Global Knowledge Development

Improving the learning process and outcomes

FEET: Fit for European E-Training is an Erasmus + project No.2015-1-DE02-KA104-002248

Learning Mobility of Individuals/Adult Education

The aim of this course is the training professionals collaborating with E@W to acquire new knowledge and skills required to become effective online trainers (e-trainers). They will study and practice how online training is designed, implemented and evaluated. They will be trained to become e-trainers so they can provide online and blended learning to their learners in Germany and worldwide.

The training course is developed based on the contract between

the FEET project coordinator **English at Work GmbH, DE:** E@W www.englishatwork.com

 and **Global Knowledge Development Ltd, UK:** GKD - www.gkd-online.com

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A. Theoretical part

Table of Contents

Note: <u>Unit 5</u> covers the following topics included in the training program:

Improving the learning process and outcomes: Taking into account the special needs of participants. Implementing learning scenarios. Overcoming challenges. Tracking learning progress.

1. Improving the learning process and outcomes

Learning evaluation

Knowing how to effectively evaluate online learning is a priority for many learning/training professionals. But due to certain challenges many learning professionals are finding it difficult to effectively measure and communicate the value of their learning programs, courses and their outcomes.

The **forgetting curve** is an often-used and sometimes over-used concept that refers to the human tendency to rapidly forget what we learn without subsequent relearning or reinforcement. The learning professionals cite often the forgetting curve as the main reason the expected learning outcomes do not match the planned ones. "Learners will forget 90% of what they learn in 30 days without reinforcement!" "70% of what people learn is quickly forgotten!" is often quoted. Herman Ebbinghaus conducted two separate experiments on him in 1880 and 1885 and published the results on forgetting curve which points to 40% retention in 10 days interval after the learning is completed. There are replications of his experiments by

other researchers (Mack, Seitz, Dros) pointing to similar results [Ref. 3].

Today Web technologies enable learning professionals to measure, aggregate and evaluate correctly many types of online learning data. These data let them to correct the learning design and process aiming at improving the outcomes.

Evaluation models

The **Kirkpatrick model's four levels of evaluation** is the most ubiquitous and well-known learning evaluation model. It is probably the best known model for analyzing and evaluating the results of training and educational programs.

The Kirkpatrick's four levels of learning evaluation include [Ref. 2, 5]:

1. Reaction - What did learners feel about the learning experience?
2. Learning - Did learners actually learn anything? Did their knowledge and skills improve?
3. Behavior - Did learners actually do anything different as a result of the training?
4. Results - What was the effect of the training as a whole?

This is a simple method to use to get a glimpse into the effectiveness of the training.

Since being defined in 1959, this model has had its fair share of both supporters and critics.

There are also alternative models developed by researchers and companies [Ref. 2]:

Kaufman's five levels of evaluation are a reaction to and development of the Kirkpatrick Model's four levels. Kaufman's main developments from Kirkpatrick are:

- the splitting of Level 1 into input and process,
- the grouping of Levels 2 and 3 under the "micro" level, and
- the addition of fifth level, mega.

Kaufman also sees Kirkpatrick's model as being restricted to training delivery, while his own model considers both delivery and impact.

Kirkpatrick's evaluation model is normally implemented following quantitative research methods. By contrast, **Brinkerhoff's Success Case Method** focuses on qualitative analysis. It isn't restricted to learning. It can be used to analyze any major individual behavior or business change. It's based on the assumption that any initiative, no matter how successful or unsuccessful, will always include some success and some failure. It seeks to uncover the most impactful successes and failures of an initiative and then tell the stories behind them, backed by evidence. Any organization or individual can use these stories to learn how to be more successful in the future.

A more recent and lesser-known model, **Anderson's Value of Learning** published in 2006 aims to address two challenges: Evaluation challenge and Value challenge. It is a three-stage cycle that's intended to be applied at the organization level, rather than for specific learning interventions.

Watershed's Seven Steps of Evaluation [Ref. 2] is a seven-step process for evaluating learning and development (L&D) programs. Its approach to evaluation is a combination of Kirkpatrick's model and the Value of Learning model with lessons from Kaufman's model, the Success Case Method, and what they've found works in practice.

The seven-step process for evaluating learning and development includes the following steps:

1 **Align** - Identify project goals and evaluate alignment with strategic priorities (Value of Learning).

2 **Define** - Identify success metrics most appropriate to the organization (Value of Learning). Ensure that these metrics cover the complete story from learning to achievement of the project goals (Kirkpatrick and Kaufman).

3 **Discover** - (Optional) Identify what learning is already occurring in the organization that supports the project's goals. Research those activities and identify what works well and what doesn't (Success Case Method).

4 **Design** - Design the project itself, including determining how data relating to evaluation metrics will be captured, aggregated, and displayed/used. Consider use of dashboards for ongoing monitoring and reports for analysis at specific points in the project.

5 **Monitor** - Continually monitor success and progress toward the project goal and keep stakeholders updated. Make changes to the project as required in response to ongoing data.

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6 **Analyze -** At the end of the project and/or at specific dates after implementation, analyze data in detail. Celebrate and share evidence of successes. Document and share lessons learned.

7 **Explore -** (Optional) Research further into particularly successful and unsuccessful elements of the project to uncover more lessons learned (Success Case Method).

Learnability of online courses

Measuring **learning effectiveness** or **learnability** of online courses is vital for learning and development teams and trainers. By evaluating online courses for learnability, they can predict its impact as well as identify measures to increase it.

There are several ways that can be adopted to measure learnability of online courses [Ref. 8]:

1. Begin with the analysis relevant for existing courses

2. Provide the guidelines that will create the required learnability for new courses

3. Predict learnability

4. Measure learnability and provide recommendations and remediation, if required

5. Validate the predictive learnability from users in real time

6. Provide analysis

7. Identify the gaps

8. Provide recommendations on exactly how the identified gap can be bridged

9. Close the loop by recalibrating the existing approach based on actual user/learner feedback

10. Establish the required learnability.

The feedback in e-learning

A good learning feedback is mainly **educational, encouraging, and emphatic** to the learner. The three criteria are all things that are meant to benefit the learner [Ref. 9]:

1. The feedback must be **educational** - there's a difference between being informative and being educational. When a trainer is informative, he or she is limited to a delivery of facts/content. Being educational, on the other hand, encourages the processing of this information for better understanding and applying.

The feedback should not be limited to merely informing the learner as to the results of the course or his or her performance but instead delve into the reasons as to why this is the case.

2. The feedback must be **encouraging** - while an e-learning management system still can't control whether a learner will succeed or fail in a particular course, a good feedback by the trainer can affect the level their motivation or willingness to continue with the program afterward.

The supportive role of feedback in online learning have to make it a point to reassure students that their failure doesn't mean they are incapable of succeeding in that course if they try again.

The learners are motivated differently, and it's up to the trainers facilitating the e-learning courses to make it a point to address any insecurities resulting from the failure. The feedback must encourage the learner.

3. The feedback must be **emphatic** - the most important part of this aspect of feedback is that it's the appreciation that actually makes education and encouragement more effective. The things that promote an open mind as well as the willingness to learn is the fact that a learner knows that he or she is understood and appreciated.

The feedback aspect of online learning is usually neglected or misunderstood. As such, the trainers don't maximize the potentials of their e-learning courses, resulting in slower development or less retention on the part of the learners. It's important to understand the concept of as well as the specific roles that feedback has on the learning experience. An effective feedback can be delivered by the trainer to the online learners/students during webinar, audio and/or video conferencing sessions using the latest online communication and webinar/meeting technologies and software systems (please refer to Unit 2).

E-learning assessments

Creating and implementing effective e-learning assessments is the way a trainer can ensure that the online training course was truly effective.

There are a variety of e-learning assessment types. Some of the more popular ones include [Ref. 10]:

- Multiple Choices

- True/False

- Drag and Drop

- Fill in the Blank

- Matching, etc.

Developing an online course, the trainers/ID teams have to avoid waiting until the end of the course to assess learners on something they saw on the very first slide/chapter/module. Instead, they need to assess at logical intervals/content portions.

Using **e-learning authoring software** can make it easy to develop and incorporate assessments into online training. These software applications typically allow a trainer to pick a question type, and then fill in the information for the question, possible answers, and feedback given to the learner for a correct and incorrect answer. This makes the whole process of designing e-learning assessments easy.

Learning evaluation and Web technology

The increasing demand for better evaluation and analytics in learning has largely been driven by better measured and collected data. Google Analytics (google.com) is just an example of a commonly used tool that provides detailed insights into website traffic and users' behavior. This includes data about website visitors themselves, but more important, how visitors got to the website and then navigated through it and content published.

How can an online trainer quantify the value of his/her learning program in relation to learners' behavior? How can an online trainer identify ahead of time which training programs are likely to have an impact and

which will fail? What technology exists to get and analyze that data?

First data must be collected from a single source. The Learning Management System (LMS) is used to conduct and manage the training process and participants. Unfortunately in online learning, there is no one single source of data about the learning that's happening. Even if the learning process has a single, well-used LMS, that LMS is probably only capturing data for a limited amount of the learning experiences. Most learning is happening elsewhere on the Internet - such as intranets/VPNs, simulators, social platforms, external websites, various additional/external content resources, offline conversations, and on the job tasks—and capturing all the data from these dispersed sources is a challenge.

Fortunately, the learning technologies industry has been aware of this challenge and working on solving it for the last decade. After several years of research and development (R&D), a community work group focused on the learning technologies industry released an interoperability specification known as the Tin Can API (or Experience API - xAPI) in April 2013 [Res. 23 – Practical part]. This specification defines a common way for learning technologies to communicate data about learning experiences to a central database - a Learning Record Store (LRS) for analysis. xAPI was developed by Rustici Software and Advanced Distributed Learning (ADL) community (the keepers of the SCORM standard). xAPI is now actively integrated by the developers into the new LMS software versions. As more data sources become "xAPI enabled," it becomes easier for trainers who use LMSs having xAPI

installed to perform the learning evaluation. xAPI also helps evaluate even formal learning experiences in terms of learner behavior and impact. Organisations are using xAPI to track job performance alongside learning to explore the impact of their learning interventions. The biggest change the Web technologies bring is the ability to quickly establish and easily track ongoing analytics in the learning process. Without this technology, learning professionals would spend countless hours continually gathering, compiling, and updating data. Using a LRS and xAPI, data is collected, processed and presented on an ongoing basis (real time) and with a Learning Analytics Platform learning professionals and L&D managers can access up-to-date analytics about the online learning process and its outcomes.

Improving online learning process

A well developed training content isn't enough to make an online course engaging and provide the best experience to the learners. To form an outstanding online experience, every single aspect of a training course matters – from materials used and structure to things as technical and graphic design elements. By carefully measuring results, collecting user feedback, analyzing and improving all course and learners' behavior components, the trainers and ID teams can make an online course and learning process close to perfect [Ref. 11]:

1. Title and TOC
2. Introduction
3. Instruction style
4. Content

2. Taking into account the special needs of participants

Learners with Special Educational Needs

The term "special educational needs" (SEN) has a legal definition, referring to children/students who have learning problems or disabilities that make it harder for them to learn than most children of the same age. Many children may have special needs of some kind at some time during their education [Ref. 16].

Analyzing the training audience and its characteristics during the initial phase when planning an online training program (please refer to Unit 2), a trainer has to take

into account that there may be participants in the group having SEN and provide specific resources and tools to help/support them.

Using digital technologies to conduct online training activities requires specific Web technologies and tools to meet the needs of the participants having SEN or disabilities.

Web Accessibility Initiative

People with disabilities may encounter difficulties when using computers generally, but also the Web. People with disabilities often require non-standard devices and Web browsers making websites and online content more accessible. They also need a wide range of tools and devices, including mobile devices, which still have limited resources.

The World Wide Web Consortium (W3C)'s Web Accessibility Initiative (WAI) is an effort to improve the accessibility of the World Wide Web (WWW or Web) for people with disabilities.

It was launched by W3C in 1997 with endorsement by the government of the USA and W3C members. It has several working groups and interest groups that work on guidelines, technical reports, educational materials, standards and other documents that relate to the several different components of Web accessibility. These components include web content, web browsers and media players, authoring tools, and evaluation tools [Ref. 21].

Evaluating whether content published on Internet is accessible looks at two sets of standards: US federal guidelines established by Section 508 and the ADA; and a global standard, Web Content Accessibility Guidelines (WCAG) 2.0. In 2016, Section 508 was updated to incorporate WCAG 2.0 recommendations and standards for accessible content, solidifying WCAG's place as the gold standard for accessibility of online content.

WCAG 2.0, published in 2003 by W3C as a recommendation, is technology neutral, written to apply to a broad range of content and formats. WCAG 2.0's accessibility standards are based on four principles, which can be remembered with the acronym **POUR** [Ref. 18, 19].

Content must be:

- **Perceivable** — available to the senses. If something is primarily presented in visual media (image or video), alt text descriptions should be provided for users with visual impairments. If it is primarily auditory, a transcript or captioning should be provided

- **Operable** — users can interact with the content using standard input devices, such as a mouse or keyboard, or an assistive device. Content that is accessible only using a mouse is inaccessible to users with limited mobility who cannot operate a mouse. If all controls and interactive elements have keyboard equivalents, the content will work with most assistive devices

- **Understandable** — content is clear and unambiguous

- **Robust** — the content is accessible using a wide range of technologies and abilities.

Accessibility for e-learning

E-learning content is a type of web-based content, and therefore, the technical standards outlined in the WCAG and Section 508 §1194.22 apply, if a trainer wants or needs to make his/her e-learning courses accessible to those with disabilities. If the e-learning content is created for a U.S. government entity, the e-learning content likely needs to be 508-compliant. Several state government entities also require 508-compliance. Also, if a web content provider is not creating e-learning courses directly for a government agency, but provides services to or was funded by the government, it's likely that some form of 508-compliance also applies.

Similar laws exist in other countries for their government entities, but most other countries have chosen to adopt WCAG as a legal requirement, rather than drafting their own rules. So if a trainer creates e-learning content for government entities in other countries (e.g. EU member states), there's a chance that some level of the WCAG applies too [Ref. 18].

Even if a trainer isn't required by law to meet the WCAG guidelines, making the e-learning courses more accessible to people with disabilities is the right thing to do. However, that extra design cost, effort, and sometimes compromised experience keep many non-government/private organizations from making accessibility a priority. Instead, many online content providers choose to use "reasonable accommodation" and provide training in another way, such as having

someone sit down with the person and go through the training together. This approach is related to blended learning activities.

Universal Design for Learning (UDL)

Those trainers and online training content providers convinced that designing e-learning for ease of access, to improve the experience of all learners, is the right approach might think about **UDL**: Universal Design for Learning. Also called "plus-one" thinking, the UDL approach is founded on providing choices to learners. For every interaction, every learning activity, learners are offered at least two options: text or video; audio or transcript; online access or downloadable file. Some learners will use one, some will use the other—and some will use both. UDL deliver a more engaging and satisfying learning experience [Ref. 14 – Practical part].

3. Implementing learning scenarios

Scenario-based e-learning

Scenario-based e-learning immerses the learners in real life or situational simulations or learning experiences that allow them to gather skills or information that they will recall for future use. Information offered within a contextual setting enables learners not only to easily manage it within their <u>working memory</u>, but also to commit it to their <u>long-term memory</u>. There are a number of core characteristics for scenario-based learning [Ref. 22], including:

- **Realism** - In order to fully engage learners, the scenarios must be as realistic as possible, while still providing students or employees with the required information

- **Learner-centric** - The task should draw upon learners' core strengths and allow them to use skill sets that they are developing, while at the same time improve upon their weak points

- **Involve applied learning strategies** - Each scenario should involve skills or knowledge that learners have already gathered and which can be applied to the current task. Under this method, learners learn by doing, rather than just merely reading or hearing about the information

- **Interactive** - Learners become fully immersed in the task and scenario, thanks to a high level of interactivity

(even in virtual classroom settings). The interactive modules should rely upon real world experience rather than theoretical information.

Benefits of scenario-based e-learning

Scenario-based e-learning helps to improve learners' engagement and understanding of core concepts. Here are the most convincing arguments for and benefits of using scenario-based eLearning:

- **Motivates the learner** - Students or employees are motivated to learn thanks to the fact that they know they possess the skills needed to accomplish the task and are being given the opportunity to build upon these particular skills. In essence, they understand that they are going to be challenged, but they are aware that they

have the tools to meet the challenge and successfully overcome it

- **Allows the learners to directly see the e-learning rewards** - When learners can see the benefits of the e-learning course they are more likely to get the most out of it. Rather than teaching the materials from a book or through a lecture, learners participate within a scenario in which they can directly see how the skills and knowledge will benefit them in the long term

- **Challenges the learners without overwhelming their mental capacity** - A good scenario-based e-learning activity or task will challenge learners to the degree in which they can expand their knowledge base without overwhelming them. If they feel that they cannot successfully navigate the scenario, then they will not

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give the effort that is required. As such, scenario-based e-learning can provide them with real world obstacles and problems that they will face in order to expand their skill sets and knowledge base, while keeping them engaged in the e-learning process.

When applying scenario-based learning in online learning environments the trainers should:

- Design the e-learning course and content with a thorough understanding of learners' needs
- Include as much interactivity as possible (the learning games and simulations are good examples)
  Ensure that the context of the scenario is realistic, manageable and well focused on the topic.

4. Overcoming challenges of online learning

Challenges of e-learning

Many trainers concern whether students can learn better from e-learning and whether they face more challenges in online courses. Like any other training solution, e-learning/training has some potential challenges. However, if an online trainer is aware of them, he/she can avoid them [Ref. 28, 29]:

- **Motivation** - Some trainers contend that the learners have to be extremely motivated to actually get something out of online training. But the same is true for in-class training. Just because an instructor is in the classroom doesn't mean the students are learning. As e-

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learning course providers, it is trainers' job to make courses engaging to ensure the learners pay attention, understand and acquire the information

- **Less face-to-face interaction** - One thing the trainers worry about with e-learning is isolation. The learners miss out on discussions with instructors and peers. How will learners ask questions? There are many ways to counteract this potential for isolation, for example, by recreating the social aspect of training online (e.g. by including social media and networks into the course), communication via discussion boards, instant messaging and video conferencing (Skype), or by supplementing e-learning courses with in-class sessions (applying mixed modes of training - blended learning scenarios)

- **Access to technology** - By definition, e-learning requires learners to access courses using some sort of technology, mainly Internet. If they don't have the device or Internet connection required, they won't be able to take the course. The best way to avoid this kind of problem is to identify the learner environment prior to development and implementation of the course.

Motivating online learners

The key to student motivation has to do with internal drive and individual interests. Adult students become more motivated to learn – whether online or in person – when they are treated like unique individuals with goals, interests, and lives of their own.

To motivate students online, the trainer have to [Ref. 30, 32]:

- provide opportunities for students to personally connect to and study the subject matter

- let them set their own learning goals

- set up the Learning Management System (LMS) for self-monitoring and progress-tracking

- encourage students to collaborate with the peers online on course material

- provide timely feedback

- encourage students

- act as a facilitator, rather than transmitter of information/content.

5. Tracking learners' progress in online learning

Tracking learners' activities and progress

To measure the effectiveness of online training, a trainer needs to track e-learning activity. E-learning metrics tell him/her how many students have viewed the course, what scores learners have earned, and more. Many organizations track course activity to comply with standards, policies, regulations, etc. Others track activity to validate usage assumptions and identify trends that can help with planning further L&D activities.

There are several ways a trainer can track e-learning activity [Ref. 37]:

- **Manual Tracking -** manually tracking course activity makes sense when a trainer only needs minimal data or there are no other tracking options available.

A way to track a course manually is to include a form or certificate at the end of the course for learners to print and forward to an administrator, who then tracks which learner took the course and when. Another example is to post a sign-in sheet next to a shared computer the learners use for an e-learning course. This type of tracking frequently involves filing a paper copy of the completion documentation and entering the info into spreadsheets.

Manual tracking is easy to implement without any additional investment in hardware or software. However, it is also a tedious approach that is only suitable for a limited number of situations.

- **Automatic Tracking** - more commonly used method automatically record course activity data that can then be used for reporting and analysis.

Web Server Tracking

Web servers automatically collect data on the courses they host each time learners view them. Analysis of this data shows how learners used the course, and can lead to finding trends.

Data relevant to an e-learning program includes the number of times the course was viewed, when the course was viewed, and the amount of time learners spent in

particular courses. It's also helpful to look at the traffic patterns, which show peak usage volumes, to determine if the server has adequate network bandwidth available.

LMS Tracking

If a trainer needs anything beyond a simple completion status or anonymous usage data, a Learning Management System (LMS) is the best option for tracking e-learning course activity. An LMS is a software application made specifically for administering, tracking, reporting, and delivering e-learning courses or training programs. While specific features vary by vendor, an LMS generally gives trainers the best tracking and reporting options.

Reporting in e-learning

All modern LMS are equipped with robust reporting features and analytics. These are of the most beneficial features of Learning Management Systems. This valuable data gives the trainer the power to continually improve your online training strategy and personalize online training initiatives.

Here are 8 essential LMS reports a trainer should consider to make the most of LMS metrics [Ref. 41]:

1. Learner progress and completion rates
2. Learner participation and engagement
3. Online assessment results
4. Course overview LMS reports
5. Time logs
6. Learner satisfaction ratings

7. Online facilitator approval ratings

8. Online training certification tracking

5. Additional Resources and References

Note: All hyperlinks updated in June-July 2017. Please feel free to search and browse Internet for more additional resources on the topics.

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B. Practical part

1. Meeting and discussions with an English language trainer (E@W EFL expert)

Topic for discussions: Using ICT for English language training

Informal discussions, Q&As.

2. Presentation:

- Tools for creating online surveys/questionnaires for collecting learners' feedback

Presenter: GKD instructor

Informal discussions, Q&As.

3. Practical tasks to be completed

Referring to the Theoretical part and using the additional self-directed resources in this section, please complete the following practical tasks:

3.1 Improving the learning process and outcomes

You are conducting a training session and collect feedback on the process. Based on collected data you want/need to improve the process and learners' outcomes.

Following the known methods and tools, please select the online tools that meet best your task to improve the learning results.

According to your professional experience, training audience analysis, and goals set, please describe what approaches and methods you will select to improve your online learning process.

Please, present your decision to the other participants in the training session.

Get feedback/suggestions from the auditory. Correct, if needed, your analysis and decision.

3.2 Taking into account the special needs of participants

Based on your previous experience working with trainees with special needs, please select what methods you can use to help students with SEN to reach their learning goals.

Please create a list of specific approaches and activities you plan to complete the task.

Please, present your lists to the other participants in the training session and explain your selection criteria.

Get feedback/suggestions from the auditory. Correct, if needed, your selection.

3.3 Implementing learning scenarios

Based on your previous experience as a EFL trainer, please create a plan how you can use learning scenarios in your online training sessions to improve the results. Please explain/describe how your plan and execution will guarantee reaching the training goals set.

Please, present your plan to the other participants in the training session.

Get feedback/suggestions from the auditory. Correct the plan, if needed.

3.4 Overcoming challenges in online learning

Based on the material you read in the theoretical part, please create a list of what kind of challenges you meet in your everyday work as a "traditional" EFL teacher and what additional challenges you expect to have as an online trainer. How do you plan to overcome those? Please, present your view to the other participants in the training session.

Get feedback/suggestions from the auditory. Correct it, if needed.

3.5 Tracking learning progress in online learning

Following the presentation of Moodle VLE/LMS (in Unit 1 – Practical part), please select what kind of learners' data and behaviour you prefer to track in your online EFL courses if using a LMS.

Please explain you selection.

Get feedback/suggestions. If needed, edit it based on the suggestions.

Additional online resources

Note: You will find some useful information on e-training practices and tools by browsing the links below. Please feel free to search and browse Internet for more additional resources on the topics.

1. youtube.com/How You Can Validate The Learnability Of Online Courses

https://www.youtube.com/watch?v=qaYAuACXmr4

2. linkedin.com/Case Study On How You Can Evaluate The Learnability Of Online Courses

https://www.linkedin.com/pulse/case-study-how-you-can-evaluate-learnability-online-courses-pandey

3. pinterest.com/Create Exciting Formative And Summative Assessments

https://za.pinterest.com/pin/177047829080648322/

4. elearningindustry.com/Free Testing and Quizzing Tools for Online Education

https://elearningindustry.com/free-testing-tools-for-online-education

5. surveygizmo.com/Free Online Survey Software

https://www.surveygizmo.com/free-survey-software/

6. efset.org/Test Your English Skills and Set Yourself Apart

https://www.efset.org/?lang=en

7. elearningindustry.com/7 Ways To Improve Your Next Online Training Course

https://elearningindustry.com/7-ways-improve-next-online-training-course

8. evolllution.com/Three Ways to Improve Online Courses for Adult Students

https://evolllution.com/revenue-streams/distance_online_learning/ways-improve-online-courses-adult-students/

9. elearningindustry.com/7 Tips To Create Effective eLearning Assessments To Measure Online Training

https://elearningindustry.com/7-tips-create-effective-elearning-assessments-measure-online-training

10. shengchifoundation.org/How to Overcome a Learning Disability - video

https://www.shengchifoundation.org/ld/analysis/learning-disability

11. elearningindustry.com/508 Compliant eLearning: Tips And Tricks

https://elearningindustry.com/508-compliant-elearning-tips-tricks

12. trivantis.com/What Does Section 508 Compliance Mean for Your eLearning Course

https://www.trivantis.com/what-does-section-508-compliance-mean-for-your-e-learning-course/

13. elearningguild.com/Accessibility from the Ground Up

https://www.elearningguild.com/content.cfm?selection=doc.5168

14. learningsolutionsmag.com/Design for Access to Enhance Accessibility—and Engagement
https://www.learningsolutionsmag.com/articles/2307/design-for-access-to-enhance-accessibilityand-engagement

15. quality4digitallearning.org/SCENARIO-BASED LEARNING
https://quality4digitallearning.org/wp-content/uploads/2016/03/Scenario-based-learning.pdf

16. elearningindustry.com/Branching Scenario eLearning: 5 Killer Examples
https://elearningindustry.com/branching-scenario-elearning-5-killer-examples

16. elearningsuperstars.com/4 Examples of Scenario-based elearning
http://www.elearningsuperstars.com/scenario-based-elearning-examples/

17. elearningbrothers.com/Scenario Based Learning Examples to Improve Engagement
http://elearningbrothers.com/scenario-based-learning-examples-improve-engagement/

18. researchgate.net/What are the advantages and challenges of online learning and teaching?
https://www.researchgate.net/post/What_are_the_advantages_and_challenges_of_online_learning_and_teaching

19. shiftelearning.com/How to Motivate the Online Learner (Free eBook)

http://info.shiftelearning.com/motivation-elearning-ebook

20. usnews.com/education/Develop Self-Motivation Skills Before Starting Online Courses https://www.usnews.com/education/online-education/articles/2016-07-25/develop-self-motivation-skills-before-starting-online-courses

21. elearningindustry.com/The 5 Most Effective Tracking Techniques In eLearning https://elearningindustry.com/5-most-effective-tracking-techniques-in-elearning

22. elearningindustry.com/8 Qualitative eLearning Assessment Methods To Track Online Learners Progress

https://elearningindustry.com/qualitative-elearning-assessment-methods-track-online-learners-progress

23. esolonline.tki.org.nz/Tracking learner progress http://esolonline.tki.org.nz/ESOL-Online/Impact/Tracking-progress-and-reporting/Tracking-learner-progress

24. ispringsolutions.com/5 Quick-Launch Training Management and Tracking Software http://www.ispringsolutions.com/blog/top-8-training-management-and-tracking-software/

25. ht2labs.com/THE LEARNING TECHNOLOGY MANAGER'S GUIDE TO THE XAPI

https://www.ht2labs.com/resources/the-learning-technology-managers-guide-to-the-xapi/#.WaxRkbIjGUk