



Developing an Educational, Engaging Online Course: A literature review

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<p>Abstract:</p> <p>Education is moving online, and the demand for online courses is rising. The popularity of MOOCs are skyrocketing, universities want to offer online courses to reach more students, and organizations are looking to move instructional content online to improve effectiveness. The question is how to successfully move this educational content online and make it engaging for the students - or simply put - what elements are important for making a good online course? The approach chosen to answer this question is through a review of the vast amount of available literature. The findings point out the importance of providing multiple communication channels among students, and between students and the instructors; building a community of learners is found to be beneficial. The students' own motivation and self-determination are key for satisfying results in an online course, it is strengthened by timely feedback, rewards, and encouragement. The learning happens through realistic tasks, problem solving, games, narratives, discussions and self-reflection. The usage of short videos with compelling visuals instead of longer lecture recordings are advocated. The author hopes that instructional designers and faculty members can use this study to improve their future online courses and feel less overwhelmed by the task.</p>	
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1 INTRODUCTION

The purpose of this study is to explain how to successfully create an engaging online course. This question is relevant due to the substantial interest in e-learning and the increased use of electronic educational technology in learning and teaching at universities, and other organizations. Online learning platforms, also known as virtual learning environments, are already in use in most universities (edutechnica 2014), as a place to collect lecture slides, additional content and for submitting assignments. Mixing traditional teaching with online resources is great as you can use the best of both worlds, but they lack the potential of a totally online course in availability and flexibility. This thesis focuses on the development of a pure online course in higher education, but teachers and administrators of traditional classroom courses can surely benefit from it also, as well as online course designers for other organizations.

1.1 Background

Many universities want to increase their online presence by offering e-learning as one of the biggest changes in higher education in the last few years is the amount of new online courses. Between 2002 and 2007, student enrollment in online courses at accredited universities grew by 145 per-cent. (Heidke 2015) The number of massive open online courses (MOOCs) has grown exponentially: in 2014 over 400 universities were offering free open courses (Shah 2014). Student engagement is one of the most important aspects of effective learning, and especially online learning (Roby, Ashe et al. 2013). This is one of the primary reasons for studying student engagement in online courses, as the amount of online course offerings are growing and will likely continue to do so. Researchers have found that under the right circumstances, online courses can be as effective as traditional courses. (Dixson 2012, King, Alperstein 2014)

The rise of online courses could mean more effective universities giving students more flexibility while serving their needs better, and it could lead to more degree offerings and increased access to courses. (Heidke 2015) With online education the university has no physical boundaries and can reach far more students (King, Alperstein 2014). One reason

for the growth could be associated with shrinking budgets and lower local student enrollments; online courses can also open doors for universities to enter global markets with a lower cost. (Boling, Hough et al. 2012)

New technology impacts all aspects of life, and it transforms the way people work, study, and teach. The Internet and ICT can empower innovative and creative practices in schools, (Gomes, Fonseca et al. 2013), and educational methods should always meet the needs of society (Heidke 2015). Integrating new e-learning strategies to better disseminate information and attract students is an essential, modern progression in the evolution of universities, and an effective implementation of these strategies can position institutions at a more competitive level. An institution's e-learning strategy should be widely understood and integrated into the overall strategy of the institution (Williams, Kear et al. 2012). Leaders, administrators, teachers, and students all have to be a part of the process of developing online courses, and adjust to the changing needs and expectations. (Gomes, Fonseca et al. 2013) Studies have shown that online teaching requires different pedagogy and a different set of skills than traditional classroom courses, yet most of the development work for these courses is completed by faculty members who have no training in teaching or e-learning fields. (Boling, Hough et al. 2012)

Online courses have a promising future, but they also present challenges to teachers and administrators who need to develop these courses; how does one create an engaging online course that works pedagogically while satisfying the students, and at the same time acknowledges the limited time and resources teachers and administrators have available? There is no single right way to create an online course, as there are no widely accepted development models or pedagogical frameworks yet (Heidke 2015, Roby, Ashe et al. 2013), but many studies have been made on this subject that can be useful for institutions. Which leads us to the research question for this study, which is: what elements contribute to an engaging educational online course?

1.2 Instructional design and the future of online courses

Instructional design is interesting for many organizations, not just universities. Instructional design is the process by which instructional materials are designed, developed, and delivered. An instructional designer is someone who creates and delivers educational training materials (e-learning courses, videos, manuals) for businesses, educational institutions, and other organizations (Instructional Design Central 2012). Even though this paper concentrates on online courses in higher education and is valuable for teachers and staff at universities, the target audience is instructional designers who will develop these courses.

Instructional designers are in high demand in many organizations, as organizations rely on them to solve business performance problems and to provide media-rich e-learning solutions (Instructional Design Central 2012). Digitization is changing education, not only in universities, but everywhere. People are interested in acquiring new skills to improve their employability, to advance their careers, and for personal fulfillment. This can be seen in the popularity of MOOCs and other online learning opportunities. Online courses are not in the exclusive domain of educational institutions; in fact there are many companies offering them also. The website, udemy.com, allows anyone to create an online course, become an instructor, and earn some income. Rockway.fi is a Finnish company which provides online courses for playing musical instruments, singing, recording, making songs etc. Rocketjump Film School launched May 1st 2015, is an online film school offering courses that cover topics including directing, producing, creating visual effects, screenwriting, editing etc. In April 2015, LinkedIn - the largest professional network on the Internet – acquired lynda.com, a leading online learning company for 1.5 billion dollars (LinkedIn 2015). This indicates that online learning is seen as a valuable asset for the future job market, and the need for good instructional designers will increase.

1.3 Structure of the thesis

This study has two main aspects, the teaching elements of an online course and the delivery of an online course. The section concerning teaching elements examines the different

methods for teachers to interact with students in an online course, and describes how the learning should occur. The section concerning the delivery concentrates on the elements that are needed to present the online course to the students. The study will not discuss different online learning environments, nor will it lay out a strategy for implementing an online course in a specific institution.

The study is divided into five parts:

1. Introduction: The purpose of this section is to describe the subject of the thesis and to explain why the topic is important and relevant.
2. Theoretical framework: The purpose of this section is to lay a foundation for the current study by considering previous research in the area.
3. Engaging online course teaching: The purpose of this section is to present the findings for teaching elements that are present in successful online courses.
4. Engaging online course delivery: The purpose of this section is to present the findings for methods of construction and delivery for online courses.
5. Conclusion: The purpose of this section is to summarize the most important findings.

1.4 Method

This is a literature review following the step-by-step guide by Machi & McEvoy (2012).

The six steps are as follows:

1. Selecting a topic
2. Searching the literature
3. Developing arguments
4. Surveying the literature
5. Critiquing the literature
6. Writing the literature review

Selecting the theme for the study came at an early stage. After an initial skimming of the available literature on online courses, the decision was made to write a literature review based on the identification of the various elements which comprise an engaging online course. A study which manages to compile the most effective strategies for creating engaging online courses is exactly what universities (and other organizations) need today, in a world where education is moving online.

The literature was organized in folders with Refworks using these three steps: scanning the literature, skimming through potential studies, and finally organizing the suitable works to be used in this study. This study is based on articles, journals, and books, found in the following databases: ScienceDirect, Academic Search Elite (EBSCO), SAGE Journals Online, and Google Scholar. Keywords used were: “online course”, “e-learning”, “engaging”, “higher education” and phrases like “creating an online course”, “successful/efficient/engaging online learning”, “engaging video”, etc. The articles focused on online learning and teaching, with newer articles, and books with a practical interest in online course teaching and delivery, prioritized.

2 THEORETICAL FRAMEWORK

Identifying the key components of an engaging online course is the first step to successfully developing one. The main topics for this thesis were chosen by reading through the literature and noticing the main themes that make up a successful online course according to the studies. The purpose of this thesis is to find the elements that make up an engaging online course, according to previous studies.

Heidke (2015) identifies six important areas to concentrate on when planning the online course, the six categories are: organization, communication, content, delivery/instruction, student feedback and assessment. Blees, Rittberger (2009) concur with asserting the following elements as important in an online course: participation, motivation and monitoring/feedback/evaluation. Both studies mention things that are equally important in traditional classrooms, and coincide with common knowledge. Participation and communication (as mentioned by Heidke and Blees, Rittberger) are key challenges for online courses. Learning in an online course is collaborative and demands social and cognitive guidance and support (Gomes, Fonseca et al. 2013) A successful online course needs a working interaction between everyone in the course, and a community feeling to satisfy learners (Boling, Hough et al. 2012). Dixson (2012) urges to find several communication channels between everyone involved in the course to support student interaction, which she claims will in turn boost student engagement in the course. Finding effective ways to interact with students and engage students with the content is vital for creating a successful online course. Yengin, Karahoca et al. (2010) explains that the three most important components in engaging students in online courses are: active learning, motivation, and feedback.

Student motivation is a crucial factor in a successful online course as the studies, and high dropout rates in online courses, indicate. The dropout rates are much higher than in traditional learning environments, one reason for this is the lack of student self-efficacy - the student's belief in his/her own ability to complete the tasks - a crucial component in learning environments with less social interaction, in which students can easily feel isolated and lost. (Shen, Cho et al. 2013) Understanding self-efficacy in online learning is essential when creating an online course and a study made by Beaudoin, Kurtz et al. (2009) supports this idea by suggesting that online-learning depend more on self-determination

than institutional support. They found out that students with most success and who persisted when faced with challenges, credited their success and failure with their own personal behavior and efforts. Self-determined students are more motivated to engage and complete tasks, so it is a key component of a fruitful online course.

According to Roby, Ashe et al. (2013) the five most important components for student engagement in higher education are: academic challenge, active and collaborative learning, student-faculty interaction, improving learning experiences and a supportive learning environment. Active learning and interaction among students and interaction between students and faculty seem to be important according to many studies. Crookes, Crookes et al. (2013) gives advice on teaching strategies for achieving meaningful learning - that bring academic challenge to students - in an active and interesting way. The strategies include: simulations, gaming, art, narratives, problem/context-based learning, and active self-reflection. New technologies will improve and make it easier to implement simulations and gaming into online courses.

New technology affects the teaching-learning process in general, by changing how knowledge is transmitted, acquired, and handled. Everything is online and can be accessed at any time; this fact, combined with new pedagogical methods and online teaching tools, should be considered when building online learning environments. The characteristics of the new learner have to be recognized when planning an online course; students today are digitally savvy, always online, social, multitaskers, have short attention spans, and gain information in nonlinear ways. Teaching should match students' learning behaviors to increase learning efficiency, and students should also be actively involved in the learning process - not passive recipients of information - in these new environments. (Gomes, Fonseca et al. 2013) Several theories have noted that students in higher education want control over their environment; they enjoy control over where and when they learn, what they learn, and the pace of learning (Kay 2012, Bachman, Stewart 2011).

New technologies and new teaching methods that can be used in online courses makes the need of adept project managers and instructional designers crucial for making successful online courses. Teacher adaptability and effectiveness is central for the future of education and competitiveness of schools. Teachers need to acquire new digital skills,

discover new pedagogical methods and at the same time do the diverse daily tasks they have. One of the biggest problems universities have to overcome is how to motivate and train teachers, so they can offer their services to the students and help them embrace the new learning concepts. (Gomes, Fonseca et al. 2013) The online course managers should promote discussion and define strategies to activate creativity in teachers; also, recognize and deal with the challenges these new methods impose on teachers. Instructional designers are in a central role for making the course well-built and organized, as Heidke (2015) pointed out that the organization and management of an online course is one of the key aspects of a successful online course, and she also mentions that teachers should receive more guidance to be ready for online teaching.

3 ENGAGING ONLINE COURSE TEACHING

3.1 Active learning

Active learning - as described by Wikipedia - is a model of teaching that puts the responsibility of learning on to the learners. Learners must do more than just listen; they should be actively doing things at the same time they are thinking about the things which they are doing. For example learning how to ride a bike while doing it, as opposed to simply reading about it in a manual. There are many types of learning activities that can be labeled as active, for example: group discussions, debates, collaborative assignments, games, role playing, learning by teaching, and reacting to reading, writing, watching videos etc. (Wikipedia 2015) Active learning is popular in traditional classrooms - but as student engagement is even harder online - one could argue that active learning is even more important in an online course.

Dixson (2012) did not find a link between the types of assignments/activities and levels of student engagement, so there is no particular activity that will boost student interest in itself. She highlights that social presence of both students and instructor is important and that student engagement is about finding multiple ways of creating meaningful communication between students and the instructor. Dixson finds that students who work on group projects together, review each other's papers, and join discussions on the discussion forums are more likely to feel more engaged in the course. She adds that it might not be enough to just offer the opportunity to interact, but that it should be required. Understanding what and how the group wants to study is important when deciding the amount of group work that will be used in the course. The goal is to have group work that feels authentic and is not forced.

In the beginning of an online course it is important to trigger the interest of the students and to encourage active learning and interaction from the start. This can be achieved by introducing the students to each other, the instructor, and the environment, and by encouraging discussions and using the learning platform. It is important for students to feel that the instructor or another staff member is present at all times in the online environment, who is able to help and build a good atmosphere. Making a personal introductory

video for every new group can be valuable, as is maintaining contact by posting relevant updates unique to the class. Doing this in a video blog format can make it more personal. Establishing a dialogue early is important, and all the communication channels available should be used. Students need to participate in their learning process, explain their views, and connect their education to real-world experiences, as learning is influenced by both cognitive and social processes. Students need to build their own knowledge, not only by gaining information, but by problem-solving and performing meaningful tasks based on context. Students should feel that they are completing the assignments for themselves and not for the teacher. They build their knowledge by self-reflection and by interacting with the instructors and other students. (Toven-Lindsey, Rhoads et al. 2015, Boling, Hough et al. 2012)

A good instructor is someone who is accessible, flexible, and gives individualized feedback. Teaching methods that emphasize development in knowledge give students the opportunity to observe, engage in, and invent or discover expert strategies in context. These methods include showing by example, coaching students, and guiding students through exploration and problem-solving. (Boling, Hough et al. 2012) Learning is triggered using a range of different activities. Media is a powerful tool in online courses for activating the learner to think and to investigate, not only for transferring information. Likewise, Yengin, Karahoca et al. (2010) recommends that teachers appoint students to activities like reading, discussing, and writing, and not only listening to the instructor. They want to put the emphasis on developing students' skills and letting the students explore their own values and attitudes. Competitions, games, and awards can be implemented to boost motivation and social interaction. (Yengin, Karahoca et al. 2010)

The learning is valuable to the student when it is situation-driven and emerges from the tasks. Therefore if the assignments mimic real-life cases in content and complexity, it will feel purposive to the student. When the students see the usefulness of what is being taught, they can also connect it with their future careers and reflect on the applicability of what is being learnt. (Yengin, Karahoca et al. 2010) This is supported by Boling, Hough et al. (2012) who emphasize the importance of self-reflection and the importance of students seeing the results of their work and identifying how it can be applied in real life.

3.2 Student's self-efficacy

Self-efficacy, one's belief in one's own ability to complete tasks, is crucial in online learning, as students can easily feel isolated and lost while attending online courses that rely heavily on the students' own ambition. Shen & Cho (2013) point out the following five criteria that enable the successful completion of online courses.

Self-efficacy to:

- complete an online course
- interact socially with classmates
- handle tools in a course management system
- interact with the instructors
- interact with classmates for academic purposes

The study finds that only the first point - self-efficacy to complete an online course - influences learning satisfaction, while the other points had no significant effect on satisfaction. Thus, it is very important that students feel capable of completing the course, and the instructor should actively encourage and support the students. The study also suggests that instructors who encourage social interaction and monitor students' achievements help to develop self-efficacy in students to complete an online course. Immediate support and guidance is necessary if a student fails to participate or submit an assignment; a student should never get the feeling of being stuck and not knowing what to do next. Support material, like assignment templates and tips, can be very helpful for students, and might reduce misunderstandings in assignments. (Shen, Cho et al. 2013)

Beaudoin, Kurtz et al. (2009) found that the most important factors for success in an online course was self-motivation, time management, and the ability to learn with limited support. Regardless of the availability of institutional support, it seems the main factor in reducing problems is whether the students use their own resources and are persistent. Bachman, Stewart (2011) also assert that creating an online course that builds the student's determination will lead to increased motivation in students. In their study they used

self-determination theory to develop an online course template. Self-determination theory assumes that self-determination in students relies on the satisfaction of three psychological needs:

- **Autonomy:** the feeling of being free and having choices when considering or performing an activity, and not feeling controlled or pressured to do it.
- **Competence:** the need to feel capable of mastering challenges and to effectively interact with the environment.
- **Relatedness:** the need to feel close to the people that are important to them, meaningful contact with others and the sense of belonging to a group.

Designing an online classroom that enhances the built-in motivation in students results in learning and feelings of relatedness and competence. Students should feel that they want to learn, that they can learn, and that the teachers care about their learning. Teachers can show their appreciation through timely and instructional feedback that students can use to improve themselves. Relatedness can be accomplished through online discussion boards, chats, and email. When students are encouraged to explore and take initiative they feel more autonomous; this can be achieved by giving them choices, letting them meet course requirements based on their interests, and implementing solutions that they can use in their own lives. (Bachman, Stewart 2011)

3.3 Student Motivation

Student persistence and confidence can also be increased by boosting motivation levels in students. Motivated students are crucial for a successful course, and especially important for an online course, which tend to have higher dropout rates etc. Students who are interested in the subject, and emotionally invested to complete the assignments, are more likely to complete the online course. (Yengin, Karahoca et al. 2010)

The ARCS Model of Motivational Design by John Keller provides a systematic approach to achieve learning. The four steps in the model are: attention, relevance, confidence, and

satisfaction, and all the steps have to be met to achieve student motivation. (Yengin, Karahoca et al. 2010) The similarities between the ARCS motivational model and the self-determination theory discussed earlier, are apparent, and can be used in unison to strengthen student self-determination and student motivation.

3.3.1 Attention

Studying online means in most cases sitting in front of a computer, a device which provides many possible distractions. Keeping the focus on the teaching is of utmost importance. Yengin, Karahoca et al. (2010) suggest the following tips for maintaining the students' attention in an online course:

- Stimulate understanding.
- Bring up absurdities and conflicts.
- Use different types of examples to prove a concept.
- Use humor.
- Ask questions and introduce problems for the students to solve.
- Require participation.
- Use interactive material and multimedia.

Some methods to stimulate understanding include using examples and experiments that need props instead of just words. It can be helpful to bring in an other person to use in an example, or to use him/her as the base for proving a concept. Bringing up unusual or interesting facts can emphasize the importance or difference in a concept. Mixing in humor spices up the lecture and lightens the mood. Even though communication in online lectures usually only works one way, asking questions can activate the students to think, thereby keeping the attention level higher. Participation can be stimulated by encouraging forum posts (or interaction through other media) and by providing rewards. Videos are engaging and can be great for sustaining attention if they are intellectually stimulating (Kay 2012), so it is beneficial to implement an appropriate amount of relevant video material to the course. Also the use of interactive material like quizzes and games can boost attention levels.

3.3.2 Relevance

Yengin, Karahoca et al. (2010) point out that lecture material should be relevant to the students' goals and presented in a way that motivates students. A general picture of the course and material should be clear from the beginning and an explanation on why it is important should be provided. Also the authors mention the importance of considering any feedback given by students during the course. Yengin, Karahoca et al. (2010) suggest the following strategies for keeping the online course relevant:

- Show the worth of completing the class.
- Point out the future usefulness of the course.
- Show role models.
- Show examples of more experienced students.
- Match the students' needs with the course.
- Allow different methods for completing tasks.

Pointing out famous people related to the course content can boost interest in the material, or mentioning if there is a connection to a movie, music or art that is relevant. Bring in an expert from the field to tell what they actually do on a regular basis and let the students ask questions. It can be an online conversation or a recorded interview with the most popular questions. The expert can also give an assignment, or the instructor can give the assignment based on the interview/conversation.

3.3.3 Confidence

The student needs to feel confident during and after finishing the class. Yengin, Karahoca et al. (2010) give the following advice to maintain students' confidence:

- Monitor the learning requirements (keep a record).
- Help students understand their likelihood of success.
- Match the difficulty of the course to students' needs and requirements.
- Try to satisfy the expectations of students.

- Define and announce the requirements of the course (success criteria).
- Give tools for scheduling and goal setting (use a calendar and, event announcements through the learning platform).
- Provide feedback without delay (e-mail, discussion boards etc.).

Monitoring the students' progress will help the instructor to notice if anyone is falling behind, so they can intervene immediately. If the course is built in chunks that are easy for the students to swallow, they will not feel as overwhelmed. Implementing a progression bar that is visible for both students and teachers can be beneficial, because understanding what is left in a course increases confidence in students. Positive feedback and encouragement after and during an assignment will also boost morale and build confidence in the students. (Yengin, Karahoca et al. 2010)

3.3.4 Satisfaction

Student learning and satisfaction go hand in hand. Student satisfaction is one of the most common measures of effective teaching, and it is an essential sign of quality in online learning. Student satisfaction is the student perception of how well the learning environment supported the student's academic success. (Roby, Ashe et al. 2013) Studies have also shown that students with higher self-efficacy in computer-based learning have a higher chance of attaining learning satisfaction. (Shen, Cho et al. 2013) For the student to learn and be satisfied, he or she has to obtain the following characteristics: interest in the subject, a positive attitude towards asking questions, the desire to learn, and an interest in having the subject as a career in the future. (Beaudoin, Kurtz et al. 2009)

Yengin, Karahoca et al. (2010) provide these suggestions for the teacher to achieve student satisfaction:

- Provide unexpected rewards (e.g. games).
- Implement positive outcomes (reward students, give results and feedback without delay).
- Avoid negative punishment.
- No patronizing through over-rewarding and easy tasks.

- Schedule the course as the students expect.
- Use real-world settings to transfer knowledge (simulations).
- Be fair in test results.

Online course satisfaction differs according to student backgrounds. Following a study on experiences and opinions of e-learners by Beaudoin, Kurtz et al. (2009) the authors concluded that the most important elements influencing satisfaction among Western and Japanese students are: the content and organization of the course itself, followed by the quality of the instructor, interaction, convenience, and flexibility. Mexican students indicate the most important element is the instructor and the interaction, followed by flexibility and institutional support. Meanwhile, Israeli students mention convenience and flexibility as the most important. It is also noted that those students who study more independently and for their own enjoyment find greater value in the quality and convenience of the course, while students who enrolled through a specific institutional mechanism value the service and support of the institution more. (Beaudoin, Kurtz et al. 2009)

3.4 Community building

As motivated and self-determined students are important for a good online course, so is an online community. A community is a group of people that share something in common and feel connected to each other through shared goals and interests. A healthy online community can motivate the unmotivated and sustain motivation in others. A great online course has a feeling of togetherness, where students and staff are socially present, and together build a good atmosphere that is helpful and supportive. Students feel they get the support they need, and they feel that the instructor is present and involved (but not too involved). Research shows that people who interact online can build a strong sense of community. The challenge is to create meaningful interaction in the course that does not feel forced; it can be guided by instructors, but the initiative has to come from the students (or at least feel like it does). Communication is key for community building, and disconnections among students, and between students and staff, should be prevented. (King, Alperstein 2014, Dixson 2012, Boling, Hough et al. 2012, Bachman, Stewart 2011)

3.4.1 Communication between students

Students need to get to know each other first in order to bond. The learning environment needs to allow for informal discussions between students without the surveillance of a faculty member. The course designers have to include methods and activities to make this possible and actively encourage interaction between students. (King, Alperstein 2014) If active, informal discussions are held, it will also lower the threshold to contact each other for academic purposes as there is already a dialog going on between the students. Both informal and academic dialogue are needed to fulfill the self-efficacy requirement by Shen, Cho et al. (2013). Students will benefit if they discuss the assignments with each other. Doing so will make it easier to master the required tasks, and it will in turn boost the feeling of competence and make it easier to pass the course. (Boling, Hough et al. 2012, Bachman, Stewart 2011) One way to promote this is by incorporating collaborative activities and assignments that give students increased social presence and a better chance to know each other and build connections. Working together and sustaining the presence of a community feeling have both been linked to positive results in online courses. (Toven-Lindsey, Rhoads et al. 2015) According to Bachman, Stewart (2011), interaction is a crucial part of the learning experience, for achieving student autonomy, and a feeling of relatedness between students. Successful teaching happens through interaction, dialogue, mentoring, and coaching by both students and faculty members.

Communicating in an online discussion board can bring unity to the group and initiate interaction on assignments with beneficial results. To trigger discussions, some encouragement from the instructor might be necessary. For example, at the start of the course, the instructor could prompt students to write a little about themselves and their expectations of the course. Also, there can be a reward for those students that are most active. For instance, students that post three or more times per week get a bonus added to their final score in the course. The instructor should also be active on the discussion boards and recognize and show appreciation to the students that are contributing to the online learning community (Shen, Cho et al. 2013). Moderating discussions and restarting halted discussions is also an important task for the instructor (Roby, Ashe et al. 2013). Proficient moderating requires a balance between encouraging discussion and giving students space for taking their own initiative on the forum and for helping each other. Both teachers and

older students (with appropriate guidance) can be moderators on discussion boards. (Williams, Kear et al. 2012)

Dixon (2012) stressed the importance of creating many discussion channels between everyone in the course to increase engagement. King, Alperstein (2014) suggest similar activities for boosting the community feeling. They suggest inviting students to listen to a guest speaker that is streamed online, and to comment and ask questions through a real-time chat or using a Twitter hashtag. This brings students together by combining interesting content (the speaker) with interaction (real-time chatting). Live online events are useful for bringing students together, but discussion boards are also great community builders. By also offering a discussion board for more casual conversation besides the official board; one can build togetherness by having students sharing other interests and refreshing topics that extend outside the course. The casual discussion board can be a place for fun and games. The course managers can start different games to activate participation on the forums; one's imagination is the limit. (King, Alperstein 2014)

The literature is overwhelmingly positive toward community building and the importance of student interaction, but in a study by Beaudoin, Kurtz et al. (2009), the authors found that the relationships between learners were considered one of the least critical components by the students in an online course. The study suggests a partial explanation could be the pedagogy in the course - students feel that relationships are not important if the course is only structured to encourage individual learning. Also live-classrooms, group work, forum discussions, and project based learning are all good practices but they do not automatically build a successful online community. As mentioned before, students can not be forced to connect with each other, and it becomes a problem if the activities are too teacher driven and feel inauthentic. Some students dislike forced group work because of the lack of flexibility, and feel that the work is unevenly shared. Yet the lack of connection is problematic if everyone just does their part without really communicating. Again, the goal is to create meaningful interactions that do not feel forced. (Boling, Hough et al. 2012)

3.4.2 Communication between student and instructor

Disconnections between students and instructors can easily happen in an online course, and when students feel this way, they tend to be more frustrated and enjoy the course less. A big issue in computer controlled communication is the lack of social cues. When these cues are filtered out the communication becomes more task oriented and less personal than face-to-face communication. (Boling, Hough et al. 2012) Common ways for the instructor to interact with students in an online course are by: providing information, participating and guiding discussions, offering support and encouragement, and giving feedback. A straightforward method for creating interaction is by giving assignments that needs to be done in pairs or small groups. Face-to-face communication brings the persons closer, so one can use video conference technology to communicate with each other. The reasons for communicating are similar as in an ordinary course, even though, the communication channels and ways might be different. (King, Alperstein 2014)

Students value interacting with their peers and collaborative activities, so offering such opportunities can help students feel less isolated in the online environment. Communication channels that can and should be used include discussion boards, email, and live online lectures. (Heidke 2015) Moreover, communication means like telephone, live chat, and social media platforms such as Facebook could be used. If the student is reluctant to be active on the specific learning platform, one can use an alternative on which they are active, and use that for communication. If social media is used, then accessibility and privacy issues should be taken into account, as not everyone wants to be on Facebook, and their preferences should be respected (Williams, Kear et al. 2012).

Instructor accessibility depends on how the course is designed, or more precisely, on the provision of different methods for students to communicate. Students feel that connecting to the instructor can be difficult, so some use an academic advisor, and some have a favorite instructor they contact throughout the whole program. Individualized feedback also helps to build a strong student-instructor connection. (Boling, Hough et al. 2012) A strong instructor presence is key for interaction in the course, and it is established by asking questions, giving constant, valuable feedback, calling students by their names, and using words like “our” or “we” (Roby, Ashe et al. 2013).

3.4.3 Communication between instructors

The last type of disconnection that should be avoided is between the instructor and other teachers and staff at the university. Teamwork and support is important for teachers that are encountering the difficulties creating an online course can carry; a community feeling is important here also, that support teachers who face problems or feel stuck. There could be weekly meetings between teachers and some designated staff members who could bounce ideas and brainstorm with the teacher. (Boling, Hough et al. 2012) An online board and, for example, a Facebook group could be created wherein staff can post ideas and share their videos to show others what they have done in order to boost creativity among each other. Sharing good practices and teaching resources and general peer support are important for staff development. (Williams, Kear et al. 2012)

3.5 Gamification

Gaming is an engaging teaching strategy that can bridge the gap between theory and practice, thus making education more meaningful for students (Crookes, Crookes et al. 2013). Gamification, the process of turning an activity or task into a game, is a way to increase motivation and engagement. Not many studies have been produced on gamification in e-learning, but game elements are used in online learning platforms like Khan Academy already. A good game never allows the player to feel stuck and provides constant challenges that are manageable. Providing a gamified structure to the course which supplies continual activities, with a progress mechanism, in which the next step is readily known, can be beneficial.

Some argue that playing computer games as a part of a course can increase motivation through fantasy, control, challenge, curiosity, and competition or cooperation. They may help develop advanced knowledge and skills, generate deeper understanding of key principles in a course, and handle complicated issues that are hard to understand only through passively receiving information. (Brom, Preuss et al. 2011)

Gamification can have a great emotional and social impact on students, as reward systems and competition seem to motivate them. A reward system can be a fun and encouraging way to show progress in an online course. Leaderboards can be a source of motivation for students as they can show their work to other students and compare their progress. There is a risk, however, that some students will feel discouraged and unwilling to compete with their classmates for a rank in the leaderboards. When designing a gamified system, different player types have to be taken into account. Some players are socializers or explorers and not super-achievers or performance/mastery -only players. The key is that the gamification should feel meaningful to each student for it to work. (Domínguez, Saenz-de-Navarrete et al. 2013)

Games that help learning and boost motivation are great additions to the course. Flashcard games like Anki and Memorize can be used for memorizing words or concepts and can be used for practicing for exams. There are many pre-made card packs provided by Anki and Memorize that can be used, or an instructor can make a new one. Students can also make packs for themselves through the games. It is a motivating way for students to learn, because they can track their own performance and progression and get a sense of completion when they know all the cards. The games are smart, as they emphasize cards that the learner finds difficult and ask them more often. These are just examples of games that can be used, and each course can benefit differently from different games.

3.6 Simulations and narrative teaching

Storytelling validates the student experience, because stories can change students' perspectives and promote "outside the box" thinking. Stories can make an assignment feel real and invoke emotions, and they have been proven to help students learn and retain information better, while being interesting and enjoyable. (Butcher 2006) Narrative teaching techniques can link theory to practice through analyzing testimonials, stories, and conversations. The method encourages students to reflect upon the theoretical content and to apply it to practical settings and makes the course content feel more realistic while at the same time being interesting and memorable. (Crookes, Crookes et al. 2013) As studies have shown, students enjoy assignments that resemble real-life problems that one could

have in a real job (Boling, Hough et al. 2012, Yengin, Karahoca et al. 2010). Problem/context-based teaching makes the meaning of the course more obvious when it mirrors real-world problems, and it leads to a “deeper learning”. (Crookes, Crookes et al. 2013) Assignments in an online course can be built around real work challenges and be presented as such. The assignment can be given by a professional in the field or as an acted scenario wherein a boss gives an assignment to an employee (the student).

Art - as in visual art, music, literature, and film - can promote a link between theory and practice and make the teaching more meaningful and engaging, because the learning environment is less traditional and passive, and instead more interesting, expressive, and active. Art and storytelling as teaching devices have proven to be tools for increasing engagement, at least for the nursing students in the Crookes, Crookes et al. (2013) study.

Reflection teaching techniques are effective for relating the content to the students’ own experiences, as it is important that the student sees the value and the reason something is being taught. This can be achieved through simulations followed by reflection through written or verbal articulation, or through active learning as discussed earlier. Simulations as an “experimental learning tool” allow subject-specific, theoretical content to be practically applied, thereby linking theory and practice, which - in turn - leads to effective and engaging learning. This promotes meaningful learning and lifelong learning skills. (Crookes, Crookes et al. 2013)

3.7 Monitoring and evaluating

Exams and quizzes are necessary to confirm student learning in an online course. The assignments should be relevant and students should have enough time to complete them. (Heidke 2015) Clear learning objectives are especially important for independent learners to ensure they understand the material with minimal help from instructors or fellow students. (Toven-Lindsey, Rhoads et al. 2015) A progress bar could be implemented to show the student his or her advancement in the course.

In courses with large number of students, instructors can utilize peer assessment as one type of evaluation. In this scenario, students submit a written response to other students' assignments using a grading rubric given by the instructor. As an instructor, more value should be placed on the matter of participation rather than the actual peer review. Peer assessment has received a mixed response from students, as many feel that the feedback received was not very helpful. Additionally, there were challenges brought up by cultural differences and uncertainty about the assignment parameters. (Toven-Lindsey, Rhoads et al. 2015) Different evaluation methods should be considered depending on group size and assignment type.

3.8 Feedback

Comprehensive feedback is always important in education but especially in online learning environments where there is little or no face-to-face interaction (Heidke 2015). Feedback, including that which addresses what was done right and wrong is essential to learning, and positive feedback for good work keeps the student satisfied and motivated. (Yengin, Karahoca et al. 2010) Giving feedback can feel repetitive and time consuming, especially if the class size is large, and there is also a concern that students lack engagement with the feedback process, even when timely and good feedback is given. (Crook, Mauchline et al. 2012) Ideally, the interaction should work both ways, since the teacher needs feedback to improve the online course, and an active dialogue helps detect communication errors and maintains a good atmosphere. (Yengin, Karahoca et al. 2010) If immediate feedback is not possible, it can be a good idea for instructors to inform their students when the feedback will be available. Some instructors have found it helpful to designate a specific weekday for sending out feedback.

Crook, Mauchline et al. (2012) found that most staff concerns about providing feedback fall into four main categories:

- Engagement (the student should understand and actively make use of the feedback provided).

- Efficiency (being efficient time wise to generate quality feedback).
- Timeliness (giving the feedback in a timely manner, so the student can use it for a future assignment).
- Quality (giving understandable feedback so students can use it for their learning and improve future assignments).

In a study by Crook, Mauchline et al. (2012) the authors tested the use of video feedback as opposed to traditional written feedback. They found that 87.5 percent of the teachers would use video feedback again in the future as a tool for giving generic feedback to students. The advantages of video feedback mentioned in the study were that the videos were reviewable, accessible, similar to one-to-one sessions, and that the students took greater notice of them (60% of the students reported taking more notice of video feedback than generic feedback methods). The study indicates that students find video feedback more engaging and personal, but providing individualized feedback through video can be time consuming when there are many students.

4 ENGAGING ONLINE COURSE DELIVERY

This chapter will focus on building and transmitting the online course to the students. Without a solid and carefully thought-out delivery, the students will not be able to appreciate the learning elements and activities. The development of an online course can be divided to a series of steps to make it less overwhelming. The main steps are: planning the course, producing the content, placing it online, and testing the course. These steps are oversimplified but they give a starting point for the development process. The material and delivery of an online course is different than a traditional course, the biggest difference being that the lectures have to be delivered online. That is why the production of video content (and video conference technology), will play an increasingly larger role in online education. Fortunately the production of video content is also becoming easier and cheaper, and video conferencing tools are becoming better and easier to use. (King, Alperstein 2014)

4.1 Online course management

According to King, Alperstein (2014), course management is probably the most challenging aspect of online education, but they find that faculty can be trained to develop online courses. Creating and managing an online course needs a strong team and a unified strategy. Three key persons needed for an online course are an academic director, an administrative director, and an instructional designer.

The academic director and the administrative director are positions which exist in traditional class environments, but the instructional designer is specialized in online course development. The academic director is responsible for the academic elements, such as, recruiting and training staff, monitoring the overall program quality, and representing the program.

The administrative director is the contact between the department and other colleagues at the university, whether in admissions, marketing, student life etc. For the students the administrative director has a large role in student support, and he is the contact person when any problems or issues occur.

Instructional designers are used for creating and delivering the educational content online. They are crucial for a successful online course, as teachers might not have the time or knowledge to do it themselves. Instructional designers are expected to understand the technologies used in online courses and how they can be used in the best way. Furthermore, instructional designers can create content for the course, in particular video content. Additionally to the technical knowledge they bring, they can also help identify appropriate instructional material that can be used in the course, along with providing insights in how the material should be used. Instructional designers co-create and/or manage the course development and can also be an instructor, and work as support staff. (King, Alperstein 2014)

Instructional designers have to work closely with the teachers of different online courses, this cooperation can sometimes be difficult, but it is important for the success of the online course, as skills and techniques used in traditional classrooms might not transition well to the online platform. Online lectures will generate a different feel for the student, no matter how well produced. With recorded online lectures, spontaneity and informality are lost. The instructor will not be able to correct mistakes as easily online as if the student is right in front of the teacher; and judging if the course is too difficult, is also hard without interacting with the students in the same room. Chat rooms or video conferences bring interaction to the course but will not be the same as a discussion in a classroom. With the help of an instructional designer these problems can be worked around or minimized. (King, Alperstein 2014)

4.2 Planning the course

The first phase of getting a course online, is to plan the course. This step is not much different than developing a traditional course. The course staff has to determine the learning goals and outcomes, the competencies students should master, the material to be used, the activities student should engage in to activate learning, and the assessment strategy. A clear statement should be written of the learning outcomes that should be achieved in the course, where the skills, personal development, and professional competencies, which should be achieved are clearly stated. (King, Alperstein 2014, Williams, Kear et al. 2012)

Traditional courses are usually divided into class sessions a few times a week, but this does not transition well to an online environment. A too strict schedule can make it more difficult for students to manage their work, and letting students have more freedom in how they pace their studies will make the course more flexible and more convenient for the students, resulting in a better online course. The whole calendar can be reorganized to be suitable for online learning, the lectures can be split into smaller pieces and spread into a longer time span, and students do not have to spend each week with equal work amount but can pace themselves. (King, Alperstein 2014)

4.3 Producing the content

An online course consists of online lectures, online discussion, self-study material, quizzes, and assignments. The material can be built on text, graphics, audio, video multimedia presentations, or simulations. The learning environment needs to provide adequate tools for interaction and for helping learning. Learning services provided by the course would consist at least of: a discussion forum, a chat room, a wiki (an application for collaborative creation of content), a contact email address, a tool to collect notes and a calendar to keep track of upcoming deadlines and for setting goals. (Williams, Kear et al. 2012, Shen, Cho et al. 2013, King, Vieira, Lopes et al. 2014, Alperstein 2014, Heidke 2015)

Early online courses relied heavily on text-based lectures and had many reading and writing assignments. These were often found to limit the development of students creative thinking and cognitive skills. Teachers noticed that courses could easily get too text-based, and students complained that there was too much reading required. These students were also less satisfied in their online learning experience than students who enrolled in more interactive courses that used various types of multimedia. Appropriate use of text, graphics, audio, and video is important for course-content development and student learning. (Boling, Hough et al. 2012)

Online courses are usually divided into modules - with their own set of learning aims - that are meant to be completed in a fixed period of time. Lectures, discussions, and group work can all be used online as in a traditional course, but they require some additional

planning. It mostly comes down to the technology being in its place, and the lecturer being comfortable with the new challenges. The important thing is that the content aligns with the course goals and feels valuable to the student (Heidke 2015).

The orientation to the course should use all different types of content and activities that will be used in the course, so the students know what to expect and can use them in the future. Video tutorials will make technology training more efficient and should be made for each application. A video greeting from the faculty members managing the course is a good way to build a connection with the students. The students should do the same by introducing themselves to each other by a video or forum post. (King, Alperstein 2014)

4.4 Student-generated content

To further stimulate active learning and engagement, students should be able to use online tools (like audio and video recording) provided by the learning environment for their projects. (Yengin, Karahoca et al. 2010, Kay 2012) While these media products are an interesting addition to the course, one should keep in mind that assessment of them can introduce both technical and educational challenges for institutions (Williams, Kear et al. 2012).

Students creating audio or videos files supports learning in a variety of contexts and purposes. Allowing students to generate their own content helps to achieve higher-level learning and creative learning, as the content is based on the students' own design and decisions. It can boost creativity and motivation, and thus improve learning and gratification in the course. (Popova, Edirisingha 2010)

Baepler, Reynolds (2014) found in their study that giving students the opportunity to make videos for the course (such as online presentations) made the course more engaging and developed digital literacy at the same time. Students can verbalize their knowledge through presentations of self-made videos. These interactive practices promote the development of expertise and are a way to add more value to an online course. (Boling, Hough et al. 2012)

4.5 Educational videos and online lectures

Video has emerged as a leading instrument for online education, as observed by millions of learners participating in MOOCs and watching YouTube, etc. Research on MOOCs has shown that students spend the majority of their time watching videos. (Guo, Kim et al. 2014)

Videos are an important tool when moving from a traditional course to an online course, but what kind of videos are most beneficial for student learning? Measuring learning is a difficult task, but student satisfaction and engagement are good indicators for successful learning. In a study by Guo, Kim et al. (2014), researchers measured engagement according to how long students spent watching the videos and whether they tried to answer the post-video questions. The study was based on four EdX courses offered by MIT, Harvard, and UC Berkeley and were primarily focused on math and science. The data was extracted from 6.9 million video views. (Guo, Kim et al. 2014)

The course structure and lectures should be planned with proper foresight for use in e-learning. EdX video producers reported that pre-production had the biggest impact on engagement, but could not pinpoint specific video features. It is recommended that if longer video segments (like a recorded classroom lecture), they should be planned to be edited and reduced to logical individual segments in advance. (Guo, Kim et al. 2014)

4.5.1 Comparing video types

Kay (2012) divides teaching videos into four categories according to purpose:

- Lecture-based videos that are recordings of traditional lectures to be viewed instead or after face-to-face meetings.
- Enhanced video podcasts: (videos of PowerPoint slides with audio explanation).
- Supplementary videos that build on the teaching and includes administrative support, real-world demonstrations, summaries of class lessons or textbook chapters, and additional material that can broaden or deepen student understanding.

- Worked examples that provide video explanations of specific problems that students need to solve in a particular course.

Kay (2012) continues to divide the videos into different pedagogical strategies: receptive viewing, problem solving and “created video podcasts”. Ninety-five percent of videos in his study are made for receptive viewing, videos that are made for relatively passive viewing with the main pedagogical strategy of delivering information. Problem-solving clips are designed to explain and assist students with solving specific problems from the course (tutorial type of video). With these, the main pedagogical strategy is still to deliver information, but the focus and the learning objective is much narrower. The third type of pedagogical strategy involves students planning and creating their own videos. Students learn by investigating, collaborating, researching, and - finally - making an academic-based video.

According to Guo, Kim et al. (2014) there are four typical types of video used in MOOCs right now:

1. Recording of classroom lectures.
2. “Talking head” (a close up video of the instructor).
3. “Khan-style” videos (digital tablet drawing videos popularized by Khan Academy).
4. PowerPoint slide presentations with audio explanation.

When comparing a video filmed at the instructor's desk and a video filmed in a professional studio, researchers found that the video filmed at the desk had longer student engagement. Moreover, students engaged more with videos that alternated between the instructor and informational slides. As the result from the comparison indicate, high production value may not matter. The video filmed at the desk was reportedly more personal, as the instructor was closer to the camera and filmed within a tight frame, as opposed to the video in the studio where the instructor was standing behind a podium lecturing to an imaginary crowd. As mentioned the first video was more engaging for viewers; however,

it should be borne in mind that this result could also be attributed to the different skills and personalities/charisma of the two instructors, and more studies should be made. The key point is, that more expensive does not mean better.

The results show that “talking head” type videos are more engaging than plain slide/code videos. A human face provided a more intimate and personal feel to the video and broke up the monotony of slides. Some participants expressed concern about switching repeatedly from slides to face and thought a picture-in-picture view might work better. (Kim, Guo et al. 2014)

Tutorial type videos (step-by-step problem-solving walkthroughs), the Khan-style videos, proved more engaging than slideshows or screen captures. If slides need to be used, instructors can add emphasis by sketching over them. (Kim, Guo et al. 2014)

4.5.2 Creating engaging video content

Guo, Kim et al. (2014) mention the importance of dynamic visuals; for instance, constantly changing from slides to the instructor and not showing the same image throughout the video. The content in itself can also be made more dynamic with the use of practical examples including external people and props. Using pictures, graphics, and text, on the video, will also make them more dynamic and thus more engaging. As discussed earlier, assignments that resemble real-life cases are valued by students. The assignment could be given in video form and delivered by an external person, who could be a real employer, an actor, or a colleague. Acted scenarios can be utilized in other videos, too, like showing an example in a work environment.

Students engage differently with lectures and tutorials. Tutorials are watched for a shorter amount of time (and pausing and re-watching is more common), while lectures are usually just viewed once. Therefore, videos for lectures should be optimized for first-time watching and tutorials for re-watching and skimming.

The following are the main recommendations for producing an engaging video for an online course:

- Brevity (shorter videos are found to be more engaging while students tend to stop watching during longer videos)
- Informality (students engage more with a teacher seated at her desk than behind a podium)
- Dynamic visuals rather than static PowerPoint slides
- Fast talkers (students find faster talking instructors more engaging and energetic)
- More pauses (for students to understand complicated ideas and charts)
- Web-friendly lessons (videotaped classroom lectures or other existing videos divided into shorter segments and uploaded to online courses are not as appealing as videos planned to be shown online)

One factor affecting all video types was the length, so - although instructors are accustomed to one-hour lectures - keeping the videos brief is encouraged. Studies show that students watch most of the video if it is short, but regardless of the length, the average engagement time does not usually exceed six minutes (Guo 2013). In videos over nine minutes long, students often stopped watching before they were half-way through, and fewer students answered the post-video questions after a longer video. One possibility for the difference in engagement is that perhaps the shorter videos were better planned and have higher quality instructional content. Speaking rate has also shown to affect engagement. The study by Guo, Kim et al. (2014) shows that students find faster speakers more interesting. The speed itself might not be the only reason, because faster speakers also tend to convey more energy and enthusiasm, so lecturers are advised to bring out their natural enthusiasm and not be afraid to talk fast. (Guo, Kim et al. 2014)

4.5.3 Video conferencing technology

Video conferencing technology is becoming more stable and easy to use, and is a useful addition to the course. (King, Alperstein 2014) Live sessions will enhance the teacher's presence, which Dixson (2012) asserted to be pivotal for student engagement in online courses. Additionally, having weekly or monthly live Q&A sessions with the instructor (or a professional from the field) via live conference software adds value to the course. Such sessions incorporating Google Hangout - proved successful for two MOOCs made

at the University of Glasgow (Kerr, Houston et al. 2015). Bringing in an outside expert from the field to the course is advisable in any case. The expert could provide valuable insights and describe realistic workplace situations. (Boling, Hough et al. 2012)

4.6 Support

Students need appropriate support to get through the course. Building staff capacity to support an online course and definitely a whole online program can be challenging; all support functions should definitely not be put solely on teacher's' shoulders. It is critical that the students have the support they need to pass the online course. (King, Alperstein 2014)

4.6.1 Technical support

In a study by Beaudoin, Kurtz et al. (2009) the authors found that “familiarity with technology” was one of the least problematic aspects of an online course. Many students feel that understanding the learning environment is not that difficult but remark that the provision of only limited technical support requires self-sufficiency when dealing with computer-related problems. On the other hand, they found that courses which require participation in live online classrooms and digital worlds, such as Second Life, tend to frustrate students more because of technical difficulties and confusion brought by the environment. Shen, Cho et al. (2013) suggest making video tutorials to help guide students to use the tools and confidently navigate their online learning environment. The same tutorials can be used in all courses that use the same learning environment, so they would only need to be made once, thus simplifying the workload.

4.6.2 Academic support

Students should have the contact details for a person (whether the instructor or some other staff member) that can provide feedback and support. Students may also find guidance via online communities on the learning platform or through external social networking sites. The online communities on external sites like Facebook or LinkedIn may be formed

by students or by staff. To encourage these communities of learners, the institution should use additional tools (such as those in real-time or non-real-time) for interaction.

Real-time:

- Video-conferencing
- Real-time online lectures
- Real-time chat

Non-real-time:

- Discussion forums
- Wikis
- Blogs

Finally, students should be made aware of how often and when the contact person will be available online, and how quickly the contact person will answer questions. (Williams, Kear et al. 2012)

4.6.3 Staff support

With the help of staff support, the academic and administrative staff can develop the online course, hopefully without too many obstacles. Academic staff need special support to transition from face-to-face teaching to effective online teaching, without having to become ICT or media experts themselves. At least making online lectures and updating the online course needs plenty of support. (Williams, Kear et al. 2012) Boling, Hough et al. (2012) also point out the importance of peer support between faculty members, and suggest regular meetings and common discussion channels, for developing and testing the online course.

5 CONCLUSION

Teachers and other staff at universities face new challenges when crossing into the realm of online courses. Making engaging online courses might seem like an intimidating task, but fortunately there is already an extensive body of literature to help.

Communication in online courses is different than in a traditional classroom environment, and disconnections between students and instructors should be prevented. Problems stemming from the lack of social cues in an online environment can be rectified by a strong instructor presence that promotes discussion and interaction. Building meaningful communication alternatives and using existing communication tools in the learning environment is important; external tools like social media platforms can be used to bring the interaction to platforms on which the students are already active. Instructor presence is crucial in an online course, and active interaction with students can be achieved through forum and social media discussions, engaging video lectures, and consistent update and feedback videos. The instructor is responsible for encouraging activity and rewarding behavior that inspire the creation of a learning community. The community feeling must feel authentic and originate from the students - it can not be forced - but it can be encouraged through informality, fun and games. Instructors should also aim to build a community of teachers that are actively developing new and creative ideas for online teaching.

Teaching should be driven through active learning, with students building their knowledge through problem solving, games, discussion and self-reflection. The use of narrative teaching and storytelling and utilizing assignments that resemble real world problems can link theory to practice in a creative and stimulating way that has proven more valuable to students than the passive transmission of information.

Motivation and self-determination are crucial traits for students to possess in order to pass an online course. Keeping the students challenged, confident and satisfied with relevant and engaging material is key. This can be achieved by using captivating video lectures, providing consistent feedback, and ensuring an active teacher presence that maintains a good atmosphere. Ensuring students know what is expected of them by providing clear

assignments and instructions (through the utilization of assignment templates and tutorial videos) will promote self-efficacy in students. Students need to feel that they are able to pass the course and situations that promote feelings of helplessness in students should be anticipated and remedied. Students need timely feedback to be able to learn from mistakes and to boost their confidence. Appreciation should be shown when the student does a good job or takes their own initiative. Lastly, students should receive proper instruction pertaining to the use of tools in their online environment and interactions with the teacher and other classmates for academic purposes. These practices will lead to engaged and satisfied students.

Bringing gamified elements to the online course can have a great emotional and social impact on the students for instance through the use of a reward system and competition. The key is to implement meaningful gamification elements that will enhance the learning experience and not make it feel intimidating or forced.

Live video sessions, such as those featuring a live online lecture, a Q&A session, a discussion with an expert from the field, or a feedback session, bring students closer to the teacher and with each other. Feedback, which was mentioned many times throughout the study, should be engaging, efficient, and come in a timely manner so that it feels useful for the student. Feedback can be made more appealing through video; it has shown to be more closely comparable to one-to-one sessions than written feedback. Real-time chat and live Q&A sessions are also proven to be useful.

Engaging video lectures should be planned from the beginning to be used in an online course, as recorded classroom lectures have proven less engaging than short, well planned videos meant for the web. Brief (under six minute long), informal videos with dynamic visuals are shown to be more engaging for students. Incorporating video assignments in which students generate their own content can be used as a tool to make class more interesting.

There is not one ultimate way to develop an online course, but hopefully the task does not feel as overwhelming anymore. The key is to be open minded, and start right now!

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