


3.5. Learning through experience

Duration: 14 hours

Trainer:



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Learning
through
experience

“TO LEARN BY DOING”

(EntreComp)



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Learning Outcomes



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39. DESCRIBE TRADITIONAL REFLECTION STRATEGIES, SUCH AS JOURNALS AND ORAL OR WRITTEN REPORTING, AS WELL AS NEW TECHNIQUES (SUCH AS THINKING ROUTINES E.G. I USED TO THINK BUT NOW I THINK, 3-2-1 BRIDGE, TWO SIDED NOTEBOOKS) AND SELF CHECKS THAT CAN BE APPLIED WITH THE PUPILS.

40. DEVELOP REFLECTION SKILLS OF PUPILS SO AS TO REFLECT ON THEIR LEARNING FROM BOTH SUCCESS AND FAILURES THROUGH THE PRACTICAL USE OF TRADITIONAL AND NEW TECHNIQUES SUCH AS THINKING TECHNIQUES (I USED TO THINK BUT NOW I THINK, 3-2-1 BRIDGE, TWO SIDED NOTEBOOKS ETC.).

41. SUPPORT PUPILS ON THEIR REFLECTION DURING THE DIFFERENT STAGES OF THEIR LEARNING.

42. SUPPORT PUPILS IN RECOGNIZING OPPORTUNITIES FOR LEARNING AS WELL AS IN EVALUATING AND ADJUSTING LEARNING PROCESSES AND GOALS.

Training Rules

- ▶ Mobile Phones
- ▶ Smoking
- ▶ Breaks
- ▶ Other



Participation



Respect

Express your opinion



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What is reflection

And what are its benefits

Brainstorming

What is reflection?



What is reflection?

- ▶ When we reflect, we consider deeply something that we might not otherwise have given much thought to. This helps us to learn.
- ▶ Reflection is concerned with consciously looking at and thinking about our experiences, actions, feelings, and responses, and then interpreting or analyzing them in order to learn from them (Atkins and Murphy, 1994; Boud et al., 1994).
- ▶ Typically we do this by asking ourselves questions about what we did, how we did it, and what we learnt from doing it.



Reflection process

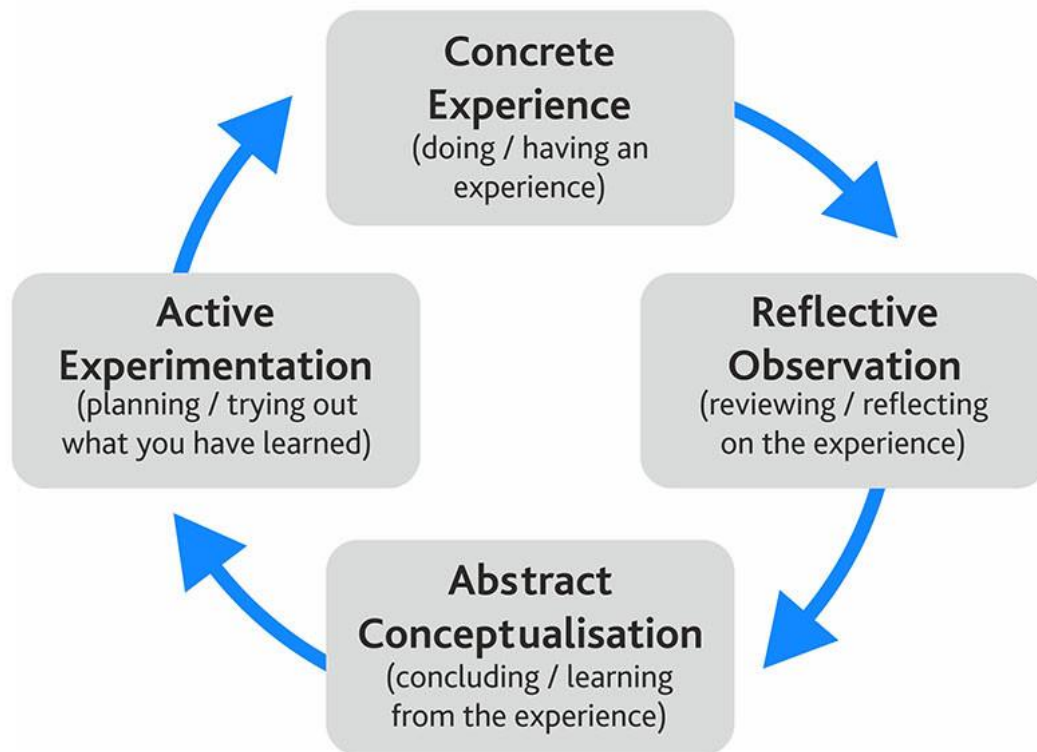


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<https://youtu.be/ObQ2DheGOKA>

Kolb's Reflective Cycle

The Experiential Learning Cycle



Why is reflection important in the classroom?

- ▶ Reflection is the necessary bridge in the learning process that takes place when a pupil is involved in a **service-learning experience**.
- ▶ When pupils are provided with the **time** and **place** for reflection, they are empowered as learners and thinkers.
- ▶ **Reflection** on a lesson or on their own progress also allows them to build skills in critical thinking that they can apply when they are **problem-solving** and learning on their own.



Group Discussion

- What are the benefits of reflection in the classroom?



Benefits of reflection in the classroom

**Process
Recognition**

Analysis

Significance

Motivation

**Not
content-
driven
learning**

**Solutions/
Strategies**





Reflection strategies and techniques

Traditional and innovative

Traditional reflection strategies

- ▶ Writing in journals
- ▶ Reporting orally in front of the class
- ▶ Writing an essay describing the experience



Thinking Routines

- ▶ New tools provide teachers with a **variety of methods** which they can incorporate in the classroom.
- ▶ Teachers should provide an opportunity to pupils to engage in **critical thinking experiences** on a regular basis – **making them routine**.
- ▶ **Thinking routines** can be used in many different learning situations, such as at the **beginning** of a new unit of study and **after** a lesson or activity.



Thinking Routines

- ▶ Thinking Routines help to make thinking **visible** while promoting deeper learning of curricular content.
- ▶ Incorporating them into a lesson or activity and putting them into practice **does not require special materials** or even too much **extra time**.
- ▶ pupils' responses can be shared in a variety of ways including:



Verbally

Written on
post-it
notes

Recorded
in digital
form



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Thinking Routine “I Used to think but now I think”

- ▶ This thinking routine helps pupils reflect on **how and why** their thinking about a topic has **changed** over time
- ▶ Begin by asking pupils to consider their thoughts on a **particular topic** and use the sentence “***I used to think...***” to explain their initial opinions and/or beliefs.
- ▶ After a lesson or unit, prompt pupils to share how their thinking has **shifted**, starting with “***But now, I think...***”. Ask pupils to elaborate on why their thinking has changed.

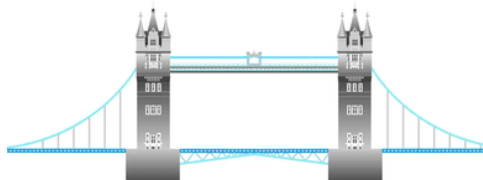


Group Exercise

- Think of a situation where you could use the thinking technique “**I used to think but now I think**”.



Other Thinking Routines



- 3-2-1 Bridge



- 2-sided notebooks



- Self-check

Thinking Routine “3-2-1 Bridge”

- ▶ This thinking routine encourages pupils to connect their **initial thoughts** on a topic to **new learning**.
- ▶ Each pupil shares **3 thoughts**, **2 questions**, and **1 analogy** about a topic of study.
- ▶ After engaging in a learning experience (that may include additional learning content and/or new ideas), pupils share **another set of “3, 2, 1”**.
- ▶ Pupils explain how their prior understandings **“bridge” with their new ways of thinking**. It is important to communicate to pupils that there is nothing wrong with their first thoughts—they are just a starting point.



Thinking Routine “3-2-1 Bridge”

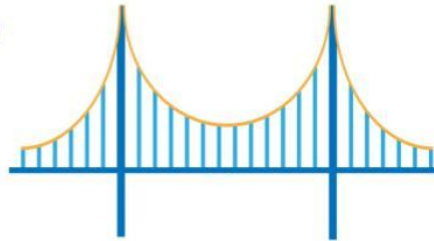
3-2-1 Bridge

1st Responses

3 thoughts/ ideas

2 questions

1 analogy



Connected Responses

3 thoughts/ ideas

2 questions

1 analogy

Bridge

Identify how your new response connects to or shifted from your initial response

purpose

This routine asks learners to uncover their 1st thoughts, ideas, questions & understandings about a topic & then connect these to new thinking about the topic after some exposure & research.

Introducing
& Exploring
Ideas



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Group Exercise

- Think and present a situation where you could use the thinking technique “**3-2-1 Bridge**”.



Thinking Routine “Two-sided (interactive) notebooks”

- ▶ Pupils **record content/notes** on one side (input) **and process the content** on the other side (output).
- ▶ Pupils need to understand the **purpose** of each side, what kinds of things can go in each section, and that there is not one “right” way to share their thinking.



Individual exercise

- Think and present of a situation where you could use the thinking technique **“Two sided notebooks”**.



“Self-check” technique

- ▶ **Self-reported grades** are just one form of learner self-assessment. Other forms are:
- ▶ *rubrics*
- ▶ *surveys*
- ▶ *checklists*
- ▶ *fill-in the blanks*
- ▶ *writing prompts*
- ▶ *sharing verbally*



Individual exercise

- Think and present a situation where you could use the thinking technique **“Self-check”**.



Group Exercise

- Statements' Hat/Bowl





Opportunities for learning

Inside and outside the classroom

Opportunities for learning

- ▶ There are teaching opportunities in **every environment** and situation, **not only inside a classroom**.
- ▶ Learning outside the classroom has an infinite number of manifestations that underline the necessity of **actively involving pupils to learning procedure**.
- ▶ As Confucius said “*Tell me and I forget, teach me and I may remember, involve me and I learn*”.



Perceiving opportunities for learning

In order to perceive opportunities for learning, pupils should

- ▶ set goals
- ▶ monitor and evaluate their own academic development, so that they can manage their own motivation towards learning.



Benefits of finding opportunities for learning

The benefits for pupils when they **identify** and **seize** opportunities for learning include:

- ▶ Improving their learning performance
- ▶ Increasing motivation and confidence
- ▶ Increasing chances to be practically and intellectually creative
- ▶ Increasing opportunities for completing differentiated tasks



Group exercise

- What are the benefits of learning outside the classroom?



Benefits of Learning Outside the classroom

- Stronger motivation for learning:
 - The experience of **active experimentation, risk-taking and especially failure** in relevant **real-world contexts** with authentic audiences is highly motivating and yields more engagement in the learning process.
 - Pupils crave **meaning, relevance, and purpose**; teaching that affords this provides tremendous motivation for learning.



Benefits of Learning Outside the classroom

► Depth and Breadth of Comprehension:

- By encountering uncontrolled **real-world complexities and ambiguities** that challenge preexisting concepts, pupils are better able to refine their understandings for different settings, strengthening their comprehension and memory.
- Real-world contexts are rarely covered by one discipline, requiring **interdisciplinary insights and comparisons** that broaden cognitive connections.



Benefits of Learning Outside the classroom

► Depth and Breadth of Comprehension:

- Using experiential contexts, pupils come to understand knowledge as more than a discrete set of facts and theories, but instead as **an unending dialectical process of engagement** with investigative methods, deductive and inductive reasoning, and theorizing.
- Pupils come to **recognize enduring elements and methods of inquiry**, enhancing metacognition and intellectual autonomy as well as open, fair-minded reflection.



Benefits of Learning Outside the classroom

► Problem-solving:

- By being allowed to take what they learn in the classroom and **apply it in others contexts**, pupils must **grapple with challenges, define problems, design solutions and test** them.



Brainstorming: Opportunities for learning outside the classroom

- Identify areas where pupils can learn outside the classroom.



Opportunities for learning outside the classroom

Civic and Social Education

- ▶ Learning in social contexts outside the classroom, such as basic field work, community-based education, community engagement.
- ▶ Pupils gain an awareness of social problems, whether they be cultural, economic, or political.
- ▶ Through contributing to solving social problems such as homelessness or environmental problems, pupils learn how to generate governmental, policy, cultural, or economic change and thus develop citizenship skills and a valuable sense of self-efficacy or empowerment.



Opportunities for learning outside the classroom

Civic and Social Education

- ▶ Especially in study abroad and community-based experiential learning, pupils have immersive opportunities to learn about social groups, if not entire societies, that are different.
- ▶ This prompts deeper learning across the disciplines, especially in the acquisition of language, cultural and historical critique and social analyses of race, class, gender, sexuality and nation.



Group Exercise

- Think of an activity by which pupils can learn outside the school environment.





Supporting
reflection during
the different stages
of learning

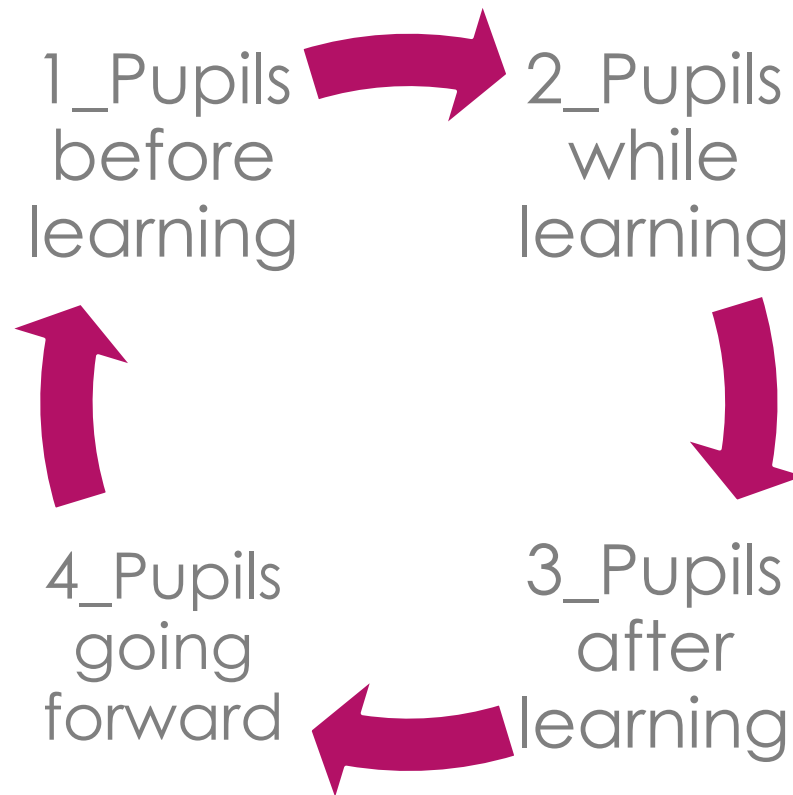
Questions to support pupils' reflection

In order to support pupils to reflect on their learning, you may ask questions like:

- ▶ What was your **significant learning** this past week?
- ▶ What did you learn or what was **reinforced** about yourself?
- ▶ What can you take from the class activities to **use in your life outside the class**?



Reflection in the different stages of learning



Pupils **before** learning



- ▶ Pupils may have **prior** knowledge, preference, assumptions, bias, feelings about a topic/subject.



- ▶ Teachers should demonstrate **empathy** knowing these feelings, thoughts and ideas. This will allow pupils to speak/write openly about their feelings, thoughts and ideas.



Pupils **while** learning



- ▶ Pupils will provide their thoughts and ideas on “**how**” **they are learning**, which informs “**how**” teachers teach.



- ▶ The teacher becomes the facilitator.



Pupils **after** learning



- ▶ Pupils are called to "**analyze**" **what** they have learned and "**why**" **it was important to learn**.
- ▶ Reflecting on the **significance** of what they have learned is vital in helping pupils to see the **relevance** in our lessons.
- ▶ **Relevance = motivation**



Pupils going forward

- ▶ Pupils synthesize their learning. The aim is to be able to take what they have learned and **apply it elsewhere**.
- ▶ Pupils are advised to take the prior reflection on the relevance of the lesson and try to make sense of it to be **applied in different scenarios**.



How can teachers use pupils' reflections on their learning?

Teachers can use pupils' reflections

- ▶ to provide feedback to them
- ▶ for peer feedback
- ▶ to understand and inform teaching strategies and pedagogy in the classroom (pupils evaluating teachers)
- ▶ For class discussions, community posts, chats as a class etc.



Group Exercise

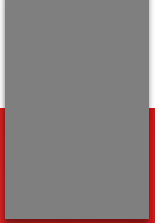
- Develop questions through which teachers can support pupils in reflecting.



Group Exercise

- Now go back to the reflection questions you have developed and compare them to the handout.





Supporting pupils to
evaluate and adjust
learning processes and
goals

Personal Learning Goals

They are based on the following very important principles:

- ▶ the learning environment promotes independence, interdependence and self motivation
- ▶ assessment practices are an integral part of teaching and learning
- ▶ both pupils and teachers have a significant role during the learning process



Setting goals process

- Setting individual goals is a circular process which requires 4 steps



Setting SMART goals

S Specific

M Measurable

A Achievable

R Realistic

T Time-bound



Setting SMART goals

Specific

With specific goals a pupil can focus on **behavior**.

It is a bit more tangible than an academic goal, and pupils are still learning how to “be” in our classroom, so it’s the perfect opportunity to change a few things before they become a habit.



Setting SMART goals

Measurable

It's important to have measurable goals in classroom, so that pupils can track progress and stay motivated. A measurable goal should address questions such as:

- ▶ How much?
- ▶ How many?
- ▶ How will I know when it is accomplished?



Setting SMART goals

Achievable

Pupil's goal also needs to be achievable. It should stretch pupil's abilities but still remain possible. An achievable goal will usually answer questions such as:

- ▶ How can I accomplish this goal?
- ▶ How realistic is the goal?



Setting SMART goals

Relevant

Pupils have to ensure ensuring that their goal matters to them, and that it also aligns with other relevant goals.

A relevant goal should answer "yes" to questions as:

- ▶ Is this goal worthwhile?
- ▶ Is this the right time?
- ▶ Does this goal match my other efforts/needs?



Setting SMART goals

Time - bound

Every goal needs a target date, so that pupils have a deadline to focus on and something to work toward. A time-bound goal will usually answer these questions:

- ▶ When?
- ▶ What can I do a month from now?
- ▶ What can I do a week from now?
- ▶ What can I do today?



Why is evaluation important?

Evaluation of pupils upon own learning goals and targets motivates them to:

- ▶ become more **active participants** in the learning process
- ▶ become **independent** learners
- ▶ identify what is **important** to their own learning
- ▶ achieve their full **potential**



Uses of assessment

- ▶ Assessment **for** learning
- ▶ Assessment **as** learning
- ▶ Assessment **of** learning



Uses of assessment: Assessment **for** learning (teachers)

- ▶ Assessment **for** learning occurs when teachers use inferences about pupil progress to inform their teaching.



Uses of assessment: Assessment **as** learning (pupils)

- ▶ Assessment **as** learning – occurs when pupils reflect on and monitor their progress to inform their future learning goals
- ▶ Assessment as learning regularly occurs, formally or informally (e.g. peer feedback, formal self-assessment).



Uses of assessment: Assessment **of** learning (teachers)

- ▶ Assessment **of** learning occurs when teachers use evidence of pupils' learning to make judgements on pupils' achievements against goals and standards.



Assessment **as** learning for setting goals (pupils)

- ▶ In assessment **as** learning, pupils should:
 - monitor their learning
 - use feedback from this monitoring to make adaptations and adjustments to what they understand



Assessment **as** learning for setting goals (pupils)

In assessment **as** learning, pupils should:

- ▶ Reflect on past experience
- ▶ Remember and understand what took place
- ▶ Gain a clearer idea of what has been learned and achieved
- ▶ Share responsibility for the organisation of their work
- ▶ Keep records of activities undertaken
- ▶ Make sound decisions about future actions and targets



Assessment **as** learning for setting goals (pupils)

- ▶ Pupils need to **understand** themselves as **learners** in order to understand their needs, set their goals and manage their learning processes
- ▶ Pupils may also consider the following questions:
 - What are the **instructional methods** that better help me?
 - Who were my **favorite teachers**? Why? What did they do that was different from other teachers?



Assessment **as** learning for setting goals (pupils)

Questions pupils can use to set and evaluate goals and learning processes:

- What exactly do I need to do?
- Why am I doing this?
- What do I know about this already?
- What choices and options do I have?
- How will I be assessed?
- What strategies could I use?
- How will I know if I am successful?
- What will I check my success against?



Brainstorming

- ▶ What is the role of the teacher in the assessment process?



Assessment **for** learning (teacher)

Teachers should:

- ▶ Guide pupils with regard to the kinds of goals they set
- ▶ Provide pupils with a set of statements in order to focus on their goals, such as:
 - 'My strengths are...'
 - 'I feel frustrated when...'
 - 'I need help with...'
 - 'I need to find out more about...'



Assessment **for** learning (teacher)

Teachers should:

- ▶ Elaborate on what the goals are and which ones are 'SMART'
- ▶ In the early stages, provide pupils with examples of personal learning goals from which to select, as this can facilitate the process of goal setting and allow pupils to see how learning goals can be defined



Assessment **for** learning (teacher)

- ▶ **Teachers should discuss with pupils about:**
 - their achievements and challenges from the previous class
 - their strengths and areas for improvement, both in and out of the class
 - their goals for the short and long term
 - setting achievable and worthwhile goals
 - developing a plan of action for achieving their goals
 - planning for monitoring and reflecting regularly on their goals



Group Exercise

- ▶ How can you help your pupils to set and assess SMART goals?



Tools which teachers can use

- ▶ Pupil report card:
 - My Learning Goals
 - Pupil's Comments
 - Teacher's Comments
 - My Future Learning Goals



** The teacher should give pupils hardcopies of the cards*



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Assessment of learning (teachers and pupils)

In order for pupils to **support** this self-evaluation process, they should engage in reflection of their **achievements**, which involves asking:

- ▶ How do I **know** I have learned?
- ▶ Am I **flexible** in adapting and applying knowledge?
- ▶ Do I have **confidence** in explaining the material?
- ▶ When do I know I have learned **enough**?
- ▶ When is it **time** for **self-reflection** and when is it time for **consultation** with my teacher(s)?



Assessment of learning (teachers and pupils)

- ▶ The process of developing, monitoring and reporting on individual learning goals and processes also involves conversations about learning between the **pupil** and the **teacher**.
- ▶ Conversations should be carried out in a spirit of **openness** and **cooperation** and should allow for pupil diversity.
- ▶ Pupils should seek feedback from their teacher



Assessment of learning (teachers and pupils)

- ▶ **Storing, retrieving and editing individual learning goals and targets**
 - Pupils should be able to **record** their learning goals in various formats depending on what processes are practical at their school.
 - These processes should be **secure** and **ensure** the **privacy** of the pupil in communicating their individual learning goals and targets to the teacher/s.



Assessment of learning (teachers and pupils)

Some ways of supporting pupils to reflect and monitor their goals include:

- ▶ Pupils using portfolios, learning logs, learning journals and other simple devices to reflect on their recent work and how they have progressed towards achieving their personal learning goals.
- ▶ Pupils may reflect on their learning at either set times each week or at times suitable to them. There may be regular prompts to respond to, such as:
 - This week I have learned...
 - I am now able to do...
 - For next week I am focusing on...
 - I will know I am getting better when...



Assessment of learning (teachers and pupils) - “60-second Think”

Assessment by using a spontaneous “**60-second Think**” in the classroom at any time:

- ▶ Teachers just ask pupils to stop and have a ‘60-second Think’ about how their learning is going right now and how they are progressing towards achieving their personal learning goals.
- ▶ It is important that teachers time the 60 seconds to allow quiet thinking time.



- ▶ Reflection empowers pupils as learners and thinkers.
- ▶ Reflection strategies and thinking routines such as “I used to think but now I think”, “3-2-1 Bridge”, “2-sided notebooks”, “Self-check” are useful and powerful classroom tools.
- ▶ Teachers should be able to support pupils in identifying and seizing learning opportunities outside the classroom, since learning outside the classroom has great benefits for pupils.
- ▶ Teachers should encourage pupils’ reflection during all stages of learning.
- ▶ Evaluation is useful for pupils’ setting and adjusting their own learning goals and should be applied both by pupils and teachers.



Key Points

Suggestions for self-directed learning

- ▶ R. J. Sternberg and L. F. Zhang (Eds.), 2000. Perspectives on cognitive, learning, and thinking styles. NJ: Lawrence Erlbaum
- ▶ Kolb, D. A. (2014). Experiential learning: Experience as the source of learning and development. FT press.
- ▶ SMART Goal Setting Theory
<https://www.rhythmsystems.com/blog/smart-goal-setting-to-set-smarter-goals-start-with-why>
- ▶ Wertsch, J.V. (1985). Cultural, Communication, and Cognition: Vygotskian Perspectives. Cambridge University Press.
- ▶ Blaine, L. (2012). Smart Goals: How the Application of Smart Goals can Contribute to Achievement of Student Learning Outcomes. Developments in Business Simulation and Experiential Learning, p.267, v.39
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