A Course Design Workbook

By Dr Henrietta Carbonel

Welcome to the Course Design Workbook!

This workbook will help you create an effective course, from scratch, taking you through each step of the course creation process.

By the end, you will have a course that engages your students in authentic learning, based on best practices and through a variety of active learning activities.

The Course Design Cycle

The course design process is divided into four main steps:

- **Stakeholders**: who are they and what do they expect?
- What are the **learning objectives**?
- What **activities** should the learners do to reach these objectives?
- **Assessment**: how will I know the learners have reached the objectives?
- I have added a special section on **Ed Tech**, too.

The Course Design Cycle

Learning Activities

What activities do the learners need to accomplish to reach the learning objectives?

Learning Objectives

What should the learners be able to do by the end of the course?

Assessments

How will I know the learners have achieved the learning objectives?

Input from Stakeholders

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Who are they? What are their objectives? What are their constraints?

2 The Learning Objectives

How to determine your learning objectives? How to write specific learning objectives?

3 Assessments

How do I know the learners have met their objectives?

4 Learning Activities

There are so many possibilites to make learning meaningful and authentic.

5 Content Creation

What are the different parts of a course? How will they be organised?

6 Course Evaluation

Feedback is essential to make your course even better next time!

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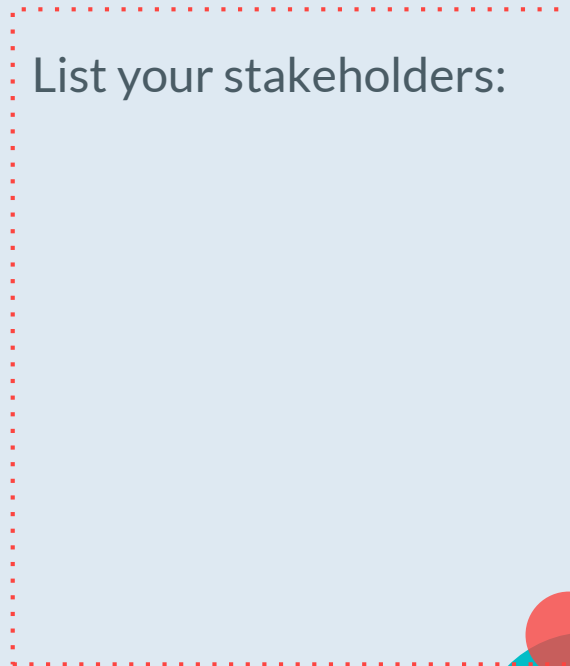
The Stakeholders

Stakeholders

Possible stakeholders:

- ○ Learners
- ○ Current or future manager
- ○ School, IT department
- ○ Payer (learner, employer, parent)
- ○ Teacher
- ○ …

List your stakeholders:

Stakeholders

For each stakeholder, analyse their expectations and concerns.

For example: the manager of an MBA student may expect her employee not to take time off work for her studies.

The company may define the total number of contact hours.

However, the most important stakeholder in preparing a course is the learner. The next page is all about your learners.

Write a Learner Persona:
Describe a typical learner in the course

- Who are the learners?
- What do they already know?
- What is their motivation to attend the course?
- How to they feel about learning? About the subject matter?

- What are their worries and concerns?
- How is their life outside of the learning environment?
- How comfortable are they with the teaching materials (reading, computers, math skills, etc.)

Stakeholders

Tools: How can you learn more about each stakeholder?

- ○ Meet them in person
- ○ Send out a questionnaire (Google Forms, for example)
- ○ Company and school handbooks
- ○ Introductions during the first class (it is never too late)

Do not assume you know. As a teacher, you are probably not a typical learner (you like school or you wouldn't have stayed).

Learner Persona.

Julia is 29, she was born in the US, lived in Brazil with her family for 3 years and is now in Basel, Switzerland. Julia is a pharmacist and has worked for a large pharma company in a lab for the last 5 years. She is doing her MBA to move into HR and is particularly interested in organizational change.

She has good IT, math and data skills. She has seen how her managers work, heard about the requirements from marketing, market access, finance, etc. However, she does not have any formal business training.

She doesn't have a family, but a boyfriend and full-time job. Her company will give her time to attend class, but not for the homework. She enjoys studying, but is a high achiever and is concerned about exams.

Your Learner Persona:

- Who are the learners?

- What do they already know?

- What is their motivation to attend the course?

- How to they feel about learning? About the subject matter?

Your Learner Persona:

- What are their worries and concerns?

- How is their life outside of the learning environment?

- How comfortable are they with the teaching materials (reading, computers, math skills, etc.)

Your Learner Persona

Stakeholder 1: _____

Stakeholders

Expectations of the stakeholder:

Concerns related to the stakeholder:

Stakeholder 2: _____

Stakeholders

Expectations of the stakeholder:

Concerns related to the stakeholder:

Stakeholder 3: _____

Stakeholders

Expectations of the stakeholder:

Concerns related to the stakeholder:

Stakeholders

You now know who you will be teaching and the expectations and concerns of all the different parties. Keep these in mind during the course design process, always coming back to whom the course is made for.

Now we are ready to move onto the Learning Objectives.

2.

The Learning Objectives

Learning Objectives

What should my learners be able to do by the end of the course?

There are subject specific knowledge and skills such as knowing about the different types of leadership, and being able to use them as appropriate. There are also transferable skills such as the XXI century Four Cs: Critical Thinking, Cooperating, Communicating and Creativity. Both are essential in the workplace today. A university's curriculum will ensure that all aspects are covered over the period of study.

A company training usually has much more specific objectives. You must make sure these are clear and in line with the business goals of the company.

Learning Objectives

How to determine the Learning Objectives.

This is an essential step and once again requires some research.

○ Resources on the academic side: school curriculum and syllabi, reference textbooks, academic bodies' recommendations (eg: Quality Assurance Agency for Higher Education in the UK).

○ From the workplace: employers and alumni, job descriptions, specialised literature, professional organizations and conferences. What will the learner be expected to be able to do in the workplace?

Learning Objectives

Writing the Learning Objectives:

○ LOs should be measurable.

For example, rather than: 'the student will understand the different types of social media', you should specify 'the student will be able to compare and contrast the different types of social media'.

○ Be specific about the expected level.

Should the student be able to 'list of factors affecting the exchange rate' or 'analyse how changes in different factors will affect the exchange rate' (see Bloom's taxonomy).

Example of learning objectives for a project management course

By the end of this course, you will:

- gain the knowledge and confidence to manage a project from beginning to end
- identify the different stages involved in project planning
- describe the use of a Gantt chart and the relevance of milestones in monitoring and measuring progress taking account of budget, expenditure and risk management

(UCL Human Resources Organisational Development, Project Managment, an Introduction)

Learning Objectives

Some resources to help write Learning Objectives:

- Quality Assurance Agency for Higher Education, subject benchmarks for bachelors, masters and health professions:
- Bloom's Taxonomy
- More about XXIst Century Skills
- H.E.A.T Framework towards higher order thinking skills, engaged learning, authentic connections and technology use.
- 6 alternatives to Bloom's taxonomy

Learning Objectives

My Learning Objectives:

1.

2.

3.

4.

3.

Assessments
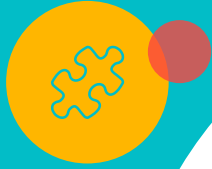
Assessments

How will I know the learners have achieved the learning objectives?

Before thinking about learning activities, it is important to know what success will look like. When the students graduate or the employees finish the course, what will they be able to do specifically? How can I measure whether this objective has been reached?

The course assessment should clearly show whether the learner has reached the objectives.

Example: if, in the workplace, the learner is expected to write a content matrix for the company's digital marketing campaign, the assessment should be a content matrix.

Each LO must be assessed and each assessment must correspond to a LO.

Example of a real world assessment.

In Dr M. S.'s Project Management course, students were expected to apply project management theory to a real project. The Spring 2018 students decided to organise a charity event. As they planned the event, they used the tools they had learned about in class: feasibility analysis, budget planning, fundraising, marketing, monitoring and control, teamwork and leadership skills, etc.

By the end of the course, the students had real experience in each of these areas. They can tell a future employer that, in a team of 6, they planned and carried out a dance event with 280 paying guests and raised over CHF 12'000 for the Swiss Multiple Sclerosis Foundation. And they have a real understanding of the full project management cycle.

Assessments

What should your students be able to do by the end of the course?

- ○
- ○
- ○
- ○
- ○

Check that all your Learning Objectives (LO) are assessed and that all your assessments correspond to a LO.

Assessment

Learning Objectives:

Assessments:

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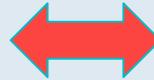
Learning Activities
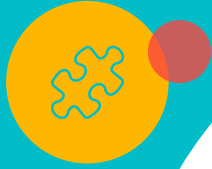
Learning Activities

Now that we know what the learners need to be able to do, we can plan the activities that build the knowledge and skills towards that objective.

No one has ever become an expert by listening to a lecture. Real understanding and the ability to apply the knowledge only comes when learners wrestle with the concepts, try to apply them, fail and try again. Remember, F.A.I.L stands for First Attempt In Learning!

We need to create learning activities in which learners have to actively engage with the material, to build their own understanding and connections. It shouldn't be too easy, or too difficult, but build on where they stand (see the Learner Persona). The material should also be relevant to the learners so that they want to engage with it and see the purpose of the activity.

Learning Activities

Active learning ideas:

- Task-based learning (e.g. creating a Word template)
- Problem solving (add an unexpected complication in the problem)
- Project-based learning
- Collaborative learning
- Real world (as the charity event for project management)
- Peer learning (also called inter-teaching)
- Discussions, debates (in person or online, synchronous or not)
- Case studies (eg: Pain Paillasse)
- Role play, theater
- Simulations
- Game-based learning
- Group work
- Curating (https://www.cultofpedagogy.com/curation/)
- Lectures, videos or readings
- brainstorming

Learning Activities

Where will the learning take place:

- In person, in a classroom
- In person, in another location (on the job, for example)
- Online: at a computer or on a mobile device

It is easier to build a learning community if the learners get me meet each other at least once. Learning is a very social activity and the interactions between members and with the teacher lead to a deeper understanding, more questioning of one's own beliefs. However, online learning gives more flexibility.

… and when:

- Synchronously: all agendas need to be coordinated
- Asynchronously: completely freely, or within a set timeframe

Asynchronous activities have the advantage that learners can take part when they have time, but also at their own rhythm. Some may need longer to understand, others already know the material. Non-native speakers will benefit from transcripts and slowing down the speed.

New technologies allow for infinite learning paths. Make sure to choose what is best for the learner, for each activity, within your environmental constraints.

Learning Activities

The Entry point: sparking the learner's interest

At the beginning of each sequence, we need to create excitement. We must awaken the learner's curiosity and show how the material is relevant to them. The Learner Persona will help you make the material more personal, use examples related to their areas of interest.

There are many ways of sparking learners' interest:

- Ask an intriguing question
- Show some surprising data
- As a question about their future job and the skills it requires
- Show examples
- Tell a story
- Carry out an experiment

Learning Activities

For each learning objective determine:

	Learning Objective 1	Learning Objective 2	Learning Objective 3
The assessment (copy from section 3)			
What input / content			
The learning activity(ies)			
Entry point			
Resources, including technological			
Where (classroom, on the job, online with computer, mobile)			
Time: when and how long			

Learning Activities

For each learning objective determine:

	Learning Objective 4	Learning Objective 5	Learning Objective 6
The assessment (copy from section 3)			
What input / content			
The learning activity(ies)			
Entry point			
Resources, including technological			
Where (classroom, on the job, online with computer, mobile)			
Time: when and how long			

Learning Activities

Sequencing:

Make sure the **order** in which your activities are presented is logical: do students get content input before having to apply it? If one learning objective is particularly complex, **chunk** it into small bite size elements. You want learners to be challenged, but not overwhelmed.

Recall is important for long term memorisation. It is worth starting a class with a short quiz or think-pair-share for learners to recall the important points from the previous class. A quiz can also encourage learners to do the prep work. No one likes to be last in a game! Another recall idea is at ask for an 'exit ticket' at the end of a class: each student should write on a piece of paper 3 points they learned during the class, or something they didn't understand (a good starting point for the next class), or any other questions that makes them recall what was discussed in class that day.

Within a session make sure there are a **variety** of activities, whether online or in class. Ask participants to stop the video and answer a question, for example. After a written exercise, introduce a discussion.

Learning Activities

You are now ready to create your learning path

The learning path gives you a visual overview of the full course, what happens when and where. You know what you need to prepare, and when it needs to happen.

This learning path also shows students where they are going, what they are expected to do, how and when.

Make sure to clearly highlight the type of activity, where it takes place (physical location or online), the time (set or open) and how long it will take the learner to complete the task.

Finally, make sure to include feedback points along the way. You do not want to finish the course and hear that students couldn't access the videos, or that they needed more time to prepare. Informal feedback should be constantly collected: are the learners engaged? Can they do the activities? Plan at least two more formal feedback points, one in the middle and one at the end.

Example of a Learning Path for a one day course: Selling at a Professional Trade Fair

Pre course activity:

Learners should fill in form about why they are taking the course, their previous knowledge, expectations and concerns.

- Create a schedule: backward planning (including communication and marketing, pre/during/post))
- Discussion: Preparing you stand and marketing materials
- Role play: Attracting and talking with potential clients
- Wrap up, online community

Course: morning

Pre-course

Post-course

Course: afternoon

- Introductions, ice breaker
- Discussion: Why Attend?
- Practical Exercise: Calculating Costs and the Breakeven Point
- How to apply?

- Feedback
- Maintain online community (Google Classroom group, post interesting information, start a discussion)
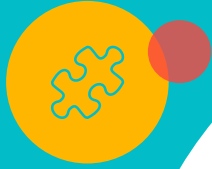
Learning Activities

In this section, we chose the learning activities so that the learners would gain the knowledge and skills to carry out the tasks we set as our learning objectives.

We now have a clear path of how to reach these objectives, with the specific activities and how they are ordered.

The next step is to create the learning material.

5.

Content Creation

Content Creation

We know what we want to do and the information we want to share. How do we now create this content? What tools are available to facilitate the learning and long term use?

It is important to remember that learning doesn't stop when the course ends. With today's tools, it is easy to make sure the material is available wherever and whenever it is needed. An infographic, for example, can help someone remember all the steps of a process, a checklist comes in useful when starting a new project, a video can summarize the main points of how to set up a successful meeting. During the course, learners should use these tools so that they become familiar and help once they are alone trying to apply the new knowledge at home, or in the workplace.

As you develop the materials, think how they will be used long term and how to give the learners easy access to them.

Content Creation

You are the content specialist, but here are some ideas on how you can make the most of the different media. In the next few pages we look at:

- Creating videos
- The many benefits of quizzes
- Preparing in-class activities
- Forms
- Curate content

Content Creation

Creating videos

The technology has become a lot cheaper and easier to use. Often a smartphone, ipad or computer is enough to make a great video. Here I suggest some technologies that are easy to use and mostly free, if not very reasonable.

Here are some important points to consider:

- Talking head or making a screencast
- Length of the video
- Quality of the light and sound
- Write your text!
- Check your content so that it is inline with your learning objectives and assignments.

Type of video: If the course is fully online, it is important the learners get to see you speaking, at least a little. If you are running a blended learning course, just hearing your voice may be enough. Showing images or graphs to explain what is happening often helps with the student understanding.

Content Creation

Creating videos, cont'd

Length: Research shows that viewers start to slack off after 6 minutes. When you first open a video, isn't the first thing you do look at how long it is? You would have to be very motivated to want to watch 60 minutes of anything. It is better to make a series of short videos than one long one. And forget filming a full lecture and posting it online. That is not the best you can give your students. Ideally, you video should be less than 6 minutes, although many courses have lectures of up to 15 minutes. Think of your audience and what will work best.

Light and sound: if you are filming someone, make sure they are well lit, with little distraction in the background. A quality microphone is highly recommended, and do make sure you work in a very quiet place. These are not so important when making a screencast.

Write your text: I never thought I would write this. Even when experienced professors told me they wrote their full text, I found it difficult to believe. But remember, you have little time to share your message, it is essential to get all the important elements in and hesitations and repetitions do matter in a video (which is not the case in a live presentation). So please, write your text out, as you would say it. And make sure to say it in a lively manner so no one can tell you are reading.

Content Creation

Creating videos, cont'd

Check the Learning Objectives: once again, make sure that the students have everything they need to reach their learning objectives. The video's purpose must be clear.

Check out the tools that can help you make videos on www.apassionforteaching.org under Ed Tech. Tools change fast and my website has an up to date page on video creating tools, with suggestions of different software and links to videos on how to use them.

Content Creation

The many benefits of quizzes

There are three main benefits to quizzes: recall practice which is proven to increase long term retention, an encouragement to do the pre-course activities and a way for the teacher to see how well the students have understood the material.

There are two main ways to use quizzes: online outside the classroom, or in class.

- Outside the class: quizzes can be used to support pre-course preparation, they are then based on the readings or videos. I usually use Google or Microsoft Forms.
  I make quite easy quizzes requiring a direct application of what was in the text or video. I keep the difficult points to do in class, when I am there to walk my students through the steps.

- In class quizzes are no longer the dreaded pop quiz, but can be made fun and energize the classroom. With Kahoot! or Socrative they are more like television games. I have had students ask for more, which is always a good sign!

Content Creation

Preparing in class activities

There are so many different types of activities, I will not go into detail of each one, but there are certain rules that apply to the preparation of any course activity:

- Check that the purpose is clear and in-line with the learning objectives.
- Write out the instructions and try them out on someone else to make sure they are clear. It is usually a good idea to hand out the instructions in written form, even if you explain them. Not all learners are native speakers, so may miss out on a part of what you say, many will forget.
- Try out the activity to see how easy it is for people to understand and carry out. I found that simple paper cutting in a factory experiment was more complicated than expected and I now prepare the paper beforehand to save time.
- Make sure you have all the necessary material and props available and that they work, before each and every class.

Content Creation

Forms

Google or Microsoft Forms are ideal to make pre-course forms (for students or other stakeholders to learn about their expectations from the course and their background), during the course you may want to collect data to use in class, and at the end of the course you will want to get learner feedback.

Content Creation

Curate Content

Curated content is a collection of relevant and annotated information, all in one place. With so much information available, one of the roles of the instructor is to curate information so that learners have immediate access to quality information that is relevant to their training. It can be done in collaboration with the learners who all share their favorite sources of information, to create an active learning community that will continue beyond the course.

How to curate content:

- Be clear about the purpose of the curated information. You might want to have a number of different curated topics to make information easier to find.
- The sources should be of high quality (you are modeling for your learners).
- Make sure to annotate each piece of information: why is it relevant? Add a short summary and relate the document to the learning objectives.
- Use a sharing tool that is easy to access for the learners. Ideally, they should be able to add their comments and more information.
- Keep it all up to date, regularly checking that the links still work and the material is still relevant. Add new material to keep the conversation going.

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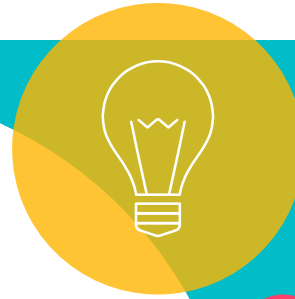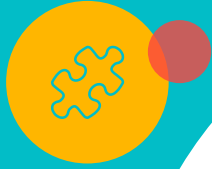
Course Evaluation

Course Evaluation

Course evaluation is essential and don't wait until the end and you can't change anything.

After each class, make sure to **reflect** back on it: What worked well? What didn't work so well? What are possible reasons? What could I do differently next time?

Write down your notes next to your timeline. Small changes should be made straight away (spelling mistakes, unclear instructions, etc.). You may want to wait until the end of the course to make bigger changes to have an overall picture.
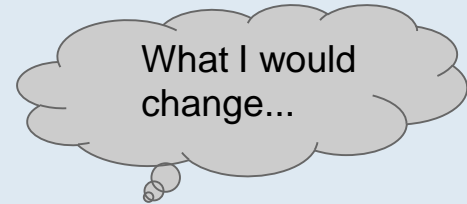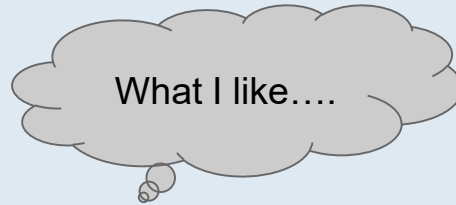
Course Evaluation

Mid Course feedback:

I usually do an informal written feedback about halfway along the course:

What I like....

What I would change...

This way I can adapt my course to my learners straight away: give more feedback, publish the material earlier, talk more slowly, etc.

Course Evaluation

End of course feedback is usually more formal. Make sure you cover all the important aspects of the course:

- Learning objectives (relevant? covered?)
- Activities (were they helpful to reach the learning objectives?)
- Facilitator
- Course administration and practicalities
- Always leave space at the bottom for open comments. That is usually where you will learn the most about what learners liked or not.

Course Evaluation

Take Action:

Feedback is only useful if it is part of the course design cycle. You need to act on the feedback to make the course even better next time round! Review the learning objectives, the assessments and the learning activities.

Congratulations! You have created a course that meets the needs of your learners with activities that engage them to reach an authentic understanding and build real skills.

About Dr Henrietta Carbonel

I am passionate about designing courses: creating an exceptional learning experience, based on best practice and research, using the opportunities new technologies have to offer to facilitate learning and ensure my learners reach the objectives set for the course and transfer their new skills and understanding into the real world.

My current focus is on using EdTech which offers new opportunities to facilitate real learning, beyond the classroom, emphasizing learner-centered strategies and problem solving.

Learn more at   www.apassionforteaching.org
or contact me at   henrietta.carbonel@gmail.com

Credits

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