

## **From an interactive syllabus to a printable version of START e-business training: Tools and challenges**

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**Abstract:** A syllabus is a plan for a course of study, which provides a visualization of the course structure. The syllabi play a number of functions, such as providing information about the communication methods between the teacher and their students, a course plan for learners, a source for learning materials or additional readings, and a guide for learners that helps them directing their effort to success in the course. Online education now is more interactive and increasingly multimedia-rich, and therefore syllabi need to be interactive too. In designing and developing an interactive syllabus for START e-Business Training, learners can visualize the structure of training, search its contents, access frequently asked questions, and explore additional resources. Although the significance of an interactive syllabus, a printable version is needed. This paper discusses the best strategies and tools that were used to develop both interactive and printable syllabi. The paper also outlines some challenges in producing a corresponding pdf version to the interactive syllabus, from the learning designer's point of view.

### **Introduction**

A curriculum is concerned with answering a series of specific questions about what to teach, what knowledge is of most worth to learners, how to teach, what activities are effective in helping learners to acquire the knowledge when to teach, what are the learning outcomes and how do we assess these as educators (Print, 1993). While the curriculum is a broad term, a syllabus is more focused.

### **Definition and role of the syllabus**

The syllabus is the course outline that provides the structure for planning, course requirements, expectations and success (O'Brien et al., 2009). The syllabus provides an official presentation and visual map that describes the outline of a curriculum (Luke et al., 2012). The syllabi play a variety of valuable functions and including providing information about the communication mechanism, a planning tool for instructors, a course plan for learners, a teaching tool, a source for learning materials or additional readings, a guide that learners can use in their learning in-class and out-of-class learning, and it also can work as a contract or written agreement between learners and instructors or their institutions (Ko, 2017). While the syllabus is seen as a contract because it lays out the terms of class interactions, expected duties and responsibilities and grading criteria (Ko, 2017), some researchers argued that the syllabus cannot legally function as a contract, because students receive the syllabus after their enrolments, and there are usually many amendments apply to courses, by their instructors and communicated to students via emails, forum posts or during lecturers or tutorials (Rumore, 2016). It is worth noticing, however, that negotiations and discussions around syllabi may increase motivation and learners' engagement in the course (Kaplan & Renard, 2015).

O'Brien et al. (2009) argued that the syllabus should include the table of contents, letter to students, the purpose of the course, course description, course objectives and any readings and resources, course requirements, policies and expectations and evaluation and grading. The syllabus also provides a time-based sequence of activities that learners need to do during the course (Germano & Nicholls, 2020). It is recommended that when designing any materials online is to be clear, intuitive, well-organised and structured, enabling learners to be motivated and to navigate the content easily (Adams et al., 2021). Headings are an effective and simple organizational tool when designing the syllabus. Such structured presentations help learners to make connections among different topics taught in the course (Bloomberg, 2021). Moreover, it was found that visual syllabi promote greater information retention than traditional syllabi, and the selection of any visual elements should be relevant (Yarosh, 2021). Visual tools, such as images, graphics, and charts, help learners see and take in important information about the course (Harrington & Thomas, 2018). Graphics convey information more efficiently than text, and they require fewer cognitive transformations than text (Nilson, 2006). Nilson (2006) has argued that while most syllabi are designed in a linear and text-based format, she has suggested that educators and instructional designers should adopt graphics-based syllabi since learners are often more visual.

### **Design considerations of syllabi**

A well-designed learner-centered syllabus should promote learners' growth and motivation, and consider personal and professional relevance (Taylor et al., 2019). Several factors influence the design of a syllabus, and these include common trends, educational context, learner backgrounds and course objectives. Syllabi should also consider diversity and inclusion, in many ways from providing different office hours, to offering different activities (Fuentes et al., 2021). From the students' point of view, they value rich experience, rich media, pleasing content, personalized content and localized content (Murphy, 2018). The learner-centered tone of the syllabus, by itself, does not increase learners' engagement, but there might be other factors that could enhance learners' engagement, including having a colorful and interactive syllabus (Howton et al., 2020). The instructional block should be self-contained, and at the same time, contributes to the larger goals of the syllabus (Murphy, 2018).

There are some parameters that make the syllabus a motivational tool for learners and importantly when linking the course with expected learning outcomes and helping learners in their future career goals (Harrington & Thomas, 2018). There are a set of components that a syllabus should include: 1) Course details: Course name, description, objectives, duration and any textbooks or supplemental readings; 2) Instructor details: Instructor name, and contact details; 3) Assessment details: Information about assignment names, descriptions, grading systems and tips for success; and 4) Policies of consideration: Any relevant policies such as attendance policy, grading policy, and integrity policy, etc. To create a syllabus for a course, some steps need to be followed (Srinivasan, 2019). These steps include: 1) Determining the key objectives of the course; 2) Mapping the structure of the course; 3) Creating connections between modules; 4) Balancing between the technical knowledge and the conceptual understanding in each module and the course as a whole; and 5) Including materials that best represent the course objectives.

### **From an interactive syllabus to a printable syllabus**

The syllabus is an important step in course development, regardless of the mode of delivery whether face-to-face, online, or blended. It is especially important in online education as learners are likely to feel somewhat disoriented without a clear guide of what they would face in the course (Ko, 2017). Previous research found that the graphical syllabus is easier and more exciting to be viewed on mobile phones compared to the printed syllabus (Mikhailova, 2018). Moreover, adding video and audio elements can be powerful in drawing attention to key components of the course (Harrington & Thomas, 2018). Moreover, when the course is to be conducted online, there is a need to provide more information about the technical requirements such as information about navigating the learning management system used in the course as well as information about how to receive technical support (Vai & Sosulski, 2015). An interactive syllabus is a tool that facilitates the constructivist strategies in an online course, through progressive engagement with course materials in a non-linear and adaptive process. It was argued that the interactive syllabus is an ideal medium for reflective thinking and cognitive scaffolding, which help learners to construct meanings and build new experiences. The interactive syllabus can be integrated into a learning management system or available online, as part of an online course (Richards, 2003).

### **Designing an interactive syllabus**

The online learning environment provides the opportunity to design interactive multimedia materials (O'Keefe et al., 2020). Interactive syllabi incorporate various elements, including drawings, charts, graphs, maps, timelines, or images to visualise the sequence and organization of course topics. Such visualization helps learners to see the "big picture" of interrelationships between different parts of a provided course (Almunive, 2020). McKinney (2021) has defined the interactive syllabus as a document that provides information about a course and helps students to navigate it more easily with hyperlinks and that syllabus is multimedia-rich (texts, audios, videos, animations, and images) to convey information as effectively as possible. These hyperlinks are not only to navigate through the syllabus itself but also to access the course contents (Martin et al., 2018). By adding interactivity features to syllabi, learners can navigate and view any course content easily (Almunive, 2020). Designing an interactive syllabus has some challenges including overwhelming effort and time consuming (Ozaki, 2013). Nevertheless, developing learning-focused syllabi can positively affect motivation, before students even step their feet into classrooms, and can therefore make meaningful engagement during the course of study (Wheeler et al., 2019). Moosavian (2017) has argued that there is a difference between the graphic syllabus, which is a flowchart or a diagram that displays the sequence of a course, and the interactive syllabus, which web-based syllabus that offers rich media to students, including texts, images, audios, and videos. Instructors and learning designers are using innovative modern technologies to design, develop and present interactive teaching demonstrations (Mysore, 2006). With the current state of distance and online education, there is a necessity to have interactive learning materials including interactive syllabi (Jones, 2021).

### **Features of the interactive syllabus**

An interactive syllabus is designed to appeal to different learning styles, as it contains media that encourage learners' exploration; thus, it is a tool that adopts constructivist principles, because it helps learners to construct their understandings based on their multiple and adaptive interpretations of their interactions with the syllabus (Richards, 2003). Previous research found that an interactive syllabus has significantly improved the students' enthusiasm and greatly enhanced their interest in the teaching content (Bo et al., 2021). Martin et al. (2018) suggested that online instructors should use interactive syllabi, so learners can find answers to their questions and other course information more easily. In the next section, an overview of START e-business training is discussed as well as the need to design and develop a syllabus for that training.

### **The online START e-Business Training**

The *Smart Training for Arabic-speaking Residents on Technology* START is a self-paced e-business training. This training is specifically designed for the Arabic-speaking residents of Australia, who have work rights in Australia. The Arabic-speaking residents can participate in the training, regardless of their interest to participate in the study, which has received ethics approval from Flinders University's Human Research Ethics Committee (Project ID: 8605). This training is provided to Arabic-speaking residents to solve the high unemployment rate among this group, due to various reasons, including lack of English skills, lack of computer/ICT skills, lack of professional skills, and lack of equal opportunity that hinder them from employment (Hanna et al., 2022). The START training is aiming to help those unemployed Arabic residents of Australia to establish their online businesses, by providing them with self-paced training that enhances their computer/ICT skills and business skills and indirectly English skills, and they then can overcome the lack of equal opportunity they face in employment, by establishing their businesses, using the skill sets, hobbies and interests they master in the business they aim to run (Hanna et al., 2022).

The designed and implemented START e-Business Training is self-paced. It is interactive, as learners can navigate, by clicks, through the contents of each module. At the end of each module, learners can answer a quiz, and they have the opportunity to repeat answering the quiz. Moreover, learners can engage in an online forum, where they can communicate with each other and with their trainer. An online support group is also available to them. Since the START e-business training is online and interactive, there was a need to design an online interactive syllabus (Martin et al., 2018; Vlachopoulos & Makri, 2019). It was suggested that when an instructor or instructional designer creates a syllabus designed for an online course, it is essential to write it clearly about how to navigate the digital learning environment and any learning management systems (Gunder et al., 2021).

### **Steps of producing START's syllabus**

Producing a syllabus for START e-business training began with producing an interactive syllabus, and then a printable version that corresponds the interactive syllabus. The interactive syllabus requires using a set of design skills including word processing apps, presentation apps, pdf apps, photo editing apps, video recording apps, audio recording apps, learning management systems, and cloud systems with the incorporation of different multimedia including texts, images, animations, videos, and hyperlinks, etc. (Jones, 2021). Glyshaw (2021) has designed and developed a syllabus website, which has replaced the overwhelming LMS; and that syllabus website was accessible for students and manageable by instructors. In implementing the interactive syllabus, it was considered to enable learners to provide their feedback about the course content, as well as to provide them with links to useful resources (Zhou & Hargis, 2020). Syllabi should be student-centered (Richmond et al., 2019). The videos were also used to provide information about each module of the training (Zhou & Hargis, 2020). The interactive syllabus has also quizzes that help enhance motivation and reduce anxiety and learners can also complete a survey at the end of the syllabus (Miller et al., 2022). Moreover, in designing the interactive syllabus online, learners and website visitors were allowed to rate and comment on the interactive syllabus. The website visitors are likely to be those interested in the START e-business training, and they can be future trainees. In developing the interactive syllabus, the ADDIE model (Branch, 2014) was followed side-by-side when developing the START training. After the interactive syllabus was designed, a printable version was produced – as discussed in this section.

### **START's interactive syllabus**

#### **1) *Analysing learners needs***

Arabic-speaking trainees have different age levels and educational backgrounds. Therefore, their readability levels are unknown. However, they all share the same interest in running an online business. The training itself has authentic learning objectives, in helping them establish their online businesses. Learners are distributed across Australia and there is no way to know their daily schedule. Hence online self-paced training can accommodate their unknown schedules and consider their country-wide distribution and time differences.

## **2) Designing the contents and visual aspects of the syllabus**

The learning objectives of each module were outlined for the START online version, to cover ICT/computer, business, and English skills development. Simplified and short versions of these objectives were prepared for the interactive syllabus. To increase the interactivity with the syllabus and hence increase the motivation to participate in the START training, quizzes were designed for each module. The aim of these quizzes is not to test the knowledge of potential trainees, but rather to help them aware of their knowledge shortage if any and if they are interested and motivated, they can join the training. The visitors of the interactive syllabus website have the opportunity to rate the syllabus either via an online survey or by posting a review.

## **3) Developing and crafting the syllabus interactive website**

The interactive syllabus website was designed using software called Website X5. This software is featured with various templates, that consider accessibility compliance, including colour, font, and description for videos and images. The website is very simple and easy to navigate. The main page includes a video that provides an overview of the START training as well as a downloadable pdf version of the syllabus. There are four main buttons on each webpage. Each webpage includes a video that describes one module of the training, the module objectives, and the expected learning outcomes. These videos have animations, texts, images, and shapes that were developed using Articulate 360 Storyline. The slides voice-over was prepared using Google text-to-speech, which reads transcripts that were prepared for each module. Some important resources were selected and provided to potential learners. Website visitors can answer the module's quiz, which opens for them when they click on the quiz link. While the modules were developed using Articulate 360 Storyline which were uploaded to Chamilo LMS (Hanna, 2020), the quizzes and survey were developed using iSpring QuizMaker and they were hosted on a Linux webserver. This interactive syllabus website is available at <http://istartproject.net/syllabus/> (Hanna, 2022).

## **4) Implementing the training**

After an Arabic-speaking resident expressed their interest to participate in START training, a welcome email is sent to them, including access details (username and password) to START Chamilo LMS. In the welcome email, there is a link to the online interactive syllabus as well as a pdf version of the syllabus is attached. The first intake of START training began in January 2023.

## **5) Evaluating the syllabus**

The informal verbal feedback about the interactive syllabus was received from some peers who positively expressed that the interactive syllabus is light and easy to navigate. Moreover, there was a website visitor of the interactive syllabus called Kamal who left a 5-star rating and a comment saying: "*The syllabus looks interesting. I look forward to join the training.*".

## **START's printable syllabus**

Regardless of the significance of having an interactive syllabus for an online training course, it is very crucial to have a printable version for an interactive syllabus (Garrett-Ostermiller & Harrington, 2021). Therefore, a printable syllabus was designed for START e-business training. While Jones (2021) created a multimedia syllabus using MS PowerPoint, which features transitions, animations, embedded audio/video materials, hyperlinks and buttons, in this study we have produced a printable version of the interactive syllabus using the same software. On the cover page of the printable syllabus, there is a QR code that redirects its reader to the website of the interactive syllabus. The printable version syllabus includes information about the START e-business training and overall learning outcomes (Figure 1). In the printable version of the syllabus, the contact information of the training tutor was provided (Figure 2). The syllabus includes learning objectives and outcomes, as well as some links to useful resources for each module, as well as links to the module's online quizzes were provided (Figure 3). The printable version was developed using Microsoft PowerPoint to enable floating shapes, textboxes, and images, in a portrait layout. After designing the syllabus in PowerPoint, a pdf version was generated. As O'Brien et al. (2009) suggested, the pdf syllabus has a simple presentation to enhance its readability.



## About **START** e-Business Training

### **Smart Teaching for Arabic Residents on Technology (START)**

START is an online training program that aims to enhance the opportunities for Arabic residents in Australia to secure employment, and by proceeding further in this training, they will be able to establish and run an online business.

### **Objectives of START e-Business Training**

- 1) Mastering Professional Skills (Computer/ICT Skills, English Skills and Business Skills).
- 2) Establishing Online Business, including Business Website and Online Shopping Cart.

### **Learning Outcomes of START e-Business Training**

- By the end of this START e-Business Training, you will be able to
  - Landing to an idea that is suitable for online business.
  - Choosing, in consultation with an accountant, a suitable business structure.
  - Writing a business plan and communication templates (e.g. offers).
  - Keeping records of your business income and expenses.
  - Designing business flyers and business card.
  - Maintaining records of business customers.
  - Marketing through Facebook (pages & groups).
  - Sending email promotions to current and potential customers.
  - Building a business website's basic pages (products/Services and contact).
  - Setting up an online shopping cart for your business, and managing orders.



*Figure 1: Objectives and learning outcomes of START e-business training*



## START: Eligibility Criteria and Registration

### Modules of START e-Business Training

- ❖ Module 01: Assessment of Business Idea
- ❖ Module 02: Business Structure & Licensing
- ❖ Module 03: Building Business Plan
- ❖ Module 04: Mastering Record Keeping
- ❖ Module 05: Building Business Presence
- ❖ Module 06: Building Customers Database
- ❖ Module 07: Marketing in Social Media
- ❖ Module 08: Email Marketing
- ❖ Module 09: Building Business Website
- ❖ Module 10: Creating Shopping Cart

### Eligibility Criteria

- Be an Arabic-speaking resident in Australia, and
- Have basic level of English skills or higher, and
- Have basic level of computer skills or higher, and
- Have work rights in Australia, and
- Aim for employment or seek to establish online business.

### Software Requirements

- Microsoft Office (Word, Access, Excel, PowerPoint, Outlook).
- Website X5 Professional (You can use Trial version).

### Registration & Questions

- Registration in START e-Business Training: <https://www.istartproject.net/>
- Questions: [help@istartproject.net](mailto:help@istartproject.net)



Figure 2: START's eligibility criteria and contact details



## Module (05): Building Business Presence

### Module Training Objectives

- Creating the awareness of the significance of business presence.
- Exploring ways of business presence, including Google My Business.
- Using Microsoft PowerPoint to create flyers and posters.

### Training Outcomes

- By the end of this module, you will be able to design business flyers and posters.

### Resources

- Marketing: <https://business.gov.au/marketing/advertising-for-business>
- Google Business: [https://www.google.com/intl/en\\_au/business/](https://www.google.com/intl/en_au/business/)

### Quiz

- ❖ <https://www.istartproject.net/syllabus/Quiz05/>

Figure 3: An example of module's objectives, outcomes, resources, and quiz

## Discussion and conclusion

Online learning, either blended or entirely online, requires a well-prepared instructional design, including the learning objectives, learning materials, activities, course content, multimedia, as well as syllabi. As Jones (2021) explained that while the traditional paper syllabus has its significance to learners, the interactive syllabus, motivates learners not only to revisit the interactive syllabus but also to engage with course content and activities, the START e-business training has its interactive syllabus that not only featured videos and links to useful resources, but also quizzes, rate & comment, and survey, as well as a printable pdf syllabus (Hanna, 2023). The present paper describes the how both interactive syllabus website and printable pdf version were designed and developed. While the interactive syllabus is more engaging and multimedia-rich, the pdf syllabus could be attached to emails, uploaded to the Chamilo LMS, or downloaded from the interactive syllabus website (Table 1). The START e-business syllabus, whether the interactive website or printable pdf file, is designed after assessing learners' needs, as a first stage in the ADDIE model. Learning objectives, links to useful resources and quizzes were prepared to meet learners' needs. There were some challenges when developing the interactive syllabus, mainly in the time consumption to develop the videos using multiple software for the transcripts, animations, and audios, which then were uploaded and hosted on YouTube servers, and embedded in the module webpages. Other challenge includes designing and developing the quizzes, which cover the module learning objectives. Both the interactive syllabus website and printable syllabus pdf have an appealing appearance. Both START interactive and printable syllabi can be used independently. The START e-business training, and of course its syllabus, is designed using design-based research (Baumgartner et al., 2003), which means that after each intake, the learners' evaluation will be analysed to refine the training modules and the syllabus. This will involve an overwhelming effort, with each intake/iteration.

Table 1: Comparison between interactive and printable syllabi: Tools and challenges

Interactive Syllabus	Printable Syllabus
Website Pages → WebsiteX5	Syllabus Document → PowerPoint to PDF
Videos → Articulate Storyline to mp4	Videos → Not applicable. Replaced by Text instead.
Audios → Google Text-to-Speech	Audios → Not applicable. Replaced by Text instead.
Surveys & Quizzes → iSpring Quizmaker	Surveys & Quizzes → Links to online surveys provided
Comment & Rating → WebsiteX5 Object	Comment & Rating → Not applicable
Buttons → WebsiteX5 Object	Buttons → Not applicable. Learners can flip pdf syllabus.
Flip & Download → WebsiteX5 Object	Not applicable
QR Code → QR Code Generator (embedded)	QR Code → QR Code Generator (embedded)
Links to Resources → Clickable	Links to Resources → URLs provided
Availability → Online; and requires ongoing internet access. It cannot be attached to emails.	Availability → Offline; and no need for ongoing internet access. It can be attached to emails.

This paper is practice-based rather than a research paper, as it describes the process of designing the interactive syllabus website and the printable syllabus pdf from an educational designer's perspective. In the future, and after the results of the survey are received and analysed, a report of findings can be discussed. Having said that, the primary feedback received informally was positive which was supported by the only rating and comment that was left on the syllabus website by the time this paper was submitted. In general, and to conclude, as Richards (2003), when the interactive syllabus is multimedia-rich and aligned with constructivist course objectives, it offers learners a pedagogically rich website for the training materials that form the basis for participating in the training. While the interactive syllabus can be implemented into the Chamilo learning management system for the training, it is wise to be separate from the LMS as potential learners will not be able to join the START e-business training without expressing an interest to enroll in the training. The interactive syllabus has several special advantages, including its ability to simplify complex concepts and relationships, which helps cause better retention and communication than text across cultural and language barriers (Moosavian, 2017). Moreover, and as Moosavian (2017) discussed, the interactive syllabus can engage learners with different learning styles, and also different readability levels, as those participating in the training are from different age ranges and educational levels.

Overall, this paper made some contributions to knowledge and practice, including assessing features of traditional versus interactive syllabi and describing the steps, processes and tools that are used to design and develop the interactive syllabus, and how to produce a corresponding printable pdf version of the interactive syllabus. While the significance of having an interactive syllabus for an online training course, it was very crucial to have a printable version of an interactive syllabus (Garrett-Ostermiller & Harrington, 2021).

While Jones (2021) has created a multimedia syllabus using MS PowerPoint, in this paper we discussed how MS PowerPoint was used differently to produce a printable version of the START interactive syllabus. In this printable version, all features of the online interactive syllabus were incorporated, including information about the training course and the trainer's contact details. Links to learning resources and quizzes were also provided to learners. During the implementation of the START training, more feedback and evaluations will be received through a survey that is available within START's Chamilo learning management system.

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