much simpler than what we are producing. I think sometimes what we are producing is the space shuttle, but all they want is a book.'

Also, not all schools and institutions have the technological infrastructure to support an 'all-signing-and-dancing' technological experience; in some places you are lucky if you have a wireless internet connection, so expecting every student to have their own tablet or a laptop is not realistic. Mobile phones are fairly commonplace among young people

– for example, in the UK, a research by National Literacy Trust in 2010 suggested that 86% of young people own a mobile phone. A number that at the time of writing, some seven years later since the research, would expect this to be nearing over 90%. During the research part of this paper, it became obvious that, for example, Finland is very much driving the digitalisation of learning materials in schools. However, it is not all plain sailing, as a new set of issues has to be tackled. Most schools, especially secondary schools, in Finland, encourage students to 'bring your own device' (BYOD) to school. A case study by European Schoolnet – Future Classroom Lab, discovered that:

> 'The Finnish national Ministry for Education does not have a special policy on BYOD. However, the new core curriculum for schools gives guidance that students can be allowed to bring their own devices to school to support learning. The Ministry is aware that some cities have recommended that students at upper secondary school level should bring their own laptop or other device when they come to school. In primary and secondary schools there are few examples where BYOD requires students to bring a device. This is probably due to concerns that this may contravene the law stating that education must be totally free to all.' (European Schoolnet – Future Classroom Lab 2015)

So, while there are technological advantages in digital delivery and it is something most educational publishers are keen to get on board with, the needs of the user are as complex as the products potentially on offer, something which only can be developed and iterated through, the often-simple, trial and error 'method'.

4.2   From product to service

In order to meet the needs of the market – the users – the dawn of digital educational resources has also brought about changes to the business model. Book publishing is fundamentally a product selling business, where books are tangible assets which are physically sold to the end user, the reader. Developing a digital resource suite introduces a new set of challenges to the product selling business, as one of my interviewees explained:

'Maybe the biggest thing that I know that has changed is that we used to be sellers of "pieces". So we'd just sell books and when we sold the books, it never came back to us. But now when we are dealing with the services, so we are working with the licensing and it's a yearly licence or whatever they are, and then you are having the service, so you have to be there 24/7 to serve the customers. And now the customers are no longer just schools anymore, there are the students, there are the pupils, the parents and the teachers and even the school secretaries and everything… And we have to take care of the servers and all the possible things we didn't have to before.'

And another interviewee was along the same lines:

'[the company] is pushing, trying to change from, make a transition from product selling business to a service business. Product service business is a big push really. Digital, preferably digital, but also we have a need for print; customers have a need for print. So we are becoming you know very service oriented…'

So, educational publishers are making the leap from product selling into service business, which means constant availability of *service*.

'Both product- and service-based businesses sell a product. The ultimate difference between the two is that the product business actually sells a physical, tangible product, while the service business owner sells his skills as the main product. In the service-based business, potential clients invest in the salesperson or owner, which makes the client relationship even more valuable and important than in the product-based business.' (Brandenberg, Small Business Chron.com)

This puts the whole business in an entirely new scenario that requires service infrastructure to be built around the content creation and delivery. As one interviewee pointed out:

'Yeah, we used to have the warehouse, but now we have the servers.'

A few years down the line, once the new business model has taken wind properly under its wings, it would be an interesting area of research to see how publishers are adapting to the more customer-centric business model where service is provided around the clock and what effect it has on the business revenues, especially around building business around subscription models rather than 'the selling of pieces', as one interviewee put it.

4.3   The provider of reliable content

One of the most interesting topics the interviewees touched on was their perception about the role of publishers in this plural-content era, where 'open-source' and 'free' are the buzzwords bandied about. The world of online is naturally an endless source of content (of varying quality), and many universities and institutions are also making their content free to access. One of the most notable recent moves in this field was the renowned Massachusetts Institute of Technology (MIT) making all its course content available for free, which opens up the playfield of quality learning content in a unprecedented way.

> 'MIT OpenCourseWare (OCW) is a web-based publication of virtually all MIT course content. OCW is open and available to the world and is a permanent MIT activity. … Through OCW, educators improve courses and curricula, making their schools more effective; students find additional resources to help them succeed; and independent learners enrich their lives and use the content to tackle some of our world's most difficult challenges, including sustainable development, climate change, and cancer eradication.' (MIT OCW website)

Obviously, the position of publishers is not going to get any easier with quality content being distributed free, especially by institutions with clout, such as the MIT. The main comments made by most of the interviewees about the purpose and position of educational publishers were when asked what makes them different, was that publishers publish content that has been written by experts, which has been reviewed and proven. Unified in their individual opinions, each interviewee saw the position of publishers as encouraging learners to being critical of the sources they used by being one that can be accounted for being a supplier of quality, proven content. One of the interviewees summarised it well:

'There is more choice for people... you know people can self publish... Schools can put their own materials online, publish it on iTunes – all these different things. But the reason why people keep going back into is this is not in an arrogant sense, but we understand the learner and we know what good looks like and we can deliver on that. And we dont't always get it right, but I think we mostly do, in my view, that there will always be a place for that specialism, really.'

One interviewee also mentioned the cut-and-paste generation who cannot assess the value of the content they are reading. So 'up-skilling' learning itself was one of the biggest purposes publishers saw as their purpose for continuing to exist.

'Up-skilling, learning it is probably, there is a big problem with plagiarism I hear that a lot, it is the cut-and-paste generation, and they well, they can't assess the value, the accuracy and the value of what they are cutting and pasting – and also you are not supposed do it.'

Finally, the person in a directorial post summarised why publishing is important and how publishers can/will remain relevant in multi-content era:

'But to be honest, one big thing is quality, and with quality I mean the publisher's role in the future will be that we have to make materials that we can say "these materials are right and proven". So, it will be the core content for the students, what they can use for their studies and when they are working, for example, with the web, they will find a lot more information about the same issue, they have to have something to compare. And what we are doing is like a source for comparing. And they should learn to be critical for the content. And if they find something else, they have to decide is it, because it's newer research or is it just somebody's opinion… so it's going to be critical thinking that is one big skill.

We also have to be careful that we will show to the students and the teachers that we will make them have better learning results. So, if you are really taking care that they are having better learning, I think we will win the game. But, if you just think that we will have all the possible equipment or content or whatever… Flashy technology things, it's not going to be the thing; you always have to think about the learning.'

4.4 Project managing publishing projects

In educational publishing, when the final product is a printed book, usually the following process takes place. The book is:

1. conceptualised (as per market need)
2. commissioned (according to a curriculum specification)
3. authored
4. developed and copy-edited
5. designed and typeset
6. reviewed and proofread
7. corrected and finalised
8. printed and published.

The structure is pretty linear with not many things happening simultaneously. Perhaps the designer is drafting the look of the book, while the editorial is editing the text, but most of the time, the next stage only takes place upon completion of the previous stage. This structure is known in project management terms as 'Waterfall', which is 'the most well-known method of managing a project.' (Cork 2015) It is a linear structure where things happen one at a time until all has been done and the project can be brought to a conclusion, which for books is probably going to print. The printing process is usually a separate activity after which there is now point of return in content production terms.

4.4.1 Methods

In plural-content era, where educational content is delivered as both print and digital resources, the traditional Waterfall project management system is a not a viable one, due to its linear conveyor-belt style approach. It is often too rigid to deliver content that is being published in many formations and where multiple layers of development are connected to one other – for example, a multi-component elearning suite with interactive elements and an accompanying textbook.

It was interesting to discover that despite all the people interviewed worked for companies which regarded themselves as producers of digital and interactive elearning content, but often the project management of these resources was not considered a

'question' that should be answered – which means that publishing projects are still managed pretty 'organically', using traditional methods Waterfall type methodology regardless of the end product (print vs. digital). The gradually increasing volume of output has not generated a great deal of urgency for most publishers to develop more definitive project management strategies either – which often increases drastically in elearning production, as, for example, the need for differentiation; parallel content has to be created to match the varied levels of student ability. For example, to produce a set of answers to a simple quiz, say, you need to deliver two or more alternatives for each question, depending how complex or responsive (to student) the elearning is. All of this work requires author and editorial brainpower, to make the content 'intelligent' and responsive to cover all eventualities, choices and answers the student requires in order to make a smooth learning path. So, it was a surprise to learn through the interviews that only one company at present have trained their content production teams in project management, Agile – which historically associated with software development – and are consciously moving away from Waterfall. The only company actually using Agile by having introduced the concepts of backlogs, sprints and stand-ups into their everyday editorial content production is Pearson Education (*Appendix 2*).

4.5   Benefits of Agile in publishing projects

So the conversation about Agile methodology circled around mainly in conversations with the representatives from Pearson, as it was the only company to have actually taken on this methodology and was making a conscious strategic decision in their content production to become fully Agile (*Appendix 2*). The staff have been given training and the projects in UK Schools* (*one of Pearson's business units) are run based on the methodology of Agile project management.

'We are moving towards Agile working practices. Now we've all had training in that and we are seeing how we are going to apply to what we do because what we have done is traditionally Waterfall. So, we are following Agile methodology, we are having stand-ups every day, you know, we are having retrospectives, we are working in sprints, we have sprint planning sessions, and we are having show and tell… What are they called… demos… I can't remember what they're called, but we have those Agile demos, but all in small delivery teams, and we are replacing the old Waterfall methodology wherever possible.'

So what did they find beneficial about Agile project management in their work?

The main positive identified by far was the increased communication between different members of the team, as well as the increased understanding of others' workloads, when people are able to flag up issues more easily. One interviewee said as much:

'So the benefits – a benefit is communication, the communication area has a lot of benefits, and I don't think really anyone would really disagree with that. Some people said daily stand-ups are dull and why are we sitting and listening to what else he has done and what is I got to do, because it is get on with it, really. Even I would have to admit really that there are a lot of benefits to working very tightly in small teams being co-located next to publisher who is commissioning your material and viewing your material, seeing your materials, so being right next physically or in very close hangout contact with [another] office, so we do the best across two sites. That's the other thing that doesn't help, but we do the best with it. I mean if I just say communication is good, example is daily stand-ups, well I pretty much know what other people are doing, attending one time to say right now what is he doing, what is she doing. I would be able to tell you. What workload is, what time they've got available. We just didn't, frankly, just did not have [before Agile] that level of visibility on other people's workload and time.'

4.6   Challenges of Agile in publishing projects

First, publishing process is still very linear and naturally more inclined to follow Waterfall, especially in book publishing. The only publisher out of the companies interviewed, Pearson, are attempting also to make book production process Agile, but they admit they are 'yet to answer the question' of *how* exactly to do that. For example, authors are essentially part of the multidisciplinary team, but they are often external, which more than one interviewee identified as the stumbling block to managing a publishing project in a 'purely' Agile way – which also amounted to quite an amusing realisation in our conversation, as one interviewee put it:

'I think, one of the things is about authors, so the Agile structure is only as good as continuity of flow, because the entire Agile because you know is have work constantly moving through the teams' backlogs. So, what to do with a stakeholder that is outside of that, who doesn't deliver on time… we have not answered that, and we need to. That is my proverbial 'fly in the ointment'. I mean they are a stakeholder for the entire business, but they are not part of this, so Agile or whatever system you choose, if the content is not there, you cannot do anything with it.'

And another said that, 'you can do all the Agile in the world, but if the manuscript is not in, what do you do then?'

Another integral feature of Agile has its base in software development, where a team works through a backlog, which is 'breaking down the scope and requirements into tasks that have to be carried out' (Cork 2015) – and this is based on a team where everyone can do anything. Whereas, in book publishing, the majority of the work is carried out by specialists. As noted before, editors often have a subject specialism, so their skill set is not interchangeable with another team member, say, the project manager, or the graphic designer. Therefore, the concept of a 'backlog' has to be adapted to certain members, as not everyone can do everything. The interviewee explained:

'Also one challenge is the way we look at skills. So one of the challenges is idea of Agile is kind of … which is a horrible analogy, but it is kind of a production line thing and we take stuff off the line, production given to the teams to do, but what are the tensions of this is that not everyone can do everything. So, if you are work a modern foreign languages editor you are not able to develop a science book. So, we are working with subject specialism … we are not making software that everyone's got skills that are the same and can be deployed flexibly … We are kind of specialists. That is a challenge.'

Third challenge identified was scheduling and planning, which in pure Agile are often considered cyclical and iterative with version releases, but as one interviewee pointed out: 'So obviously there is a conundrum there really because you cannot produce half a book and then send the customer to see what they think', which not only makes

adapting production to the new model but also makes long-term planning difficult as well, as another one said: 'The attention between short-term experience in long-term planning, though you know often with the schedules are determined by certain factors such as exam endorsements such as adoption races with other publishers or all these things, so that is a challenge because we are looking into future.'

The final bigger issue identified with the Agile methodology is the perceived amount of time the team spends of their working time talking about what they are about to do, what they are doing and what they have done, and the feeling is that the amount of time to do 'actual work' is diminished somewhat. This could be a red flag to managers, as the feeling is that the volume of work in this digital age, where content has to be produced in multiples by the same number of workers, but if they spend their days reporting or discussing the work they *ought to be doing*, then at some point something has to give. One interviewee summarised it well:

'One of my bug bears is that we spend a lot of time talking about doing work, reporting, admin, talking about what we are going to do, talking about what we haven't done, talking about how we can do it better. It leaves a very large gap in the working week where we could actually be doing something productive, in my mind. We could argue all the stuff is productive, as suppose it is in the manner of speaking, but is not actually doing work [for example, editing or development of content] … A friend of mine said to me – he works at another company – and he is implementing Agile, and he is a practitioner, and has gone through courses and all that – that, fundamentally, it is a hell a lot of talking and not actual work – I mean this was completely unprompted by me! He says, the good thing about it is you are doing very little work. It is weird. I am not sure whether it is flash in the pan, as we would say, I don't think it is, but I am not sure if it is going to be around for a long time or it may be here today, gone tomorrow maybe…'

4.7   Project management tools (software)

Basically most of the tools in used for project management in publishing are still fairly basic, and there are no 'industry standard' project management software or tools that would be used universally. In fact, the only tool that can be found in most publishing companies is the humble spreadsheet. It might take different forms, from the 'standard'

Excel sheet to a collaborative Google Sheet, but it is still a list with cells and columns. Often everything from budgets to schedules is typed into a spreadsheet. It is still the 'easiest' tool for distributing and sharing information across the publishing team in a format that most can use to the degree that they can scroll it down or use the tabs to view, for example, different schedules across one unit of production (namely, book, the workbook, digital component, etc.).

So, it is a little anticlimactic to write a whole section on project management tools, when majority of the interviewees had not heard of many others than Trello or Jira, but even when they had heard of them, only Pearson and Otava at the time of the interviewees (autumn 2015) were using these project management tools aside, or instead of, the spreadsheet in their editorial and content production teams.

'Trello is a collaboration tool that organizes your projects into boards. In one glance, Trello tells you what's being worked on, who's working on what, and where something is in a process.' (Trello website) Trello is free to use and online. It is fairly easy to pick up for anyone who has not used a similar 'task-board-based' project management tool before. It is visual and intuitive – which elements of drag and drop, etc. – so it is easy to grasp with little or no training – which probably explains its popularity among some of these 'trail-blazing' publishing companies who have decided to take their project management into the Agile and Lean arena, away from linear Waterfall and spreadsheet lists.

In this paper, we are not going to look at Jira, as it was only discussed on a naming and concept level in the interviewees. None of the interviewees were using it, but they had heard of it. 'Jira is a proprietary issue tracking product, developed by Atlassian. It provides bug tracking, issue tracking, and project management functions.' (Wikipedia on 'Jira [software]')

4.8   The role of external suppliers vs. in-house skills base

Publishing industry, at least in the UK, is a growing industry, 'with total sales or book and journal publishing up to £4.4bn in 2015' (The Publishers Association 2016) – this includes all book publishing from trade to educational and academic. So the need for external (often freelance) help is fairly obvious, as many of the companies are also

streamlining internal processes and this also reflects on the numbers in personnel (Sandle & Holton 2016). It is now a common occurrence the company producing educational materials (a publisher) has a core editorial team, which often consists of the following people:

- Publisher
- Commissioning Editor
- Senior Editor
- Editor

The positions of Editor and Senior Editors are practically interchangeable, as, depending on the history of the team and how long an editor has served, it is often simply to justify pay increases and / or to retain talent from the company's perspective. Ditto, Publisher and Commissioning Editor have overlap, often depending on the size and needs of the team. It is common for Commissioning Editor to taken on publishing planning and research type work, which would normally be Publisher's remit. Also Commissioning Editor can be the 'top position' within a team – again, depends on the wider company structure. Also, it must be noted that these job titles are not fixed and they change from company to company, but these are the broad definitions the author has come across in her time in educational publishing over the past decade.

Then, around the core editorial team there is often a list of freelance editors, who take care of the editorial tasks externally. They can do the following tasks, which the in-house team allocates to them:

- Development editing – This is the development of the manuscript when it comes from the author in its raw form. The Development Editor often liaises directly with the author to shape the text and find answers to any queries that might arise in the development process.
- Copy-editing – Once the manuscript has been developed into a shape where it is fit for purpose in broad terms, it is then handed over to the Copy Editor for editing the content to fit certain parameters, e.g. length and style. Copy Editor also reads the text for legibility and fixes any grammatical and typographical errors, as well ensures that manuscript has the correct heading levels and order, and that it is 'coded' for the typesetter or graphic designer to lay it out correctly, as per plan.

- Proofreading – After typesetting has taken place, the ready drafts of the pages are ready for checking, which are called 'proofs'. The proofs are given to the Proofreader, who reads the pages and checks it against the copy-edited manuscript, ensuring that the typesetter has executed the layout and textual plan from the coded manuscript correctly and that all the images are correctly placed, as per the photo / artwork list, which is often compiled at the development and copy-editing stages. There are traditionally up to three proof stages, each check less in time, but checking that all changes and corrections have been taken in, before the final set of proofs are produced ready for printing.

These functions are often considered the basic skillset of the in-house editor. However, due to the volume of work that a single in-house editor is working on at a given time – it varies from company to company, but one editor could expect to work on at least 5–15 individual products or combinations of at the same time – so they don't have the time to do it all themselves. Also, it is often good to have more than one person working on a single piece of content, because one does become blind to errors if they work with the same content over and over, meaning that errors are not picked up. Here the freelance people come into play. The in-house editor simply allocates and manages the work to these 'suppliers' (as they are often known) and checks their work for quality, and answers any questions they might raise. The in-house editor also supervises and determines the schedule in relation to bringing it all together in time for the deadline of known as the go-to-print and ultimately, the publishing date – which has been determined by the Publisher and, ultimately, the wider company strategy.

This is a simplistic view of the in-house editorial role, but it should give an overview to those who are not as deeply familiar with the workings of an editorial team within (educational) publishing.

It is therefore unlikely that the role or need for external suppliers will diminish, quite the contrary, as the volume of output is expected to increase over time. As discussed previously in this paper, digital and interactive publishing means larger content quantities per single publishing product, in order to, for example, facilitate the possibility of content differentiation or artificial intelligence in learning products, to enable true differentiation depending on the user's knowledge and skill level in their learning path.

The problem – or question – that this poses for the in-house role, as more and more external help is drawn in – how this affects the skillset of the editor, as they are increasingly more project managers rather than editors; they are managing the project and while they have the quality checking role over the external supplier's work, it is likely that many editors who want to work in publishing roles would prefer to be working directly with the content, shaping it, i.e. *being* the editor, *not* the project manager. But, if you bring in a project manager with no editorial skills, how do they supervise and add value to the editorial process as the gatekeepers of quality? This was definitely a point that arose from the discussions with the interviewees, and it seems there are no answers to this as yet, when publishers are increasingly going down the route of 'converting' in-house roles from skilled editorial to project managerial.

4.9   The future – outlook

The future is not bleak – but it is challenging. Publishing industry is in a constant motion and from the days of the arrival of radio and television, in the early part of twentieth century, the whole print media has been mooted to be in danger of being outmoded and outdated, desperately trying to cling on to its place in the media scape… We all know this is not true. Readers still want to read their book in print form. Many people prefer to hold a book instead of reading something on-screen. It has even been researched that readers find it easier to retain information from reading on paper than on-screen (Two Sides 2015). So, the textbook is definitely not dead. However, it will continue to develop into something that can be also read in digital form. Enhanced experience for the reader, for example, in the form of additional content embedded into a book, such as video and links to related content. These can only really be seen as positive developments for the learner's benefit. But it is still useful to have something in print as well.

The interviewees were reluctant to make future predictions too far into the future, as it simply is rather impossible. Those in production editorial roles (actual editors) were less prepared to make any predictions, but held some concerns over the changing nature of their roles from skilled editors to project managers with no real say in the content they are producing. This causes negativity in those who enjoy dealing with language and editorial, whereas those who enjoy project management remain more neutral or even slightly optimistic. The concerns they shared is the necessity of their roles in the future

and if the content could be produced without them or not – possibly increasing the awareness of the need for the development of their skills in relation to the changing landscape of content production.

Those in managerial roles were more optimistic overall and were more prepared to venture out their predictions on what may be. They saw the benefits of improved technology in content production. They saw the current tools a bit lacking and the need for using external companies for building their products onto the platforms, adding to the complexity of production and human resource. Especially, in Finland, the company director interviewed was pro introducing content creation and authoring tools to serve the content creator – making sure the creative prowess remains in the hands of the content creator and editor. So, for example they have introduced content creation and authoring tools, such as Cloubi (Cloubi.fi), in their production process. The e-publishing tool, such as Cloubi, removes the need for coding and thus enables the editor to create the content based on templates (self-generated or pre-set) directly on their screen with an intuitive interface and 'drag'n'drop' functionality. It was not evident in the interviewees if other publishers were as far down the road as Otava was at the time of writing. There are content production tools such as Cloubi, often developed internally by these 'big publishers', but the companies are fairly secretive about them until official launches, which makes attaining accurate information difficult. There are other similar tools available, as the above-mentioned Cloubi, but the writer of this paper has not researched this field in depth as part of this research.

5   CONCLUSION

It is definitely an interesting time to have been conducting this research, as publishing industry seems to be teetering on the edge of a small content production revolution. The norm, increasingly, is that plural content era is no longer a pipedream for many publishers but a reality that requires a lot of energy not only from the point of view of business planning, as it is also a very competitive landscape, but from the point of view of attracting the right kind of talent and training existing workers up to the new requirements. Everyone wants to be first in the (digital and interactive) market, or definitely at least the second, improving on the first one's mistakes and thus creating a superior product. This is, of course, true of many industries, not just publishing.

The benefits of plural content era to the learner can be immense. Not only are most learning styles covered by this offering, helping those who might not be 'traditional learners', through, for example, by giving access to videos, interactives and audio alongside printed text, but also the speed at which one can retain feedback and identify strengths as well as weaknesses. All this must be a positive thing when harnessed appropriately.

From the publisher's perspective, the most interesting aspect of producing content in plural content era has to be the instant results and feedback the usage algorithms can deliver to the business; from identifying success stories and best revenue streams, to actually understanding what makes learners tick and what benefits them most. Also, the instant reporting that these resources provide for the teacher can only be seen as a positive addition to any teacher's toolkit in getting the best out of their students.

When asked about the challenges, most content producers interviewed identified that making the new type of content (when talking about interactive digital content) to fit in traditional publishing project management methodology is a challenge. This is where 'old' and 'new' are slightly at odds. Also, the arrival of new project management processes – namely, Agile – has been seen as something that does not fully, yet, embed itself in the current setting. As Agile derives historically from software development – where multiple product iterations are the norm – so, when compared to book publishing, the iteration thinking does not sit fully within it, as most customers would still prefer to receive a complete book rather than perhaps only half a book! So, for book publishing,

the foreseeable future is still with 'Waterfall' project management methodology when it comes to printed books.

On the digital side various components can be managed in Agile in most educational publishing settings, but it seems that only Pearson Education at this moment has made tangible steps to making its content production truly Agile. They have invested time and effort to amalgamate Agile into their publishing processes and have trained their staff in Agile project management. Other publishers may be using aspects of Agile project management and may be embracing new tools such as Trello or Jira, but they have not officially rolled out a certain project management process, such as Agile. It could be that many publishers have not really had the need to 'tackle' project management in the 'new' era of digital publishing as yet. Or they are almost waiting for it to grow organically from internal experimentation into new methods of production. Also, usually editorial people are by nature quite organised and have the ability to grasp large entities such as producing multi-component products, which might add to management's reluctance to curb the 'flow' by 'force implementing' new processes when old processes have not yet been deemed ineffective. This is, of course, speculation, but – from the interviews conducted – some of the hands-on editorial people, while recognising that there are new resources and components they regularly work on, they did not identify the need (on a wider scale) to embed new project management methods such as Agile in their work. Or, perhaps they like to pick and choose – in a self-directing way – the parts of Agile that work in publishing settings and discarding those that do not, and ultimately, delivering content in adapted Waterfall– Agile setting for the time being.

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APPENDICES

Appendix 1. Having a say in the look and feel of a product

This is an excerpt from an interview on how much input the person interviewed has on the look and feel of the product. (NB: The interview has been transcribed from a recording but not in verbatim.)

Interviewer: ... So you obviously work with content, so are you someone who actually work with content and produces from start to finish?

Interviewee: No, as I'm a production person I get involved more at the copywriting and proof reading, etc., stage, so it's kind of project managing from the point where, point from which the content in inverted commas 'being finalized'.

Interviewer: ... Do you have a say in how these products develop function all look like?

Interviewee: The way we're set up we have a kind of development team who work on commissioning content from the authors and then they put the content through a review chain and in terms of when I turn it to something like text books – and we have note books as well – and our online platform it is all quite standard, so there are no big decisions to be made around you know…

Interviewer: Around the functionality of, yeah.

Interviewee: Yeah, on elearning projects, we have like a print digital product manager who would be involved in that, and also a development team will involved in that kind of scoping phase and we decide to kind of what type of questions and what type of interactivity a product is going to have...

Appendix 2. Pearson Education and Agile project management

This is an excerpt from an interview with Pearson employee talking about the shift from traditional methods to Agile project management. (NB: The interview has been transcribed from a recording but not in verbatim.)

Interviewer: So, I know that you know as a company you are probably moving into that direction already in a way, but without kind of obviously you do recognize the terms Waterfall, Agile tests, or even TDD – and do you have any other methodologies or anything that you do know are in use?

Interviewee: I mean you are right saying that there is a shift from Waterfall to Agile, so we are fully Agile now in UK schools. The other term that is being kicked about is 'Lean'. My understanding is it has come halfway house between Waterfall and Agile.

Interviewer: Yeah, yeah, I think it is.

Interviewee: I mean the expectation is that we will become fully Agile.

Interviewer: Fully Agile, yeah…

Interviewee: So, how it going to work with print…

Interviewer: Yeah, well that is the interesting thing and that is actually part of the research questions, so that you get digital stapled on print or is it more like actually the digital is the big thing and the print gets stapled on it? I do not know.

Interviewee: No, well everything is Agile so the expectation is that, so is Agile principally is a software, is designed to get software out and as a business we want to apply to all products – but at some point a book has to become a book – so can you deliver that content through Trello boards…? We are answering that question at the moment.

Interviewer: Well actually well can you expand all that how the feeling is at the moment?

Interviewee: I think, one of the things is about authors, so the Agile structure is as good as continuity flow because the entire Agile because you know is have work constantly moving through the teams' backlogs. So, what to do with a stakeholder who is outside of who doesn't deliver on time – we don't have answer to that one yet, and that is my proverbial 'fly in the ointment' … I mean they are a stakeholder for the entire business, but they are not part of this, so Agile or whatever system you choose, if the content is not there, you cannot do anything with it.