LAB University of Applied Sciences

DESIGNING AND CREATING E-LEARNING PLATFORM FOR A GLOBAL DISTRIBUTOR

CASE WIPAK

LAB-UNIVERSITY OF APPLIED SCIENCES
Bachelor of Business Administration
2020
Otto Vihunen

Tiivistelmä

Tekijä(t)	Julkaisun laji	Valmistumisaika
Vihunen Otto opiskelija Ammatti-korkeakoulu LAB Tradenomi	Opinnäytetyö, AMK	Syksy 2020
	Sivumäärä 48	

Työn nimi

DESIGNING AND CREATING E-LEARNING PLATFORM FOR A GLOBAL DISTRIBUTOR – CASE WIPAK

Tutkinto

Tradenomi AMK

Opinnäytetyön ohjaaja

Riitta Turkia Lecturer, LAB University of Applied Sciences

Työn tilaaja

Tillaéus Nina, Business Solution Manager Health, Wipak.

Tiivistelmä

E-oppiminen on kasvattanut merkittävästi suosiotaan opetus- ja koulutusmetodina yritysmaailmassa. Opinnäytetyö tutkii, millainen on hyvä e-oppimisalusta ja millaista oppimismateriaalia sen tulisi sisältää. Työn toimeksiantaja on Wipak, yksi maailman suurimmista pakkausmateriaalin valmistajia ruoka- ja terveysteollisuudessa. Työn tarkoitus oli luoda oppimismateriaalia sekä alusta terveysalan tuotteista maailmanlaajuiseen käyttöön jakelijoille ja myyntihenkilöille. Tehty tutkimus selvästi osoittaa piirteitä, joita hyvän e-oppimisympäristön tulisi sisältää ja millainen oppimismateriaali on innostavaa oppijalle.

Tämä opinnäytetyö on jaettu kahteen osaan: teoreettiseen sekä empiiriseen. Teoreettisessa osassa käydään läpi e-oppimisen määritelmä, sen hyödyt, trendit, erilaisia oppimistyylejä ja tulevaisuuden näkymät. Empiirinen osa sisältää puolistrukturoidun haastattelun ja katsauksen, miten e-oppimisalusta WAY- Wipak Academy for You luotiin sekä miten e-kurssit sekä muu oppimismateriaali sen sisällä luotiin.

Avainlöydökset tässä opinnäytetyössä ovat erilaisten oppimistyylien merkitys, erilaiset e-oppimismateriaalit sekä trendit e-oppimisympäristössä, kuten gamifikaatio sekä video-oppiminen

Asiasanat

E-oppiminen, oppimistyylit, e-oppimisalusta

Abstract

Author(s)	Type of publication	Published
Vihunen Otto, Student at LAB University of Applied Sciences	Bachelor's thesis	Autumn 2020
	Number of pages 48	

Title of publication

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Name of Degree

Bachelor of Business Administration

Thesis supervisor

Riitta Turkia Lecturer, LAB University of Applied Sciences

Client

Tillaéus Nina, Business Solution Manager Health, Wipak.

Abstract

E-learning is becoming more and more popular to use as a teaching and learning method in the business world. This thesis investigates how to create a good e-learning platform and what kind of learning material should it contain for a good learning experience. The commissioning company for this thesis was Wipak, one of the largest manufacturers of packaging materials in the food and health industry. The goal of the thesis was to create e-learning material and a platform about health packaging products to be used globally with the distributors and salespeople. The results of the research clearly show some elements which should be implemented to a good e-learning platform and reveal what kind of learning material is engaging for the learner.

The thesis is divided into two parts: the literature review of e-learning and empirical research. The literature review consists of defining e-learning, its benefits, trends, different learning styles, and the future of learning. The Empirical part consists of a half-structured interview and a look at how the e-learning portal WAY – Wipak Academy for You was made as well as how the e-learning courses and other e-learning material inside it were made.

Key findings in this thesis are the importance of different learning styles, variety in the e-learning content, and different trends in the e-learning world, such as gamification and video-learning.

Keywords

E-learning, learning styles, e-learning platform

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Background and structure for this thesis

E-learning in a global corporate environment is a growing business with many benefits over the traditional learning model. Constantly improving and educating has become increasingly important to both individuals and corporates employing individuals. New technologies, ideas, and innovations are constantly created, and both corporates and their employees need to constantly learn these new things as efficiently as possible. Multiple tests made by for example LinkedIn (Chelovechkov, Spar, Lefkowitz & Van Nyus 2019), Global Market Insights (Global Market Insights Inc. 2009), and Software advice (Westfall, 2016) have proven the significance of learning online both now and tomorrow. Therefore e-learning is one of the most important trends in the corporate world right now and in the future: it offers a more flexible and efficient way to improve and reach both personal/corporate goals. This thesis will give the reader a better understanding of e-learning in a global corporate market with concrete examples of how to make an e-learning platform for over four hundred learners for a multinational market-leading company Wipak and how to create material to said platform. Key findings in this thesis are the importance of gamification, microlearning, video learning, and different learning styles in creating an e-learning platform and learning material for it as well as the benefits of e-learning over traditional learning. Key findings are based on researches, expert opinions, and a semi-structured interview.

This thesis starts with an introduction, followed by a literature review about what e-learning is, different types of e-learning, its future perspective and market size, typical features in the e-learning platform, and e-learning courses. It also contains a brief look at the different learning styles and how they can be implemented to e-learning, including Kolb's four learning styles (Cherry 2020), behaviorism, and online social collaboration theory. The thesis also contains an empirical side in which it takes a closer look at the process of the creation of Wipak WAY – Wipak Academy for You. This includes a semi-structured interview and the process of creating e-learning courses inside the learning portal. It also contains future considerations for the WAY-portal based on the research.

1.2 Goals and restrictions, Method of research

The method of research int this thesis is the qualitative research. This research method was selected to answer the research questions, understand e-learning better from the learner’s point of view, and through that, improve the WAY e-learning platform. According

to Pitkäranta (2014), qualitative research goals can be to reach answers to questions *about why, how, and in what way.* The research can be described as successful one if it adds knowledge about the research problem, gives a picture of the research problem and new conclusions can be made based on the research. Research questions were limited based on relevance and scale of the research: qualitative research should be restricted only to the core things about the subject. (Saaranen-Kauppinen & Puusniekka 2006.) Ultimately, the goal of the research work was to create the WAY e-learning portal, and thus the research and research questions should help this process.

Based on the research method and restrictions goals, this thesis was determined to answer the following research questions: what are the elements that make a good e-learning platform ?, And what kind of learning material it should contain to ensure the best learning experience for the learner?

2 LITERATURE REVIEW OF E-LEARNING

In this chapter, the thesis investigates the facts surrounding e-learning. The first part defines what e-learning is, and when the term was first used. The second part asks and answers the question what are the differences between e-learning and traditional learning? After this, the third and fourth part look at the different types of e-learning, fifth and sixth check the worldwide situation of e-learning.

2.1 What is E-learning?

E-learning is a fairly new term, simply because it has not been around that long. The first-time term “e-learning” was used 1999 in the CBT system seminar. Other terms used around the time were also “online learning” and “virtual learning”. E-learning is defined by TalentLMS (2014) as follows:

“In essence, e-learning is a computer-based educational tool or system that enables you to learn anywhere and at any time.”

Tom Kelly described E-learning to be about information, communication, education, and learning (Kakoty, Lal & Sarma 2011). E-learning is nowadays mostly done via the Internet, but before that other ways to e-learn were for example CD-ROMS.

Even though the term "e-learning” is new, it does not mean that there has not been distance learning before 1999. In fact, there is evidence that one Isaac Pitman used correspondence to teach his pupils back in the 1840s. Pitman would simply send the assignments via mail. In 1924 the first testing machine was invented, with this device students could test themselves. The next step forward happened in 1954, when B.F Skinner invented "the teaching machine", which enabled schools to administer programmed instructions for their students. The first computer-based training program was launched in the 1960s in the Illinois area. This program was called PLATO or Programmed Logic for Automated Teaching Operations. This was another big step forward and resembled something you could call e-learning, however it still lacked interactivity. Interactivity in computer-based training programs started to become a thing in the 1970s when Britain's open university started corresponding with emails to their students. (TalentLMS 2014, 8–10.)

It goes without saying that technology is a key factor in today’s e-learning. Teaching and learning via the Internet changed the way to teach dramatically: you can share all kinds of material such as slideshows, PDFs, videos, and word documents. The possibility to attach webinars and interactivity via chat offers also new elements to teach. There are many kinds of e-learning systems, or LMS (Learning Management Systems) for short. Because

e-learning can be used nowadays with many devices, such as tablets, smartphones, and computers, a person can learn what they want, when they want, and wherever they want. (TalentLMS 2014, 5–7.) E-learning can be divided into three main categories: Synchronous, Asynchronous, and Cohort learning. Selecting the right type of e-learning depends on multiple factors including learning speed, learner's prior knowledge or experience, geographic separation, and time available. Every one of them has its advantages and downsides. (Elkins & Pinder 2015.)

2.2 E-learning versus traditional learning

Before choosing what kind of e-learning method is good in the corporation world, one should ask, is it worth it? What are the advantages of e-learning compared to traditional learning and are there some disadvantages that can affect the learning experience? Also, if e-learning is the way to go, what kind of e-learning suits the learner best? Here are some of the advantages of e-learning compared to the traditional, classroom-type of learning.

No restrictions

The traditional learning process has a lot of restrictions compared to e-learning: major ones being the location and time of the learning. Traditional learning requires some physical location where learners would gather in a specific time with the instructor to learn. This limits the possible learners to those who have the time to attend and are close enough to have access to the location of learning. E-learning does not require these things: anyone with a computer or some other electronic device supported by the e-learning platform can learn without being anywhere near the instructor or other learners. (TalentLMS 2014,12.)

Individual learning styles

Every individual has a specific way of processing information and learning new things. Traditional learning is difficult, if not impossible, to center around an individual's way of learning, which means that the learning is not as efficient as possible. E-learning allows individuals to learn at their own pace and with their unique learning styles. It may not still be the perfect learning style for some, but e-learning at least offers a more flexible way to learn and process information for the individual. (Tamm 2019.) More about individuals learning styles and ways of taking that account in e-learning can be found in section 4 of this thesis.

Cost savings

A big part of decision making in the corporate world are the numbers: how much is this going to cost and what are the benefits of it? Compared to organizing a traditional learning experience, e-learning offers great savings with arguably better results. For example, one employee traveling domestically to a traditional training session costs the company an average of 949 $ in the US and 2600 $ when flying internationally according to the study by Certify as shown in figure 1(Certify 2020).

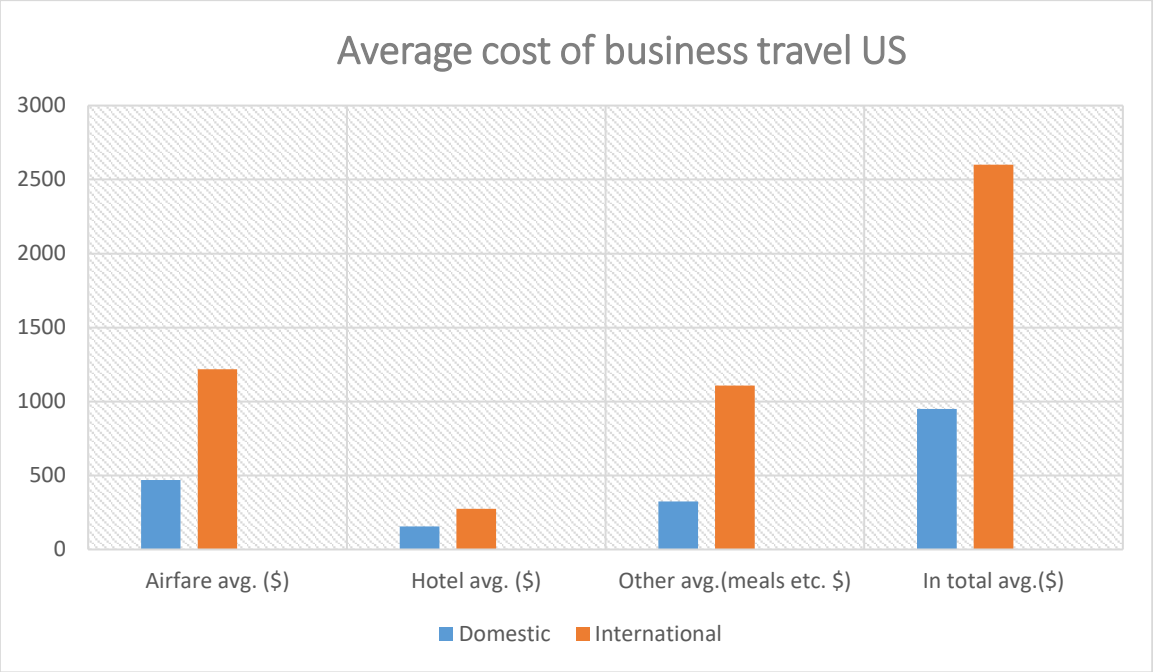

Figure 1. The average cost of business travel in the US, modified from Certify. (Certify 2020)

Other big cost saving comes from time and productivity. Time is money and traditional training sessions tend to need a lot of time. Time loss does not only come from the training session but the time to get to the location of training. Traditional training does not have the flexibility regarding individuals' timetable, so it is very likely that not everybody can attend, especially if the training is for a large group of learners. The cost of productivity alone can be calculated simply by multiplying the number of learners, their hourly salary, and the time needed for the training. (Ingwersen 2018.)

Location is another cost-related problem in traditional training. If the training session is meant for a large group of people, the company must have a ready space for it, or more realistically, rent a space for the event. According to Venuu, daily rent for office space in Helsinki for around 10 people is between 250 and 500 euros, this is not including

transportation or lunch, etc. (Venuu 2020). This kind of training session also needs an instructor, which depending on expertise and subject matter, can be costly. Typically, these kinds of instructor's charge around 20$ per hour (Ingwersen 2018). Taking account of all these expenses, one can estimate what is the price of a traditional training session. An example found in figure 2, training session estimation is based on 10 people sales teams located in Finland and an inhouse instructor flying internationally from the US to host the training. In this example, the sales team is having an 8-hour training session with one instructor at the workplace. If the venue/office space is needed outside company premises, the cost of the training session would be even higher. In this example, the estimated cost for the training would be 4 503,70 € as shown in figure 2.

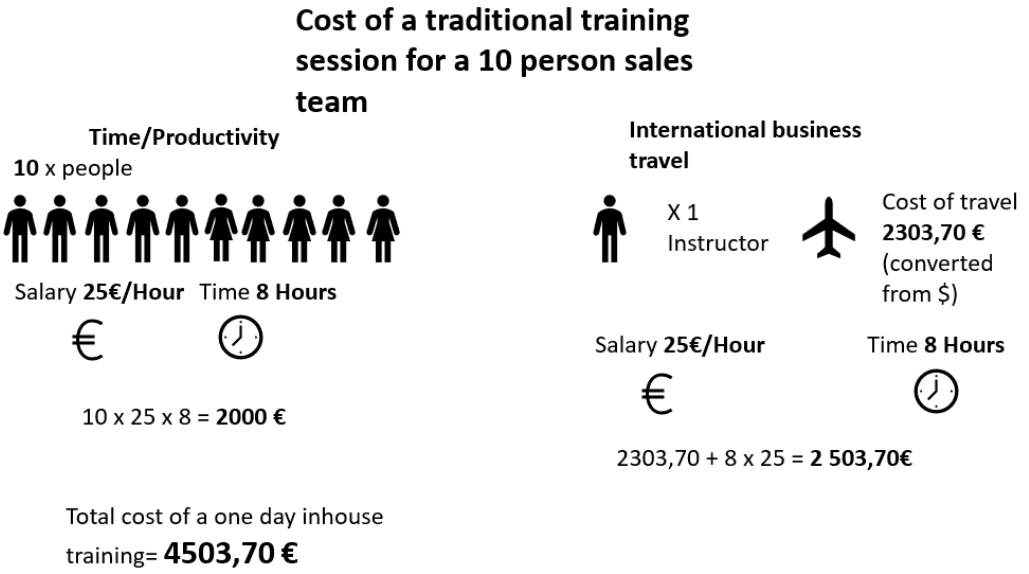

Figure 2. Estimation of a price of an 8 hour long a sales training session at the workplace. Based on the average cost of business travel by Certify (Certify 2020) and the example by Ingwersen. (Ingwersen 2018)

E-learning is a much cheaper and effective option. Multiple studies have proven significant cost reduction in companies by switching to e-learning or at least integrated it somehow to their training process. For example, British Airforce announced that they can reduce the cost of their training 1.1 million £ in three years by implementing e-learning for their training program (AC Education 2020). Training session online does not require an instructor to fly to the training session, the instructor can simply teach the subject matter through e-learning online.

2.3 Synchronous e-learning

Synchronous learning means that both the instructor and the learners are present at the same time but not necessarily at the same place. Traditional classroom teaching is a perfect example of this since both the teacher and the pupils are in the classroom all at the same time. Synchronous e-learning uses the same concept, the difference being the location. While learners still must be present at the same time, they do not have to be physically at the same location. Platforms like Adobe Connect, Zoom, or Microsoft Teams allow synchronous e-learning with either webinars, webcasts, or virtual classrooms. (Elkins 2015.) One of the benefits of synchronous learning is the active communication it provides: rather than waiting for an answer, the learner will have an opportunity to ask questions directly. This brings a human element to the learning: while interacting with others and having a dialogue with the instructor, the learning experience feels less robotic. The instructor can also help the learner better, when the instructor can answer the question or help in some other way on the spot, leaving no room for mistakes. Direct communication also helps the instructor to develop e-learning experience better and more personal through direct feedback. Interactivity encourages learning and with the right tools implemented to the e-learning system, such as screen sharing, participants can help each other to learn. (Thompson 2019.) Enabling communication is a major benefit of e-learning. According to the study by Salesforce, employees who feel that they have been heard are 4.6 times more likely to be empowered to perform at their best at work (Kirsch 2018).

The downside of synchronous learning is time. It can be hard to find time in a day or week for a synchronous e-learning session, especially if the participants are from different countries/time-zones. For example, since the time-zone between London and Los Angeles is eight hours, the only realistic time to have a synchronous e-learning session within working hours would be somewhere around 7-8 am London time and 3-4 pm Los Angles time, leaving a very short time frame in which to facilitate such an event. If the learners are all around the world, like in Wipak's case, finding a good time regularly would be impossible.

2.4 Asynchronous e-learning

Asynchronous e-learning is the opposite of synchronous e-learning. Synchronous e-learning happens when the instructor and the learners interact with each other at some place, website, or other application at the same time. Asynchronous learning however happens without real-time interaction or participation. Asynchronous e-learning does not even need an instructor: learning can be arranged with a self-paced scenario. A good example of asynchronous learning in traditional learning scenarios would be homework: the teacher

gives his/her pupils some learning activity to do on their own time. This does mean that communication between learners and the teacher does not exist, it just does not happen in real-time. (Elkins 2015.)

Asynchronous e-learning offers many advantages as well as some challenges. Here are some the things that one should consider, when making their e-learning asynchronous according to Elkins (2015):

Advantages:

- Can be viewed anywhere

  Asynchronous e-learning material can be viewed anywhere in the world, the only requirement being some sort of electronic device such as a computer or mobile phone. The material can be online on the internet or intranet, or it can be downloadable to one's device from the internet or a disk, CD-ROM, USB, etc. Both ways have their advantages and challenges: online material does not take hard drive space from your device but requires an internet connection. Downloadable material requires hard drive space from your device and many devices do not support CD-ROMS or similar solutions. (Elkins 2015.)

- Usable anytime

  One big advantage of the asynchronous method of learning is that it is not tied to a specific time. The learner can access the material at any time and fit the e-learning experience to his or her schedule. This means that nobody misses any learning sessions because of their time zone or work assignments. Asynchronous learning also allows self-paced learning: this means that the learner can progress the e-learning material at their own pace, without having to wait for others or falling behind because of a missed webinar or other synchronous e-learning experience. The advantages of self-paced learning include efficiency, effectiveness, convenience, reusability, and scalability. (Tamm 2019.)

- Enables user tracking and communication

  While one cannot communicate real-time like in synchronous learning, asynchronous e-learning still offers to communicate via e-mail or other messaging, maybe even inside the LMS. The instructor can also track learners' progress. Trackable information includes completion of courses, answers given in the courses, time spent learning, etc. (Elkins 2015.)

Challenges

Asynchronous e-learning comes with its challenges too. While communication is certainly possible in an asynchronous way, it is not as effective as real-time communication. One of the most effective ways of learning is live interaction with others, something that probably will not happen as much when learning is not happening live. Asynchronous e-learning also requires an electronic device, usually a computer, something that all learners might not have. Technical issues are also a possibility, slow internet connection or dated technology makes e-learning frustrating and not very efficient experience. (Elkins 2015.)

2.5 E-learning global market size

E-learning has grown rapidly in the 21st century. This is partly because the amount of internet users has grown vastly and because of that, demand for online content is higher. According to the Office for National Statistics, almost every single adult (99%) in the UK between 16-44 were recent internet users in 2019 (Global Market Insights Inc. 2009). According to the same statistics, the number of users in the UK has grown from 16.2 million in 2006 to 45.1 million in 2019 (Statista 2020). Global market size gives a good impression of what is the value of e-learning material and why it is important to research and develop further.

In 2019, the global value of E-learning surpassed 200 Billion USD. Compound Annual Growth Rate (CAGR) is expected to be 8% between the years 2020-2026, which would bring the value of e-learning to around 375 Billion USD in 2026. This growth is driven by technological advancements, such as improved artificial intelligence with an increasing use of the internet globally and cloud computing. Growth factors can be divided by regions as shown in figure 3. (Global Market Insights Inc. 2009.)

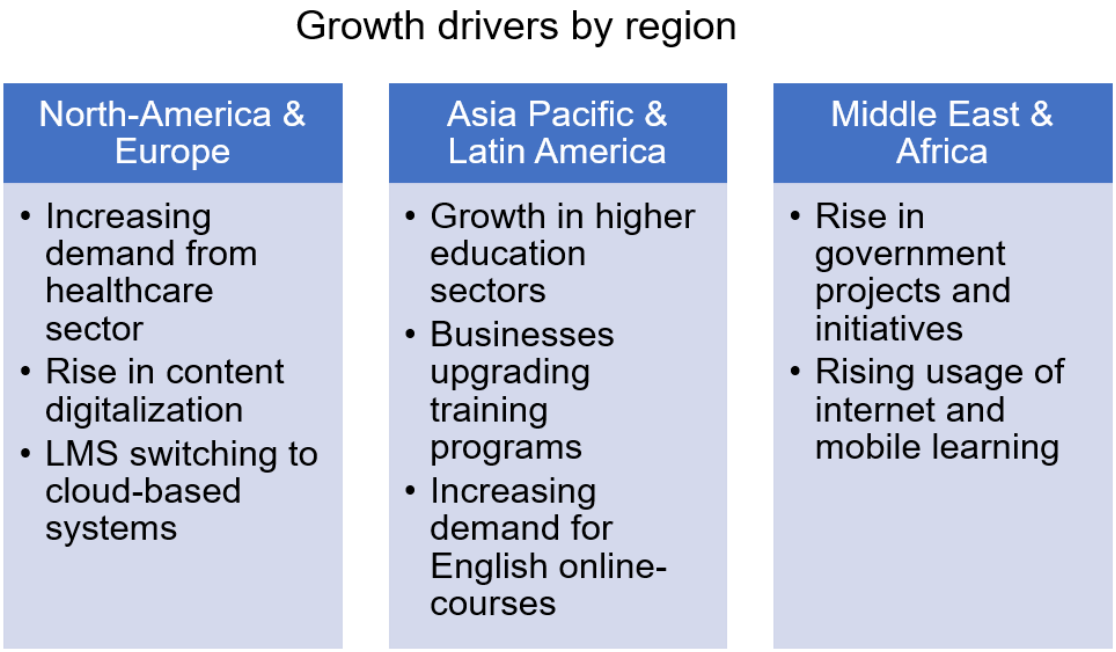

Figure 3. Modified figure from Global Market insights about growth in different regions (Global Market Insights Inc. 2009)

In the same period, virtual classroom technology is expected to grow at a compound annual growth rate (CAGR) of 11%. This is a technology, which enables interactive communication between the teacher and the pupil. As stated before, communication is one of the key reasons for a successful e-learning experience. E-learning has gained a lot of traction in the business world, some examples being WHO, G20, and The International Air Transport Association (IATA). (Global Market Insights Inc. 2009.)

Global epidemic COVID-19 has increased the use of e-learning rapidly, something that was not taken account of in the estimated growth. This means, that the expected growth can be even bigger than previously thought. Since the worst pandemic areas are in Spain, Italy, and France in 2020, it is expected that in these countries e-learning is going to be the way to educate already existing and new employees. (Global Market Insights Inc. 2009.) According to the World Economic Forum, in April 2020 there were over 1.2 billion children who were not studying at the school but instead studying online (Li 2020). This will lead to growth in the e-learning market and will most likely bring innovations to the corporate world as well.

2.6 Worldwide trends in e-learning

According to the studies, e-learning is trending up while traditional, Instructor-Led Training (ILT) is trending downwards. 2019 study made by LinkedIn shows that since 2017, 59% of the researched learning developers have spent more on online learning, while only 9% are spending less. According to the same research, 39 % of the companies have spent less money on instructor-based training as shown in figure 4.

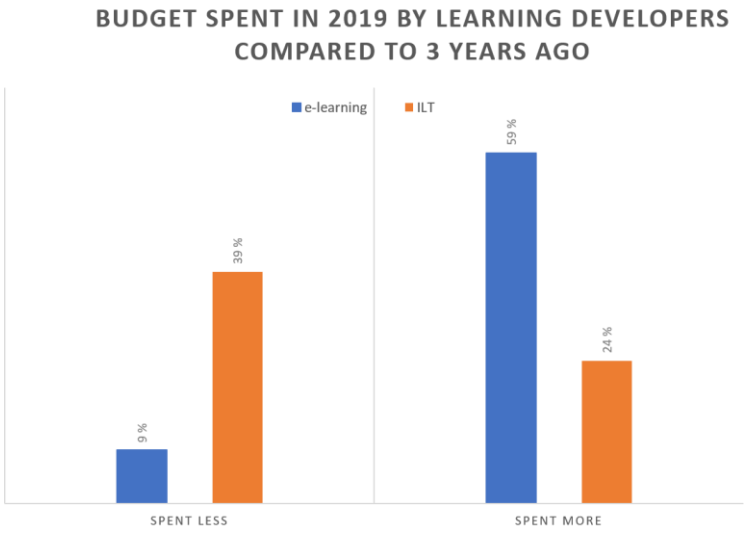

Figure 4. Budget spent on e-learning compared to Instructor-Led Training (ILT) in the companies by learning developers compared to three years ago. Modified from research by LinkedIn (Chelovechkov 2019)

Companies are also more willing to use money more money on learning: in 2017, 49 % of the researched learning developers had significant budget challenges. 2019 only 27 % of the developers had that same problem, almost two times less than in 2017. Furthermore, 43 % of the learning developers expected the budget to increase in 2019, while in 2017, only 27 % expected a budget increase as shown in figure 5. According to the same study, the top three subjects that the talent/learning developers are focusing in 2019 are identifying and assessing known skill gasps, increasing engagement with learning programs, and developing career frameworks. Developers are also making changes because of changing generation: 74% of the developers are planning to make a change to their learning development program to accommodate generation Z workers. (Chelovechkov 2019.)

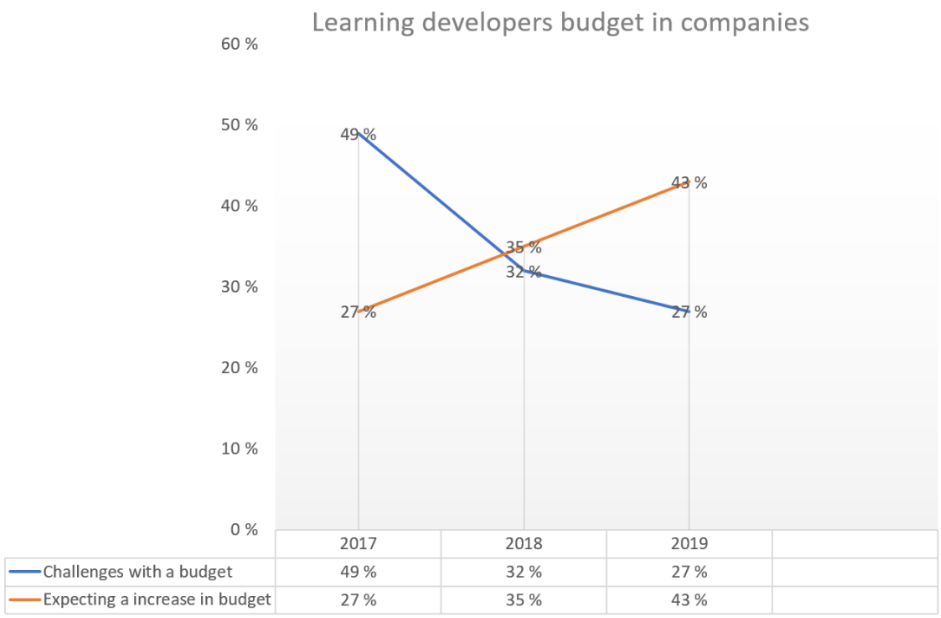

Figure 5. Learning developers' budgets in companies modified from research by LinkedIn. (Chelovechkov 2019)

Other workplace learning trends in 2020 include mobile learning, personalized learning, microlearning, gamification, video-based learning, and artificial intelligence to name a few (Pandey 2020b). More on these trends and how to utilize them in chapter 3 of this thesis.

3 E-LEARNING PLATFORMS IN THE CORPORATE WORLD

This part of the thesis presents typical features in the e-learning platforms and learning management systems, including a study about the learners' preferences. The Second part takes a short look at the typical features in the e-learning courses.

3.1 Typical features in the LMS and e-learning platform

There are a lot of different learning management systems in the market and choosing/creating one can be difficult. However, a good LMS should have some of the essential features to ensure good user experience. An employee survey made by Software Advice revealed some key features that the users would like to see in their LMS. 58% of the survey group wanted the online learning content to be split into multiple short sessions, 35% wanted real-life rewards based on the learning process and 24 % would like to see social networking through discussion boards (Westfall 2016). Based on these answers and trends in the industry some of the key features in the e-learning platform include:

Micro-learning

As the name indicates, micro-learning is a learning structure where learning happens in small lessons and short activities instead of one long assessment. Software Advice survey showed that 58 % of the people would be more likely to use the LMS if micro-learning were implemented, 38 % saying they would use it much more likely. Only 11% said that they would be less likely to use the LMS if the learning sessions would be shorter but in greater numbers. One explanation of why people would prefer this style of learning is that the amount of information is easier to digest in small parts instead of trying to absorb too much at the time. (Westfall 2016.) Other benefits of microlearning are its specification, quickness, and demand. Microlearning done right offers very specific information about the subject, this enables the learner to learn the specific information that is required at the time instead of trying to find the relevant information from a longer, broader source. Microlearning also does not require as much time than longer training sessions and its always available for the user. (Margol 2017, 4.)

Gamification

Gamification means taking elements, mechanics, and thinking from games and placing them in a non-gaming format, such as e-learning. Gamification does not necessarily mean making actual games into the e-learning format, but rather placing elements from games into the e-learning platform or LMS in various ways. Commonly used elements from games in non-game elements include points, achievements, badges, leaderboards, levels,

challenges, time-based activities, and many more. The primary goal of gamification is to increase the user's motivation, experience, and engagement. Since learning is an active process, it requires the active motivation to ensure starting the learning process and continue beyond. (Strmečki et al. 2015, 1109.) Gamification is a good tool for motivation: 62 % of learners would be more motivated to learn if leaderboards and colleague competition were implemented to learning, according to the research by Elucidat (2016).

This is however a double-edged sword since the study by Software Advice showed that people were not that interested in leaderboards: much more important was real-life based rewards based on progression and level progression. In some cases, leaderboards and competition would decrease motivation for a large group of people. Only 7 % of the surveyed people said that leaderboards would engage them more to use the company's LMS, while 55% of the same people said that real-life rewards and level progression would be the most effective incentive. While it may not be a surprise that real-life rewards would be the most popular opinion it does not mean that the company should buy very expensive things for everyone who participates in their e-learning program. One example of implementing real-life rewards to e-learning would be IBM: through their “Know your IBM” program, employees can earn points. These points then can then be redeemed for real-life rewards, such as gift cards and personal electronics. The downside of these rewards is that they typically do not offer long term motivation: only short bursts. (Westfall 2016.)

Social Learning modules

Social learning is based on a theory of one Albert Bandura, who theorized that people learn through observation, imitation, and modeling. A good e-learning platform or LMS can consider these things in multiple ways. In other words, collaboration is key to social learning (Spencer 2015). Collaboration at the workplace is something that the millennial generation is very keen on instead of a competitive one. According to the study by Intelligence Group, 88 % of millennials would prefer collaborative work culture over a competitive one. Since the same report suggests that by 2020, 40 % of the workforce in the USA would be millennials, it is probably something to something to consider while creating e-learning material (Ashgar 2014). Key thing is to enable communication between the learners, so they can collaborate their experiences with each other. Software Advice's study’s most popular answer for what social tool the survey people would want to see in LMS was discussion boards at 24 %, followed closely by sharing content at 23%. User ratings for the e-learning platform were also quite high at 21 %. (Westfall 2016.)

Mobile learning

Mobile learning, or m-learning for short, means using mobile technologies for learning, teaching, accessing, and exploring knowledge/information. While it is easy to think that m-learning is just applying smartphones as a way of learning, m-learning takes also place in other portable devices such as tablets, portable gaming consoles, and even wearables. M-learning is still a relatively new thing, so the definition for it is still a moving subject. It however offers huge potential in the e-learning market. According to the GSMA report, half of the world's population had a mobile subscription and a third of the population had mobile internet in 2016. In many emerging markets, such as Asia and Africa, the mobile phone is the most common way to get internet access. For example, in Nigeria, only 10 % of the population has a personal computer while 30 % have a smartphone and 60 % have a feature phone. (Hairsine 2016.) According to a report by BI Intelligence in 2014, 15% of all online video hours globally are watched via smartphone or a tablet and 50 million people watch videos in the USA alone with mobile devices (Danova 2014). M-learning is defined as a different way of learning than e-learning, but they use a lot of similar technologies, such as videos or interactive chats (Hairsine 2016).

Software Advice's study supports the theory that mobile devices should be implemented to the LMS. 48% of survey respondents said that they were more likely to use LMS via mobile access. The mobile aspect to e-learning makes it more convenient and accessible for the employees: mobile devices can help reach information anytime since it gives a place and time to use them anywhere. (Westfall 2016.)

Video-based learning

The popularity of videos has gone up rapidly in recent years: in 2018 there were already 22 billion daily video views globally. Video-based learning in the online environment is on the great increase too. Videos offer an engaging learning experience and offer a different way to gain knowledge. Especially increased usage of mobile learning and microlearning has accelerated the growth of video-based learning. After all, videos complement these trends very well: videos are easy to watch on mobile devices and they can be made very compact. Short, compact videos are easy to digest and can be viewed anywhere due to mobile devices. (Pandey 2018a.)

Although videos seem like a great addition to the e-learning platform, it can be an ineffective learning method if used incorrectly. Sometimes video-based learning can be quite passive, especially with longer videos or if the video requires a high level of cognition. One solution to this is implementing interactive elements to the video: hot spots, click to reveal, and other similar solutions. Other solutions to make videos more intriguing to the learner include (Pandey 2018a):

- animated videos with infographics and text
- scenarios or story-based videos with people
- including experts about the subject in the video
- implementing story and narrative elements
- kinetic text
- whiteboard animations
- applying interactive elements.

3.2 Typical features in E-learning-courses

E-learning courses are a major part of the e-learning platform. While creating new e-learning courses certain criteria should be applied to make the best the courses as useful to the learner as possible. Features mentioned before about LMS can be applied to the online courses as well, such as gamification or microlearning. Here are some of the features unique to online courses according to the Talent LMS (2014):

Proper feedback channel

A proper feedback channel ensures that the learner and the instructor can communicate without a problem and the feedback is easily available. Proper feedback is very important for the learner and ensures an interactive learning experience. It also ensures that the learner's progress is tracked. Feedback can happen through multiple tools, for example with e-mail. Well-designed LMS gives these kinds of tools and makes using them easy. Everyday tasks should be easily available and simple to use. (TalentLMS 2014, 53.)

Professional content and delivery methods

The E-learning course can be visually fine, very easy to use, and provide feedback, but does it matter if the content of the course is not up to par or the learner cannot access the material? Material inside the course needs to be professional and keep the standard up for the whole LMS. This means reliable sources of information and that the creator of the courses knows the subject very well. Tested delivery methods are to ensure that the material can be accessed with as many platforms and browsers as possible. (TalentLMS 2014, 53–55.)

Online Tests and quizzes

Online tests and quizzes are a vital part of the e-learning course structure. They offer a tremendous amount of benefits and make tracking the learners process simple and effective. Quizzes offer a simple way to learner test his or her knowledge about the subject, offering instant feedback. A good LMS can calculate and offer instant information to the learner, how the test went instead of waiting for the instructor to evaluate the test results. This way learners can easily see what went wrong. Tests have also been proven to increase engagement to the learning, tests force to the learner focus on the learning material because the learner knows that he or she is going to be tested on the subjects. The challenge with the tests and quizzes is to make them difficult enough without being overly difficult: the too easy test will not keep the learner engaged while too hard of a test can demotivate and result in searching the answer elsewhere online instead of the course. (TalentLMS 2014, 56–61.)

4 DIFFERENT LEARNING STYLES

In this part, the thesis investigates different learning styles and their meaning in the learning process. The first part describes Kolb's theory of learning and the second one looks at other learning theories, such as behaviorism.

4.1 Why learning styles matter in e-learning?

There have been multiple different learning theories over the years that can be applied to e-learning as well. Without understanding how people learn, it is impossible to create e-learning material at its full potential. A good e-learning course should consider different learning styles to reach the maximum learning potential with the learners (TalentLMS 2014, 64). Even though some of the learning theories presented here are older than e-learning, it still important to understand the fundamentals of learning and maybe apply those theories to the modern way of learning.

While there are multiple different learning theories, learning is a complex matter and is somewhat of a mystery. Different learning theories presented here disagree with each other since learning is subjective and can be approached from many angles. However, all of these learning theories offer some insight into how various groups of individuals learn and under which conditions learning happens. (Bélanger 2011, 11.)

Kolb's theory of learning

Part of creating a successful e-learning platform is to understand how your targeted audience is going to learn best from it. Psychologist David Kolb started theorizing about different learning styles in 1984. His thought process was, that our different individual learning styles would emerge based on our genetics, life experience, and demands of the current situation. Based on these believes he was able to describe four different learning cycles and also developed theories about experiential learning and learning style inventory. (Cherry 2020.) Kolb was a big believer in learning from real-life experiences and then in four steps process something from it. These steps are as follows (Parthasaraty 2018):

1. Concrete experience

   The first step is the actual, concrete experience of something new. This can be for example using a tool or a machine for the first time or visiting a new location. Now the individual has based on starting to learn something by having the experience. In e-learning this would happen ideally before the actual course/training: Individuals would have had some experience with the subject.

2. Reflective observation

The second part is reflecting the new experience based on the information that the individual had before the experience and the experience. An individual may have heard something positive about the new tool or location, but his or her own experiences tell otherwise, individual would deem it as bad. E-learning could be this previous information, which then creates an information base for the new subject. A new employee can attend e-training before starting the job and based on that information, reflect the concrete experience against that knowledge.

3. Abstract conceptualization

After deep reflection or observation, the individual comes up with new ideas about the subject. The individual might not use the tool anymore, use a different tool, or create a new tool altogether. While creating e-learning courses, it is important to give individual proper feedback channels so he/she can share these ideas with other people as well.

4. Active experimentation

The last piece is experimenting with new ideas. With experimenting, individuals might create something completely new or find a way to do things more efficiently. Ongoing feedback is important while creating new e-learning material so these experiments can be implemented to others.

4.2 Different learning styles by Kolb

The previous four steps are a good baseline of understanding individuals learning cycle, but not all learners follow the same steps. Some only initiate active experimentation, some observe and reflect from that, and those who form new ideas and innovations. This leads to four different learning style personalities:

1. The Accommodator (doing and feeling)

This style of learning is for people who like to feel things, accommodating what people have to say. They go with consensus and perceptions. Accommodators like to do things and actively experience and are considered a bit of risk-takers. When solving problems or learning something, they like to use trial and error- a type of solution. Usually, accommodators can be found in a technical field or action-based jobs, such as marketing or sales.

2. The Diverger

Like accommodators, divergers like to learn by feelings: emotions are a major factor when making decisions and learning. The difference is that while accommodators like to do things themselves, divergers are more comfortable observing and based on that, reflecting. Artists, counselors, and other artistic or humanitarian tend to have this learning style.

3. The Converger

Convergers are thinkers/doers: they shine in practical applications. The best situation for converger is when there is only one solution to the problem

4. The Assimilator

Assimilators' strengths are in abstract conceptualization and reflective observation. Creating and understanding models for theoretical situations is their bread and butter. Abstract ideas are usually more interesting than people, they are less concerned about the practical side of things or how their theories work in practice. Typically, assimilators work in the field of science or math: jobs that require planning and research. (Cherry 2020.) Different learner types and their relation to each other are shown in figure 6.

	Doing **Active Experimentation** **AE**	**Watching** **Reflective Observation** **RO**
Feeling **Concrete Experience** **CE**	Accommodating CE/AE	Diverging CE/RO
Thinking **Abstract Conceptualization** **AC**	Converging AC/AE	Assimilating AC/RO

Figure 6. Kolb's 4 different learner types based on Cherry (2020)

4.3 Other learning theories

Here are some of the other learning theories worth considering while creating online learning material according to Bates (2014):

Behaviorism

Although behaviorism was developed 1920's, it is still one of the main learning theories used while teaching. The basic idea of behaviorism is that certain stimulus activates a certain type of behavior. At its simplest, it could be a simple reflex to something, like contraction of an iris when exposed to bright light. Behaviorism does not care much about immeasurable things such as feelings, attitudes instead of believing the invariant chain of events through rewards and punishment. Human behavior is seen as controllable and predictable. Although human behavior may not be that simple, behaviorists have proven the power of reinforcement in the learning process. Reinforcement does not need to be anything earthshaking, things such as immediate feedback or correct answer in a multi-option test can create reinforcement, and through that, learning engagement.

Constructivism

Constructivism differs a lot from behaviorism: behaviorists believe in predictable and constant conditions where the actual learner has very little or no control over the process. Constructivists are focused on the importance of consciousness, free will, and social influences in the learning process. The social context in learning is critical for many learners: ideas are not only tested with the instructor but with friends, colleagues, and other learners. Every learner is also an individual, they have different experiences. That means that the learning process is not as predictable as behaviorists may assume. Social interaction with the learners is key to understand how they are learning, as learning is in many ways a social process. Thus, while designing and maintaining an e-learning platform, efficient tools of communication with the learners are very important.

Online collaborative learning

Online collaborative learning theory has been founded based on both constructivism and the rising usage of the internet. It was originally called computer-mediated communication, or CMC for short, but was later developed into Online Collaborative Learning, OCL. Its main philosophy is based on social interaction through technology: learners are encouraged to work together to gain knowledge: this includes group work, inventing, and exploring different ways to innovate. While the learner is encouraged to be active and learn socially, it does not mean that the instructor's role is insignificant. The instructor's role is still to guide and offer a gateway to the knowledge that the learner needs. This is where OCL differs from other approaches to technology in learning: the main goal is not to replace the instructor with technology but rather enable more efficient communication between learner and the instructor. The ensuing social discourse is not random in this situation: it is restricted by the instructor to ensure that the information learner's needs is delivered efficiently. (Bates 2014.)

5 CASE: WIPAK

Part of this thesis was also a compact, semi-structured interview done via Google forms. The surveyed people were selected learners of the Wipak WAY. The reason for this interview was to understand better how to improve the learning portal to be more engaging, what possible online learning elements could be added and what type of learning material the learners prefer the most and answer research questions. In a structured interview, questions are identical and in the same order, without giving predetermined options. This way the surveyed person can have their view, opinion, and feelings about the subject (Pitkäranta 2014, 92–93). Questions were designed to be open-ended, so the surveyed learners could tell their own opinions without restrictions. Surveyed learners were selected from those who had used the WAY most: this was done because these learners had the most insight about WAY and hopefully had some ideas to improve it further. Interviews were kept short and questions on the topic to keep the subject of the research problem. A structured interview was sent to 22 learners, all of them active learners in the system. Most of the surveyed learners were outside of the Wipak organization, this because the e-learning portal was mostly meant for outside of the organization.

The interview form was sent 3.8.2020 via e-mail to selected learners. E-mail message contained a link to the questions on google forms with a message to engage learners to answer the questions. The message was short and on to the point: the goal of the message was to inform about the meaning of the questions, which was to further develop the platform to be more engaging to the learners. The survey was anonymous, and this was also informed to the leaners as well as that the answers would be used in the thesis about e-learning. The first look of the answers was 17.8.2020: this was done to give the surveyed learners enough time to answer. Unfortunately, the answer percentage was not great: out of 22 contacted learners, only nine responses were given. One explanation for this could be the timing: some of the learners might be on vacation during summer months. This is however enough to make some assumptions since the answers were open-ended. The surveyed learners were not necessarily e-learning experts, but they did have experiences with the e-learning platform. Because of this, it was concluded that they did have enough expertise and certainly opinions about the subject matter. The questions and answers were the following:

1. What would you describe being the most efficient way for you to learn?

This question was asked to find different learning types and preferences: with this information, learning material can be designed in a way that supports these learning types.

Seeing, feeling, doing.

Webinars

Learning with other people in workshops or similar kinds of learning environments.

Combine face-to-face training with some exercises for you to do on your own

by doing

The designated lectures for a given time have been great. But it is also good to have the lecture and learning material on the portal to take a look at when needed. Distributors meetings are very useful but given COVID and all ... ;) But it can be very useful to hear how others are doing things

Team conference

WEBINAR + TRAINING SESSIONS

The reoccurring theme with answers was the hope for teamwork and doing tasks: this supports online collaboration theory, constructivism as well as Kolb's four different learning styles. E-learning courses were given tasks in form of tests to make them more efficient.

2. What would be the best way in your opinion to engage people to use the WAY e-learning portal?

This was asked in hopes to get new ideas for engaging the nonactive learners. This question was added keeping in mind that the learners are not experts in this matter: it however adds perspective from people who were engaged to the e-learning portal.

Let me call it "Edutainment. :-)"

By distributing information about the portal via many different kinds of medium and by constantly developing the learning material in the portal.

Reward the best, most active users, show a list of top learners

pushing them to go through relevant trainings when they have product related questions instead of answering them right away. so teach them fishing"

by informing about the use, with online courses and webinars

More innovative content

The themes of the answers were mostly the importance of informing the learners and engaging content. This compels the study by SoftwareAdvice (Westfall 2016) and adult

learning theories: learners need proper feedback channel and communication to ensure long term learning experience. Elements of gamification were also mentioned: this follows the study by SoftwareAdvice about leaderboards and level progression. Rewards also support behaviorist learning theories about a positive stimulus.

3. What kind of learning material would you like to see in the WAY?

Different kinds of learning material are needed to make sure that all of the learners can learn most efficiently and interestingly possible. Some people learn from doing, some by videos, etc. This question was asked to gather data for the research questions about e-learning material inside the platform. After all, the learners are the ones using the e-learning platform, so their opinion should be taken into consideration while adding new material.

Pictures with explanations. So more visuals, less text.

PowerPoint presentation

Learning material should be interactive and allow the use of group learning methods.

New product introductions

presentations, videos, data sheets etc

all kinds. both the Wipak products and use of them and some academical information. f.x packing instruction, how to and why.

Using your sales network for more content. You need to be able to compare and contrast to other products so your sales networks can help as they are doing this daily

VIDEO

Answers were varying, but common themes were interactivity, product information, and visual elements. Video learning seems to be an engaging option, as stated by Pandey (2018a). Videos and webinars were an integral part of the WAY.

4. Which of these training styles suits you the best?

The final question was different than others: it had different options instead of an open-ended- answer option. It however had option “other” which allowed the surveyed learner to write their own opinion. The question was set up in this way to find which current training styles used in the company were the most effective and desirable.

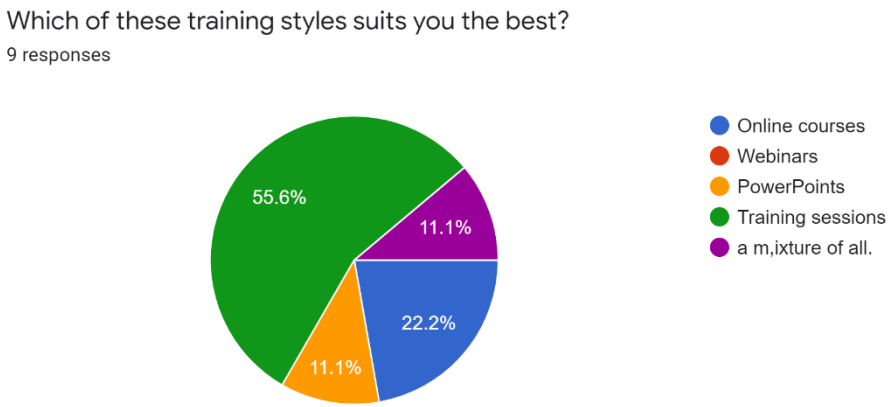

Figure 7 Results from the survey, five responses for the Training session, two for the Online courses, one for the PowerPoints, and one for a mixture of these all

Results indicate training sessions being the most suitable options for the survey group as shown in figure 7. Training session got five votes, Online courses two, bot PowerPoints and mixture of all got one vote. Surprisingly, webinars did not get a single vote for being the most suitable way to learn. This fights against the benefits and growing trends of these e-learning methods against traditional training sessions: this does not however mean that instructor-led training sessions cannot be part of e-learning.

6 CREATING NEW E-LEARNING PLATFORM FOR GLOBAL DISTRIBUTOR MARKET

This part of the thesis describes the process of creating the e-learning platform Wipak WAY – Wipak Academy for You. The second part describes, how the different e-learning courses were created for the platform. Lastly, the thesis evaluates, how the creation process went, what could have been done differently, and future considerations for the e-learning platform.

6.1 Creating an e-learning portal WAY

The purpose of this practice-based thesis was to create a new e-learning platform called Wipak WAY – Wipak Academy for You. Wipak is one of the market leaders in food and health-related packaging products, operating globally in every continent. Wipak has hundreds of employees globally and around 1,4 billion sales in 2019. The business is divided into two larger departments: food packaging products and health-related sterile packaging products. The health department is further divided into two departments: Medical Device Industry (MDI) and Health Care Facilities (HCF). MDI is a business were health-related sterile packing solutions are sold to other companies who make health-related products, while the HCF department is sterile packaging solutions sold directly to the health care facilities. HCF products have very high standards and different applications for sterile packaging and are essential in keeping the instruments used in health care facilities sterile and safe for the patient. Most of the HCF products are under Steriking® trademark. WAY was created for salespeople and distributors who sell these Steriking® products to direct health care facilities: its purpose was the contain learning material about Steriking® products including their applications, benefits, usage, and different product types. This information is vital to the salespeople and distributors: they must know what they are offering to the health care facilities.

Creating this e-learning platform offers a significant way of cost savings for Wipak: online learning is tremendously cheaper than traditional learning and training, as is shown in chapter 2 of this thesis. It also helps Wipak reach the company's strategic goal: Zero Co_2 by the year 2025. WAY helps to reach this goal when instructors do not have to fly globally to teach about the products. E-learning is a rapidly growing business around the world, and it is something that continues to grow over the years, as demonstrated by multiple pieces of research, like the one by Global Market Insight Inc (2019). WAY-e-learning platform also offers multiple ways to learn in form of product videos, webinars, PowerPoints, and e-learning courses. These learning methods support many types of learners

and their learning preferences, based on adult learning theories such as Kolb's (Cherry 2020). Wipak has distributors around the world in every continent and this e-learning platform provides them a way to learn despite different time zones. E-learning was designed to be used with both computers as portable devices, such as mobile phones and tablets.

This thesis was done during the global crisis COVID-19 and the importance of online learning is even greater than before. Many people, including the writer of this thesis, are forced to work from their home and should have an easy way to access the information that they need in their work online. This thesis was done in English because the commissioner of the work asked so: WAY was also done in English, Spanish and French. The learning material inside the portal contains specific product information, so the e-learning courses, webinars, PowerPoints, or product videos cannot be shown in this thesis.

6.2 Prewise Gimlet LMS

The LMS used in making the e-learning platform was Prewise Gimlet LMS. This LMS was already used in the organization in another learning portal. It allowed both making the e-learning courses and designing the e-learning platform WAY through two different applications: Gimlet composer and Gimlet LMS.

Gimlet LMS is fairly easy to use and offers a guide both in video and text format. Its purpose is to create and manage an e-learning portal, publish learning material, create learners to the e-learning portal, and for communication with said learners. It also allows seeing statistics about the learner's progress.

Publishing learning material

Publishing learning material to the e-learning material was not a complicated process. First, the material was uploaded to the Gimlet LMS, either directly from Composer in the case of e-learning courses, or the case of media, uploading it directly to the LMS. After that the material can be assigned to sub-categories in the platform: either under e-learning courses, webinars, PowerPoints, or product videos depending on what it is. The material can be assigned a short description. This was also done since it gives the learner an understanding of what the learning material is going to be about. Descriptions of the learning material were given short yet informative to insure learners' interest in the material.

Most of the learning material was published before the launch, but new material was added after that too and will be added in the future as well. Whenever material was published it was informed to the learners by messaging via email.

Creating learners to the e-learning portal

WAY was not designed to be available for everybody since it contains specific data about the Steriking® products: only selected people were given access to the learning material. Creating learners to the WAY-portal was based on the list of distributors, salespeople, and some other employees from Wipak that needed this learning material. Creating the users can be done either manually adding learners one by one or straight from an excel-file. Regardless, the only information that was needed when creating new learners in the Gimlet LMS was a first name, last name, and a valid e-mail address. The username was created to be the same as the e-mail address to avoid confusion with the learners. Gimlet LMS also allows the admin to create a password for the user or assigning the same password for multiple users. This option was however not used because of the learner's privacy. Instead, learners would use the option "I forgot my password" the first-time logging in and assign their password through that. This option also allows the learner to choose a password that they remember. Learners were then assigned to one group, "Wipak WAY users" to help communication and tracking the progress of learners. The process of creating new learners was streamlined by adding a link to the login page for access requests: through this link, learners could request access via e-mail as shown in figure 8.

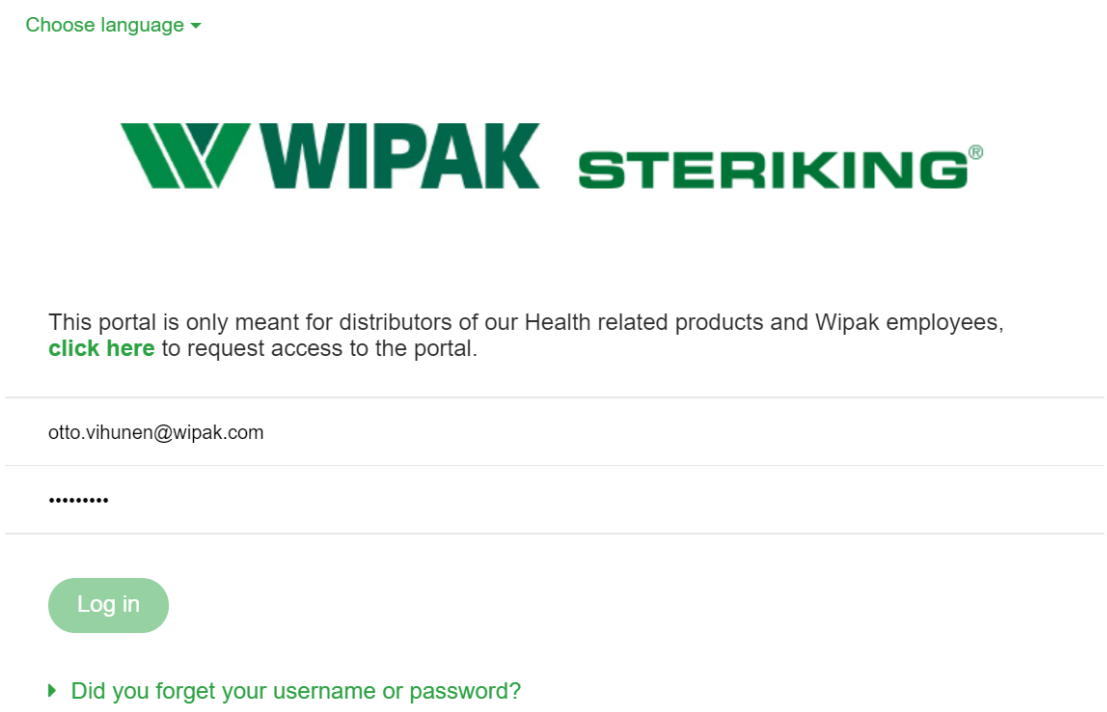

Figure 8. Log in page for the WAY, the learner could only access the portal after given access by the administrator

Communication with the learners

Communication and feedback are an important part of the learning experience and should be something to consider while creating the e-learning platform. (TalentLMS 2014, 53.) Although implementing social elements to e-learning would have been great, it was not really possible. This is because the learners were not supposed to know each other's identity. This meant that the learners could not communicate with each other directly expect in the form of user ratings, which was anonymous. Learners could give a star rating from one to five to the e-learning material on the platform. User ratings make the learner more engaged to the learner according to the study by Software Advice (Westfall 2016). Learners were given the possibility to give feedback to the instructor/admin of the WAY through multiple channels: either by leaving their comments on the textbox at the end of an online course or by sending an e-mail. The platform was designed in a way that the learner could click a link on the front page, which directly opened the email and the correct corresponded. This way learner could easily communicate with the instructor.

Gimlet LMS has its messaging tool that can be used to send messages to specific learners or to the whole learning group. This tool will send the message through e-mail to selected learners without showing the recipients of other learners. Messages could be timed to be sent in time, for example when new learning material was added. Messages sent included a description of the WAY, how to use it, and what it is for. This messaging tool enabled asynchronous communication with learners from the instructor's point of view.

Gamification

Elements of gamification were also implemented to WAY, mainly in process tracking and own profile. Gamification elements were added to the e-learning platform in hopes of better engagement to learning as per the study by Software Advice (Westfall 2016). Learners can follow their progress in their profile or at the content page, seeing how many percent they have completed that learning material. In the profile, learners can also see what e-learning courses they have completed, or webinars watched. The learner could also add their picture in the profile section and change their personal information, such as name or e-mail address. Gamification was discussed in meetings to be something possibly improve in the future: after all, researches and the survey showed it being a beneficial part of e-learning.

Visual design

The visual design of the e-learning platform was kept fairly simple. The background color of the page was white and Wipak's trademark green, also containing the logo of the company and the globally well-known product line, Steriking®. The top right corner of the page contains links to the front page, all of the content, profile section, language options, and

the logout option. At the bottom of the page linked to terms of use and feedback link to the administrator of the page, Prewise GimletLMS. All of the categories had little thumbnails too, all property of Wipak. Thumbnail pictures contained pictures of other people to make the e-learning experience seem more human and personal experience to the learning. Another way was the content carousel. This was kind of a slide show containing three slides at the upper part of the page. These slides contained pictures and text which offered guidance and greetings to the learner. The learning experience was made a little bit more personalized by adding an algorithm to the front page which recognized the learner's name. This meant that every time learner opened the portal, he or she was greeted by the text "Hello (learners name)"! as shown in figure 9.

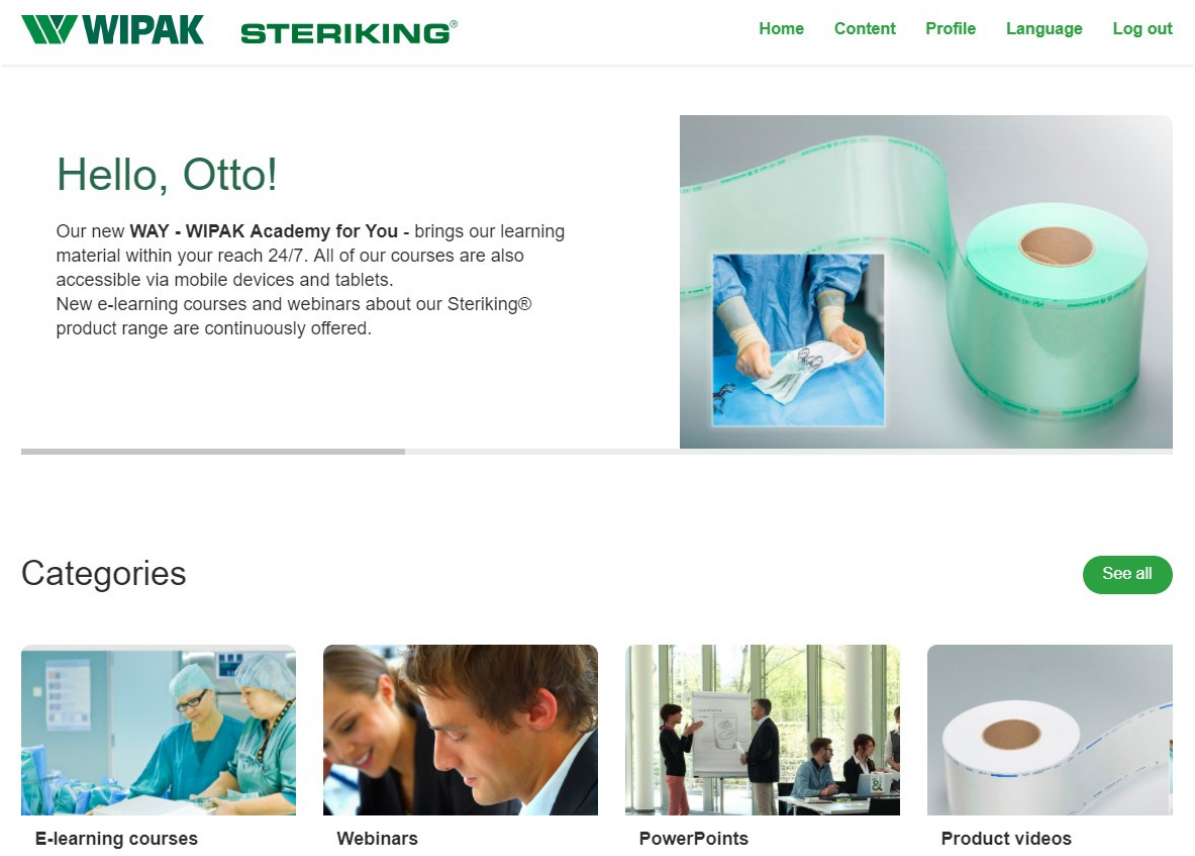

Figure 9. Frontpage of the WAY - WIPAK Academy for You.

Learner tracking and reports

Part of the many benefits of asynchronous e-learning is process tracking. This means both the learners and instructor can track the learning progress. The instructor can see, which learners have accessed the learning material and how much they have progressed

in said material. The learner could see from his or her profile what learning material they have accessed and how much they have completed it. Gimlet LMS contains a reporting function, a function that creates reports of the learner's progress. These reports display a great amount of data about who has accessed the material, when it has been accessed, how many learners have visited and completed the material, how many times the learner has visited the platform and how long they have spent on the platform. This data proved to be very useful when analyzing, what kind of material was used the most, and how popular WAY turned out to be. This data showed that the most popular learning material in the WAY were e-learning courses and PowerPoint presentations, the most popular e-learning course being accessed by 32 people and PowerPoints being accessed by 24 people. Video material was perhaps a little surprisingly the least popular material, the most popular webinar was watched 15 times according to YouTubes statistics. Product videos were accessed by nine people.

6.3 E-learning material in WAY

To apply to as many learning types, learning material inside the platform should be varied. Learners are individuals and learn individual ways: some by video, others by doing e-learning courses. WAY contained four different types of learning material: product videos, PowerPoints, Webinars, and e-learning courses. All of these materials supported each other: all of the learning material in the platform could be accessed with any of these options

Webinars are usually interactive video sessions where the instructor gives a demonstration/teaching session for the learners. These webinars were then uploaded to the WAY. Instructors were experts in the subject matter. These webinars offered synchronous communication for the learners: at the end of the webinar, learners could ask questions from the instructor and thus getting an answer immediately. Webinars' lengths were around 40 to 50 minutes. Because of the length and quality of the webinars, loading/staring the video took couple minutes, depending on the quality of the learner's network. Since learners were all around the globe, webinars were also uploaded to YouTube, where they could be accessed instantly with lower quality networks and mobile phones. Webinars were the backbone for the e-learning courses: material inside the course was based on the webinar in a more condensed version. In the survey, some answers indicated that the webinar was the most efficient way to learn for the learner, yet there was not a single response for webinars being the most suitable way to learn.

PowerPoint presentations were used in the webinars and uploaded to the WAY as well. The learner could upload the webinars from the platform by simply clicking it open. This

offered the learner way to learn even without constant internet connection: once PowerPoint is downloaded to the learner's device; it could be accessed anytime without internet access. PowerPoints were made by the same experts as webinars about the subject. PowerPoints were the most suitable way to learn for one learner in the survey.

Product videos were short videos used in the webinars and e-learning courses. They were uploaded separately to the WAY for quick access. The learner does not necessarily have time to watch the whole webinar and find the product video inside it, watching only the product video can be considered a quick micro-learning session. Product videos were also uploaded to YouTube for quick mobile access.

E-learning courses were a major element in the WAY as well. Many learners learn best from doing and interacting with the learning material, and e-learning courses provided that kind of learning style. These courses were either made by experts or the author of this thesis based on the webinars and PowerPoint presentations. Courses were designed to be around 15-30 minutes long, with subsections. This was done so that the learner could take smaller learning sessions instead of spending hours studying.

6.4 Creating e-learning courses with Gimlet Composer

Gimlet composer is a separate application than Gimlet LMS and was used as a tool to create e-learning courses to the WAY portal. E-learning courses are a major part of e-learning since they provide an interactive way to learn and through quizzes and tests, test, and challenge the learner. Different learning styles and current trends were kept in my mind while designing courses, trying to include variety in the content within the limits of the course creating tool.

Composer contains many tools to make informative yet engaging online courses. Elements added to the courses included:

- Print

  The print could be added normally or copying straight from a source. Basic tools for managing the print are also on the system, including bold, italics, underlining, bullet point/ numbered lists, adding hyperlinks, headlines, and superscripts/subscripts. The text could be changed to be either on the right or left side of the screen. The print could be also placed in hot spots and text boxes.

- Pictures

Pictures could be added to the course by first uploading them to the Gimlet Composer and then selecting them from a media bank. This means that everybody else from your organization can use the picture as well. Pictures could be modified in size and can be placed either left/right side on the page or as a whole page size picture. Pictures are a major part of learning since some learners learn easier from them and see the actual products or their applications. All the pictures used were the property of Wipak.

- Video

Adding video-material to the e-learning courses was similar to adding pictures, first uploading them to the media bank, and then adding them to the page. Unfortunately, interactive videos are not a possibility in the GimletLMS, but added videos were purposefully kept short inside the course. This was done because the courses were meant to keep compact, abiding the rules of micro-learning. Videos were kept mandatory to receive 100 % completion of the course in the English version since they were short but very informative. Subtitles were added to the videos so they could be accessed anywhere, even without sound.

- Sound

Sound files were not used in the making of the courses since there were already webinars and product videos about the learning material. E-learning courses were meant to be accessible anywhere and sound could distract some type of learners who want to concentrate on the learning material without distractions such as sound. It was an option however and adds a possibility to have commentary on the learning page.

- Tabs

Tabs were meant to be used if there was a need to but a lot of text on one page. Tabs enabled print to be put on both the left and the right side of the page. Multiple tabs could be similarly placed on the same page than slideshows, only with more room for print. Tabs were not used since there was not a lot of need to put that much content on the same page, instead of distributing the learning material on multiple pages.

- Infoboxes

An infobox is a small, clickable box that opens and reveals information in the form of print or/and a picture. info boxes were used quite a lot in the courses, since they offered to input information under different headlines, creating an easy way for the

learner to check specific information, for example, specific products product codes, and sizes.

- Hot spots

Hot spots in the Gimlet Composer are areas placed on the pictures, which show new information by either clicking it or hovering over it. The area could be filled with text or it can be a circle with a plus symbol on it, symbolizing that it contains something extra. The information inside the hot spot could be print or a picture, hot spots were utilized a lot in the online courses since they offer a great way to something from the picture: for example, products different layers or parts. Hot spots also served a similar purpose than infoboxes: diverging learning material into different segments.

- Slide show

Slide shows were another handy tool to deliver information more interestingly and visually. Slide shows could be placed on the page and be used much the same as PowerPoint without effects: by swiping or clicking the picture, the learner could see the next slide. A timer could be also added so the slides would change automatically in a selected time. Slides could contain a picture and a headline. Slides are useful when lots of pictures are required on the same page: instead of placing a lot of small pictures on the page, slideshows enable larger pictures with headlines. Gimlet Composer is shown in figure 10.

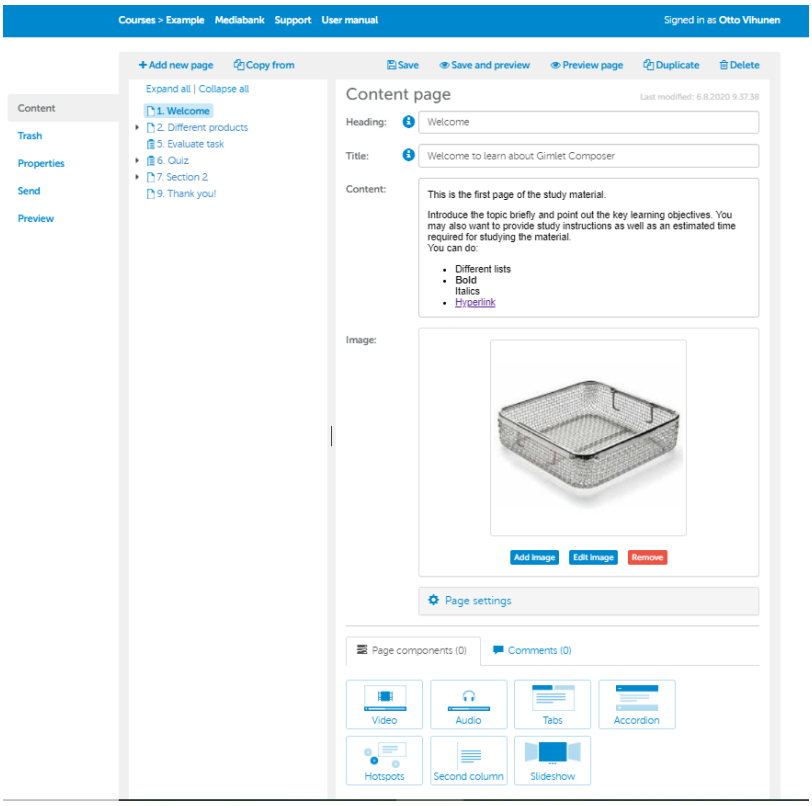

Figure 10. Gimlet composer was used to creating e-learning courses to WAY.

Quizzes and tests

Quizzes and tests are standard in e-learning courses to benchmark how the learner has understood the learning material. It offers both the learner and instructor to track the learning progress. Quizzes were designed not to be overly difficult but challenging enough that the learner needed to read and interact with the material inside the course. All the information for the tests and quizzes could be found in the e-learning course itself: there was no need or benefit for looking outside sources. Tests were sprinkled inside the course besides the final, bigger quiz. These tests were meant to be test specific parts of the course and be placed directly after the subject matter. This was done to enable microlearning: the learner could only learn a short part of the course and then test his or her information by a test instead of finishing the whole course in one sitting. The learner gets the feedback immediately from questions answered correctly and incorrectly. Questions were mostly statements of the subject matter with “yes or no" as answer options.

Quizzes were at the end of the course and were meant to test the knowledge about every subject in the course: it contained more questions than previous tests. Quiz could be attempted multiple times: this was done in order to not discourage the learners. Passing

percent for the quiz was set fairly high: between 70-100% in order the quiz have relevance, requiring actual knowledge of the course. After the quiz, the learner could choose to leave feedback about this specific course: this was not mandatory once again to not discourage the learner. Feedback is however important both for the instructor and the learner: feedback could be left in a textbox with no character limit.

6.5 Language versions

The main reason that this learning portal was created was to be an accessible learning tool globally to Wipak's distributors and salespeople. While English is the commonly used language in the corporate world, some people would be more comfortable using their native language. Worst case scenario, some learning material could be misunderstood or not understood at all. Therefore, Wipak WAY's interface and the e-learning material inside of it were decided to be done in three languages: English, Spanish, and French. These languages were chosen because most of the learners would speak one of them as their native language. The learner could easily change the language from either in the login phase or from the front page: this would show all the content in the selected language.

Creating the e-learning courses and WAY required an outside help from a translation firm x. First, the material was done in English, after that the material was sent to the translation firm with an offer request. When the translation firm sent their offer, it was considered and accepted. The translation process took usually around a week, after which new learning material was made. Webinars were also planned to be done in Spanish and French and then to be uploaded to WAY.

Translating e-learning courses was made easy by Gimlet Composer: all the English material could be copied from the original course to a new one. After that, the text was simply changed to either French or Spanish. Translations came in a chart, in which it was easy to see correct translations per sentence.

6.6 Launch and adjusting trough feedback

While creating a lot of e-learning material it is easy to overlook certain things and make the material only from one's own point of view. This is why it is important that other people look at the learning material and then make suggestions based on their views. Especially experts of the learning materials subject are important in giving their view, this ensures that the material is correct and up to high standards (TalentLMS 2014, 55). Before the actual launch of the WAY, the test group was created. This group could test the platform and give feedback. Based on this feedback, WAY was modified, mostly by changing certain

pictures or phrases. After this, a person born in England did a final check for grammatical errors, which there were few since the writer of this thesis and creator of WAY is not an English native.

The launch of WAY-portal was on the 15th of July 2020. Before this, most of the learning material was made and published to the portal. The launch was informed to the learners via Gimlet LMS messaging system, which sends the invitation to the learner's e-mail. The invitation contained a link to the portal, instructions on how to set up a personal account there, what benefits the learners get from joining the portal, and an overview of what learning material was in the portal as well as what learning material there was going to be in the future. The main goal of this invitation was trying to engage recipients to start learning trough WAY and make staring the learning process as easy as possible. The list of recipients was around 380 people. The number of learners in the portal would increase later to over 400 through requests.

It must be said that the launch was not as successful as anticipated. Gimlet LMS allows tracking to see who has visited the portal and what learning material they have started/completed. After one week of the launch, only 5% of the recipients had become learners by at least starting to study some learning material. To boost the number of learners, other people from the organization, such as sales managers, sent the invitation too. Wipak WAY was also mentioned in the monthly e-news with a link to the portal. This raised the number of active learners to around 7 %

6.7 Conclusions and future considerations

All and all results of this thesis can be called somewhat of a success, with some mistakes that could have been done more efficiently and effectively. The main goal of this thesis was to create the e-platform WAY and answer research questions about what makes a good e-learning platform and what kind of e-learning material should it contain to ensure the most efficient learning experience for the learner? Research questions were perhaps a little bit too broad: there is no clear answer to what makes a good learning portal or what kind of learning material is best for every individual: this is because of the multiple learning styles and learning preferences of individuals. However, certain elements such as video learning, mobile combability, micro-learning, and gamification make the e-learning portal more accessible and engaging. A good e-learning portal contains many different types of learning material, so the learner can choose in which way to learn based on his or her learning preference and current situation. Learning material should be engaging and easily digestible for quick learning sessions to enable microlearning if necessary. The survey indicated that the learners would like to see more visual elements, training sessions, and

social interaction with other learners, supporting online collaborative learning theory. According to the same survey, learners would also like to see elements of gamification in the portal through leaderboards. Multiple studies show that mobile learning is an important part of e-learning too and should be taken into consideration while designing the platform as well as the e-learning material inside of it. Although the survey revealed that the learners would still mostly prefer training sessions, it does not mean that the training sessions and other social elements couldn't be done through e-learning. This is recommended to be done the future of the WAY: more interactive pieces of training with the instructor, social elements such as discussion boards, and leaderboards. These would make the e-learning more engaging to the learners and would help certain types of learners to learn better when they have a chance to compare notes and develop new ideas together.

It is clear that e-learning is the learning method now and in the future. A study by Global Market Insight shows rapid growth for the whole e-learning industry, even without the global pandemic. COVID-19 has forced most of us into working from home and limit unnecessary social contact. It has also meant that studying has changed from classrooms to homes, where only e-learning is possible. Many companies, including Wipak, are changing more and more their traditional learning styles towards e-learning. E-learning offers substantial financial benefits when instructors or learners no longer have to be physically present to be a part of the learning experience. With that in mind, it would be beneficial that e-learning and WAY would receive continuous upkeeping and development.

WAY certainly has the potential to grow much bigger than it is now. At the time of writing, under 10 % of the created learners had accessed the learning material. With enough engaging learning material and easy access, the number of active learners should grow rapidly. Key thing is to keep learners engaged in the learning platform: one way to achieve this is efficient communication with the learners and adding gamification elements into the portal. With efficient communication, learners feel a more human connection and have a say in the learning material. Communication has to be ongoing in the future as well to excite the learners and further develop the material inside the platform. If the communication with learners is not ongoing and new learning material is not created regularly, there is a risk of the e-learning platform withering away.

Elements of gamification and new language versions were also in the planning stage at the time of writing. According to the study by SoftwareAdvice (Westfall 2016) and new trends, level progression badges, leaderboards, and rewards could boost learning engagement significantly. Gimlet LMS allows creating certificates to the learners after they have completed certain e-learning courses and other learning material, this relatively

small reward that could boost learning engagement. Leaderboards could be implemented either by showing the progress of other people from the same organization or showing top learners with only first names on a weekly or monthly basis. A new language version of the platform was also planned, adding Chinese and German versions of the interface, and learning material. This probably requires further research work, since language versions require a lot of resources, so the actual benefits should be researched before any decisions. Current language versions, French and Spanish, were not very popular: only a few learners accessed these materials.

6.8 Reliability, validity, and ethics of the thesis

This thesis was done keeping mind of the ethics, reliability, and validity of what is usual in this kind of research. Sources used are fresh and under 10 years old, the exception being one from 2006 but most of them being between 2018 and 2020. Sources were selected from a valid organization and persons; all the source authors are competent in the field of e-learning. Many sources and research material found on the internet about e-learning are made by companies who produce e-learning platforms themselves: these sources were kept to a minimum to find as reliable and neutral information as possible. Sources in this thesis are used from a wide variety of authors and institutes/companies: this was done to find a good quantity of different views and opinions about the subjects of this thesis. Original opinions and research results by authors have not changed in any way in this thesis, source material was kept as original as possible without plagiarism. All of the sources used in this thesis can be found at the end of this thesis under chapter 8 “sources”, all of them are also referenced in the text, abiding the rules of the LAB University of applied sciences. These sources were deemed ethical by the writer of this thesis. The thesis was written keeping in mind the universal principals in the research world: honesty, thoroughness, and accuracy (Saaranen-Kauppinen 2006).

Validity in qualitative research means that the results should be clearly understandable and repeatable. One research however cannot give a full understanding of the subject (Saaranen-Kauppinen 2006). Based on this, the research results of this thesis are valid. Qualitative research work can be repeated in other instances, although the results of the structured interviews may wary depending on the research group, especially since the target group was quite small. Nevertheless, the results of the interviews were supported by other similar studies made before by reliable sources. The interview was done without any incentives to the surveyed people.

7 SUMMARY

All and all, e-learning is a fairly new, rapidly growing style of learning and teaching. Multiple studies, including those made by LinkedIn, SoftwareAdvice, and Global Market Insights Inc., show many advantages such as cost savings, individual learning styles, and flexibility over traditional learning. Because of this, it is a fast-growing business and increasingly popular way to facilitate learning in the corporate world. Most of the major e-learning companies have fewer concerns about their budget and companies are increasingly turning towards e-learning instead of traditional learning. The biggest trends in e-learning at the time of writing are gamification, video-elements, microlearning, and implementing social elements to learning. These elements should be inspected and implemented to e-learning platforms within the limits and possibilities. While designing a new e-learning platform, ongoing communication is important to engage learners through feedback and listening to their learning preferences. Different learners learn in various ways, there are many theories about learning, such as Kolb's four different learning types, online social collaboration, and behaviorism. Since there are multiple different learning types and learning theories, it is best to include a wide variety of different learning styles, from e-learning courses to videos. While designing e-learning courses, it is good to keep in mind what makes the e-learning course engaging to the learner. Using different elements such as tests and visuals have a positive effect in learning. These things make a good e-learning platform and learning material inside of it engaging to the learner. E-learning platform WAY – Wipak Academy for You was made based on these principles and semi-structured interviews.

Creating an e-learning portal and material inside it is not something to be done in one day: it requires time and effort. This thesis was meant to give some insight and ideas on how to construct your e-learning platform.

LIST OF REFERENCES

AC Education. 2020.The benefits of e-learning. Retrieved on 3 March 2020. Available at https://www.ac-education.co.uk/benefits-of-e-learning/

Asghar R. 2014. What Millennials Want In The Workplace (And Why You Should Start Giving It To Them). Forbes. Retrieved on 15 July 2020] Available at https://www.forbes.com/sites/robasghar/2014/01/13/what-millennials-want-in-the-work-place-and-why-you-should-start-giving-it-to-them/#12fa7e2f4c40

Bates T. 2014. Learning theories and online learning. Retrieved on 3 August 2020. Available at https://www.tonybates.ca/2014/07/29/learning-theories-and-online-learning/

Bélanger P. 2011. Theories in Adult Learning and Education Verlag Barbara Budrich. Retrieved on 2 June 2020. Available at https://www.jstor.org/stable/j.ctvbkjx77.6?refreqid=excelsior%3A896ce210c5fd019ebbf796bc3c37cf9a&seq=1#metadata_info_tab_contents

Certify. 2020. Understanding the average cost of business travel. Certify infographic. retrieved on 2 July 2020. Available at https://www.certify.com/Infographic-TheAverageCostOfBusinessTravel.aspx

Cherry K. 2020. Kolb's theory of learning styles. Verywellmind. Retrieved on 19 May 2020] Available at https://www.verywellmind.com/kolbs-learning-styles-2795155

Chelovechkov A, Spar B, Lefkowitz R &Van Nuys A. 2019. 2019 Workplace Learning report. LinkedIn research Retrieved on 9 July 2020. Available at https://learning.linkedin.com/content/dam/me/business/en-us/amp/learning-solutions/images/workplace-learning-report-2019/pdf/workplace-learning-report-2019.pdf

Danova T. 2014. The Mobile Video Revolution: How Netflix, Vevo, And YouTube Have Thrived On Smartphones And Tablets. Business Insider. Retrieved on 16 July 2020. Available at https://www.businessinsider.com/mobile-video-statistics-and-growth-2013-12?r=US&IR=T

Elkins D & Pinder D. 2015. E-Learning Fundamentals: A Practical Guide. Alexandria, VA: Association for Talent Development. Referenced on 9 June 2020. Available at: http://web.b.ebscohost.com.ezproxy.saimia.fi/ehost/detail?nobk=y&sid=8a0c90be-f475-48db-8f27-29befafe0644@pdc-v-sessmgr02&vid=1&format=EK&rid=1#AN=1022850&db=e000xww

Elucidat. 2016. How to motivate modern learners with gamification. Retrieved on 15 June 2020. Available at http://cdn2.hubspot.net/hubfs/1864311/content_library/motive-learners-gamification.pdf?submissionGuid=3acca4a6-f08a-4398-9a3d-e0ba81b1a3dd

Global Market Insights Inc. 2019. Industry Trends. Study Retrieved on 5 July 2020. Available at https://www.gminsights.com/industry-analysis/elearning-market-size

Hairsine K. 2016. What is m-learning? DW Akademie. Retrieved on 16 June 2020. Available at https://www.dw.com/en/what-is-m-learning/a-19110813

Ingwersen H. 2018. 6 Ways Online Training for Employees Can Save You Money. Capterra. Retrieved on 2 July 2020. Available at https://blog.capterra.com/how-using-online-training-for-your-employees-can-save-you-money/

Kakoty S, Lal M, Sarma S. 2011. E-learning as a Research Area: An Analytical Approach. Vol 2 IJACSA. Retrieved on 20 April 2020. Available at https://thesai.org/Downloads/Volume2No9/Paper%2023%20-%20E-learning%20as%20a%20Research%20Area%20An%20Analytical%20Approach.pdf

Kirsh A. 2018. Why equality and diversity need to be SMB priorities. Salesforce. Rerieved on 17 April 2020. Available at https://www.salesforce.com/blog/2018/02/why-equality-and-diversity-need-to-be-priorities

Li C, Lalani F. 2020. The COVID-19 pandemic has changed education forever. This is how. World Economic Forum. 5 July .2020. Available at https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/

Margol E. 2017. Microlearning to boost the employee experience. Vol.34 Issue 1701 atd learning & development. Rerieved on 14 June 2020

Pandey A. 2018a. 8 Examples Of Video-Based Learning For Corporate Training. E-learning industry. Retrieved on 16 June 2020. Available at https://elearningindustry.com/video-based-learning-for-corporate-training-8-examples

Pandey A. 2020b. E-Learning Trends in 2020. Retrieved on 10 June 2020. Available at https://www.td.org/user/content/ashapandey/elearning-trends-in-2020-03-03-20-07-22

Parthasarathy V. 2018. Using Kolb's Learning Styles to Create Engaging Custom eLearning Courses. E-learning industry. Retrieved on 19 May 2020. Available at https://elearningindustry.com/using-kolbs-learning-styles-engaging-custom-elearning-courses

Pitkäranta A. 2014. Laadullinen tutkimus opinnäytetyönä: työkirja ammattikorkeakouluun. e-Oppi. Retrieved on 31 June.2020]

Saaranen-Kauppinen A & Puusniekka A. 2006. KvaliMOTV - Menetelmäopetuksen tietovaranto – tutkimusongelmat. e-database Tampere Yhteiskuntatieteellinen tietoarkisto Retrieved on 3 September 2020. Available at https://www.fsd.tuni.fi/menetelmaopetus/kvali/index.html

Strmečki D, Bernik A, Radošević D. 2015. Gamification in E-Learning: Introducing Gamified Design Elements into E-Learning Systems. Journal of Computer Science. Retrieved on 15 June 2020. Available at https://www.researchgate.net/publication/303430512_Gamification_in_E-Learning_Introducing_Gamified_Design_Elements_into_E-Learning_Systems

TalentLMS. 2014. E-learning concept, trends, applications. Retrieved on 15 April 2020. Available at https://www.talentlms.com/wp-content/uploads/2018/09/elearning-101-concept-trends-applications.pdf

Tamm S. 2019. Advantages of E-Learning. Retrieved on 2 July 2020. Available at https://e-student.org/advantages-of-e-learning/

Thompson S. 2019. 9 Benefits of Synchronous and Asynchronous e-Learning. Newrow. Retrieved on 9 June 2020. Available at https://www.newrow.com/9-benefits-of-synchronous-and-asynchronous-e-learning/

Seufert S. 2002. Rethinking management education for the 21st century. Retrieved on 15 April 2020. Available at https://books.google.fi/books?hl=en&lr=&id=uPgnDwAAQBAJ&oi=fnd&pg=PA109&dq=e+learning+examples&ots=XKb3fEkTGF&sig=w2vKvJL2VYGmaSzAhVESt0l6FcM&redir_esc=y#v=onepage&q=e%20learning%20examples&f=false

Spencer R. 2015. How to Apply Social Learning Theory for Effective E-Learning. Training industry. Retrieved on 15 July 2020. Available at https://trainingindustry.com/blog/e-learning/how-to-apply-social-learning-theory-for-effective-e-learning/

Statista. 2020. Number of daily internet users in Great Britain from 2006 to 2019. Retrieved on 5 June 2020. Available at https://www.statista.com/statistics/275786/daily-internet-users-in-great-britain/

Venuu. 2020. Office spaces for rent in Helsinki. search results. Retrieved on 2 July 2020. Available at https://venuu.fi/tilat?et=41&people=10..25&location=helsinki

Westfall B. 2016.Top LMS Features To Drive Employee Engagement. Study SoftwareAdvice. Retrieved on 14 June 2020. Available at https://www.softwareadvice.com/resources/top-lms-features-employe-engagement/