

Learners in the digital context:

An Introduction

Topics

- *Empowering Learners*
- *The role of the mindset*
- *Challenges in the digital context*
- *Self-directed learning*
- *Attention in the digital context*

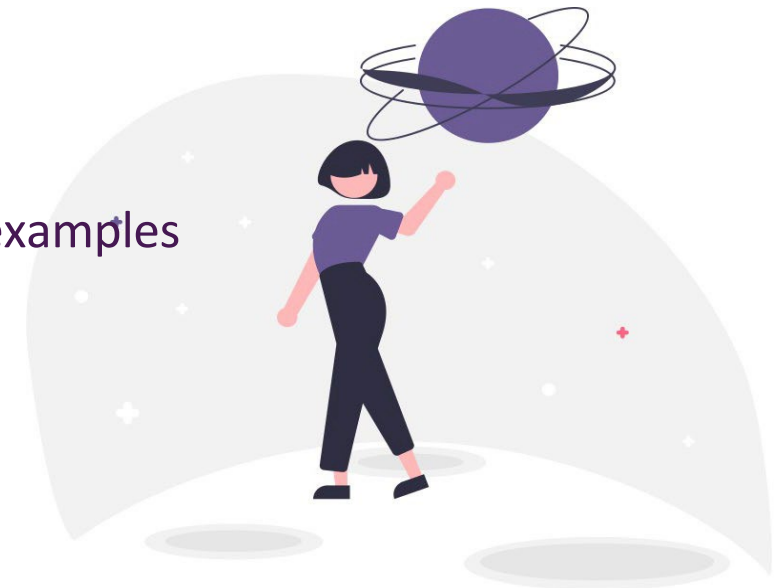


Unit 1

Empowering Learners

Activities

- ◆ Videos: How to empower learners
- ◆ 4 myths about empowered learners
- ◆ PPT on empowerment
- ◆ Self-reflection test
- ◆ Scientific studies on the benefits on empowerment
- ◆ Podcast on empowering learners
- ◆ Digital tools
- ◆ 'How to' guides
- ◆ Good practice examples



Unit 1

Empowering Learners

Outcomes

- ◆ understand and implement the main competences of psychological empowerment
- ◆ understand the importance of this psychological construct and the role of subjective perception
- ◆ test the level of psychological empowerment
- ◆ understand the link between empowering learners and to the concept of the learners' self-leadership

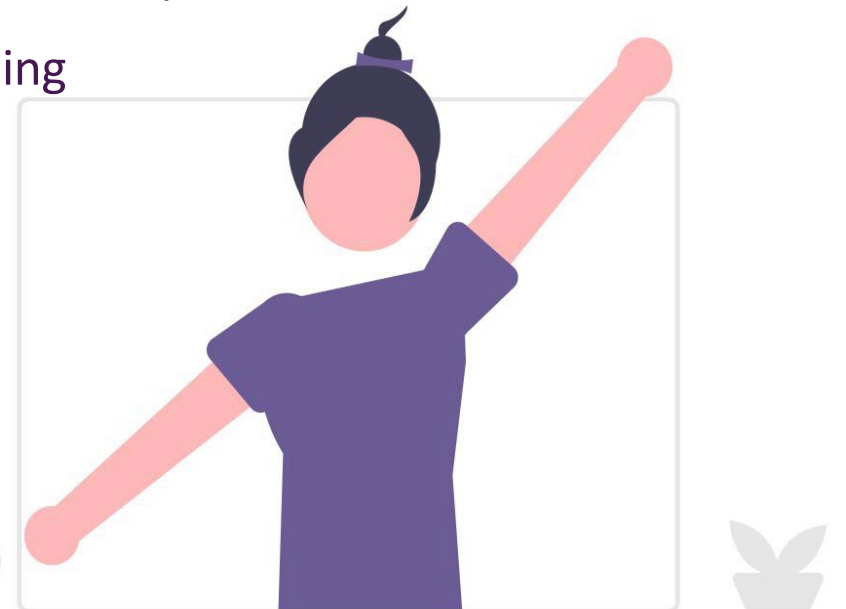
Unit 2

Growth

Mindset

Activities

- ◆ Developing a growth mindset
- ◆ Activity: matching statements
- ◆ Growth mindset quiz
- ◆ Where am I - checklist
- ◆ Digital tools
- ◆ 'How to' guides
- ◆ Good practice examples
- ◆ Further reading
- ◆ Videos



Unit 2

Growth

Mindset

Outcomes

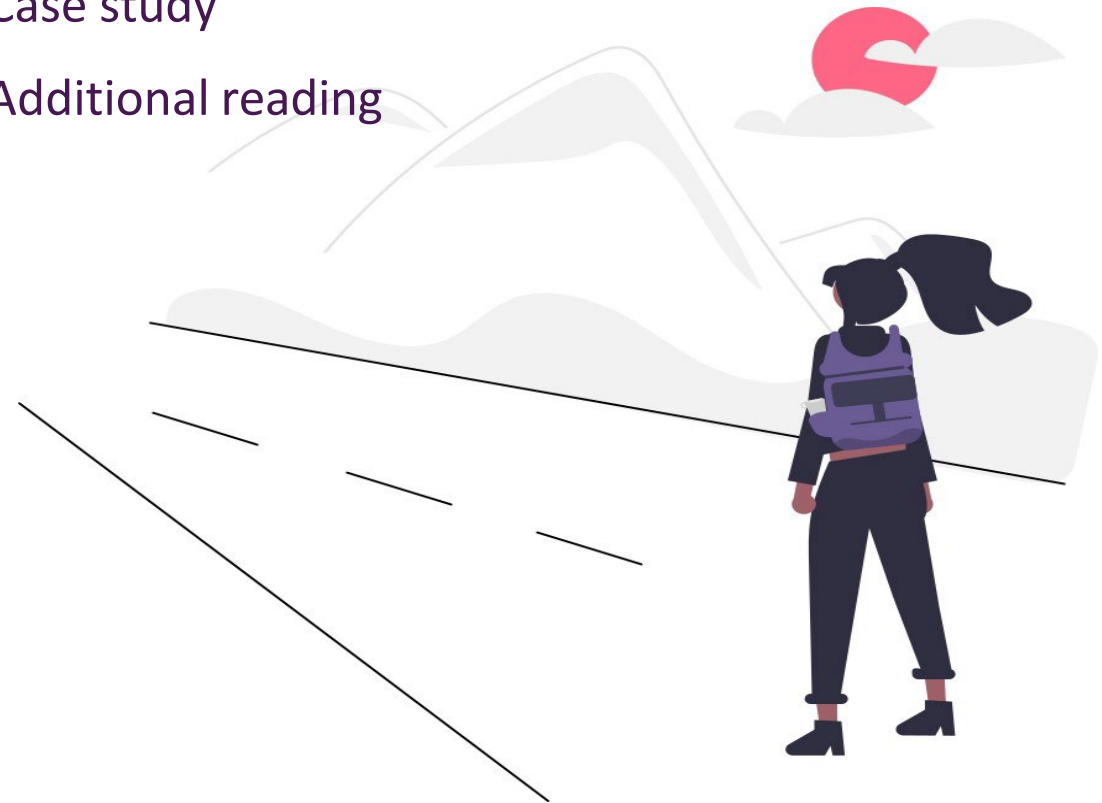
- ◆ know the foundations of fixed and growth mindsets
- ◆ understand and value the benefits of growth mindset
- ◆ recognise the behavioural implications of adopting a fixed or growth mindset
- ◆ able to implement a self-awareness test for themselves and their learners
- ◆ able to develop/encourage growth mindset in their learners

Unit 3

Challenges in the digital context

Activities

- ◆ Video: Why e-learning is killing education
- ◆ Workshop: the challenges in digital education
- ◆ Workshop: dealing with the challenges
- ◆ Case study
- ◆ Additional reading



Unit 3

Challenges in the digital context

Outcomes

- ◆ understand the implications of this more individual form of learning
- ◆ analyse the notion of “presence” and interaction
- ◆ get a broader perspective of the topic of interpersonal relationships in digital context



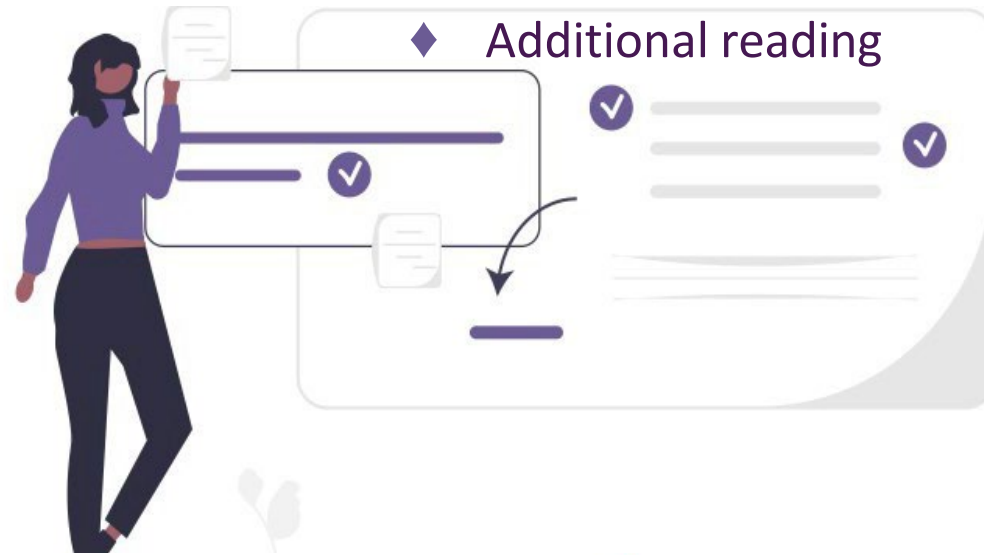
Unit 4

Self-directed learning

Activities

- ◆ Good practice example
- ◆ Activity: setting goals
- ◆ Activity: reframing goals to wishes
- ◆ Moving motivators
- ◆ Motivational podcasts
- ◆ Study on the role of the self
- ◆ Ideas
- ◆ Digital tools

- ◆ Additional reading



Unit 4

Self-directed learning

Outcomes

- ◆ know how to foster self-motivation
- ◆ able to help learners set learning goals
- ◆ understand why goal setting matters
- ◆ know how to set goals effectively
- ◆ use tools to encourage self-motivation

Unit 5

Attention in the digital context

Activities

- ◆ Your Brain Online – Overstimulation & Attention
- ◆ Focus in the Digital Context and Dealing with Distractions
- ◆ Task: working under distractions
- ◆ Task: memorisation techniques
- ◆ Tips and tricks
- ◆ Stimulating the online learning environment
- ◆ Aptitude test
- ◆ Digital tools



Unit 5

Attention in the digital context

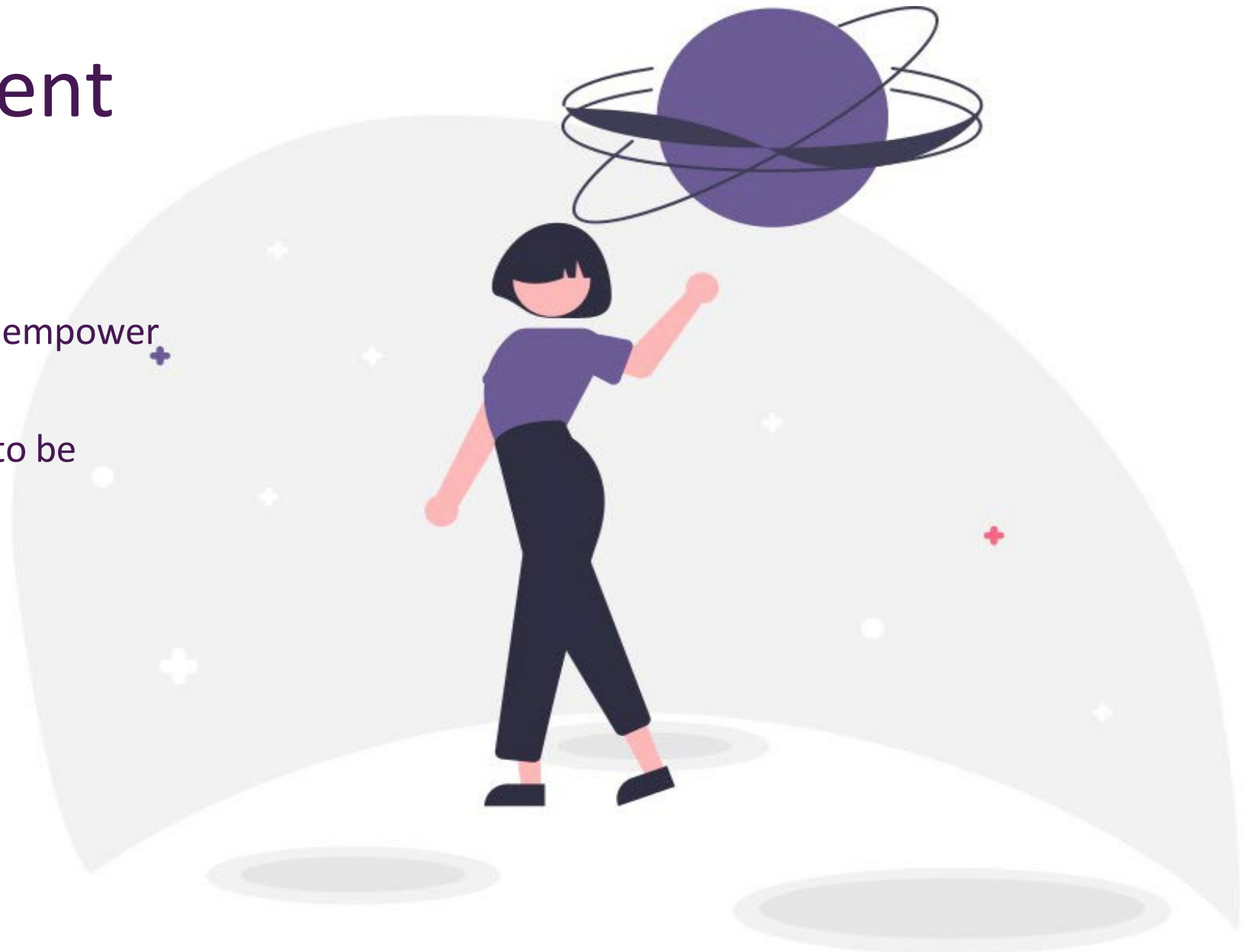
Outcomes

- ◆ gain deeper, science-based knowledge on the effect of the digital environment over the brain and its attention capacity (overstimulation of the brain/ neuroscience)
- ◆ learn tips and tricks on how to improve the focus in the digital context
- ◆ test new tools for improving attention in the digital context - e.g. focus mode apps
- ◆ able to set up a stimulating learning environment
- ◆ know how to deal with distractors

Empowering learners

Empowerment

- ◆ What does it mean to empower someone?
- ◆ What does it feel like to be empowered?



Psychological Empowerment

◆ MEANING:

is seen as the “engine of empowerment” and is linked to the feeling of personal importance.

◆ COMPETENCE:

relates to the confidence in one’s abilities and skills.

◆ SELF-DETERMINATION:

refers to the degree to which one feels freedom in choosing how to initiate and complete a certain task. A level of autonomy and a feeling of independence.

◆ IMPACT:

concerns the belief in one’s ability to influence the work outcomes. The perception of control over what happens in the department.

SPREITZER, 1995

Self-reflection time

Empowered people are empowering.

Take your time and reflect on your own personal perception of empowerment:

- The work I do is very important to me (meaning).
- My job activities are personally meaningful to me (meaning).
- I am confident about my ability to do my job (confidence).
- I have mastered the skills necessary for my job (confidence).
- I have significant autonomy in determining how I perform my job (self-determination).
- My impact over what happens in my department/team/workplace is large (impact).
- I have a great deal of control over what happens in my department (impact).

SPREITZER, 1995





*"Passion for learning
rather than
a hunger for approval."*

Carol Dweck

Growth mindset

Growth mindset

[TEDx Talks: The Power of belief - mindset and success | Eduardo Briceno |](#)



Challenges in the digital context

Challenges in the digital context

[TEDx Talks: Why e-learning is killing education | Aaron Barth |](#)



“The reason we don’t do this in eLearning is because it’s three time more difficult and takes four times as long to do. I totally agree with what this man is saying, and it is definitely a better way of teaching as well as being more interactive and engaging, but the sad reality is that most organisations don’t have the time or money to put into developing eLearning like this. I have been an eLearning developer for the last 8 years and the reality is that most organisations don’t do this because it’s cost heavy, time heavy, and doesn’t necessarily bring any more results. Building a really good, emotionally engaging story takes as much skill as making a movie because that’s kind of what you’re doing. It’s far easier and quicker to just cut and paste content, because that’s how the boss who is paying for it has learned at school - so that’s what they are comfortable with and that’s what they think everyone else will be comfortable with. I totally agree that good stories are much, much better at teaching people (although bad or boring stories can be much worse), but it all boils down to money and time. It’s just the world that we live in.”

Why are the learners struggling with digital education?

Technology

Learning content

Self-management

Social interaction

Feedback

Technology

- Learners do not always have access to all the necessary equipment
- Learners often lack the digital skills necessary
- Websites and LMS are often not adapted to the requirements of learners with special needs, such as dyslexia, visual impairments etc.
- Because of the plethora of tools and platforms used and their often-changing appearance, it is often difficult to stay updated with all the functionalities.

Content

- Not all learning materials are adapted to an online content
- Learners need to make use of different, sometimes unusual learning materials
- In some cases, sensitive information cannot be shared because of security and/or copyright implications
- Practical, hands-on sessions do not lend themselves well to an adaptation to an online format, and must await an opportunity for a face-to-face delivery.



Self-management

- Learners are sometimes overloaded with learning activities.
- Because of the need to adapt to a new learning environment, learners often need additional time for the same tasks.
- Many learners suffer from decreased motivation – without a trainer or a class present, they quickly lose focus.
- Many learners try to multitask – write while listening, etc, or fall prey to different distractors like social media.
- Because of the many distractions, online sessions lead to a shorter attention span and require more frequent breaks to be effective.



Social interaction

- In an online environment every participant feels alone, not a part of the group – affecting motivation and the willingness to interact.
- the non-verbal communication is practically missing – and its importance for the act of communication is undeniable, resulting in poorer understanding of the content;
- the small talk natural to any classroom loses its value, decreasing the commitment of learners to the group process;
- very few participants use their cameras, and this is almost universally accepted – the trainer has little control over the behaviour of the learners;
- as a result of the abovementioned factors, learners adopt a more passive role – in particular, fewer questions are asked;

Feedback

- during the classes, learner feedback is often lacking;
- there is an insufficient or lacking quality control over the work of the learners;
- as a result, learning outcomes cannot always be established with certainty.

Challenges - solutions?

Lacking equipment

Lacking skills

Learners with special needs

Staying updated

Materials not adapted

Unfamilliar materials

Copyright

No hands-on sessions

Overload

More time needed

More breaks needed

Decreased motivation

Multitasking

Missing non-verbal communication

Feeling alone

Passive learners

Missing small talk

Cameras not used

Missing feedback

Lacking quality control

Uncertain outcomes

Empowering Leadership

Empowered people are empowering.

- Delegating:
 - 1. My leader conveys that I shall take responsibility
 - 2. My leader gives me power
 - 3. My leader gives me authority over issues within my group
- Initiative
 - 4. My leader encourages me to start tasks on my own initiative
 - 5. My leader expresses positive attitudes related to me starting with my own defined tasks
 - 6. My leader encourages me to take initiative
- Goal focus
 - 7. My leader is concerned that I reach my goals
 - 8. My leader makes me work towards goal attainment
 - 9. My leader is concerned that I work in a goal-directed manner
- Efficacy support
 - 10. My leader listens to me
 - 11. My leader recognizes my strong and weak sides
 - 12. My leader invites me to use my strong sides when needed

BASED ON AMUNDSEN & MARTINSEN, 2014



Empowering Leadership

Empowered people are empowering.

BASED ON AMUNDSEN & MARTINSEN, 2014

- Inspiring
- 13. My leader is enthusiastic about what we can achieve
- 14. My leader conveys a bright view of the future
- 15. My leader shows that he/she is optimistic about the future
- Coordinating
- 16. My leader coordinates his/her goals with my goals
- 17. My leader talks with me about his/her own and my goals
- 18. My leader discusses shared affairs with me
- Modeling
- 19. My leader lets me see how he/she organizes his/her work
- 20. My leader's planning of his/her work is visible to me
- 21. I gain insights into how my leader arranges his/her days
- Guidance:
- 22. My leader shows me how I can improve my way of working/learning
- 23. My leader guides me in how I can do my work in the best way
- 24. My leader tells me about his/her own way of organizing his/her work



MOVING MOTIVATORS

The Moving Motivators exercise is based on the ten intrinsic desires which Jurgen derived from the works of Daniel Pink, Steven Reiss, and Edward Deci.



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Image sources

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Critical Curation and Collaboration in Learning (Cur8)

Learners in the Online Environment

www.cur8learning.online



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LEGEND:

| | | | | | | | |
|-----------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|------------------------------------|
|  | ACTIVITY |  | TASK |  | IDEAS |  | LEARNING EXPERIENCE PLATFORM |
|  | SELF ASSESSMENT |  | WORKSHOP |  | PODCAST/WEBINAR |  | COLLABORATE |
|  | SELF STUDY |  | EXPLORE |  | e-LEARNING |  | TOOLBOX |



Module: Learners in the Online Environment

Introductory overview presentation (see file)

Module Introduction (The Rationale)

The days of the educator-centred classroom are long gone. Across schools, universities and educational centres there is a growing understanding that only the learner can bear the responsibility of their own learning, and the educator, rather than a simple repository of knowledge, should be taking on the roles of an inspiration, a tutor, an advisor, feedback provider. The educator should help the learner make sense of what they are trying to achieve, how they should go about it, where to search for resources, how they are doing in pursuing their goals. This is even truer in hybrid educational formats, as the educator has no direct influence over the attention and the motivation of the learners when they are on their own.

Empowering the learner is the first step of this journey. Of course, in order to be able to empower others, one must feel empowered oneself. It also comes from adopting a mindset that sustained effort always leads to growth. The process also requires the ability to empathise - to put oneself in the shoes of the learners and understand the challenges they are facing. The improved understanding of the learners' perspective is key in supporting them to set up and achieve their own educational goals. In a digital environment, the effective pursuit of learning goals requires setting up a stimulating environment free of distractions - otherwise the increased freedom of the learner can turn from an asset into a detriment.

Module Aims and Objectives

The purpose of this module is to:

- ◆ Equip educators with the skills and tools necessary to effectively support their learners
- ◆ Help the educator transition from 'a sage on the stage' to a 'guide on the side'
- ◆ Foster a learner-centred educational process

Learning Outcomes

After studying this module you will be able to:

- ◆ implement the main competences of **psychological empowerment**



- ◆ develop/encourage **growth mindset** in learners
- ◆ deliberate possible solutions for addressing the **challenges** faced within a digital format
- ◆ help learners set effective **learning goals**
- ◆ be able to set up a stimulating learning environment free from **distractions**

You will also find a range of supporting tools and resource materials available in the [Learning Experience Platform](#)



Unit 1 Empowering Learners:

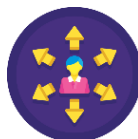
Learning Objectives

The specific learning objectives of the unit

- understand and implement the main competences of psychological empowerment
- understand the importance of this psychological construct and the role of subjective perception
- test the level of psychological empowerment
- understand the link between empowering learners and the concept of the learners' self-leadership

Learning Activity/ies

Description methods used: e.g. case studies, role plays, simulations (f-t-f and/or using tools from the LXP/ Toolbox). These should encourage the development of knowledge, skills and attitudes in relation to the topic.



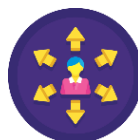
Explore: Setting the scene for the Empowerment of learners - Watch the video and explore who are the learners in the “new normal”, what are their needs and expectations? - Discover all this in the video from the OECD Future of Education and Skills 2030: “The new “normal” in education”: https://www.youtube.com/watch?v=9YNDnkph_Ko



Introductory video from ISTE* on **how to Empower Proactive Digital Learners** - <https://www.youtube.com/watch?v=NOYu35BbMNU>

- Digital Agent
- Digital interactor
- Digital self

**The International Society for Technology in Education (ISTE®) is the premier membership association for educators and education leaders engaged in improving learning and teaching by advancing the effective use of technology in PK--12 and teacher education.*



Setting the foundations: [4 myths \(and 4 truths\) about empowered learners](#)

Lack of empowerment = surface learning



Learn more about PSYCHOLOGICAL EMPOWERMENT:

The four main qualities that **most people who feel empowered** have in common are:

1. **Meaning** is seen as the “engine of empowerment” and is linked to the feeling of personal importance.
2. **Competence** on the other hand relates to the confidence in one’s abilities and skills.
3. **Self-determination** refers to the degree to which one feels freedom in choosing how to initiate and complete a certain task. A level of autonomy and a feeling of independence.
4. **Impact** concerns the belief in one’s ability to influence the work outcomes. The perception of control over what happens.

Combined, all the sub-processes outlined above, build up psychological empowerment – the personal feeling of empowerment.

Empowered people are believed to be:

- **Motivated**
- **Innovative**
- **Creative**
- **Persistent**
- **Engaged**
- **Efficient**



Task: Self-reflection test on Psychological Empowerment for educators - do I **perceive myself as empowered?** (based on Spreitzer, 1995)

Following the belief that empowered people are empowering, take your time to reflect on your own personal perception of empowerment.

1. Read the statements

2. Think about concrete examples from your own experience

3. Self-evaluate your own perception of empowerment - if you feel that you do not feel empowered in one of the key dimensions (meaning, confidence, self-determination, impact), use this self-awareness and work in the direction of increasing your own empowerment in order to empower others more effectively.

- **The work I do is very important to me (meaning).**
- **My job activities are personally meaningful to me (meaning).**
- **I am confident about my ability to do my job (confidence).**
- **I have mastered the skills necessary for my job (confidence).**
- **I have significant autonomy in determining how I perform my job (self-determination).**
- **My impact over what happens in my department/team/workplace is large (impact).**
- **I have a great deal of control over what happens in my department (impact).**



Self-study:

An examination of the relationship between post-school outcomes and autonomy, psychological empowerment, and self-realization. Shogren, K. A., Lee, J., & Panko, P. (2017). *The Journal of Special Education*, 51(2), 115-124. Read it here: <https://files.eric.ed.gov/fulltext/EJ1148768.pdf>

Benefits of psychological empowerment: A study example from the organisational context: A study on impact of psychological empowerment on employee performance in small and medium scale enterprise sectors. *European Journal of Business and Management*, 6(27), 60-72. Degago, E. (2014). Read full text here: <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.676.5784&rep=rep1&type=pdf>



Digital Tools for Facilitating Empowering Learners



Examples of tools and techniques that can be accessed via the LXP/Toolbox

The Course of Mind podcast will explore evidence-based strategies for teaching the whole child and creating engaging and effective educational experiences for learners. <https://courseofmind.buzzsprout.com/> or direct link to Spotify: <https://open.spotify.com/show/1gFdlA88xhQ1L9meTBdjai>

ED Influencers Podcast: motivations, aspirations and passion projects of today's most prominent education innovators: Listen directly here: <https://info.iste.org/ed-influencers> or find all episodes in Google Podcasts: <https://podcasts.google.com/feed/aHR0cHM6Ly9mZWVkcyc5idXp6c3Byb3V0LmNvbS8yNzA2NjYucnNz>



Additional Ideas:

Efficient leadership in the digital era - An example from the business field - In business today, the need for innovation and rapid decision-making trumps yesterday's drive for efficiency. How does this influence what it means to be an effective leader? **Charlene Li explains that it's less about control and more about empowerment: enabling employees to acquire the information they need, so they can make their own decisions.** https://www.ted.com/talks/charlene_li_efficient_leadership_in_the_digital_era

Good Practice Example

Empowered Learner Standards - as defined by The International Society for Technology in Education (ISTE®).

In order to empower learners, these standards encourage educators to:

- Ensure the setting of **personal learning goals**: https://www.youtube.com/watch?v=OGGZ6ZtJdw0&list=PL6aVN_9hcQEH6D0zMdyIQbDkSrV-MNOwD&index=3
- Build **networks** - encourage links to other learners online and **customise their learning environment - freedom to choose**. Practical example: https://www.youtube.com/watch?v=3R-cd_YfdkE&list=PL6aVN_9hcQEH6D0zMdyIQbDkSrV-MNOwD&index=4&t=3s
- Encourage the use technology to seek **feedback** that informs and improves their practice: https://www.youtube.com/watch?v=Ungjlb03Z0c&list=PL6aVN_9hcQEH6D0zMdyIQbDkSrV-MNOwD&index=5



Unit 2 The importance of mindsets:



Video: [Developing a growth mindset and the power of "yet"](#)

Should you tell your kids they are smart or talented? Professor Carol Dweck answers this question and more, as she talks about her groundbreaking work on developing mindsets. She emphasises the power of "yet" in helping students succeed in and out of the classroom.

Learning Objectives

- ★ know the foundations of fixed and growth mindsets
- ★ understand and value the benefits of growth mindset
- ★ recognise the behavioural implications of adopting a fixed or growth mindset
- ★ be able to implement a self-awareness test for themselves and their learners
- ★ be able to develop/encourage growth mindset in their learners

Learning Activities



1. Match the statements with the right category

How do we tell a fixed from a growth mindset? Please read the following statements and place them under the category they belong to: Fixed mindset or Growth mindset.

If you do this activity online, you could use a random word generator app such as [wordwall](#) (open the box template).*

“I expect to talk things through with my partner so we can understand each other better.”



“I prefer not to take on new tasks which seem rather difficult.”

“I like it when I get praised for putting a lot of work into something.”

“Failure frustrates me and shows me where my limits are.”

“My abilities and talents are innate and cannot be changed.”

“I enjoy trying out new and unfamiliar things.”

“I can develop any skill as long as I put in enough effort and want it badly.”

“I like being praised for being good at something.”

“I expect my partner to know me well enough to read my mind.”

“Failure makes me even more ambitious about what I can improve.”

“I can learn anything I want to.”

“When I am frustrated, I give up.”

“My effort and attitude determine everything.”

“I am either good at it or I’m not.”

“My abilities determine everything.”

“When I am frustrated, I persevere until I make it.”

“The mistake I made is just another lesson.”



2. What's your mindset – take the quiz to find out

- [example](#) (if done individually)
- [example 2](#) – if done in a group (both online and F2F) to define both the individual mindset of a participant and the group mindset at the same time. This can be done using the [quizziz](#) app.

Depending on the audience and if English is not preferred, it would be better to use the second questionnaire and translate it accordingly.



3. On the way to building a growth mindset – where am I?

To be done in a group and in pairs. Everyone receives a copy of the [Growth Mindset Check-list](#). First, everyone reflects individually on each statement and checks the ones which they still find difficult to do and feel they have more work to do in this direction. Then, in pairs people discuss and try to give an example for a concrete situation when they experienced a difficulty. Both people reflect together on whether the difficulty comes from the situation or the person and try to find/recommend a solution about what to do next time when encountering this situation in order to feel more in line with the growth mindset thinking.



Digital Tools for Facilitating

Quizziz - a game-based learning tool used to create and design your own quizzes embedding various types of questions (multiple choice, open ended, polls, fill in the blanks, etc.) and media (e.g., images, videos, voice clips, and audio recordings).

Wordwall - an interactive, gamified learning platform offering a wide selection of mini-games that can be used to review theory, concepts and vocabulary items, and to create both interactive and printable activities, designed to be played individually by students or teacher-led.



'How to' Guides



[What is Quizizz and how to use it with your students?](#)

[What is Wordwall and how to use it in the classroom?](#)

Good Practice Example

1) Carol Dweck's jigsaw puzzle experiment

Carol Dweck's most remarkable research, which has informed present theories of why presence is more important than praise in teaching children to cultivate a healthy relationship with achievement, explores how these mindsets are born — they form, it turns out, **very early in life**. In one seminal study, Dweck and her colleagues offered **four-year-olds** a choice: They could either redo an easy jigsaw puzzle, or try a harder one. Even these young children conformed to the characteristics of one of the two mindsets — those with “fixed” mentality stayed on the safe side, choosing the easier puzzles that would affirm their existing ability, articulating to the researchers their belief that smart kids don't make mistakes; those with the “growth” mindset thought it an odd choice to begin with, perplexed why anyone would want to do the same puzzle over and over if they aren't learning anything new. In other words, the fixed-mindset kids wanted to make sure they succeeded in order to seem smart, whereas the growth-mindset ones wanted to stretch themselves, for their definition of success was about becoming smarter.

2) “I can always improve at something if I try” – an inspiration read

With a growth mindset, you don't give up at the first sign of weakness. Rather, you believe that the more effort you put into something, the better you will become. Take a look at these [stories of successful people who once failed](#). Each of them got back up after failing and continued to put effort into their craft until they were successful.

3) Growth mindset – check out some curious [scientific examples/experiments](#)



Resources for further reading:



[Mindset – how you can fulfil your potential by Dr. Carol Dweck](#)

A book by Dr. Dweck on the power of mindset. It shows how success in school, work, sports, the arts, and almost every area of human endeavor can be dramatically influenced by how we think about our talents and abilities.

[Fixed vs. Growth: The Two Basic Mindsets That Shape Our Lives](#)

An article on another book by Dr. Dweck (Mindset: The New Psychology of Success) - an inquiry into the power of our beliefs, both conscious and unconscious, and how changing even the simplest of them can have profound impact on nearly every aspect of our lives.

Video resources:



[The Growth Mindset – Interview with Carol Dweck](#)

A podcast interview with the world-renowned Stanford University psychologist Carol Dweck about her research work and concepts on the growth mindset.

[The Power of belief - mindset and success](#)

A TED talk by Eduardo Briceño, Co-Founder and CEO of Mindset Works - an organisation that helps schools and other organisations cultivate a growth mindset culture. Based on social science research and real life examples, Eduardo Briceño articulates how mindset, or the understanding of intelligence and abilities, is key to success.

[How to Build a New Habit That ACTUALLY Sticks: 9 Steps to Form a Good Habit](#)

A short video presenting a 9-step process about building habits that stick for the rest of one's life. It briefly talks about the research on building sticky habits and references a variety of notable authors on the subject: James Clear (Atomic Habits), BJ Fogg (Tiny Habits), and even Jerry Seinfeld (with this "Don't Break the Chain" rule.)



Unit 3 Challenges in the digital context:

Learning Objectives

The specific learning objectives of the unit

- Understand the scope of the challenges the learners are faced with in a digital format and their implications for the learning process
- Empathise with the challenges of the learners
- Deliberate possible solutions for addressing the challenges
- Evaluate the effectiveness of different strategies

Learning Activities



Video. Watch the following video by Dr. Aaron Barth: Why e-learning is killing education (<https://www.youtube.com/watch?v=iwSOeRcX9NI>). If you are using a language other than English, please make use of the auto-generated subtitles.

Do you agree that learners need an emotional connection to the learning material in order for it to really make an impact on them? What do you think of the counterargument – that such learning content is not really feasible, presented by a viewer of the video:

The reason we don't do this in e-Learning is because it's three times more difficult and takes four times as long to do. I totally agree with what this man is saying, and it is definitely a better way of teaching as well as being more interactive and engaging, but the sad reality is that most organisations don't have the time or money to put into developing e-Learning like this. I have been an e-Learning developer for the last 8 years and the reality is that most organisations don't do this because it's cost heavy, time heavy, and doesn't necessarily bring any more results. Building a really good, emotionally engaging story takes as much skill as making a movie because that's kind of what you're doing. It's far easier and quicker to just cut and paste content, because that's how the boss who is paying for it has learned at school - so that's what they are comfortable with and that's what they think everyone else will be comfortable with. I totally agree that good stories are much, much better at teaching people (although bad or boring stories can be much worse), but it all boils down to money and time. It's just the world that we live in.



Workshop. Despite the obvious advantages of using digital technologies to enhance the learning experience, learners sometimes struggle to adapt to the newer format. Why could this be? Divide the group in pairs, and, depending on the number of participants, discuss one or more of the following topics:



- Technology
- Learning content
- Self-management
- Social interaction
- Feedback

Try to identify the specific challenges that the learners are faced with. What are the causes of these challenges? How do they affect the learners?



Activity: If you are following the module individually, and not as a part of a group, try to identify the challenges learners face in all of the above-mentioned contexts.



Activity: Please compare what you have written with the list proposed below. Did you miss anything? Have you come up with something in addition to the points proposed? Do you agree with them all? Can you name the top 5 most important factors according to you?

Now, compare your top 5 factors and try to define a common list for the whole group.

Technology

- Disadvantaged learners do not always have access to all the necessary **equipment** in order to participate meaningfully in the learning process.
- Even if all the equipment is present, learners often lack the **digital skills** necessary to make effective use of it.
- Websites and LMS are often not adapted to the requirements of learners with **special needs**, such as dyslexia, visual impairments etc.
- Because of the plethora of tools and platforms used and their often-changing appearance, it is often difficult to **stay updated** with all the functionalities.

Differences in content

- Not all learning materials are **adapted** to an online content
- Learners need to make use of different, sometimes **unusual learning materials**



- in some cases, sensitive information cannot be shared because of security and/or **copyright** implications
- practical, **hands-on sessions** do not lend themselves well to an adaptation to an online format and must await an opportunity for a face-to-face delivery.

Self-management

- Learners are sometimes **overloaded** with learning activities.
- Because of the need to adapt to a new learning environment, learners often **need additional time** for the same tasks.
- Many learners suffer from **decreased motivation** – without a trainer or a class present, they quickly lose focus.
- Many learners try to **multitask** – write while listening, etc, or fall prey to different distractors like social media.
- Because of the many distractions, online sessions lead to a shorter attention span and require more frequent **breaks** to be effective.

Social Interaction

- In an online environment every participant feels **alone**, not a part of the group – affecting motivation and the willingness to interact.
- the **non-verbal** communication is practically missing – and its importance for the act of communication is undeniable, resulting in poorer understanding of the content;
- the **small talk** natural to any classroom loses its value, decreasing the commitment of learners to the group process;
- very few participants use their **cameras**, and this is almost universally accepted – the trainer has little control over the behaviour of the learners;
- as a result of the abovementioned factors, learners adopt a more **passive** role – in particular, fewer questions are asked;

Feedback

- during the classes, **learner feedback** is often lacking;
- there is an insufficient or lacking **quality control** over the work of the learners;
- as a result, **learning outcomes** cannot always be established with certainty.



Workshop. You have defined the main challenges the learners are faced with in a digital environment. Now, what can a trainer do to alleviate these challenges? Please try to define 1-3 interventions to help deal with each of the following challenges:

1. lacking equipment
2. lacking digital skills
3. lacking adaptation to learners with special needs
4. difficulties to stay updated with all the functionalities
5. learning materials are not adapted
6. learners are unfamiliar with the learning materials
7. copyright implications
8. impossible to conduct hands-on sessions
9. learners are overloaded
10. learners need additional time
11. decreased learner motivation
12. multitasking
13. need for more frequent breaks
14. feeling alone
15. missing non-verbal communication
16. missing small talk
17. cameras not being used
18. passive learners
19. lacking learner feedback
20. insufficient quality control
21. uncertain learning outcomes

- ❖ After the proposed strategies have been presented, the group enters into a discussion on their effectiveness. Is each of the interventions feasible? Does it require the use of external resources and additional time? If implemented, how effective would it be?
- ❖ Modification: Depending on the size of the group, you can divide the list into sections and have a separate pair discuss each section (3 questions per pair for a group of 14 learners, 4 for a group of 10, 5 for a group of 8 etc.)



Activity: Please compare the proposed list of solutions to the ones defined by the group. Do you agree with all suggestions? If implemented, how effective would each strategy be? If you can focus your efforts only on a limited number of strategies, what would your top 5 be? Can the group agree on a common top 5 strategies?

| Problem | Potential solution |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Lacking equipment | <ul style="list-style-type: none"> ● This issue is outside of the responsibilities of the trainer/teacher ● The learning institution normally provides support to underprivileged students ● Know where to seek assistance ● provide learning content for asynchronous or offline use |
| 2. lacking digital skills | <ul style="list-style-type: none"> ● direct students to free digital skills training (free offers available) ● make sure tutorials are always available to the learners ● enable technical support via email, chat or phone ● make a technical test before the beginning of class to make sure everyone is able to participate ● ask students to create presentation of virtual tools and share their recommendations |



| | |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>3. lacking adaptation to learners with special needs</p> | <ul style="list-style-type: none"> ● familiarise yourself with the learning requirements of students with special needs ● make sure the platform uses an appropriate font, colour scheme, and that the font size is changeable ● make sure the audio quality of materials is sufficient ● ensure the availability of subtitles for all videos |
| <p>4. difficulties to stay updated with all the functionalities</p> | <ul style="list-style-type: none"> ● be consistent with the use of online tools ● make sure tutorials are always available to the learners ● restrict the use of special features to the appropriate minimum |
| <p>5. learning materials are not adapted</p> | <ul style="list-style-type: none"> ● strictly speaking, this is a responsibility of the trainer ● make sure to adapt your methodology to the different format ● make use of Artificial Intelligence to better adapt materials to individual learners preferences |



| | |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>6. learners are unfamiliar with the learning materials</p> | <ul style="list-style-type: none"> ● take some time to familiarise the learners with the new materials ● be sure to leave room for questions ● make a trial session before the learning begins in earnest ● make all learning content (presentations, scripts, video recordings) available for a follow-up. |
| <p>7. copyright implications</p> | <ul style="list-style-type: none"> ● familiarise yourself with copyright and data protection regulations ● always use materials that have an appropriate licence ● bring the learners attention to the issue of copyright and where they can find free to use materials and images |
| <p>8. impossible to conduct hands-on sessions</p> | <ul style="list-style-type: none"> ● not much to do here. Not everything can be adopted to an online format. ● Nevertheless, you could try some creative solutions, like simulations via specialised software, or role-playing games. |



| | |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>9. Learners are overloaded.</p> | <ul style="list-style-type: none"> ● Be realistic about the workload your learners are able to take. ● Give them sufficient time to prepare ● Take into consideration the most effective learning styles for learners in order to make the process as easy as possible for them |
| <p>10. learners need additional time</p> | <ul style="list-style-type: none"> ● anticipate the need for additional time in your lesson plans ● if necessary, decrease the workload to a manageable level |
| <p>11. decreased learner motivation</p> | <ul style="list-style-type: none"> ● help learners define their own learning goals ● try to encourage a growth mindset ● provide learners with appropriate planning tools ● be available for assistance when needed ● show students a clear framework at the beginning of the course and offer them the opportunity to get to know each other |



| | |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>12. multitasking</p> | <ul style="list-style-type: none"> ● instruct learners to avoid distractions that can affect their learning ● help learners create a dedicated learning space free from distractions ● use shorter learning sessions to help concentration ● limit the workload to decrease the incentive to multitask |
| <p>13. need for more frequent breaks</p> | <ul style="list-style-type: none"> ● adapt your lesson plans – it must fit the new environment |
| <p>14. feeling alone</p> | <ul style="list-style-type: none"> ● use group facilitation techniques ● start the class with a warmup ● make use of interaction in small group |
| <p>15. missing non-verbal communication</p> | <ul style="list-style-type: none"> ● the opportunities to alleviate this problem are limited ● if learners use their cameras, you can have them focus on the whole body rather than just the face for some sessions like presentations |
| <p>16. missing small talk</p> | <ul style="list-style-type: none"> ● use group facilitation techniques ● start the class with a warmup ● end the class with a sharing session |



| | |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17. cameras not being used | <ul style="list-style-type: none"> ● make a group contract requiring learners to use cameras ● remind the learners of the contract at the beginning of each class |
| 18. passive learners | <ul style="list-style-type: none"> ● design activities so that every learner has a chance to participate ● ask questions proactively |
| 19. lacking learner feedback | <ul style="list-style-type: none"> ● proactively ask for feedback ● have a 'what I learned' session at the end of each class ● employ surveys and feedback forms ● when possible, have a 1-on-1 session with learners |
| 20. insufficient quality control | <ul style="list-style-type: none"> ● make active use of peer-review ● establish clear review procedures ● contact learners proactively and ask them to describe to you the way they are learning |
| 21. uncertain learning outcomes | <ul style="list-style-type: none"> ● define learning aims in advance ● monitor progress constantly ● employ the use of LMS |



Case study. Some of the learning experience dealing with the rapid transfer to e-learning during the Covid-19 pandemic has already been studied and used as a basis to form recommendations for future action. The article addresses challenges related to the transition to e-learning by quantitatively surveying students and lecturers at the Rhein Main University of Applied Sciences about the digital “Corona Semester”. Please pay special attention to the “Recommendations for Action” section and compare it with the list created above.

Lisa Ulzheimer , Annika Kanzinger, Alina Ziegler, Bernd Martin, Joerg Zender, Antje Römhild, Christine Leyhe. Barriers in Times of Digital Teaching and Learning – a German Case Study: Challenges and Recommendations for Action. Journal of Interactive Media in Education. 08 Sep 2021

<https://jime.open.ac.uk/articles/10.5334/jime.638/>



Additional Reading

Online Learning Challenges & Solutions. A post on embibe.com (an education platform) from 03/12/21:

https://www.embibe.com/exams/online-learning-challenges-and-solutions/#1_Adaptability_issues_in_Online_Learning

15 Digital Learning Challenges & How to Overcome Them. An eBook Crowdsourced from the Schoology Community:

<https://www.scribd.com/document/483415820/15-Digital-Learning-Challenges-How-to-Overcome-Them-pdf>

Otto D. Driven by Emotions! The Effect of Attitudes on Intention and Behaviour regarding Open Educational Resources (OER)

<https://jime.open.ac.uk/articles/10.5334/jime.606/>



Unit 4 Self-directed learning:

Specific information relating to the element

Learning Objectives

The specific learning objectives of the unit:

- know how to foster self-motivation
- be able to help learners set learning goals
- understand why goal setting matters
- know how to set goals effectively

Good Practice Example

A five-step process can help teachers and administrators collaborate effectively with students on setting and achieving goals.

<https://www.edutopia.org/article/thinking-critically-about-goal-setting>



Learning activity - setting goals practical exercise

Setting goals has been identified as a high impact teaching strategy (HITS). Read [this practical guide](#) for setting goals for high-ability students* and test one of its components in your own practice. It is derived from the experience with this exact target group of high achievements, but it is also very useful for all types of students.

Strategies that teachers may use to set goals for learning for high-ability students include:

- involving high-ability students in the goal-setting process
- encouraging high-ability students to set personal best goals rather than competitive goals
- grouping high-ability students at a similar point of need together to develop a common goal
- grouping high-ability students at a similar point of need together to work toward a common goal.

Templates for group goal-setting and individual goal-setting incl. further theory and practical tips:

<https://www.education.vic.gov.au/school/teachers/teachingresources/high-ability-toolkit/Pages/setting-goals-for-learning.aspx>

**This is a template that comes from the "For School" section, but is also relevant and easily implementable for other learners in other contexts.*



Learning activity: Reframing GOALS to WISHES

Learn more about the science-based mental strategy WOOP, developed with the aim to help people “find and fulfil their wishes, set preferences, and change their habits”. Watch the introduction video on this link: <https://woopmylife.org/en/science>

WOOP stands for:

- **W**ish
 - **O**utcome
 - **O**bstacle
 - **P**lan
- Self-reflect on your perceptions when you hear the task “Set a goal” and “Define your wish”. Choose one situation in an upcoming learning activity with your trainees, where you can test the WOOP strategy with them or simply discuss their associations with the word WISH (in contrast to “GOAL”).



Self-study: Studies on Motivation Theories and Moving Motivators

[Moving Motivators: An Intrinsic Motivators Game](#) by Jurgen Appello



Group activity with your trainees

Top 20 motivational podcasts for students: <https://leverageedu.com/blog/motivational-podcasts/>

Divide this list among your trainees and ask them to listen to min. 1 episode of the podcast and present the podcast to the rest of their group with at least one takeaway from it.



Group activity with your trainees: SUPERBETTER

Discover the science-based app and method to improve resilience, mental health & social-emotional learning.

Intro video for the educators: https://www.youtube.com/watch?time_continue=156&v=IWwy7TYfOUk&feature=emb_logo



Instructions: Watch the TED Talk of Dr. Jane McGonigal (https://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world) with your students and then invite them to choose one micro-challenge (called “daily quests” in the method) from the SuperBetter App/Book, to test it and to report their experience and the effect of the exercise:

App/Method: <https://www.superbetter.com/>

Book: <https://www.amazon.com/SuperBetter-Living-Gamefully-Jane-McGonigal/dp/0143109774>



Source: Superbetter.com, https://www.superbetter.com/want_to_play



❖ Interesting study on the role of self:

Amundsen and Martinsen (2014) see psychological empowerment and self-leadership as the necessary “be and do” characteristics of empowered people. Self-leadership (SL) is defined as the process of self-influence through which people get more self-directed and self-motivated towards achieving their tasks and goals (Manz, 1986; Manz & Sims, 1991). The definition clearly illustrates the vast influence of the ‘self’ and the individual perception in this important process.

SL is being conceptualised as a process that consists of several types of cognitive and behavioural strategies, grouped in three major approaches: (that could be further discovered in their original study here: <https://www.sciencedirect.com/science/article/pii/S1048984313001240>)

- **behavioural strategies:** self-observation, self-goal setting, self-reward, self-punishment and self-cueing.
- **rewards:** shaping perceptions by focusing attention away from the unpleasant aspects of a task and refocusing it on the task’s inherently rewarding aspects
- **constructive thoughts:** identifying and replacing dysfunctional beliefs and assumptions, mental imagery and positive self-talk



Ideas:

- **3 steps to stop remote work burnout** - useful tips on what you could do to protect your energy and your limits in remote work/learning. https://www.ted.com/talks/morra_aarons_mele_3_steps_to_stop_remote_work_burnout
- **How to escape education's death valley;** Sir Ken Robinson outlines 3 principles crucial for the human mind to flourish -- and how current education culture works against them. In a funny, stirring talk he tells us how to get out of the educational "death valley" we now face, and how to nurture our youngest generations with a climate of possibility. https://www.ted.com/talks/sir_ken_robinson_how_to_escape_education_s_death_valley
- **The self-organising computer course**
Shimon Schocken and Noam Nisan developed a curriculum for their students to build a computer, piece by piece. When they put the course online - giving away the tools, simulators, chip specifications and other building blocks -- they were surprised that thousands jumped at the opportunity to learn, working independently as well as organising their own classes in the first Massive Open Online Course (MOOC). **A call to forget about grades and tap into the self-motivation to learn.** https://www.ted.com/talks/shimon_schocken_the_self_organizing_computer_course



- **On goal setting and visualisation:** Students/trainees often enter a course with clearly defined official training goals. But are they internally ignited for the effect these official learning goals might have on their lives? A possible approach as an educator is to illustrate these using the power of visualisation - as confirmed by [Frank Niels, PhD](#):

According to research using brain imagery, visualisation works because neurons in our brains, those electrically excitable cells that transmit information, interpret imagery as equivalent to a real-life action. When we visualise an act, the brain generates an impulse that tells our neurons to “perform” the movement. This creates a new neural pathway — clusters of cells in our brain that work together to create memories or learned behaviours — that primes our body to act in a way consistent to what we imagined. All of this occurs without actually performing the physical activity, yet it achieves a similar result.

Digital Tools for Facilitating....



Examples of tools and techniques that can be accessed via the LXP/Toolbox

Use tools to encourage self-motivation such as:

- Tracking progress - Journaling
- Buddy systems
- Comparison/ leaderboard/ equity theory
- Micro-challenges - Superbetter app
- YEAR COMPASS - annual self-reflection and goalsetting
- Jurgen Appello Moving Motivators and Celebration Grid



Additional Reading

TED’s culture list: 114 podcasts, books, TV shows, movies and more to nourish you: <https://ideas.ted.com/teds-summer-culture-list-114-podcasts-books-tv-shows-movies-and-more-to-nourish-you/>

The Happiness Lab podcast “This podcast, hosted by Dr. Laurie Santos (TED Talk: A monkey economy as irrational as ours), takes you through the latest happiness research and offers insightful anecdotes. It will make you feel differently about your day to day, especially during these up-and-down times.”

Catie Cuan, TED Talk: Teaching robots how to dance - how experiential learning and experimenting can shifts perceptions and increase courage for further learning: https://www.ted.com/talks/catie_cuan_teaching_robots_how_to_dance



Franklin Covey on goal setting and putting first things first: [Franklin Covey on goal setting and putting first things first](#)

Unit 5 Attention in the digital context

Specific information relating to the element:

This unit is broken down into **three activities** adhering to the learning objectives described below. Each of the three units aims to empower the learner in terms of either theoretical knowledge or practical skills to help facilitate both their, as well as their students' attention in the context of curation and learning in a digital environment.

Learning Objectives

The specific learning objectives of the unit:

- ★ Gain a deeper, science-based understanding on the effect of the digital environment over the brain and its attention capacity (*overstimulation of the brain/neuroscience*);
- ★ Learn tips and tricks on how to improve the focus in the digital context;
- ★ Test new tools for improving attention in the digital context;
- ★ Increase ability to set up a stimulating learning environment
- ★ Learn how to deal with distractions

Learning Activity/ies

Activity 1:

Your Brain Online – Overstimulation & Attention

Concept: *How does our engagement digital technology physically alter our brains?*

Focus: *Comprehension, concentration, and contemplation*



HOW DOES THE BRAIN WORK?

Before we explore the effects of digital technology interactions on the brain, we need to delve into some primary characteristics of brain functioning.

First, it is important to acknowledge that the brain is capable of change, something which was recognised merely 40 years ago. **Plasticity** refers to the changes in [neural pathways](#) and [synapses](#) resulting from changes in our behaviour, environment, neural processes and bodily injury.

When we perform a task or experience a sensation, neurons in our brain are activated. Consequently, when we repeat a task or experience, the synaptic link between neurons grows stronger. The repeated tasks or experiences can be either physical or mental. With the synaptic links growing stronger with our repetitive actions, different regions of the brain shrink because the brain devotes more resources to functions which are used more frequently. In other words, the brain will allow the more frequently used areas to occupy areas that are used less frequently.

The more – the more! The less, the less.



https://www.youtube.com/watch?v=nWMP68DqHE&ab_channel=HaloNeuroscience

Please, see the video “The Neuroscience of Learning” before continuing.

In addition to repeated experiences, your **attention also impacts neuroplasticity** (*the ability of neural networks in the brain to change through growth and reorganisation*). Not only that, but it is precisely attention that pumps up your neuronal activity. **Repetition alone cannot facilitate learning.**

Attention works like a gate, regulating the input of neural information.



Here is a good example of how these two facets of brain functioning (*repeated experience and attention*) work:

MRI imagery showed two different types of brain images when looking at **experienced** and **newcomer** web users who were using Google; The experienced users **showed activity in the dorsolateral prefrontal cortex** (*the area of the brain responsible for working memory & selective attention*), while the newcomers **showed hardly any activity in that area of the brain.**

However, it only took an hour a day (*for five days*) for the newcomers’ brain to become rewired in the same way as the experienced users.

To see the full research experiment, go to <https://pubmed.ncbi.nlm.nih.gov/19155745/> (Small et. al., 2009: 116-118)



Now what happens to our brain when we engage with the digital world excessively or irresponsibly (or both)?



Studies have shown that the constant use of technologies such as smartphones, computers, search engines and the like **stimulate brain cell alteration and neurotransmitter release**, gradually strengthening new neural pathways in our brains while weakening old ones, while also stunting our **frontal lobe development**: <https://www.bizcommunity.com/Article/196/371/94748.html> (Affleck et. al., 2012).

To clarify, our frontal lobe is responsible for higher cognitive functions such as **memory, emotions, impulse control, problem solving, social interaction, and motor function**. It is also known that **the depth of our intelligence** (*emotional or otherwise*) **hinges on our ability to transfer information from working memory to long-term memory and weave it into conceptual schemas**.

However, working memory can hold only a small amount of information at a time, and **a break in attention can sweep information from our short-term memory**. When cognitive load (*working memory storage*) exceeds the brain's ability to process and store it, we cannot retain the information or draw connections with other memories.

This overflow of information prevents our brains from forming strong neural connections that give depth to our thinking when we are distracted, resulting in reduced ability to comprehend and contemplate information, as well as concentrate.



While the Internet is brimming not only with information, but also attention grabbers - it is vitally important that we increase our awareness of how and why our attention is affected.

Since we are born into a world where we have a lot of catching up to do - our cultural-technological development is happening too rapidly for us to keep up - we present to you a few hard facts about the Internet you are probably unaware of, which we believe will steer your future online endeavours in a direction more synchronistic with your wellbeing.

It is the things we do not know that affect us the most!

- ❖ The Internet as we know it today is **but an outcome of the cultural revolutions** in the 1970s and 1980s in the West;
- ❖ Those revolutions' roots stood in the widespread concern that banks and corporations were taking control over both the **political** and **economic** spectrums by developing a **digital network** (*servers for information sharing and storage*) to govern their amassing records not only of transactions and economic trends, but **characteristic human tendencies of socio-cultural interaction and expression** that they could exploit to increase their capital;



- ❖ These digital networks were previously an exclusive part of **military** and **secret service** communication strategies. We may safely argue the Internet's true origins lie there, *if not radio and television*. After all, we must not forget it was Nazi propaganda that gave the start of mass media as we know it today.
- ❖ Initially, the World Wide Web was an **open-access platform made by the people for the people**. In it, we could share information with others and express ourselves **without the intervention of any governing authorities**.
- ❖ While many would argue the Internet today is a free space (*there are certainly independent websites allowing free and anonymous exchange of information, such as <https://www.4chan.org/>*) - **the level of influence exerted upon the World Wide Web by large corporations is immense**.
- ❖ With the help of **algorithms** (*these are finite logical sequences of well-defined instructions often functioning under the **if>then** principle*) working to the benefit of increasing accessibility and ensuring a positive user experience, **the Internet today has become one of the primary mediums through which our attention is steered**. Big corporations invest billions of dollars to ensure that the information, products and services **our own data suggests** we might wish to consume reaches us.
- ❖ How does this work? In the past, our hunter-gatherer ancestors had to deal with dilemmas - for example, when they heard a noise in the forest, they had to judge if it was the wind or a predator...there was a benefit in making one choice rather than the other. Missing an alert was costlier than raising the alert for nothing. Thus, we developed **hypervigilance** - preferring to make a mistake rather than die. And this hypervigilance reflex has stayed with us to this day. It makes us highly susceptible to the stimulations of the online world.
- ❖ Taking advantage of biases such as the one just mentioned - those faults in our rationality that hinder our free decision-making capacity - is the **fundamental factor** in the race to capture the attention of Internet users and make money by satisfying their unconscious desires, albeit only momentarily most of the time.
- ❖ **Humans instinctively make the choice of processing information quickly** and responding to visual and sound signals (*like smartphone notifications, flashing lights, sharp sounds and pictures, etc*). For these reasons, we always tend to give in to the call of the digital world when it emits a signal, warning us of a change or a novelty which, by innate reflex, **we do not want to miss**. This the Internet, or the consumerist economy standing firmly behind it, has understood. Many big corporations are contracted with Facebook, Google and other digital media to gather personal data in order to **market their products, tailored to match people's desires and wishes**.
- ❖ Knowing all of the above does not in itself cause one's attention capacity, information processing ability and resistance to distractors to increase. However, **being aware that much of what you see online is there to provoke you to be interested in it leverages your responsibility to govern your own attention with greater freedom**, and to more consciously accept the consequences of your digital interactions!

References:



<https://youtu.be/thLgkQBFTPw?t=2361> Adam Curtis - "Hypernormalisation" (2016: minutes 39:24 - 50:35);

De Vos, J. (2020) - The Digitalization of (Inter)subjectivity

Chatellier Et. al. (2019) - Shaping Choices in the Digital World; p. 16



TASK: Go on [YouTube](#) and watch some videos for half an hour. Make sure they are short (*no more than 5 minutes each*). Think only initially about what you want to entertain yourself with, the algorithm will take care of the rest.

After you are finished, do a small recap of how you feel:

- *Are you overly stimulated?*
- *Was it hard to stop watching?*
- *Do you feel restless and invigorated?*
- *Does the real world seem like a slow-paced and rather uninteresting place to be in?*

The effect should be similar to scrolling through Facebook, Instagram, Twitter, or similar social media. It is made to hook you up. It is designed to keep your interest in the next best thing to come. It does not matter what it is - the magic is in the anticipation.

Activity 2:

Focus in the Digital Context and Dealing with Distractions – Tips & Tricks

Concept: *How do we counteract negative brain changes by balancing and regulating technology engagement?*



Focus: Using our brain in non-technological ways and facilitating, comprehension, learning and memory skills



When we surf the Internet and expose our brains to its stimuli (*which are always only visual or auditory*), we often **evaluate links** and **make navigational choices** – tasks which require decision making. This process of pausing to evaluate whether to move to the next link alters neural connections and distracts the brain from the work of interpreting text. Our **mental resources move from reading words to making judgments, which impedes comprehension and retention**. Exposure to digital technologies thus makes us read in a "skimming" way, leading to a different kind of thinking which places **efficiency** and **immediacy** above all else, weakening our ability to read deeply, interpret text and make rich mental connections.

This creates new weaknesses in our higher-order cognitive processes, including ones that affect our **abstract vocabulary, mindfulness, reflection, inductive problem solving, critical thinking, and imagination**.

What can we do to mitigate these effects?

Most of the problems associated with learning, especially in a digital context, arise from the **distractors of attention which hamper our ability to make connections** both within the material we try to absorb, as well as in its relation to our current knowledge and perception. When we learn, it is extremely important for our short-term memory to be engaged with **nothing outside the context of whatever we are studying** while also bearing in mind any practical applications (*connections*) of the knowledge are welcome. This will bring your assimilation and comprehension to the next level!

Preceding the non-learning related exercises listed in the **Tips & Tricks** section in the end, in the following tasks you will engage with one activity tailored to **increasing your awareness of distractions**, and another teaching you a **memorising/information processing technique**.



TASK: Read [these](#) short articles and write two summaries of them. Reflect on your activity in terms of the quality of your interpretations. The first one you will read on a digital screen while also doing the following:

- playing music from a browser
- having your smartphone close by
- having several Internet tabs open - *social media, email (work or personal, depending on which one is more active)*, and a random leisure/informational site of your own choice
- checking your feed while reading

When reading the second text, make sure you print it out on a piece of paper. While reading it, you will:



- have no digital devices nearby (*or switched on, at the least*)
- stay in a quiet and soothing environment
- have good lighting that does not flash in your eyes
- be in a comfortable sitting position (*laying down may make you sleepy*)

Give yourself two minutes for the information to sink in. After each text, write a 200 word interpretation of the story you read in your own voice. When you are finished, reflect on the differences in the quality of each of your interpretations.

Do you notice any in terms of:

- depth of understanding
- logical consistency
- coherence between sentences
- argumentation
- writer's and personal position on the topic in question?



TASK 2: This task is designed for exploring the memory capacity of a couple of volunteers by trying out a **memory improving technique** known as **chaining**. Although you should ask somebody to conduct it with you, you can also help friends and family learn the technique by being their facilitator. The full description of the activity can be found here: <https://www.scientificamerican.com/article/dont-forget-a-memorization-exploration/>

- ❖ The chaining technique is strongly related to the connections “within-the-text” that help us evaluate, process and comprehend information. Linear reading and consistent learning, as we will see shortly, are extremely important for deep understanding.



THE IMPORTANCE OF REST:

Rest periods are also critical in allowing the brain to **synthesise** information and **make connections**. Constant stimulation places the online users' brains in a **heightened state of stress** which further leads to reductions in the quality of time for reflection, contemplation and focused decision making. Check out this TEDx talk by Brady Wilson on the connotations of the exhausted brain and how to fix it:

https://www.youtube.com/watch?v=XOU2ubWkoPw&ab_channel=TEDxTalks



In another research worth noting done way back in 2005 on the student's perspective in education, results showed that due to their high use of Internet and technology, **learners would rarely look to instructions or manuals** with regards to their studies; **instead, they would experiment until they get it right**, preferring to piece together information from a variety of sources. **LINK TO RESEARCH - <https://core.ac.uk/download/pdf/232590071.pdf>** (Cooney, 2007-2008: 506).

This incoherent and sporadic type of learning not only results from overstimulation of the brain due to the vast amounts of information and stimuli it is bombarded with, but **contributes to a hampered ability to focus, as well as comprehend knowledge.**



As a result of the exposure to digital technologies and the subsequent physical changes to the brain, we start reading at a **superficial level** with little concentration or contemplation, searching for key terms and skimming the text surrounding the key terms, instead of reading line by line. In addition, **people who read linear text comprehend more, remember more and learn more** than those who read text peppered with links. Here we do not mean links which help the learner become more familiar with terms and information within the text, *which are helpful to the process of comprehension*, but rather **attention grabbers** based on our personal data and preferences **that are always custom-fit to our innate desire for amusement, self-expression, etc.**

What else can we do?

The brain can right itself if we are aware of these issues. Improvements in memory scores will be witnessed, as well as dramatic changes on [PET scans](#), demonstrating increased mental efficiency in the front part of the brain when following the tips listed below:



TIPS & TRICKS:

- Limit your use of technology;
 - conduct cardiovascular conditioning (*Aerobic exercise*);
 - do memory exercises (*reading in a calm environment/playing chess/memory card games/solving crosswords*);
 - practice relaxation techniques (*meditation, yoga, walks in the park*);
 - keep a healthy diet!
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- *Balance your online and offline time, flex the brain muscle in (not exclusively) the non-technological ways listed above; try to work within your working memory's cognitive load (by reducing distractions); put away the technologies when trying to learn new, complex concepts.*



Activity 3:

Stimulating the Online Learning Environment

Concept: *What can we do to positively influence our online learning environment?*

Focus: *Tools and methods for facilitating productive learning and positive classroom dynamics*



A well-designed online course can provide online learners with the same efficacy as normal classrooms. However, effective and successful online learning requires greater focus on the following three factors: **course design, interaction among course participants, and instructor preparation and support**. These are harder to properly conduct online, especially since the teacher has impeded knowledge over his students' preferences and characteristics due to their lack of face-to-face communication.

- ❖ Although these three factors are facilitated by teachers - what we can do as learners is openly comment on them with our tutors and colleagues within the classroom environment.



Studies show that distractions in **presentation style** can substantially impair learning. Minimise or eliminate the use of **irrelevant sounds, music, and animation in PowerPoints**. Use the **same style** throughout presentations. Facilitate a **student-centred environment with respect and emotional integrity**, and help students to develop **positive and productive relationships** with one another!



Discuss extracting alternative inputs (**personality, performance test, cognitive style, etc.**) from learners to suggest a session that more closely accommodates their individual preferences. Increased students' **brain activation** can be attributed to their interaction with content that resembles their **aptitude profile**. By continuously linking the aptitude level of learners to the complexity of the learning material, they will eventually improve their overall learning experience. Here is an exemplary aptitude test you can use: <https://www.aptitude-test.com/>

The aptitude test measures the skill level and individual preferences in the following areas:

- ❖ Numerical Logic
- ❖ Numerical Word Problems



- ❖ Deductive Reasoning
- ❖ Word Analogy
- ❖ Inductive Reasoning
- ❖ Spatial Ability
- ❖ Abstract Reasoning
- ❖ Word Relationships
- ❖ Deductive Reasoning

Based on the type of course/studies, both the teacher and the learner can help modify the material or learning approach based on the class' overall abilities and predilections. For example, some learners would be better suited to abstract reasoning rather than logic, words rather than numbers and statistics, or verbal rather than written expression. Notwithstanding the fact it is good to develop new skills and learning approaches, **tailoring the class experience in this manner will boost learning.**

Furthermore, **relating new information to data already stored in long-term memory** (*relating new topics to material previously covered*) is also a great method for stimulating the learning process. For example, you can:



Break down critical reading into three subparts – *pre-reading, active reading, and post-reading.*

1. **Pre-reading** increases the awareness of the purpose for reading using a preview of the material. This is accomplished easily in both the print and electronic world. First, inform students that they **need to be aware of their purpose for reading the information** so they can focus on the relevant aspects. Next, have them preview the text, whether by flipping to the Table of Contents or by scanning hyperlinks on a digital device without clicking on them. This allows students to gather the needed background information while **not actually reading the material**;
2. **Active reading** is an actual **interactive process with reading by highlighting, annotating, or taking notes**. This process provokes the readers to think about the material they are reading and not just pass their eyes over words.
Active reading is harder to accomplish in the digital world because you cannot take a highlighter or pen directly to the paper. So, students need to learn how to use various **computer functions** to engage with the material if they read digitally. For example, they should use a variety of techniques available on the computer, such as **highlighting, using flashing text, altering fonts, enclosing text in boxes**, etc.
Active reading skills are important because reading is not simply pulling information from the text; it is a matter of **interpreting and creating meaning** within the text.
3. **Post-reading** is meant to **reinforce and cement** the concepts learnt. In both the physical and the digital world, questions should be asked that elicit more than just a summation of the read material. In the digital world, professors can insert questions directly into the text.



In the print world, the student and professor should pose questions about the material. Talk about why you are reading a particular case. It has been shown that **what is discussed prior** to reading the text **influences the students' understanding** of the material. **Debriefing and posing questions** that cause the students to self-reflect on the material continually **reinforces critical reading**. Also, since the structure of the brain changes whenever a person pays attention to a certain experience, **students should** also be able to **learn to control and focus their attention**. Encourage students to allow their brain to have true “**downtime**”. Get rid of distractions, and have clear-cut objectives supported by clear-cut explanations!



Digital Tools for Facilitating....

Examples of tools and techniques that can be accessed via the LXP/Toolbox

<https://prnt.sc/> **Lightshot** is a tool that replaces your “prnt scrn” keyboard button with the option of instantly cropping a segment/your whole screen and saving it to an allocated folder. Great for saving images/text instead of copying them and allocating them manually.

<https://v4.brainhq.com/?v4=true&fr=y#> **BrainHQ** is an online headquarters for working out your brain. Think of it as a personal gym, where you exercise your memory, attention, brain speed, people skills, intelligence and navigation instead of your abs, delts, and quads.

https://thebrain.mcgill.ca/flash/d/d_07/d_07_p/d_07_p_tra/d_07_p_tra.html **The Brain From Top To Bottom** is a great website to help you boost your basic understanding of not only how memory and learning work, but everything brain-related, from your senses, emotions, thoughts and language to evolution and the sense of self.

<https://www.apititude-test.com/> **A Free Online Aptitude Test** that measures your skill (and consequently, preference, although this is based on correlation. Usually, we have a preference for what we are good at) in different areas of cognition.

Good Practice Examples

READING & COMPREHENSIONS SKILLS:

- ❖ Recall prior knowledge and mentally connect new information with that knowledge as you read;
- ❖ Monitor and repair comprehension by rereading and skipping ahead;
- ❖ Analyse text to determine important ideas before, during and after reading;
- ❖ Summarise and synthesise to check comprehension;



- ❖ Draw inferences from prior knowledge and text to fill in the gaps;
- ❖ Ask and answer questions while reading to check comprehension, clarify ideas and focus attention.
- ❖ Talk about why you are reading a particular case. It has been shown that what is discussed prior to the text being read can influence the students' understanding of the material.
- ❖ Debrief and pose questions which cause you to reflect on the material read and continually reinforce critical reading.
- ❖ Since the structure of the brain changes whenever a person pays attention to a certain experience, learn to focus and control your attention.
- ❖ Allow your brain to have true "downtime." Rest is vital.