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Experiential Learning in Formal School Education

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**learning
by doing**

Experiential Learning in Formal School Education

“Theoretical and Methodological Framework of Applying Experiential Learning in
Formal Education”

For contributions we want to thank

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FOREWORD

Experiential Training Centre Association (DeM) has been operating since its establishment in 2009 with an effort to disseminate non-formal education studies based on experiential learning and to develop the use of experiential learning on a local, national and international scale. It has developed projects and conducted R&D studies in the field of experiential learning; and involved in many national and international scaled training activities.

DeM has seen the impact of experiential learning in non-formal education level. It is an effective tool to involve participants in training, create behavioural change and make learning possible with fun. DeM believes this effect of experiential learning in non-formal education should not stay in non-formal areas. It should go beyond.

As Experiential Training Center Association (Turkey), VisMedNet Association (Malta), Europroodos (Greece), Colegio do Sardo (Portugal), Innovative Education Centre (Austria) and Fundacja Europejski Instytut Outsourcingu (Poland) we want to provide a conceptual framework to implement experiential learning to formal education with this project.

Several formal educators, non-formal educators, and experts have been working within the field of experiential learning during this project. With their contribution and hard work of the project team, this framework would give a great insight and provide an important base for implementing experiential learning to formal education.

We want to thank our partners and everyone who is involved in this project. Without their effort, this project would not have been possible.

**Learning by Doing: Experiential Learning in Formal School Education
Project Team**



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ABOUT THE PROJECT

Learning by Doing: Experiential Learning in Formal School Education is a Key Action 2: Cooperation Partnerships in School Education project financed by the Erasmus+ program of the European Union. The project consists of a partnership consortium of organisations' experts in non-formal education, experiential learning, and youth works. The project consortium is stated as:

- ~ **Portugal** Colegio do Sardo
- ~ **Malta** VisMedNet Association
- ~ **Austria** Innovative Education Center
- ~ **Poland** Fundacja Europejski Instytut Outsourcingu
- ~ **Turkey** Experiential Training Center Association (DeM)
- ~ **Greece** Europroodos Educational Group Single Member Private Company

PROJECT SUMMARY

European Union initiatives in the field of school education, including using non-formal learning in formal education, support teaching innovation by enhancing both the teachers' continuous professional development and students' key competencies development. At the same time, in today's rapidly changing world, there are some key competences that children need to thrive at school (critical thinking, learning to learn, etc.), but do not actually practice every day in their lives; so, most kids will never really hone those skills. Experiential learning is the best paradigm of educational innovation and transferring a non-formal learning method to formal education. More specifically, experiential learning is an educational philosophy that seeks to draw on students' experiences to learn. It's the opposite of textbook-based learning. By taking things out of the classroom and bringing them into a real-life context instead, kids can learn the information they're being taught in school in a more interesting way and involves hands-on learning. Through the project, the following needs have been planned to be answered:

For Teachers:

- Initiatives that will facilitate their job: Through the suggested experiential activities, the students will be more concentrated and focused on the classroom, and they will diffuse their energy in the experiential activities and thus, they won't be disruptive, facilitating the teachers' job.
- New didactic methods that will make their lessons more attractive to students: With the activities of project, the participating teachers will have the role of a "tutor" or "facilitator" instead of the "lecturer", whom many times lose his/her audience.
- Upskilling opportunities: The participating teachers will gain significant experience in experiential learning and will be able to learn new pedagogical approaches that will accompany them for the rest of their professional life. They will also receive a knowledge transfer from educators specialising in non-formal education.

For School Principals:

- New training approaches that will make the school more attractive not only to students and their parents but also to teachers that seek an innovative workplace: After the completion of the project, the participating schools will have the opportunity to install new innovative approaches, pedagogical methods, and training initiatives that will bring something fresh to the school environment, attracting more students, parents, and teachers than before.
- Innovations which allow them to be characterised as a “model school” or help them to later claim the title of “experimental school”: After the completion of the project, the management of the participating schools will have the appropriate tools to develop them further, to claim the title of “model” or “experimental” school For High-school students, aged from 15 up to 18, including students with learning disabilities:
- Motivation to take a more active part in the learning process: By taking things out of the classroom and bringing them into a real-life context instead, the participating students will learn in a more interesting way and involves hands-on learning. -Being activated and constantly learning new things: With the activities, the students will get out of their comfort zone and take part in innovative training through games
- Acquiring key competences: Our project will improve their key competences with particular emphasis on critical thinking, learning to learn, and civic competences through their participation in experiential learning activities. This will also help them develop the soft skills that will be necessary not only for their secondary studies but also for the long run.
- Feeling comfortable in the school environment: With the suggested experiential activities, students with learning difficulties will be more active in learning, reducing the chances of early school leaving.

The project aims to:

- Increase awareness of experiential learning as a non-formal educational practice,
- Test and implement experiential learning methods derived from non-formal education to formal school education,
- Improve students’ key competences with particular emphasis on critical thinking, learning to learn as well as civic competences through their participation in experiential learning activities,
- Improve teachers’ skills and enhance their practical experience through the usage of new pedagogy methods,
- Transfer knowledge among school teachers with formal educational backgrounds and educators specialising in non-formal education.

The project will produce three main results:

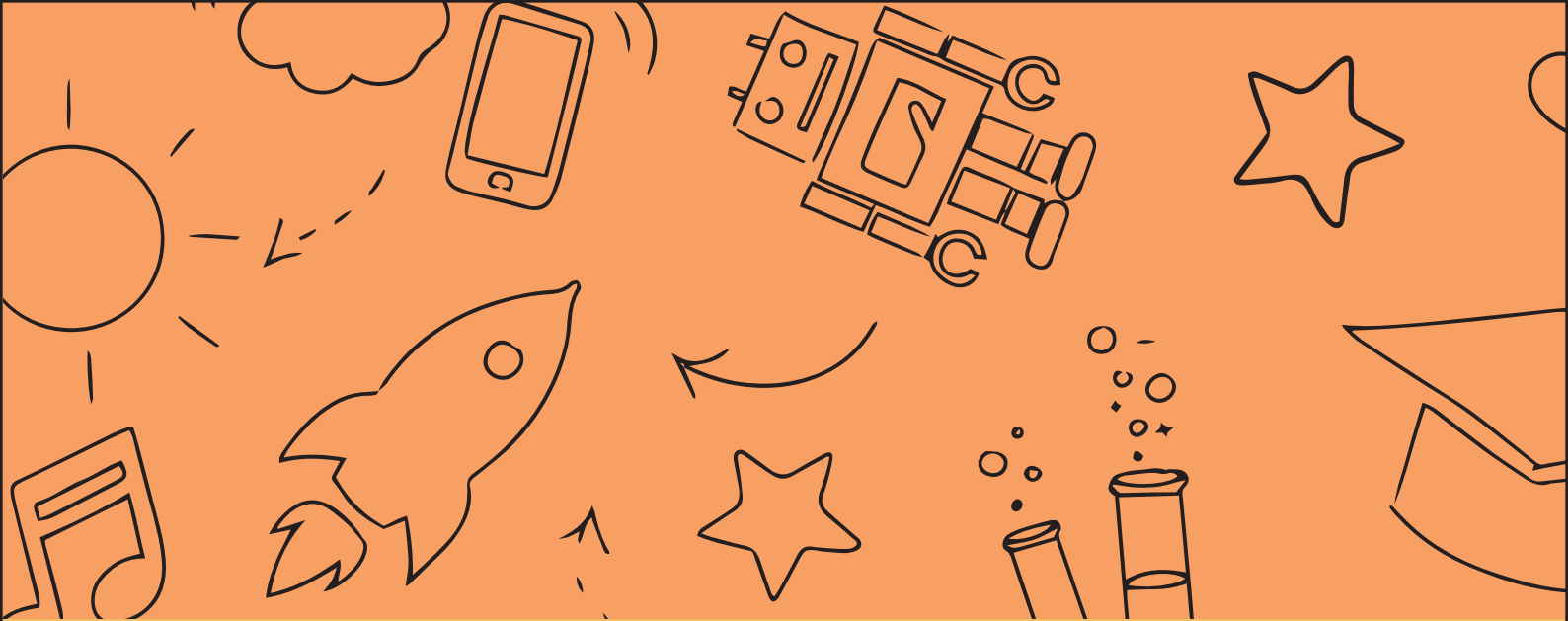
1. A theoretical and methodological framework for applying experiential learning in formal education that will provide teachers with new didactic methods that will make their lessons more attractive to students and upskilling opportunities since they will be able to learn new pedagogical approaches that will accompany them for the rest of their professional life. Also, schools will be equipped with new training approaches that

will make the school more attractive not only to students and their parents but also to teachers that seek an innovative workplace and innovations which will allow them to be characterised as a “model school” or help them to claim the title of “experimental school later”.

2. A repository with training material and activities of experiential learning which will empower the participating teachers to have the role of a “tutor” or “facilitator” instead of the “lecturer” that many times loses their audience and will gain a significant experience in experiential learning and will be able to learn new pedagogical approaches that will accompany them for the rest of their professional life.

3. Knowledge transfer on teachers and students that will motivate teachers and students to take a more active part in the learning process. By taking things out of the classroom and bringing them into a real-life context instead. Also, they will get out of their comfort zone and take part in innovative training through game. Also, students’ key competences will be improved and make them feel comfortable in the school environment: With the suggested experiential activities, students with learning difficulties will be more active in learning, reducing the chances of early school leaving. Also, the students will be more concentrated and focused on the classroom. They will diffuse their energy in the experiential activities, and thus, they won’t be disruptive, facilitating the teachers’ job. Finally, teachers will receive knowledge transferring from educators specialising in non-formal education.





CONCEPTUAL FRAMEWORK



CONCEPTUAL FRAMEWORK

Before going deeper into concrete lesson plans, a theoretical and methodological framework was developed concerning how experiential learning could be applied to formal school education.

Target group / the recipients of the framework are:

- School Teachers who lack new didactic methods and upskilling opportunities
- School principals who need new training approaches that will make the school more attractive and innovative
- Other stakeholders in formal education that are interested in non-formal learning practices Innovation.

This methodological framework includes the most recent updates on experiential learning theory (Experiential Learning Cycle) and provides all the latest trends in experiential learning concrete activities and techniques.

This framework works as a rubric that helps educational program/curricula designers to design formal education programs in line with experiential learning theory.

The way of thinking for this project finds its basis in the New Skills Agenda for Europe, adopted in 2016 by the European Commission.

Methodology for Developing The Framework:

- The first step was to conduct **desk research** on Experiential Learning as a learning process Focus will be given to: Experiential Learning Cycle as a concrete concept. Learning Styles in Experiential Learning · Educator's Role Profiles For example, it is included in the theoretical framework the Kolb's Inventory for Learning Styles that have been developed mainly for adult education, and Kolb's Educator Role Profiles that needed to be further adapted for school teachers.
- For the Methodology to be developed, each partner organized focus groups in their country, with representatives from both formal and non-formal education. In total 4 focus groups organized, and the reports fed into the Methodological Component.
- Gathering **feedback from external parties and finalisation of the framework.**
- As the last step for the Framework, the draft document was sent **to experts for review.** Experts made their comments on the feedbacks and adopted the rubric for formal education.

NEW SKILL AGENDA OF EUROPE ¹

In July 2020, the European Commission presented the New Skills Agenda for Europe which builds upon the Commission’s 2016 Skills Agenda. The Skills Agenda introduces a totally new momentum, focused on skilling for a job. It combines a European Pact for Skills which brings together all stakeholders with a heavily increased EU budget, as proposed by the Commission in May, and ambitious quantitative objectives by 2025.²

The European Skills Agenda is a five-year ambitious plan to help individuals and businesses develop more and better skills and to put them to use, by:

- Strengthening sustainable competitiveness, as set out in the [European Green Deal](#)
- Ensuring social fairness, putting into practice the first principle of the [European Pillar of Social Rights](#): access to education, training and lifelong learning for everybody, everywhere in the EU
- Building resilience to react to crises, based on the lessons learnt during the COVID-19 pandemic

The European Skills Agenda includes 12 actions organised around four building blocks³:

ACTION	INITIATIVE
A call to join forces in a collective action	<p>Action 1: A Pact for Skills</p> <p>Mobilising all partners for more and better opportunities for people to train, and to unlock public and private investments across industrial and skills ecosystems.</p>
Actions to ensure that people have the right skills for jobs	<p>Action 2: Strengthening skills intelligence</p> <p>To skill for a job, we need online ‘real-time’ information on skills demand, including at regional and sectoral level, using big data analysis of job vacancies, and making it widely available.</p>

1 <https://ec.europa.eu/social/main.jsp?catId=1223>

2 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

3 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

ACTION	INITIATIVE
<p>Actions to ensure that people have the right skills for jobs</p>	<p>Action 3: EU support for strategic national upskilling action</p> <p>Member States will work on modern and comprehensive national skills strategies and join forces with national public employment agencies to realise them. This can be coupled with a more strategic approach to legal migration, oriented towards better attracting and keeping talent.</p> <p>Action 4: Proposal for a Council Recommendation on vocational education and training (VET)</p> <p>Taking a fresh approach to make vocational education and training more modern, attractive for all learners, flexible and fit for the digital age and green transition.</p> <p>Action 5: Rolling out the European Universities Initiative and upskilling scientists</p> <p>Building long-term transnational alliances between higher education institutions throughout Europe and developing a core set of skills for researchers.</p> <p>Action 6: Skills to support the twin transitions</p> <p>Developing a set of core green skills, statistical monitoring of the greening of our workplaces, boosting digital skills through a Digital Education Action Plan and ICT jump-start training courses.</p>

ACTION	INITIATIVE
<p>Actions to ensure that people have the right skills for jobs</p>	<p>Action 7: Increasing STEM graduates and fostering entrepreneurial and transversal skills</p> <p>Encourage young people, especially women, into Science, Technology, Engineering and Maths. Goal is to strengthen support for entrepreneurs and the acquisition of transversal skills like cooperation and critical thinking.</p> <p>Action 8: Skills for life</p> <p>Beyond the labour market, the aim is to support adult learning for everyone — young people and adults — on issues such as media literacy, civic competences, and financial, environmental and health literacy.</p>
<p>Tools and initiatives to support people in their lifelong learning pathways</p>	<p>Action 9: Initiative on individual learning accounts</p> <p>Explore if and how portable and quality-checked training entitlements could help stimulate lifelong learning for all.</p> <p>Action 10: A European approach to micro-credentials</p> <p>Training courses are becoming shorter and more targeted and are often online. Aim is to create European standards that should help recognise the results of such training.</p> <p>Action 11: New Europass platform</p> <p>Europass platform offers online tools and guidance on CV-writing, suggests tailored jobs and learning opportunities, provides information for job seekers, and is available in 29 languages. www.europa.eu/europass.</p>

ACTION	INITIATIVE
A framework to unlock investments in skills	<p>Action 12: Improving the enabling framework to unlock Member States' and private investments in skills</p> <p>A key element of the Skills Agenda is the much-boosted EU budget to catalyse Member States and private actors to invest in skills. Aim is to work on improving transparency around skills investment and explore novel financing mechanisms such as social impact bonds to incentivise investment.</p>

The plan is to partner with all member States and realise the right to training and lifelong learning, enshrined in its [European Pillar of Social Rights](#). The Commission initiates all Europeans living in cities or remote rural areas to benefit.

SKILLS

Skills are key for sustainable competitiveness, resilience and ensuring social fairness for all. Businesses need workers with the skills required to master the green and digital transitions, and people need to be able to get the right education and training to thrive in life. Skills are an answer to the need for companies to remain competitive while ensuring social fairness for all.⁴

Having the right skills means being able to stay employed and master job transitions more easily. This requires providing equal access to additional up-skilling opportunities for people across the EU, regardless of gender, racial or ethnic origin, religion or belief, disability, age, or sexual orientation, and including low-qualified/skilled adults and people with a migrant background. Similarly, all territories should be covered, from big cities to rural, coastal, or remote areas across the whole EU.⁵

PACT FOR SKILLS

[The Pact for Skills](#) is the first and latest development in the new Skills Agenda for Europe initiative. It was launched on 10 November 2020 and is an invitation to join forces for upskilling and reskilling the Europeans.

The Pact for Skills is a new engagement and governance model for skills. Industry, public and private employers, social partners, chambers of commerce, education and training providers and employment agencies will be invited to work together and to create a shared vision and action. In particular, it will set up large-scale partnerships, including at regional level, in strategic industrial ecosystems and priority areas identified in the European Green Deal to achieve ambitious commitments.⁶

Specifically, it invites public and private organisations and anyone who can play a key role in this workforce transformation. The Pact aims to:

4 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

5 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

6 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

- To promote a culture of lifelong learning for all
- To build strong skills partnerships
- To monitor skills needs and demands
- To work against discrimination, gender equality, and equal opportunities
- To mobilise resources and incentivise all relevant stakeholders to take real action to upskill and reskill the workforce

Furthermore, to support all these different participating organisations' collaboration, the Pact for Skills will offer some dedicated services. It will particularly act as a networking hub, a knowledge hub, and a guidance and resources hub. To clarify, these three hubs will offer support in finding partners, webinars, and seminars for information and guidance to identify opportunities.⁷ Under the Pact, the Commission will offer a single-entry point at EU level where everyone can access the information on EU funding and programmes for skills development of working-age people. Building upon the Cedefop pilot of big data analysis, a permanent online tool will be created where 'real-time' information will be published so that it can be used by all interested stakeholders. The Commission will also explore partnerships to use data from private job portals and national skills intelligence.⁸

Skills Guarantee

The Commission also welcomes the initiative of Skills Guarantee. In particular the "Skills Guarantee" is a step in the right direction for adult learning and for low-skilled people. As the Communication rightly says, "most members of Europe's workforce in the next two decades are already adults today", which is why a focus on adult education to reskill and upskill people is very much needed.⁹

As part of the Skills Agenda, the Commission will develop European standards for the quality and transparency of micro-credentials, so that they can be trusted, recognised, and used throughout the European labour market and the European Education Area. This way, they can be coupled with national qualifications frameworks and the European qualifications framework. As a way of giving a trusted and understood value to short training, they have great potential to help people improve or gain new skills throughout their careers and with the flexibility they need. They are also useful for regular students and graduates, in particular to develop transferable skills that students from all disciplines need for their future careers.¹⁰

7 <https://ied.eu/blog/new-skills-agenda-for-europe-2020/>

8 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

9 https://eaea.org/wp-content/uploads/2018/01/EAEA_statement_skills-guarantee.pdf

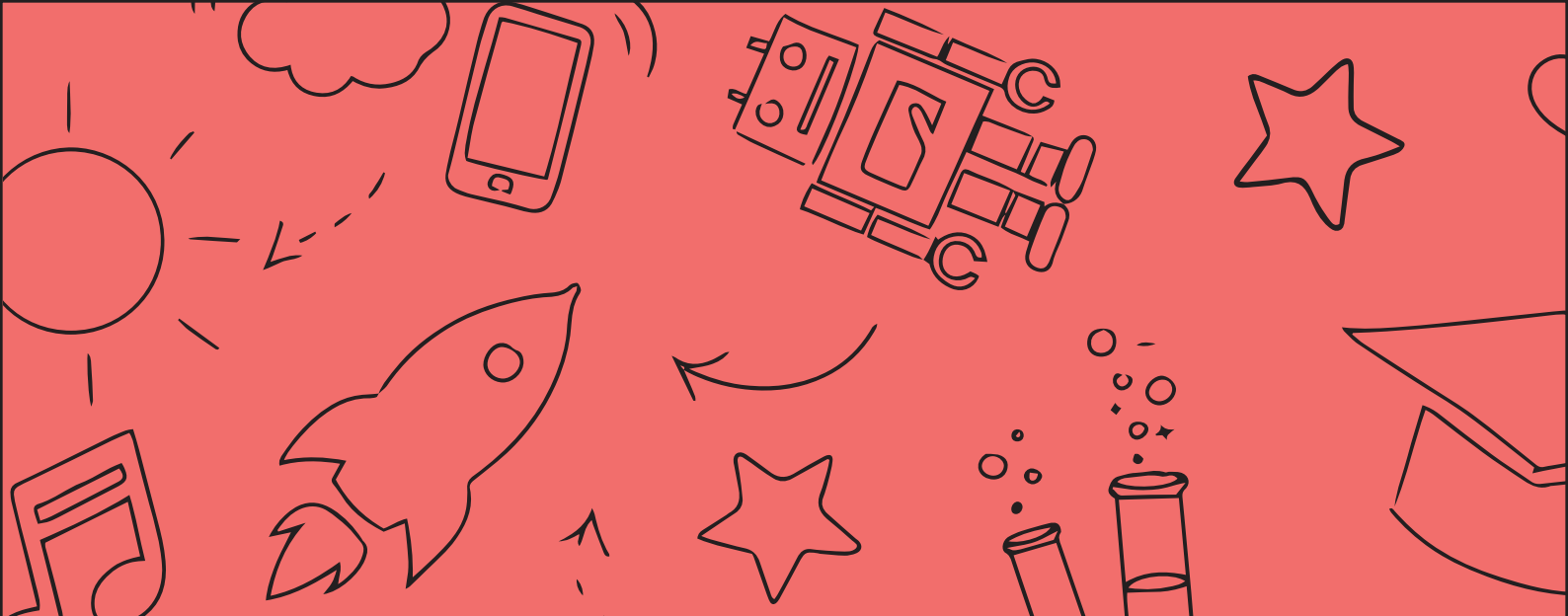
10 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197

New Europass

Europass is the EU tool for workers, jobseekers, learners, and volunteers to plan their career and get access to tools and information on working and learning in Europe.

The new Europass platform offers a new, multilingual online e-Portfolio tool for people to record information on their skills, qualifications, and experiences, receive tailored suggestions of jobs (via EURES) and training and prepare and track job applications. Available in 29 languages the new platform also includes updated tools for designing CVs, cover letters and a personal library so that individuals can store all their information in a secure, online tool.¹¹

11 https://ec.europa.eu/commission/presscorner/detail/it/qanda_20_1197



FORMAL EDUCATION AND SKILLS AGENDA



FORMAL EDUCATION AND SKILLS AGENDA

Everyone has the right to quality and inclusive education, training and lifelong learning that develops key competences and basic skills. Key competences and basic skills are needed by all for personal fulfilment and development, employability, social inclusion, and active citizenship.¹² Below are some examples of the initiatives of the EU.

Teachers, Trainers, and School Leaders – Initiatives¹³

The European Union is working to revalorise the teaching professions and to provide all teachers, trainers and school leaders with high-quality initial education and professional development opportunities. Teachers, trainers, and school leaders play a central role in the provision of high-quality, inclusive education for all learners. During the COVID-19 pandemic, they rapidly adapted to school closures and switched to remote and blended forms of teaching to ensure that effective learning could continue.

Without involving and committing these professionals, no educational reform will succeed. They play a central role in fostering and implementing innovative curricula and teaching practices that provide learners with the key competences they need to flourish in Europe's sustainable digital economy of the future.¹⁴

Digital Education: Free Self-Reflection Tools

The European Union is promoting the development of a high-performing European digital education ecosystem and is seeking to enhance citizens' competences and skills for the digital transition.

The self-reflection tools on digital competences in Education SELFIE (including WBL module) and SELFIE for TEACHERS are run by the European commission and available for free in all EU official languages.¹⁵

COMPETENCES

What Does Competence Mean?

The word “competence” means a mix of knowledge, abilities, and responsibilities: you are “competent” if you are able to act well in a certain situation. To be competent does not mean solely to know something or to have some notions about some topics, but also to put into practice the knowledge in a given context and situation.

Competence is defined as a combination of knowledge, skills, and responsibilities useful in a certain context. Key Competences are those which contribute to one's personal fulfilment and development, active citizenship, social inclusion, and employment.

¹² <https://education.ec.europa.eu/education-levels/school-education/school-education-initiatives/key-competences-and-basic-skills>

¹³ https://innovative-teaching-award.ec.europa.eu/index_en

¹⁴ <https://education.ec.europa.eu/focus-topics/teachers-trainers-and-school-leaders/about-teachers-trainers-and-school-leaders>

¹⁵ <https://education.ec.europa.eu/focus-topics/digital-education/about/self-reflection-tools>

Introduction to the 8 Key Competences

In December 2006 the European Parliament and the Council adopted the recommendation of Key Competences for Lifelong Learning.¹⁶ The idea behind this political initiative was to create educational strategies to build and to care for a competitive, knowledge-based economy and for much more social cohesion in Europe. Key Competences are defined as basic skills, knowledge and attitudes which should be acquired and developed by each European citizen during his or her lifetime. (EU Parliament, 2006).

The Key Competences are all considered equally important because each of them can contribute to a successful life in a knowledge-based society. They have the capacity to show development in a standardised structure which can be recognized and validated by the outside world.

8 Key – Competences Matrix of Skills Setting

In order to fully understand the concept of Key Competences set by EC and the necessary set of skills to perform them, you can check the following Matrix table:

Competence	Action Performance	Skills Set
Communication in the mother tongue	<ol style="list-style-type: none"> 1. Articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts. 2. Listen effectively to decode meanings (knowledge, values, attitudes, intentions). 3. Use communication for multiple purposes (to inform, instruct, motivate, and persuade) and in diverse environments. 	<ol style="list-style-type: none"> S1. Ability to understand and interpret concepts, feelings, facts, or opinions in oral form. S2. Ability to understand and interpret concepts, feelings, facts, or opinions in written form. S3. Ability to express concepts, feelings, facts, or opinion in oral form. S4. Ability to express concepts, feelings, facts, or opinion in written form. S5. Ability to interpret the world and relate to others. S6. Ability to interact in an appropriate and creative way in any situation.

16 <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:en:PDF>

Competence	Action Performance	Skills Set
Communication in foreign languages	<ol style="list-style-type: none"> 1. Articulate thoughts and ideas effectively in a foreign language, in a variety of forms and contexts. 2. Listen effectively to decode meanings. 3. Use communication for multiple purposes and in foreign environments. 	<p>S1. Ability to understand and interpret concepts, feelings, facts, or opinions in oral form.</p> <p>S2. Ability to understand and interpret concepts, feelings, facts, or opinions in written form.</p> <p>S3. Ability to express concepts, feelings, facts, or opinion in oral form.</p> <p>S4. Ability to express concepts, feelings, facts, or opinion in written form.</p>
Communication in foreign languages	<ol style="list-style-type: none"> 1. Articulate thoughts and ideas effectively in a foreign language, in a variety of forms and contexts. 2. Listen effectively to decode meanings. 3. Use communication for multiple purposes and in foreign environments. 	<p>S5. Ability to interpret the world and relate to others.</p> <p>S6. Ability to interact in an appropriate and creative way in any situation.</p> <p>S7. Knowledge of vocabulary, grammar, and language.</p> <p>S8. Appreciation of cultural diversity.</p> <p>S9. Ability to use technical language according to the field of work.</p>
Mathematical competence and basic competences in science and technology	<ol style="list-style-type: none"> 1. Demonstrate ability to reason with numbers and other mathematical concepts. 2. Demonstrate the ability to evaluate scientific and numerical information on the basis of its sources and the methods used to generate it. 3. Demonstrate the capacity to evaluate scientific arguments based on evidence and to apply conclusions from such arguments in an appropriate manner. 	<p>S1. Ability to use constructed thinking in order to solve a problem in every situation.</p> <p>S2. Understanding of mathematical terms and concepts and knowing how to apply it.</p> <p>S3. Knowledge of basic principles of the natural world, scientific concepts, methods, and technological processes</p> <p>S4. Numeracy (ability to perform basic calculations)</p>

Competence	Action Performance	Skills Set
Digital competence	<ol style="list-style-type: none"> 1. Apply Technology Effectively: technology as a tool to research, organise, evaluate, and communicate information. 2. Use digital technologies, communication/networking tools, and social media appropriately to access, manage, integrate, evaluate, and create information to function successfully in a given environment. 3. Fundamental understanding of the ethical and legal issues surrounding the access and use of information technologies. 	<ol style="list-style-type: none"> S1. Critical use of information technology for work S2. Basic skills in ICT S3. Understanding the role, opportunity and risks related to ICT in everyday life. S4. Ability to use and handle technological tools and machines.
Learning to learn	<ol style="list-style-type: none"> 1. Demonstrate commitment to learning as a lifelong process. 2. Be a self-directed learner: go beyond basic mastery of skills to explore and expand your own learning and opportunities to gain expertise. 3. Demonstrate initiative to advance skill levels towards a professional level. 4. Reflect critically on past experiences in order to inform future progress. 	<ol style="list-style-type: none"> S1. Ability to pursue and persist in different kinds of learning. S2. Identifying available opportunities. S3. Ability to gain process and assimilate new knowledge, skills and qualification required for career goals.

Competence	Action Performance	Skills Set
Social and civic competences	<p>1. Interact effectively with others: know when it is appropriate to listen and when to speak, conduct oneself in a respectable, professional manner.</p> <p>2. Flexibility and adaptability: adapt to change (to varied societal roles, job responsibilities, schedules, and contexts, work effectively in a climate of changing priorities) and be flexible (react to feedback effectively, be stress-resistant, deal positively with drawbacks and criticism, understand, negotiate, and balance diverse views and beliefs to reach solutions, particularly in multicultural environments).</p> <p>3. Collaborate with other people: be able to work effectively and respectfully with diverse teams, be flexible and willing to be helpful in making necessary compromises to accomplish a common goal.</p> <p>4. Opt for shared responsibility in collaborative work, and value the individual contributions made by each team member.</p>	<p>S1. Ability to effective interaction with other people</p> <p>S2. Ability to adapt to the changing situation, being flexible and work under pressure</p> <p>S3. Ability to work effectively and collaborate with other team members</p>

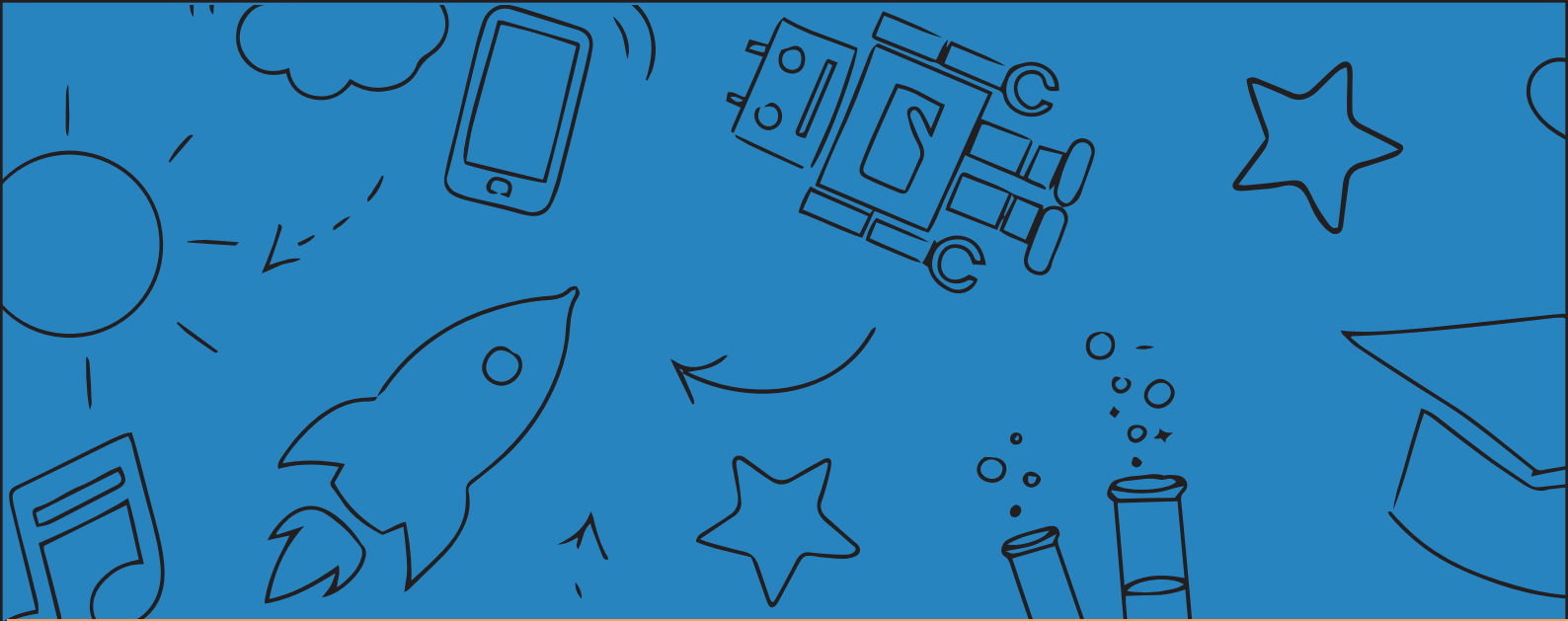
Competence	Action Performance	Skills Set
Cultural awareness and expression	<ol style="list-style-type: none"> 1. Work effectively in a multinational team. 2. Respect and be aware of cultural differences and work effectively with people from a range of social and cultural backgrounds. 3. Be tolerant and respond open-mindedly to different ideas and values. 4. Make use of social and cultural differences to create new ideas and increase both innovation and quality of work. 	<p>S1. Awareness of local, national, European culture heritage and their place in the world</p> <p>S2. Basic knowledge of contemporary culture</p> <p>S3. Understanding of cultural diversity</p>
Sense of initiative and entrepreneurship	<ol style="list-style-type: none"> 1. Work effectively in a multinational team. 2. Respect and be aware of cultural differences and work effectively with people from a range of social and cultural backgrounds. 3. Be tolerant and respond open-mindedly to different ideas and values. 4. Make use of social and cultural differences to create new ideas and increase both innovation and quality of work. 	<p>S1. Ability to turn idea into action</p> <p>S2. Creativity/innovation</p> <p>S3. Ability to plan and manage tasks</p> <p>S4. Independence</p> <p>S5. Motivation</p> <p>S6. Determination</p>

In 2017 the European Commission launched a consultation to revise the old Key Competences. The Education Committee discussed the proposed recommendations during the Bulgarian presidency and the Education Council made the final decision on the 22nd of May 2018. (EU parliament, 2008, 2009, 2018).

You can see the adaptations modifications in-between these years in the following table:

NO	KEY COMPETENCES 2006	KEY COMPETENCES 2018 Council Recommendations¹⁷
1	Communication in the mother tongue	Literacy competence
2	Communication in foreign languages	Multilingual competence
3	Mathematical competence and basic competences in science and technology	Mathematical competence and competence in science, technology, and engineering
4	Digital competence	Digital competence
5	Learning to learn	Personal, social, and learning to learn competence
6	Social and civic competences	Citizenship competence
7	Sense of initiative and entrepreneurship	Entrepreneurship competence
8	Cultural awareness and expression	Cultural awareness and expression competence

¹⁷ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01)&from=EN)



EXPERIENTIAL LEARNING



EXPERIENTIAL LEARNING THEORY

FOUNDATIONAL SCHOLARS OF EXPERIENTIAL LEARNING

David Kolb and Alice Kolb built the experiential learning theory on the valuable work of the following scientists:

- William James
- Kurt Lewin
- Carl Rogers
- Carl Jung
- John Dewey
- Jean Piaget
- Lev Vygotsky
- Paulo Freire
- Mary Parker Follett

Alice Y. KOLB

Alice Kolb is the President of Experience-Based Learning Systems (EBLS) a research and development organisation devoted to research and application of experiential learning in organisations worldwide. EBLS has developed many experiential exercises and self-assessment instruments including the latest Kolb Learning Style Inventory 4.0. The EBLS program of research on Experiential Learning Theory continues in collaboration with an international network of researchers, practitioners and learning partners.

As President of EBLS, she facilitates research and practice initiatives of the international network. She was a co-developer of the Kolb Learning Style Inventory 4.0 and was the leader of the team that developed the Kolb Educator Role Profile, an inventory designed to help educators apply experiential learning principles in their work.

She was born and raised in Brazil and went to Japan where she received her BA in Japanese Studies from Tokyo University of Foreign Studies, and MA and Doctorate in Human Resources Management from Hitotsubashi University. She received an MS in Human Resource Management from Cleveland State University and her PhD from Case Western Reserve University in Organisational Behaviour where she was an Adjunct Professor in the Weatherhead School of Management. She is fluent in Portuguese, Spanish, Japanese and English.

Her research focus on creating learning spaces conducive to deep learning led to her paper “Learning styles and learning spaces: Enhancing experiential learning in higher education” published in the Academy of Management Learning and Education and “Learning to play, playing to learn: A case study of a ludic learning space,” published in the Journal of Organisational Change Management. She recently published a book titled Becoming an Experiential Educator: Principles and Practices of Experiential Learning with David Kolb. She and David received the 2008 “Educational Pioneers of the Year Award” from the National Society for Experiential Education.

David A. KOLB

David A. Kolb is the Chairman of Experience Based Learning Systems (EBLS), an organisation that he founded in 1981 to advance research and practice on experiential learning. EBLS has developed many experiential exercises and self-assessment instruments including the latest Kolb Learning Style Inventory 4.0 and the Kolb Educator Role Profile, an inventory designed to help educators apply experiential learning principles in their work. The EBLS program of research on Experiential Learning Theory continues with an international network of researchers, practitioners and learning partners.

He received his BA in psychology, philosophy and religion at Knox College and his Ph.D. in Social Psychology from Harvard University. He was a professor of organisational behaviour and management at the MIT Sloan School of Management and at the Weatherhead School of Management, Case Western Reserve University where he is currently an Emeritus Professor of Organisational Behaviour.

He is best known for his research on experiential learning and learning styles described in the new Second Edition of *Experiential Learning: Experience as the Source of Learning and Development*. Other books include—*The Experiential Educator: Principles and Practices of Experiential Learning*, *How You Learn Is How You Live: Using Nine Ways of Learning to Transform Your Life*, *Conversational Learning: An Experiential Approach to Knowledge Creation*, *Innovation in Professional Education: Steps on a Journey from Teaching to Learning*, and *Organisational Behaviour: An Experiential Approach*. In addition, he has authored many journal articles and book chapters on experiential learning available at www.learningfromexperience.com David have received several research awards and four honorary degrees recognizing his contributions to experiential learning in higher education.

Kolb based his theory on six basic propositions:

- 1.** Learning is best conceived as a process, not in terms of outcomes. Although punctuated by knowledge milestones, learning does not end at an outcome, nor is it always evidenced in performance. Rather, learning occurs through the course of connected experiences in which knowledge is modified and re-formed. To improve learning in higher education, the primary focus should be on engaging students in a process that best enhances their learning – a process that includes feedback on the effectiveness of their learning efforts. “...education must be conceived as a continuing reconstruction of experience: ... the process and goal of education are one and the same thing.”
- 2.** All learning is relearning. Learning is best facilitated by a process that draws out the students’ beliefs and ideas about a topic so that they can be examined, tested, and integrated with new, more refined ideas. Piaget called this proposition constructivism—individuals construct their knowledge of the world based on their experience and learn from experiences that lead them to realise how new information conflicts with their prior experience and belief.
- 3.** Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world. Conflict, differences, and disagreement are what drive the learning process. These tensions are resolved in iterations of movement back and

forth between opposing modes of reflection and action and feeling and thinking.

4. Learning is a holistic process of adaptation to the world. Learning is not just the result of cognition but involves the integrated functioning of the total person—thinking, feeling, perceiving, and behaving. It encompasses other specialised models of adaptation from the scientific method to problem-solving, decision making and creativity.

5. Learning results from synergetic transactions between the person and the environment. In Piaget's terms, learning occurs through equilibration of the dialectic processes of assimilating new experiences into existing concepts and accommodating existing concepts to new experience. Following Lewin's famous formula that behaviour is a function of the person and the environment, ELT holds that learning is influenced by the characteristics of the learner and the learning space.

6. Learning is the process of creating knowledge. In ELT, knowledge is viewed as the transaction between two forms of knowledge: social knowledge, which is co-constructed in a socio-historical context, and personal knowledge, the subjective experience of the learner. This conceptualization of knowledge stands in contrast to that of the "transmission" model of education in which pre-existing, fixed ideas are transmitted to the learner.

THEORY

Experiential learning theory is based on the works of the predominant scientists of the 20th century, such as Dewey who uses experience as a base of learning, Lewin who emphasises the importance of individual effectiveness in the learning process, and Piaget who does not see intelligence only as an innate trait but qualifies it as a result of the interaction between people and the environment.

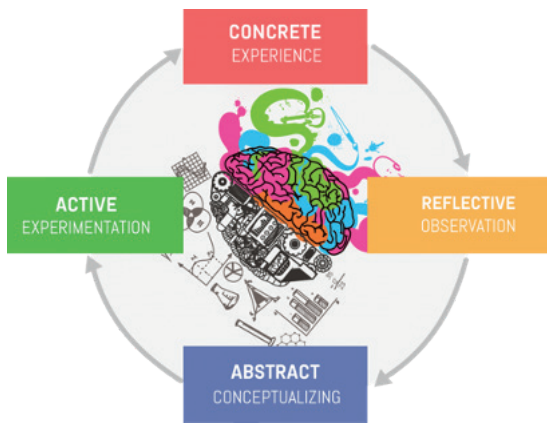
Experiential Learning is a holistic approach which covers all four (feeling, reflecting, thinking, acting) dimensions of learning.

David A. Kolb, the founder of experiential learning theory, defines learning as a process in which "experience is transformed into knowledge".

From Experience to Knowledge

We all learn from our experiences. This learning process, which started in infancy and then in childhood, actually continues in our youth and adulthood. We try to push our boundaries, get new skills, and overcome our challenges. Every experience gives us an experience. We reflect on this experience, analyse it, and observe our own experience and the experiences of others. These analyses and observations give us new insights and ideas. This implements new ideas, and we naturally get a new experience from this application. This cycle, which is the natural learning process of man, is integrated into the educational processes by the leading scientists of the 20th century.

EXPERIENTIAL LEARNING CYCLE



Experiential Learning Theory is a dynamic view of learning based on a learning cycle driven by the resolution of the dual dialectics of action/reflection and experience/abstraction. Learning is defined as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience”. Grasping experience refers to the process of taking in information, and transforming experience is how individuals interpret and act on that information.

The Experiential Learning Theory Model portrays two dialectically related modes of grasping experience:

Concrete Experience and Abstract Conceptualization

Two dialectically related modes of transforming experience:

Reflective Observation and Active Experimentation

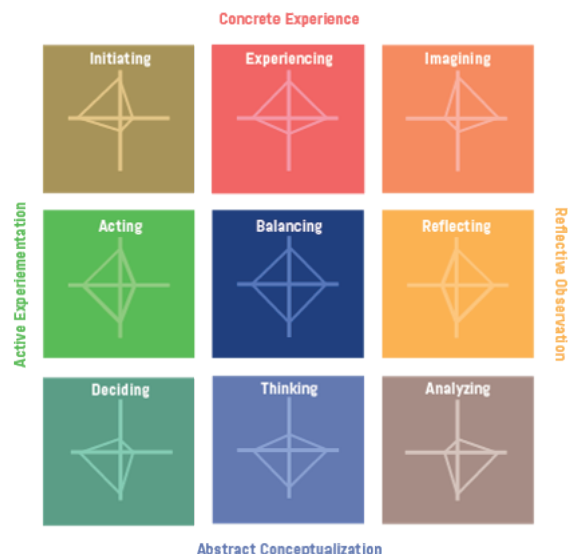
Learning arises from the resolution of creative tension among these four learning modes. This process is portrayed as an idealised learning cycle where the learner “touches all the bases”— experiencing, reflecting, thinking, and acting — in a recursive process that is sensitive to the learning situation and what is being learned. Immediate or concrete experiences are the basis for observations and reflections. These reflections are assimilated and distilled into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences.

KOLB LEARNING STYLES

Learning style describes the unique ways individuals spiral through the learning cycle based on their preference for the four different learning modes. Because of one’s genetic makeup, particular life experiences, and the demands of the present environment, a preferred way of choosing among these four learning modes is developed.

New 9 Learning Styles

Data from empirical and clinical studies over the years have shown that the original four learning style types—Accommodating,



Assimilating, Converging, and Diverging— can be refined further into a nine-style typology that better defines the unique patterns of individual learning styles and reduces the confusions introduced by borderline cases in the old four style typology.

With feedback from users, Kolb first began noticing a fifth “balancing” style describing users who scored at the centre of the Learning Style grid.

The new KLSI (Kolb Learning Style Inventory) 4.0 introduces these nine style types by moving from a 4 pixel to 9-pixel resolution of learning style types. The learning style types can be systematically arranged on a two-dimensional learning space defined by Abstract Conceptualization-Concrete Experience and Active Experimentation-Reflective Observation.

This space, including a description of the distinctive kite shape of each style, is depicted in the figure below:



The Initiating style is characterised by the ability to initiate action to deal with experiences and situations. It involves active experimentation and concrete experience.

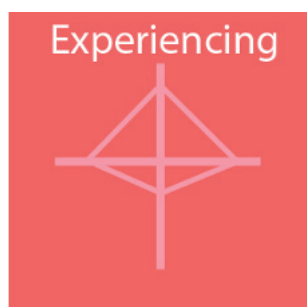
The Initiating style people: They thrive in dynamic learning spaces where they can work with others to get assignments done, set goals, and try different approaches to completing a project. They prefer teachers who take the role of coach or mentor in helping them learn from their life experiences.

Learning Strengths:

- Committing yourself to objectives
- Seeking new opportunities
- Influencing and leading others

Learning Challenges:

- Controlling the impulse to act
- Listening to others’ views
- Impatience



The Experiencing style is characterised by the ability to find meaning from deep involvement in the experience. It draws on concrete experience while balancing active experimentation and reflective observation.

The Experiencing style people: They prefer learning spaces rich in interactions and ongoing communications with their friends and co-workers. While they may enjoy working in groups, they also need time to work alone to get things done. It is essential that they receive constructive feedback on their progress at work and personal life. It is essential for them to have a personal relationship with their teacher.

Learning Strengths:

- Building deep personal relationships
- Strong intuition focused on reflection and action
- Open to new experiences

Learning Challenges:

- Understanding theory
- Systematic planning
- Evaluation



The Imagining style is characterised by the ability to imagine possibilities by observing and reflecting on experiences. It combines the learning steps of concrete experience and reflective observation.

The Imagining style people: They like working in groups where there is an open and free-flowing conversation where they can gather information, listen with an open mind, and receive personalised feedback. They may enjoy situations that call for generating a wide range of ideas, such as brainstorming sessions. They like teachers who take a facilitating role and are sensitive and creative.

Learning Strengths:

- Awareness of people's feelings and values
- Listening with an open mind
- Imagining the implications of ambiguous situations

Learning Challenges:

- Decision making
- Taking leadership
- Timely action



The Reflecting style is characterised by the ability to connect experience and ideas through sustained reflection. It draws on reflective observation while balancing concrete experience and abstract conceptualization.

The Reflecting style people: They thrive in learning spaces rich in dialogue and discussions, but they are also comfortable learning from lectures, independent projects, and from readings. Because of their preference for deep reflection, they may also need time to reflect and make sense of their experience on their own. They value teachers who provide opportunities for individual and group reflection and who are open to exploring ideas.

Learning Strengths:

- Understanding others' point of view
- Seeing "What's going on" in situation
- Converting intuitions into explicit explanations
- Gathering information

Learning Challenges:

- Initiating action
- Rumination
- Speaking up in groups



The Analysing style is characterised by the ability to integrate and systematise ideas through reflection. It combines reflective observation and abstract conceptualization.

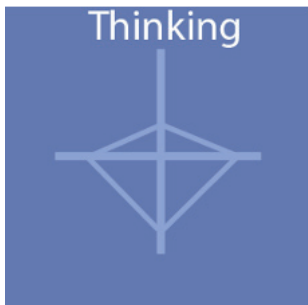
The Analysing style people: They thrive in learning spaces where they can use and develop their analytical and conceptual skills. They may prefer lectures, readings, exploring analytical models, and having time to think things through. They would rather work alone than in groups. They prefer teachers who model their thinking and analysis process in their lectures and interactions with them.

Learning Strengths:

- Organising information
- Being logical and rational
- Building conceptual models

Learning Challenges:

- Risk-taking
- Socialising with others
- Dealing with lack of structure



The Thinking style is characterised by the capacity for disciplined involvement in abstract and logical reasoning. It draws on abstract conceptualisation while balancing active experimentation and reflective observation.

The Thinking style people: They may learn best in well-structured learning spaces with clear directions and learning agendas. They also thrive in environments where they can design or conduct experiments or manipulate data. They may prefer to work alone and need time to think things through. A teacher's expertise in their field is of primary importance to them.

Learning Strengths:

- Logical analysis
- Rational decision making
- Analysing quantitative data

Learning Challenges:

- Working with people
- Keeping an open mind about your ideas
- "Lost in thought"



The Deciding style is characterised by the ability to use theories and models to decide on problem solutions and courses of action. It combines abstract conceptualisation and active experimentation.

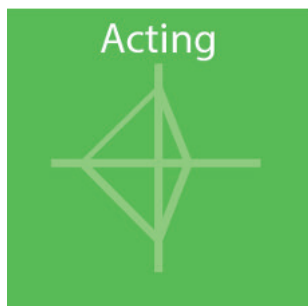
The Deciding style people: They may learn best in learning spaces where they can experiment with new ideas, simulations, laboratory assignments, and practical applications. They prefer teachers who set clear standards and goals and evaluate problems and questions that have right or wrong answers.

Learning Strengths:

- Problem-solving
- Evaluating ideas and solutions
- Setting goals
- Making decisions

Learning Challenges:

- Thinking "out of the box"
- Sensitivity to people's feelings
- Dealing with ambiguity



The Acting style is characterised by a strong motivation for goal-directed action that integrates people and tasks. It draws on active experimentation while balancing concrete experience and abstract conceptualisation.

The Acting style people: They learn best by on the job learning through discussions with colleagues and working in teams. They prefer teachers with practical, real-world experience that they can emulate.

Learning Strengths:

- Combining technical knowledge and personal relationships
- Focused on getting things done
- Leading work teams

Learning Challenges:

- Taking time to reflect
- Solving the right problem
- Gathering and analysing information



The Balancing style is characterised by the ability to adapt, weighing the pros and cons of acting versus reflecting and experiencing versus thinking. It balances concrete experience, abstract conceptualisation, active experimentation, and reflective observation.

The Balancing style people: They tend to be more satisfied in learning environments where they can use all four learning modes: learning from lectures, discussion groups, brainstorming sessions, labs, and on-the-job learning. Because they are able to adapt to the different learning environments, they can learn from teachers with different teaching approaches.

Learning Strengths:

- Flexibility in moving around the learning cycle
- Ability to work with diverse groups of people
- Creative insights

Learning Challenges:

- Indecisiveness
- “Jack of all trades, master of none.”
- Sustained commitment

KOLB EDUCATOR ROLE PROFILES



Being an educator is the most rewarding and compelling thing for a human being. Encouraging a person’s learning and development is a complex task that requires attention to a number of complex challenges (the learner’s needs and interests, knowledge of the subject, the deeper meaning and impact of knowledge, and the practical application of difficulties in student life). As teachers, trainers, coaches, leaders, and parents, we often find ourselves facing these educational challenges.

The Kolb Educator Role Profile (KERP) provides a framework for assessing our preferred approach to educating others and maximising our effectiveness in helping

others learn and develop. It is based on a holistic typology of educator roles derived from Experiential Learning Theory.

Teaching around the learning cycle and different learning styles brings with it the need to rearrange the role that the person holds against students. Educational Role Profile was created to help trainers understand the preferred teaching role and plan how they can adapt to teaching around the learning cycle. Educational Role Profiles emerge as a combination of teaching role preferences, beliefs about teaching and learning, goals of the educational process, preferred teaching style and educational practices. Their educational role is not limited to individuals involved in formal classroom teaching. This framework can be used for all individuals who have a teaching role at every stage of life, such as leaders, coaches, parents, and friends.

The teaching role is a set of planned behaviours in response to the learning environment, including students and learning demands. Each teaching role encourages students to learn in an unparalleled way using an experience and a way of changing the experience. In the role of facilitator, Trainers use concrete experience and reflective observation to help students get in touch and reflect on their own experiences. Subject experts use reflective observation and abstract conceptualisation methods to help students connect the reflection and link it to the knowledge base. Students can provide models or theories to be used in later analysis. The standard determinant and evaluator role uses abstract conceptualisation and active practice to help students apply knowledge to performance goals. In this role, trainers provide regular feedback by closely monitoring student performance according to the standards they set. Finally, the trainers, who adopt the coaching role, use concrete experience and active practice to mobilise students individually towards meaningful goals. These roles can be expressed in the face of the student in the form of knowledge centres across the application.

Educational Role Profile (ERP); Four roles are defined as facilitator, expert, assessor, and coach. Trainers adopt these roles to help students maximise their learning capacity by passing through four stages of experiential learning.

Facilitator: In the role of facilitator, trainers help students connect and reflect on their personal experiences. Students adopt an intimate and positive style to reveal their interests, intrinsic motivation, and knowledge about themselves. They often do this by encouraging small groups of dialogues. They establish personal relationships with students.

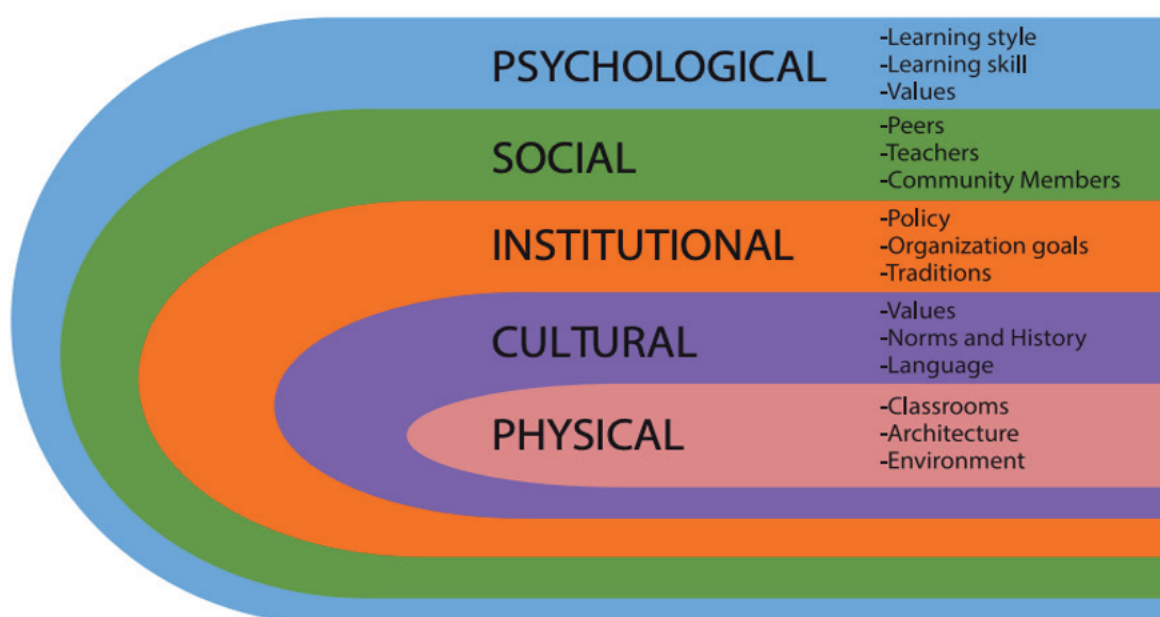
Subject Expert: In the role of subject matter expert, the trainers help students connect the reflections of a subject to students in the knowledge base. They adopt an authoritarian and reflective style. While systematically organising and analysing information on the subject, they often teach by examples, modelling and encouraging critical thinking. This information is often transmitted through lectures and written texts.

Standard Setter & Evaluator: As a standard determinant and evaluator, trainers help students master the knowledge and skills to meet their performance requirements. They adopt a result-oriented and objective style that determines the information requirements required for qualified performance. Students create performance exercises to evaluate their own learning processes.

Coach: Teachers who adopt the coaching role teach students to use knowledge to achieve their goals. In order to help them learn from their own experiences in life, they often work with individuals individually and adopt a collaborative, encouraging style. They help to create personal development plans and provide feedback on performance.

LEARNING SPACES

If learning is to occur, it requires space to take place. While, for most, the concept of learning space first conjures up the image of the physical classroom environment, it is much broader and multi-dimensional. Dimensions of learning space include physical, cultural, institutional, social, and psychological aspects. (Kolb & Kolb 2013).



In ELT these dimensions all come together in the experience of the learner. Since a learning space is in the end what the learner experiences it to be, it is the psychological and social dimensions of learning spaces that have the most influence on learning.

The ELT learning space concept emphasises that learning is not one universal process but a map of learning territories, a frame of reference within which many ways of learning can flourish and interrelate. It is a holistic framework that orients the many different ways of learning to one another. The process of experiential learning can be viewed as a process of locomotion through the learning regions that are influenced by a person's position in the learning space. One's position in the learning space defines their experience and thus defines their "reality." Teachers objectively create learning spaces through the information and activities they offer in their courses. Still, this space is interpreted in the students' subjective experience through the lens of their learning style.

RECENT DEVELOPMENT OF EXPERIENTIAL LEARNING IN FORMAL EDUCATION FORMAL EDUCATION CURRICULUM IN K12 EDUCATION

1. Falloon, G. (2019). Using simulations to teach young students science concepts: An Experiential Learning theoretical analysis. *Computers & Education*, 135, 138-159.

Summary: The paper details a study conducted in New Zealand where 38 5-year-old students learned basic procedures and concepts regarding circuit building and design. The research used experiential learning as a theoretical framework to examine the results of teaching scientific principles through iPad simulations. The investigation suggests that coupled with careful teacher guidance, simulations of physics principles can successfully encourage “reflective thinking and abstract conceptualization” (pp.139) amongst young learners. The research evaluated simulation efficacy through the lens of experiential learning theory. Thus, the assessments used an ELT (Experiential Learning Theory) model adapted from Kolb’s original model published in 1984. In the revised model, four simple circuit building simulations, progressively presented, provided students (working in pairs) with concrete experience. Per the experiential learning framework, teachers introduced the lessons without engaging in “transmissive teaching of procedures and concepts” (pp. 141). Students described their observations, generated questions about the simulations, and formulated “tentative generalised ideas or theories” (pp. 147) about circuit procedures, design, and the functions of circuit components. The next stage in the ELT cycle involved students experimenting by testing their theories and following the cycle again.

2. Hsu, T. C., Abelson, H., & Van Brummelen, J. (2022). The Effects on Secondary School Students of Applying Experiential Learning to the Conversational AI Learning Curriculum. *International Review of Research in Open and Distributed Learning*, 23(1), 82-103.

Summary: The paper is a comparative study that examines the learning effectiveness of implementing Experiential Learning in a secondary school’s AI learning curriculum. As part of the research, 46 seventh-grade students learned to apply conversational AI on a “block-based programming platform”. The platform was created for K-12 students to use block-based programming (instead of conventional programming platforms that require individuals to learn a particular programming language). Block-based programming uses pre-categorized code blocks distinguished by function or logic. Students used the MIT App Inventor to create a conversational AI (such as Amazon’s Alexa) skill by dragging and dropping code blocks during the study. Once finished with the skills, students sent them to Amazon, and by doing so, the blocks of code converted to a text-based format readable by Alexa and the Amazon website. The research examined learning effectiveness by accounting for two different variables: gender and learning approach. As part of the investigation, a group of students learned through experiential learning and another group through conventional learning. In the experiential learning group, students followed the experiential learning cycle involving exposure to a concrete experience, reflective observation, conceptualization, and active experimentation.

Meanwhile, the conventional approach required teachers to provide step-by-step directions to students. The study concluded that female students learning through the conventional approach performed better than other groups. The recommendations for the study suggest higher performance males and lower performance females should

use the experiential learning modality. In comparison, higher performance females and lower performance males would benefit from the conventional teaching modality.

3. Konak, A. (2018). Experiential learning builds cybersecurity self-efficacy in K-12 students. *Journal of Cybersecurity Education, Research and Practice*, 2018(1), 6.

Summary: The paper addresses the implementation of a K-12 program aiming to initiate students into the field of cybersecurity. The core aim was to motivate students to pursue careers in cybersecurity by introducing them to key concepts and skills in system administration, computer networking, cyber threat identification, and cryptography. The program aimed to provide students with hands-on experience and ensure students understood the essential principles of cybersecurity. Researchers created an inquiry-based framework to design adequate hands-on activities to achieve learning outcomes that account for experience and knowledge. The inquiry-based approach used in the study borrowed key elements of Kolb's Experiential Learning Model to move away from instructional styles that provide large amounts of content but do not guarantee practical understanding. Using Kolb's experiential learning model, the hands-on activities implemented during the week-long program incorporated four components of experiential learning: "concrete experience, reflective observation, abstract conceptualization, and active experimentation" (pp. 6-7). The study concludes that the hands-on activities based on the inquiry-based framework adapted from experiential learning improved students' self-efficacy in cyber security.

4. Sudria, I.B., Redhana, I.W., Kirna, I.M., & Aini, D. (2018). Effect of Kolb's Learning Styles under Inductive Guided-Inquiry Learning on Learning Outcomes. *International Journal of Instruction*, 11, 89-102.

Summary: The paper draws on Kolb's model of learning styles and emphasises the importance of learning styles as "preferred ways of learning in terms of absorbing, managing, and processing information, which is obtained either by remembering, reasoning, and/or problem solving" (Sudria et al., 2018, p. 90). Kolb developed his theory on different learning styles on the basis of experiential learning and defines learning styles in 4 categories: Diverger, Assimilator, Converger, and Accommodator. These categories can be defined according to the following axes of learning: learning is a continuous process that grounds in experience, learning requires resolving the existing conflicts to adapt the new information, and it takes place between the surrounding and people to create desired knowledge. A comparative study was conducted in Bali and gathered learning data through an inductive guided inquiry learning model. The students who are categorised as the Convergents and Assimilators showed balanced enhancement on skills such as observing, questioning, and designing experiments, and the Divergers and Accommodators showed improving performances of observing, questioning, and designing experiments. All students, regardless of their learning styles, scored high performances in using laboratory equipment and chemicals under inductive guided-inquiry learning. This finding implies that the inductive guided-inquiry learning of science work is beneficial for all learners of all learning styles.

5. Long, N. T., Yen, N. T. H., & Van Hanh, N. (2020). The Role of Experiential Learning and Engineering Design Process in K-12 Stem Education. *International Journal of Education and Practice*, 8(4), 720-732

Summary: The paper analyses the combination of Kolb's experiential learning model

and engineering design process in the K12-STEM(Science, technology, engineering, and mathematics) education systems. Experiential learning theory used as a conceptual framework in STEM fields for this study. The aim of this study was to find perspectives of students on the combination of Kolb's model and the engineering design process in K12 STEM education. The researchers conducted 2 research questions and implemented experimental design to explore. To conduct this study 32 middle school students were selected to participate in an experiment. participants were selected according to their prior knowledge on K-12 STEM topics, some students had prior knowledge while others didn't. Students were given direct questionnaires after they took part in the experiment, to collect their responses on the positive role of Kolb's model and engineering design process in K-12 STEM education. The results showed that experiential learning theory combined with a pedagogical strategy in STEM education provides a positive learning experience.

FORMAL EDUCATION CURRICULUM IN SECONDARY EDUCATION

1. Voukelatou, G. (2019). The Contribution of Experiential Learning to the Development of Cognitive and Social Skills in Secondary Education: A Case Study. www.mdpi.com/journal/education, Educ. Sci. 2019, 9, 127; doi:10.3390/educsci9020127

According to the research presented in this article, experiential learning is a successful method for teaching in secondary education, and it is crucial to pick and implement it. One of the most widely accepted theories about how we learn is the idea that it is a dynamic process in which we draw on our pre-existing perceptions and abilities while also organising and synthesising new information. It is the project's perspective that identifies an issue relating to the interaction between learning and teaching, so that the educational process might be more effective. Educators can use the project method to help students improve their cognitive and social abilities, while students themselves can use the modern student-centred teaching model to develop their own knowledge and attitude toward life.

2. Okoli, J.N., & Abonyi, O.S. (2014). The Effects of the Experiential Learning Strategy on Secondary School Students' Achievement in Biology. *US-China Education Review A*, ISSN 2161-623X D February 2014, Vol. 4, No. 2, 96-101.

According to the findings of this research, an effective method for teaching biology is to use the technique of experiential learning. Students have a wonderful opportunity to get experience in the real world through the use of experiential learning, which is an integral part of the study of biology. The results of this research suggest that teachers of biology in secondary schools should use the experiential learning technique since it is a successful method for teaching biology to students in those schools. When developing secondary school curricula, curriculum planners should consider including experiential learning as a method for more effectively teaching biology. The various science teacher education programs offered by colleges of education and universities should incorporate the experiential learning strategy into their various teacher education programs in order to adequately prepare teachers to use the experiential learning strategy when instructing students in biology. It is the responsibility of both the federal government and state governments to provide the necessary biology equipment for experiential learning to be carried out in classroom settings.

3. Rohr Marques, C. M., & Agüero Contreras, F. C. (2022). Environmental education at secondary school level in africa: a case study in Benguela-Angola. *Revista Universidad y Sociedad*, 14(3), 282-297.

The following information, taken from a variety of sources, was gleaned from an analysis of the theoretical, practical, pedagogical, and didactic requirements and content for environmental education, particularly at the secondary school level and in the work with adolescents and young people. As a result, education about the environment ought to be multidisciplinary and holistic; that is, it ought to educate about sustainable development in an integrated fashion as a whole rather than as a separate academic field. Values should be taught as part of environmental education, and students should be encouraged to discuss the ethical and philosophical underpinnings of sustainable development. The ability to think critically and creatively, as well as the ability to identify answers to issues, should be emphasised in environmental education. to instil confidence in the face of the conundrums and difficulties presented by sustainable development. Environmental education should make use of a variety of instructional strategies, such as instructing students in the utilisation of words, art, theatre, discussion, experiences, and a variety of pedagogies to confront the processes. Students should be included in the process of decision-making regarding how they should learn, and environmental education should encourage participatory decision-making procedures. Education about the environment should incorporate hands-on learning into everyday activities, both at home and in the workplace. Environmental education should generate instructional activities that are directly linked to the lives of the communities and localities, and it should do so using languages that students can understand.

4. Hsu, T.-C., Abelson, H. & Van Brummelen, J. (2022). The Effects on Secondary School Students of Applying Experiential Learning to the Conversational AI Learning Curriculum. *International Review of Research in Open and Distributed Learning*, 23(1), 82–103. <https://doi.org/10.19173/irrodl.v22i4.5474>

In the study students were taught through a cycle of experiential learning, and their overall learning performance was measured. The effectiveness of learning conversational AI, the performance of VUI, and the students' level of computational thinking concept scale would all be affected by the cycle of experiential learning. The following research questions served as the foundation for our inquiry:

1. Does the learning effectiveness of the conversational AI curriculum vary depending on the learner's gender (that is, males and females) as well as the learning approach (that is, cycle of doing projects and cycle of experiential learning) they choose?
2. Does a person's gender or their approach to learning have an impact on how well they perform in the conversational AI curriculum?
3. Does a student's gender or approach to learning have an effect on the concepts of computational thinking that they understand?

The results of this empirical study suggest that when secondary school teachers instruct students to learn the conversational AI curriculum, it is recommended that students adopt the cycle of doing projects. This recommendation is based on the findings of this study. It is also recommended that people make use of the cycle of experiential learning in order to cater to their one-of-a-kind preferences and requirements. This empirical study demonstrated that when the standard cycle of conducting projects was applied to the conversational AI curriculum, male students did not perform as well as female students in terms of computational thinking ideas. This was the conclusion drawn from the data collected.

5. Tiessen, R. (2018). Improving Student Reflection in Experiential Learning Reports in Post-Secondary Institutions. *Journal of Education and Learning*; Vol. 7, No. 3; 2018 ISSN 1927-5250 E-ISSN 1927-5269. <http://doi.org/10.5539/jel.v7n3p1>

The value of cooperative education and community service learning (CSL) as modes of experiential learning can in fact be seen to change the way students learn in a variety of educational settings. On the other hand, in the absence of adequate facilitation and reflection, the quality of this learning may be restricted and only superficial. The learning cycle of any educational experience must include an approach that is oriented toward praxis in order to be effective. The emphasis on work-integrated learning, also known as experiential learning, and the growing emphasis on a range of experiential learning options within secondary education mean that additional effort needs to be made to ensure that the breadth and depth of learning takes place through a combination of theoretical reflection and practical engagement in the world. This can be accomplished by ensuring that learning takes place through a combination of theoretical reflection and practical engagement in the world. Before moving on to more active experimentation, Kolb's model serves as a helpful reminder of the iterative nature of learning and the requirement to circle back around to more fundamental activities such as critical reflection and abstract conceptualization (thinking and theorising). However, in order to truly be capable of deeper reflection and conceptualization, we must first establish our place in the world through "doing" and by having experiences that are tangible before we can begin to think more abstractly. To encourage students to generate political analysis out of their practical work experiences and to reflect more on how these acts of doing or concrete experience can facilitate improved thinking and theorising when they return to the classroom, assignments designed to facilitate experiential learning need to have built-in mechanisms to enable students to move beyond the unidirectional reflection on how "what was learned in the classroom shapes how practical work is carried out." This is because students need to be able to move beyond the reflection that "what was learned in the classroom shapes how practical work is carried out" (after they leave post-secondary education). Students have shown a high level of enthusiasm when it comes to the promotion of the cyclical nature of experiential learning, which includes thinking, doing, reflecting, and theorising. However, in order to accommodate the wish on the part of students to participate in this critical reflection, there is a necessity for the instructional support and learning facilitation that are necessary for such a cautious analysis and in-depth reflection. Arendt (1958) argues that the ability to make sense of the world through ongoing reflection and analysis is what distinguishes humans from other animals. This ability also enables "conscientization" (Freire, 1972), which can be defined as an awareness of why inequality exists and what role we play in either maintaining or eliminating inequality. We can realise our full human freedom through praxis, and we can also use praxis to generate an understanding of, and support for, political action that aims to promote social justice and equality. Both of these goals can be accomplished through the use of praxis.

CASE STUDIES

TOPIC: Sustainable Development Goals

Description

FREI DAY is a learning format in which life asks the questions. Students are on the trail of self-selected questions about the future. They develop innovative and concrete solutions and implement their projects directly in the neighbourhood and community. FREI DAY is a learning format that empowers students to tackle the challenges of our time themselves and to meet them with courage, a sense of responsibility and creativity. On FREI DAY, children and young people learn to change the world.

When researching, planning, and implementing a FREI DAY project, students encounter many unanswered questions to which they want answers. The Global Goals (SDGs) cover 17 different topics, ranging from nature conservation and gender equality to quality education and the equitable distribution of resources to sustainable cities and communities. Teachers step back at this point and let non-school experts answer the questions. Non-school experts can be parents, relatives, neighbours, NGOs, scientists, companies, or universities.

At least 4h per week
The FREI DAY creates regularity!

FREI DAY is a fixed part of the students' schedule. It takes place like traditional school subjects every week and throughout the school year. Like math and German, FREI DAY is part of the core instructional time so that all children and adolescents are given this free space for interdisciplinary learning and action. Especially important: FREI DAY takes place for at least 4 hours at a time. This ensures that students have enough contiguous time to develop and implement their own FREI DAY projects.

Where do these 4 hours come from?

Some subjects give time to FREI DAY on a pro-rata basis. In the subject curriculum of all countries, it is required that students should develop important personal and social skills in addition to acquiring subject knowledge. These include the ability to learn independently, to design creatively, and to act sustainably and collaboratively. Since these skills can hardly be developed in conventional subject lessons, the time set aside for the acquisition of these important future competencies is transferred to FREI DAY. Thus, with FREI DAY, children and young people spend just as much time in school as before.

Impact

On FREI DAY, students take responsibility for themselves, for others and for the world.

Courage for new things and trust in uncertainty are the central future competencies of the 21st century. We as a humanity are facing great challenges: The fair distribution of resources, overcoming the climate crisis and creating equal opportunities are just a few of them. In order to actively confront the problems of our time and find solutions to them,

we need young people with strong personalities who are characterised by courage, a sense of responsibility, anticipatory thinking, and self-effective yet cooperative action. Children and young people need space and time for interdisciplinary learning and for practising responsible and sustainable thinking and acting, so that they can believe in themselves and shape our society in a sustainable and just way.

FREI DAY fosters these key future skills in students. It encourages them to shape the society of tomorrow themselves.

The students deal with current social, economic, and ecological challenges, which are based on the Global Goals of the United Nations. They develop their own solutions, which they then implement as projects in their school, community, or city. Without grade or time pressure, the students work on an interest-oriented, interdisciplinary basis and with local experts.

Teachers or the project groups themselves invite experts on their topics and use the vast knowledge outside of school to realise their solutions. The children and young people leave school as a place of learning and, with the help of the experts, implement their projects where they are needed: on site. For example, they arrange a meeting with their city council and convince them to convert schools to green electricity. Or they look for suitable premises and training to set up a contact point for children and young people affected by racism. FREE DAY opens the doors of school and contributes to using the world as a great learning landscape.

TOPIC: Culture

Description

Culture's influence on individuality.

Objective: To raise awareness of teachers about their cultural identity and about the degree of their perceptible intercultural competences

Step 1: You have a cultural, ethnic, and/or racial identity that shapes your understanding of the world, and your perceptions about others

Step 2: Answer the questions proposed as reflections to assess the degree of your perceptible intercultural competences

Impact

The competence has two preconditions. One is in terms of knowledge about the foreign society and social processes, about self and other, and about interaction and all that goes into it in a given situation. The other precondition is in terms of attitude. This refers to features like openness, flexibility, empathy, awareness of others, and the ability to relativize one's perspective and overcome dysfunctions and resistances. All of which allow establishing and maintaining relationships with other cultures.

TOPIC: Ecologic education

Description

In the "Ecology Lesson", implemented at KALEV (Kadıköy Anatolian High School

Education Foundation) Primary School in Istanbul, Turkey, to strengthen the bonds of students with nature, children can live in harmony with nature while learning the life cycles in nature, the basics of permaculture and regenerative agriculture in accordance with their age. They experience what can be done for them.

Due to increasing urbanisation and changing production patterns, most of the generations who have moved away from nature and natural production methods are now growing up as “city children”. Therefore nature education to children is very important in order to both minimise the destruction of nature and repair our broken ties.

Ecology teacher Esin Kuşluoğlu is a landscape architect. She says that her lessons are not only classroom-based and theoretical, but that children learn by seeing, hearing, smelling, tasting, and feeling, that is, by experiencing, that forms the basis of ecology education. For this purpose, two planting areas were established in the garden and terrace of the school, and a greenhouse was established in the classroom where the lessons were held. In addition, students have the opportunity to examine the cycles of nature, trees, insects and animals on site during the nature walks they take throughout the year.

The main purpose of the ecology education organised at KALEV Primary School is to raise students as environmentally conscious individuals who know how to live with nature, know where the things they eat come from and how they are grown, are ecologically literate, curious, and questioning, and can perceive the whole.

Impact

Education starts in kindergarten. The youngest students of the school learn what the ecosystem and habitat are, the life cycles in nature, food groups and how a balanced diet is through games and colourful visuals.

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Impact

Education starts in kindergarten. The youngest students of the school learn what the ecosystem and habitat are, the life cycles in nature, food groups and how a balanced diet is through games and colourful visuals.

Objective: To foster ideas generation for a positive learning environment

In this activity, develop an idea for a learning centre considering the classroom and pupils' interests. After this, give a comprehensive description of how it should look, how you plan to work with it, what kind of resources you need, if they can be obtained, how they can be obtained. Finally, evaluate your idea.

Impact

The teaching methods can vary between classical teaching style, individual/group, project work, etc. It can also include peer-learning, i.e., in the form of tutoring systems, meaning to bring together a motivated student with an unmotivated one.

According to "the glossary of education reform", student engagement describes the degree of attention, interest, and passion that pupils show when they are learning which impacts the level of motivation they need to have to progress in their education.

It takes advance planning and creativity to design exciting and effective learning centres. But the payoff comes as soon as you see pupils' faces light up when you announce, "Centre Time".

TOPIC: Social awareness

Description

The activity is called experiential learning in the streets. Teacher brings students out of the classroom to talk to homeless people to encourage deep learning. It is the power of not just telling but also showing and teaching out of the box.

Rather than giving students a chapter to read about homelessness, the teacher takes students on a guided walking tour. On the tour, students get a chance to speak with homeless people and see first-hand where they sleep, find food and access medical care.

Experiential learning also includes visits to local shelters, low-income residential facilities, and a federal prison.

Impact

It is an intense and personal experiential learning. Students have a chance to learn what is reality. It's also their place in the world and their responsibility as citizens to engage in the community.

TOPIC: History

Description

The project titled “The abbey of Vlierbeek” used the storyline didactic approach to engage students in 4th grade, from Vrije Basisschool Vlierbeek in Belgium, with hands-on learning about the history of the Vlierbeek Abbey. The students receive an official letter from the mayor asking them to promote the Abbey. Students do brainstorm and work on creating an exhibition for the Abbey. Throughout the process, students reflect on an exhibition’s functions, design, and definition. They formulate questions about what they want to know about the Abbey and complete a self-evaluation form about their capacities and talents provided by the teacher. Students conduct desk and field research to find out more about the Abbey and decide on the exhibition’s content. Students organise the event’s advertisement and present their findings at the exhibition.

Impact

The practice requires students to engage with a realistic scenario where they have to implement a wide range of competencies and skills such as entrepreneurial, organisational and research competencies. They learn through direct involvement in research and planning an exhibition of a historical subject matter and they develop reflective thinking, strategies, and action plans along the way.

TOPIC: Science

Description

Using iPad simulations for kindergarten students to learn basic principles and concepts of circuit building, design, and electricity. During a project conducted in New Zealand with 38 5-year-old students, teachers introduced lessons briefly but without transmission of content. The learning relied heavily on the simulations and required students to describe their observations, to generate theories and experimenting. Careful guidance from the teachers was necessary for successful implementation of the experiential learning through the use of the simulations.

Impact

The simulations of physics principles successfully encouraged “reflective thinking and abstract conceptualization” on very young students

TOPIC: Social awareness

Description

There are “Social Responsibility Courses” in several universities in Turkey. The main purpose of this course is to help students realise that they have responsibilities towards the society and the world they live in, to gain the skills to define social, cultural, and environmental problems specific to the society they live in, to raise their awareness about human rights and democratic values, to determine/determine a project topic within the scope of social responsibility, to design the project. To ensure that it implements,

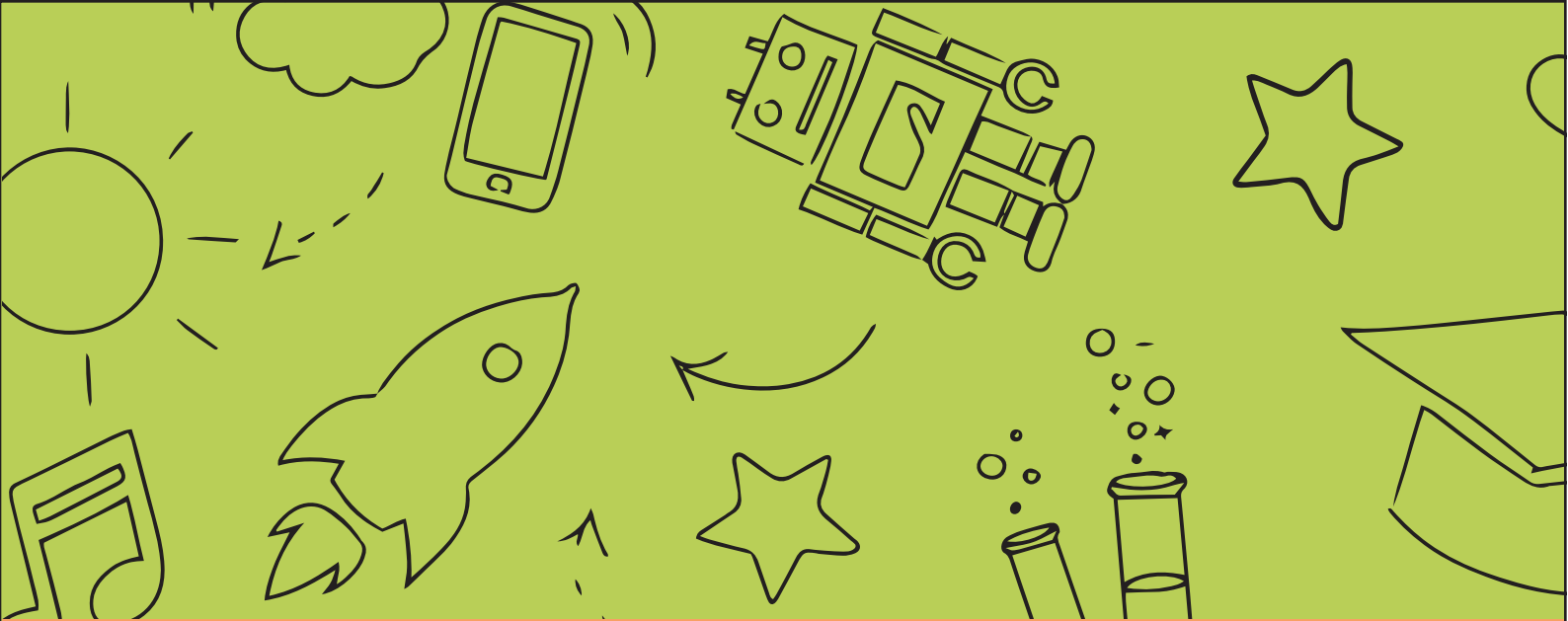
evaluates, implements, and implements in interdisciplinary cooperation with public/private institutions and organisations, non-governmental organisations where social awareness is practically gained, and develops civil society sensitivity, social responsibility awareness and sense.

The content of this course; by defining the social, cultural, and environmental problems specific to the society in which the student lives, it focuses on determining/determining a project subject within the scope of social responsibility, designing, executing and evaluating the project and putting it into practice in interdisciplinary cooperation with public/private institutions and organisations and non-governmental organisations.

Impact

At the end of this course, the student:

- (1) Explains the concept of social responsibility.
- (2) Understands the importance of social responsibility studies.
- (3) Becomes aware of the factors that affect the understanding of social responsibility.
- (4) Becomes aware of their responsibilities towards the society and the world they live in.
- (5) Discusses social responsibility working areas.
- (6) Identifies social, cultural, and environmental problems specific to the society they live in.
- (7) Designs the project to produce solutions for one of the social, cultural, and environmental problems specific to the society.
- (8) Executes the designed project.
- (9) Evaluates the project carried out.
- (10) He/she presents the project he/she has carried out.
- (11) Takes part in various projects voluntarily within the framework of social responsibility.
- (12) Gains group work skills.
- (13) Acquire a sense of social responsibility and social-citizenship values.
- (14) Develops social teamwork skills.



RUBRIC FOR EXPERIENTIAL TRAINING



RUBRIC FOR EXPERIENTIAL TRAINING (NON-FORMAL EDUCATION)

DeM Rubric for Experiential Learning

In 2021, DeM Rubric was developed in order to create a qualitative framework for evaluating the non-formal education programs in terms of experiential learning theory and methodology. This framework was developed and co-published by Mustafa Erdogan, Ilke Evin Gencil from DeM Experiential Training Center and Alice Kolb and David A. Kolb from Experience Based Learning Systems (Gencil, Erdogan, Kolb & Kolb 2021).

Practising experiential learning in full compliance with the experiential learning theory is directly related to the experiential learner training activities. To meet the needs for the evaluation process of these training activities, it was decided to develop a rubric for experiential training. The assessment of whether the application processes follow all four steps of the experiential learning cycle in the trainer training activities, whether the experiential learning cycle is introduced properly, the knowledge level of the educators about the learning styles, and right or wrong applications of the experiential learning will be functional to improve the quality of the applications. In general, in the development process of the rubric for experiential training, the steps suggested by Goodrich (2000) was followed, and these steps are respectively listing the criteria, deciding the rubric type (An analytic rubric was developed because the focus was on the evaluation of the process.), determining performance indicators and making level definitions (The highest performing participant gets 4 points while the lowest-performing participant gets 1 point.) and receiving the views of the subject matter experts.

In the rubric for experiential training, two main components, which take place in the theory and explained above briefly, were selected to measure the accordance of a curriculum with the experiential learning theory. One of these components is the concept of Learning Spaces, and the other is the concept of Educator Role Profiles. The learning spaces refer to a learning habitat that is necessary to be designed for an experiential learning-based curriculum. Unless this habitat is built holistically, the learning process in it will not be entirely experiential. Educator role profiles offer a conceptual framework about the necessity for an educator to follow a diversified methodology in the curriculum that moves around the experiential learning cycle. Since learning is considered holistic in the experiential learning theory only when all four modes of the cycle are touched, it is possible to understand whether a curriculum includes the entire experiential learning cycle by observing what roles educators play in these learning spaces. For this reason, while learning spaces define the ecosystem of the curriculum, educator role profiles emphasise the roles that the educators play in this ecosystem. While the concept of learning space defines six different learning spaces in itself, the concept of educator role profiles defines four different educator roles in itself. Thus, the rubric took the subcomponents (6+4=10 subcomponents) of these two main components as a direct reference. Rubrics consist of criteria that are used to measure performance, behaviour, or qualification (Campbell, A., 2005).

1. LEARNING SPACES				
1.1. Creating and Holding a Hospitable Space for Learning	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.1.1. Getting to know each other	There was no activity for learners to get to know each other.	Educator and some of the learners learned the names of each other.	Educators and learners learned the names of all participants.	Educators and learners learned the names of all participants and they got to know each other personally.
1.1.2. Group Dynamics	There was no activity to build the sense of trust and break the ice among the group.	Ice was broken among some of the learners and educators of the group.	Ice was broken among all the learners and educators and group dynamics were increased.	Ice was broken among all the learners and educators, group dynamics were increased and a team spirit was established within the group.
1.1.3. Ground Rules	There were no ground rules set.	The ground rules for ensuring the respect and efficient group learning process were set only by the educator.	The ground rules for ensuring the respect and efficient group learning process were set by involvement of educator and some of the learners.	The ground rules for ensuring the respect and efficient group learning process were set by active involvement of educator and all of the learners.
1.2. Creating Learner-Centred Learning Space	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.2.1. Expectations & Contributions	Learners were not asked to share their expectations from and potential contributions to the program.	Learners only shared their expectations and/or contributions.	Learners shared their expectations from and contributions to the program and the program was revised by the educator accordingly.	Learners shared their expectations from and contributions to the program, the expectations and contributions were analysed together with the learners and the program was revised by active involvement of learners.

1.2.2. Methodology	The methods were not chosen considering the learning preferences/difficulties of the learners. A monotone methodology is followed.	Some different methods were chosen considering the learning preferences/difficulties of the learners according to the assumptions of the educator.	Variety of methods were chosen considering the learning preferences/difficulties of the learners according to the analysis on the learners made by the educator.	Variety of methods were chosen considering the learning preferences/difficulties of the learners according to the analysis on the learners made by the educator. Learners had the space to reflect on/give feedback to the methodology. Educator re-adapted the methodology accordingly.
1.2.3. Evaluation by Learners	Program was not evaluated by the Learners	Program was evaluated by the learners only at the end of the program	Program was evaluated by the learners during and at the end of the program.	Program was evaluated by the learners at the end of the program and during the program. The feedbacks during the program were taken into consideration and the programs were revised accordingly.
1.3. Creating a Ludic Learning Space				
	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.3.1. Energizers	There was no energizer implemented.	Energizers were implemented however profiles of the learners and dynamics of the group weren't taken into account while choosing the energizers.	Energizers were implemented and chosen by taking only profiles of the learners into account.	Energizers were implemented and chosen by taking profiles of the learners and dynamics of the group into account.

1.3.2. Learning Games	There was no learning game implemented.	Learning games were implemented however the learners weren't prepared to be ready to play together.	Learning games were implemented after the group was prepared through warming up activities to play together, however there was no cooling down activity to support the learners to step back to real life.	Learning games were implemented after the group was prepared through warming up activities to play together and there were cooling down activities to support the learners to step back to real life.
1.3.3. Having Fun	There was no informal social activity where the learners played and had fun together.	There were informal social activities where the learners played and had fun together however the educator was not involved.	There were informal social activities where the learners played and had fun together where the educator was involved too however the activity was organized only by the educator.	There were informal social activities where the learners played and had fun together where the educator was involved too, and the activity was organized the learners with the support of educator.
1.4. Creating Space for Conversational Learning				
	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.4.1. Discussion	There was no activity for the learners to discuss on the subjects.	There were discussion activities on subjects only between the educator and the learners but not among the learners.	There were discussion activities on subjects among educators and learners however the discussions were dominated by one or few of the learners.	There were discussion activities on subjects among educators and learners where listening and talking were balanced by appropriate moderation.
1.4.2. Debrief	There was no debriefing after experiences.	There were only evaluations of the experiences/activities.	There were debriefings however they were not structured according to all four steps of the learning cycle.	The debriefings were structured according to all four steps of the learning cycle; experience, reflect, think, act.

1.4.3. Progress of Conversations	The conversations during the program were not interlinked with each other.	Sometimes educator made connections between the conversations happened in different times.	Educator made connections among conversations and facilitated the development of the conversations only according to the subject-matter.	All conversations during the program were connected by the educator and the educator facilitated the organic development of conversations according to both interests of the learners and the subject-matter.
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1.5. Creating Space for Reflective Thinking	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
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1.5.1. Dualism to Multiplicity	There was no sharing activity to reveal the learners' stereotypical thoughts on the subjects about themselves and about others.	There were sharing activities only to reveal the learners' stereotypical thoughts on the subjects about themselves and about others however they didn't have chance to listen-discover others' different point of views.	There were sharing activities to reveal the learners' stereotypical thoughts on the subjects about themselves and about others and listen-discover others' different point of views.	There were sharing activities to reveal the learners' stereotypical thoughts on the subjects about themselves and about others and listen-discover others' different point of views. The learners had space to critically think and reflect about those different point of views.
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1.5.2. Multiplicity to Relativism	There was no debate activity where the learners challenge their arguments.	There were debate activities where the learners only challenge their arguments.	There were debate activities where the learners challenge their arguments and analyse the disagreements in detail.	There were debate activities where the learners challenge their arguments and analyse the disagreements in detail. The learners had space to critically re-think about their assumptions.
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1.5.3. Relativism to Commitment	There was no activity for the learners where they try to use alternative approaches and point of views.	There were activities for the learners where they try to use alternative approaches and point of views, but they didn't have space to reflect on their experience of dealing with ambiguity and the relativism.	There were activities for the learners where they try to use alternative approaches and point of views. They had space to reflect on their experience of dealing with ambiguity and the relativism.	There were activities for the learners where they try to use alternative approaches and point of views. They had space to reflect on their experience of dealing with ambiguity and the relativism and they had opportunity to structure their own learning about which subjects they will research more.
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1.6. Creating Spaces to Develop and Sustain Deep Learning	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
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1.6.1. Learning Styles & Learning Flexibility	There was no activity to introduce Kolb Learning Styles.	Kolb Learning Styles was introduced however there was no implementation to discover the learners' learning styles.	Kolb Learning Styles was introduced to the learners and learners discovered their learning styles through Kolb Learning Styles Inventory or any other tool.	Kolb Learning Styles was introduced to the learners; learners discovered their learning styles through Kolb Learning Styles Inventory or any other tool and the learners were supported to plan how to increase their learning flexibility in order to engage to full cycle learning.
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1.6.2. Development Stages	The concept of experiential learning theory of development was not introduced.	The concept of experiential learning theory of development was introduced to the learners however there was no activity to support learners to discover at which development stages they are on the subjects of the program.	The concept of experiential learning theory of development was introduced to the learners and there were activities to support learners to discover at which development stages they are on the subjects of the program.	The concept of experiential learning theory of development was introduced to the learners and there were activities to support learners to discover at which development stages they are on the subjects of the program. The educator played appropriate educator roles for each learner according to the development stage of him/her.
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2. EDUCATOR ROLES

2.1. Facilitator	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
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2.1.1. Experience on Subjects	The learners didn't experience any of the subjects of the program.	Some of the subjects of the program was experienced by the learners through playing/sensing/real life experiences.	All subjects of the program were experienced by the learners through playing/sensing/real life experiences however learners didn't have space to talk about their feelings on these experiences.	All subjects of the program were experienced by the learners through playing/sensing/real life experiences and learners had space to talk about their feelings on these experiences.
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2.1.2. Learners Experiences	The learners didn't have any opportunity to share their previous experiences on the subjects of the program.	The learners had the opportunity to share their previous experiences on some of the subjects of the program.	The learners had the opportunity to share their previous experiences on all subjects of the program however they didn't have space to talk what they feel about these subjects.	The learners had the opportunity to share their previous experiences on all subjects of the program and they had space to talk what they feel about these subjects.
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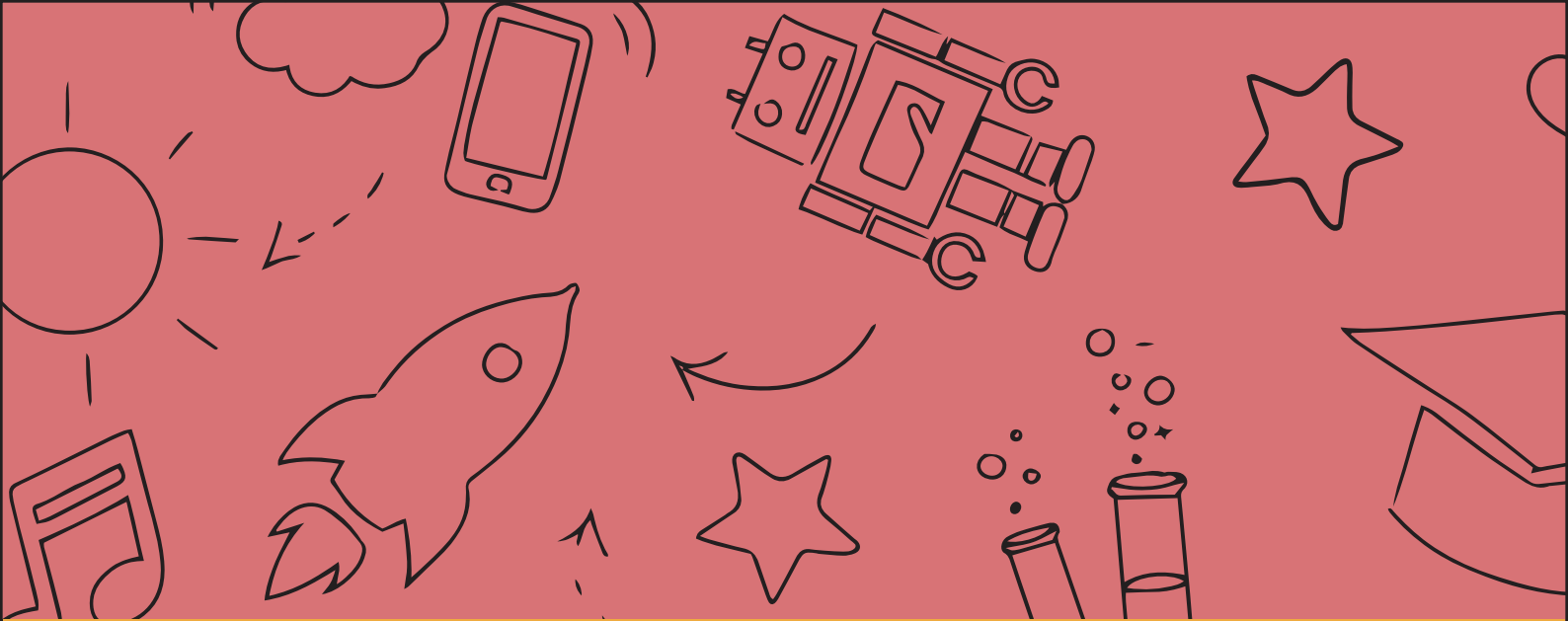
2.1.3. Reflection	The learners didn't have space to reflect on their ongoing improvement.	The learners sometimes had space to reflect on their ongoing improvement.	The learners constantly had space to reflect on their ongoing improvement.	The learners constantly had space to reflect on their ongoing improvement and variety of methods were implemented for providing them the most suitable way for reflection.
Needs				
2.2. Subject Expert	Unacceptable	Unsatisfactory	Improvement	Satisfactory
2.2.1. Gathering & Analysing Information	The learners didn't have any opportunity to search, gather/receive information on the subjects.	There was space where the learners had opportunity to search, gather/receive information on only some of the subjects.	There was space where the learners had opportunity to search, gather/receive information on all of the subjects.	There was space where the learners had opportunity to search, gather/receive information on all of the subjects and they had the opportunity to compare and critically analyse these concepts.
2.2.2. Linking the knowledge	There was no space for the learners to link the new abstract information with the previous concrete experiences and concepts.	There was space for the learners to link some of the new abstract information with the previous concrete experiences and concepts.	There was space for the learners to link all of the new abstract information with the previous concrete experiences and concepts.	There was space for the learners to link all of the new abstract information with the previous concrete experiences and concepts and they had opportunity to create their own knowledge.

2.2.3. Resources of Knowledge	There were no resources of knowledge shared with the learners.	Resources of knowledge on some of the subjects were shared with learners by the educator.	Resources of knowledge on all subjects were shared with the learners by the educator.	Resources of knowledge on all subjects were shared with the learners and the learners had the opportunity to bring and share their resources.
2.3. Evaluator	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
2.3.1. Setting the Standards	There were no performance standards/learning objectives set.	The performance standards/learning objectives were set only by the educator according to the content of the subject.	The performance standards/learning objectives were set by the educator according to the content of the subject and real-life challenges of the learners. This was done by active involvement of the learners.	The performance standards/learning objectives were set by the educator according to the content of the subject and real-life challenges of the learners. This was done by active involvement of the learners and development goals were personalised for each learner together with the learner.
2.3.2. Feedback	The learners didn't practice their new knowledge and they didn't get feedback.	The learners had chance to try/practise their new knowledge within the course, but they didn't receive constructive feedback from the educator.	The learners had chance to try/practise their new knowledge within the course and received constructive feedback from the educator.	The learners had chance to try/practise their new knowledge within the course and received constructive feedback from the educator according to the performance standards that were set together with the learners.

2.3.3. Self-Assessment	The learners didn't have any chance to make self-assessment.	The learners had chance to make self-assessment but not according to the performance standards.	The learners had chance to make self-assessment according to the performance standards.	The learners had chance to make self-assessment according to the performance standards and they had space to set new goals based on the assessment with the support of the educator.
2.4. Coach Unacceptable Unsatisfactory Needs Improvement Satisfactory				
2.4.1. Coaching	There was no coaching support for the learners.	The learners received coaching support partly, but the coaching was not completely planned.	The learners received planned and timely coaching support.	The learners received planned and timely coaching support which was structured according to experiential learning cycle.
2.4.2. Learning Plan	The learners didn't make any learning plan for the future.	The learners determined what they need to learn more at the end of the course, but they didn't create individual learning plans which have concrete and timely actions.	The learners determined what they need to learn more at the end of the course, and they created individual learning plans which have concrete and timely actions.	The learners determined what they need to learn more at the end of the course, and they created individual learning plans which have concrete and timely actions. This plan included a future meeting with the educator to evaluate the progress.

2.4.3. Practice in Real Life	There was no practice of new knowledge in real life context.	The learners had a chance to practice their new knowledge in real life context but there was no evaluation afterwards.	The learners had a chance to practice their new knowledge in real life context and these new experiences were reflected and evaluated by the learners and the educator.	The learners had a chance to practice their new knowledge in real life context, these new experiences were reflected and evaluated by the learners and the educator, and the learners set new goals and action plans based on the evaluation results.
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FEEDBACK FROM FORMAL EDUCATORS



FEEDBACK FROM FORMAL EDUCATORS

To implement and adapt Rubric for Experiential Training to formal education, focus group interviews have been conducted in 4 different countries with 18 different formal educators. Focus groups analysed the Rubric and came up with feedbacks for the Rubric to apply in formal education. The results of these focus groups are summed up below according to components and quality criteria.

General Feedback to Rubric Structure:

- Success criteria should be detailed enough not only for the assessor to gauge competence, but also for the one being assessed to understand expectations and aim to achieve them.
- The assessed items (in the first column) need to be more specifically related to the experiential learning realm. Sometimes the items are too vague or generic.
- Consider the criteria in formal education step by step (preschool-primary-secondary-secondary school-high school) and to determine the success criteria of these criteria gradually
- Some clarification and detailed explanations are needed for the educators who are not familiar with the experiential learning.
- Adding some examples of tools, methods for each criterion would be important for educators to understand and implement. Also, training to the educators about EL is crucial for achieving higher level of application of EL in formal education.
- Some of the main concerns about application of this Rubric to formal setting are the traditional educational philosophies of the teachers, administrators and parents, the intense curriculum provided by Ministry of National Education, lack of time, lack of space etc.
- Overall, criteria are crucial to create an experiential learning environment and one way or another can be applied to formal education.

FEEDBACKS	
1. LEARNING SPACES	
1.1. Creating and Holding a Hospitable Space for Learning	
1.1.1. Getting to know each other	- All criteria are suitable and essential for providing experiential learning environment in formal education - More detailed, clear explanations for criteria and evaluation levels are needed for formal educators that is not familiar with experiential learning and terminology
1.1.2. Group Dynamics	- Methods and tools to meet these criteria are useful and applicable for formal education setting. - Group/Team members in all group/team activity should be changed each time to prevent unnecessary rivalry and competition.
1.1.3. Ground Rules	- More appropriate to use the expression “decisions taken with students” instead of “rules” in formal education

1.2. Creating Learner-Centred Learning Space	
1.2.1. Expectations & Contributions	<ul style="list-style-type: none"> - These criteria are also suitable for formal education but there are difficulties to meet these criteria in formal settings. Ex: Having a central curriculum and have big contents in short time limits the usage of experiential learning methodology. - Educators should be trained and equipped with relevant tools, methods and skills that meets these criteria and not time consuming. - Time limit is a major limitation to use EL methodologies. - Decision makers for formal education needs to be trained as well. For example, school admins to be aware how experiential learning methods might look like and encourage educators to use it more.
1.2.2. Methodology	<ul style="list-style-type: none"> - For formal education, it needs to be more structured and regulated. - Educators are willing to use more student-centred and experiential methodologies. They are looking for ways to learn and opportunities to use them. - Individual differences in the classroom about learning or special needs should be addressed and considered while selecting methodologies.
1.2.3. Evaluation by Learners	<ul style="list-style-type: none"> - For the expectation criteria, it is stated that learner's expectation is not only their expectation. It is influenced by families, peers, their special needs, educational stuff, even Ministry of Education and public in different levels at the different years of education. It should be addressed somehow in the Rubric. - For evaluation criteria, program evaluation process is done by education boards and has regulations. It can be stated that this evaluation is for educator and their session, not whole educational program.
1.3. Creating a Ludic Learning Space	
1.3.1. Energizers	<ul style="list-style-type: none"> - These criteria are very suitable for formal education, but there may be difficulties in practice due to the traditional educational philosophies of the teachers, administrators, and parents. Also, the heaviness of the curriculum and lack of time, lack of space due to crowded classrooms, fixed tables, and chairs are limitation for these criteria to be met. - Game should not have a winner or a runner-up while structuring and maintaining educational games and practices in formal education. - Training for educators, tools, materials are important for educators, especially, for the ones who are not used to use them.
1.3.2. Learning Games	
1.3.3. Having Fun	

1.4. Creating Space for Conversational Learning	
1.4.1. Discussion	- These criteria are also suitable for formal education but have the same limitation with other criteria.
1.4.2. Debrief	- There is a need to differentiate educational level and development of learners in the rubric.
1.4.3. Progress of Conversations	- It requires pre-planning and opening space in curriculum for formal education. - Educator should be able to change their educator roles.
1.5. Creating Space for Reflective Thinking	
1.5.1. Dualism to Multiplicity	- Centrality of education/training programs in formal education and the fact that the achievements are determined precisely by the Ministry of National Education limits the suitability and application of these criteria.
1.5.2. Multiplicity to Relativism	- These are applicable, but time-consuming for formal education.
1.5.3. Relativism to Commitment	- It also requires pre-planning and opening space in curriculum for formal education.
1.6. Creating Spaces to Develop and Sustain Deep Learning	
1.6.1. Learning Styles & Learning Flexibility	- These criteria are suitable and valid for formal education as well - Being able to provide freedom to learners is important to meet these criteria.
1.6.2. Development Stages	- In order for these criteria to be applicable to a formal setting, teachers would need to be trained in Kolb's learning styles at a theoretical and practical level.
2. EDUCATOR ROLES	
2.1. Facilitator	
2.1.1. Experience on Subjects	- These criteria are valid for formal education. - Teachers should have the competence to prepare materials and reflection sheets that will facilitate students' reflection.
2.1.2. Learners Experiences	- Educators might need extra training to have those competences. - The teacher's ability to make reflections such as self-assessment, student's self-evaluation and peer assessment is important.
2.1.3. Reflection	- Two-way communication is the key for educators to meet these criteria. - To ensure the quality around formal education, criteria need detailed standards and standardised assessments.

2.2. Subject Expert	
2.2.1. Gathering & Analysing Information	<ul style="list-style-type: none"> - These criteria are suitable and valid for formal education as well. - Being a learning educator is important to develop competencies to meet these criteria. - These criteria would need extra time by educators and it should be addressed and provided by administration.
2.2.2. Linking the knowledge	
2.2.3. Resources of Knowledge	
2.3. Evaluator	
2.3.1. Setting the Standards	<ul style="list-style-type: none"> - These criteria are also suitable for formal education. - Providing feedback in formal education can only be perceived as test and exam results and this needs to be detailed. - Educators should be aware of different methods of assessment and evaluation techniques and be able to use them for both their learners and themselves. - Educator's competencies are crucial for these criteria as all the others.
2.3.2. Feedback	
2.3.3. Self-Assessment	
2.4. Coach	
2.4.1. Coaching	<ul style="list-style-type: none"> - These criteria are also suitable for formal education. - The teacher's ability to prepare a work plan and be able to coach requires high competency of teacher himself. - These criteria can be theoretically adapted to formal education, but it is necessary to examine what teachers understand and do in practice.
2.4.2. Learning Plan	
2.4.3. Practice in Real Life	

CONCLUSION FOR ADAPTATION

- The expert team reviewed the feedbacks and created an adaptation of Rubric. You can see a summary of the adaptation and adapted Rubric below.

Summary:

- All "Learner" is changed to "Student"
- All "Educator" is changed to "Teacher"
- "Ground Rules" is changed to "Learning Agreement/Principles"
- For the "Creating Spaces to Develop and Sustain Deep Learning" criteria, these changes are made:
 - "Learning Styles & Learning Flexibility" criteria is only applicable for student older than 13 years old.
 - "Development Stages" criteria is mainly for learning to learn. Pedagogically

development stages can be understood differently. That is why the criteria is deleted. Learning to learn is also covered in “Coach” criteria.

- Notes from the expert team:
- This tool is not for self-assessment even though it can be used as it is. This tool is for program evaluation. Teachers should see this tool as evaluating their education program. Teacher who used this tool should be aware that different aspect of the criteria need different resources.
- To be able to use this tool, teachers should read all the explanation of concepts that is written before the Rubric. Without the information, Rubric is difficult to use.

Adapted Rubric

1. LEARNING SPACES				
1.1. Creating and Holding a Hospitable Space for Learning	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.1.1. Getting to know each other	There was no activity for students to get to know each other.	Teacher and some of the students learned the names of each other.	Teachers and students learned the names of all participants.	Teachers and students learned the names of all participants and they got to know each other personally.
1.1.2. Group Dynamics	There was no activity to build the sense of trust and break the ice among the group.	Ice was broken among some of the students and teachers of the group.	Ice was broken among all the students and teachers and group dynamics were increased.	Ice was broken among all the students and teachers; group dynamics were increased and a team spirit was established within the group.

1.1.3. Learning Agreement/Principles	There were no Learning Agreement/Principles set.	The Learning Agreement/Principles for ensuring the respect and efficient group learning process was set only by the teacher.	The Learning Agreement/Principles for ensuring the respect and efficient group learning process was set by involvement of teacher and some of the students.	The Learning Agreement/Principles for ensuring the respect and efficient group learning process was set by active involvement of teacher and all of the students.
1.2. Creating Student-Centred Learning Space	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.2.1. Expectations & Contributions	Students were not asked to share their expectations from and potential contributions to the program.	Students only shared their expectations and/or contributions.	Students shared their expectations from and contributions to the program and the program was revised by the teacher accordingly.	Students shared their expectations from and contributions to the program, the expectations and contributions were analysed together with the students and the program was revised by active involvement of students.

1.2.2. Methodology	The methods were not chosen considering the learning preferences/difficulties of the students. A monotone methodology is followed.	Some different methods were chosen considering the learning preferences/difficulties of the students according to the assumptions of the teacher.	Variety of methods were chosen considering the learning preferences/difficulties of the students according to the analysis on the students made by the teacher.	Variety of methods were chosen considering the learning preferences/difficulties of the students according to the analysis on the students made by the teacher. students had the space to reflect on/give feedback to the methodology. teacher re-adapted the methodology accordingly.
1.2.3. Evaluation by Students	Program was not evaluated by the students	Program was evaluated by the students only at the end of the program	Program was evaluated by the students during and at the end of the program.	Program was evaluated by the students at the end of the program and during the program. The feedbacks during the program were taken into consideration and the programs were revised accordingly.

1.3. Creating a Ludic Learning Space	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.3.1. Energizers	There was no energizer implemented.	Energizers were implemented however profiles of the students and dynamics of the group weren't taken into account while choosing the energizers.	Energizers were implemented and chosen by taking only profiles of the students into account.	Energizers were implemented and chosen by taking profiles of the students and dynamics of the group into account.
1.3.2. Learning Games	There was no learning game implemented.	Learning games were implemented however the students weren't prepared to be ready to play together.	Learning games were implemented after the group was prepared through warming up activities to play together, however there was no cooling down activity to support the students to step back to real life.	Learning games were implemented after the group was prepared through warming up activities to play together and there were cooling down activities to support the students to step back to real life.
1.3.3. Having Fun	There was no informal social activity where the students played and had fun together.	There were informal social activities where the students played and had fun together however the teacher was not involved.	There were informal social activities where the students played and had fun together where the teacher was involved too however the activity was organized only by the teacher.	There were informal social activities where the students played and had fun together where the teacher was involved too, and the activity was organized the students with the support of teacher.

1.4. Creating Space for Conversational Learning	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.4.1. Discussion	There was no activity for the students to discuss on the subjects.	There were discussion activities on subjects only between the teacher and the students but not among the students.	There were discussion activities on subjects among teachers and students however the discussions were dominated by one or few of the students.	There were discussion activities on subjects among teachers and students where listening and talking were balanced by appropriate moderation.
1.4.2. Debrief	There was no debriefing after experiences.	There were only evaluations of the experiences/activities.	There were debriefings however they were not structured according to all four steps of the learning cycle.	The debriefings were structured according to all four steps of the learning cycle; experience, reflect, think, act.
1.4.3. Progress of Conversations	The conversations during the program were not interlinked with each other.	Sometimes teacher made connections between the conversations happened in different times.	teacher made connections among conversations and facilitated the development of the conversations only according to the subject-matter.	All conversations during the program were connected by the teacher and the teacher facilitated the organic development of conversations according to both interests of the students and the subject-matter.

1.5. Creating Space for Reflective Thinking	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.5.1. Dualism to Multiplicity	There was no sharing activity to reveal the students' stereotypical thoughts on the subjects about themselves and about others.	There were sharing activities only to reveal the students' stereotypical thoughts on the subjects about themselves and about others however they didn't have chance to listen-discover others' different point of views.	There were sharing activities to reveal the students' stereotypical thoughts on the subjects about themselves and about others and listen-discover others' different point of views.	There were sharing activities to reveal the students' stereotypical thoughts on the subjects about themselves and about others and listen-discover others' different point of views. The students had space to critically think and reflect about those different point of views.
1.5.2. Multiplicity to Relativism	There was no debate activity where the students challenge their arguments.	There were debate activities where the students only challenge their arguments.	There were debate activities where the students challenge their arguments and analyse the disagreements in detail.	There were debate activities where the students challenge their arguments and analyse the disagreements in detail. The students had space to critically re-think about their assumptions.

1.5.3. Relativism to Commitment	There was no activity for the students where they try to use alternative approaches and point of views.	There were activities for the students where they try to use alternative approaches and point of views, but they didn't have space to reflect on their experience of dealing with ambiguity and the relativism.	There were activities for the students where they try to use alternative approaches and point of views. They had space to reflect on their experience of dealing with ambiguity and the relativism.	There were activities for the students where they try to use alternative approaches and point of views. They had space to reflect on their experience of dealing with ambiguity and the relativism and they had opportunity to structure their own learning about which subjects they will research more.
1.6. Creating Spaces to Develop and Sustain Deep Learning	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
1.6.1. Learning Styles & Learning Flexibility *Kolb Learning Styles inventory can be used for students older than 13 years old.	There was no activity to introduce Kolb Learning Styles.	Kolb Learning Styles was introduced however there was no implementation to discover the students' learning styles.	Kolb Learning Styles was introduced to the students and students discovered their learning styles through Kolb Learning Styles Inventory or any other tool.	Kolb Learning Styles was introduced to the students; students discovered their learning styles through Kolb Learning Styles Inventory, or any other tool and the students were supported to plan how to increase their learning flexibility in order to engage to full cycle learning.

2. TEACHER ROLES				
2.1. Facilitator	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
2.1.1. Experience on Subjects	The students didn't experience any of the subjects of the program.	Some of the subjects of the program was experienced by the students through playing/sensing/real life experiences.	All subjects of the program were experienced by the students through playing/sensing/real life experiences however students didn't have space to talk about their feelings on these experiences.	All subjects of the program were experienced by the students through playing/sensing/real life experiences and students had space to talk about their feelings on these experiences.
2.1.2. Students Experiences	The students didn't have any opportunity to share their previous experiences on the subjects of the program.	The students had the opportunity to share their previous experiences on some of the subjects of the program.	The students had the opportunity to share their previous experiences on all subjects of the program however they didn't have space to talk what they feel about these subjects.	The students had the opportunity to share their previous experiences on all subjects of the program and they had space to talk what they feel about these subjects.

2.1.3. Reflection	The students didn't have space to reflect on their ongoing improvement.	The students sometimes had space to reflect on their ongoing improvement.	The students constantly had space to reflect on their ongoing improvement.	The students constantly had space to reflect on their ongoing improvement and variety of methods were implemented for providing them the most suitable way for reflection.
2.2. Subject Expert	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
2.2.1. Gathering & Analysing Information	The students didn't have any opportunity to search, gather/receive information on the subjects.	There was space where the students had opportunity to search, gather/receive information on only some of the subjects.	There was space where the students had opportunity to search, gather/receive information on all of the subjects.	There was space where the students had opportunity to search, gather/receive information on all of the subjects and they had the opportunity to compare and critically analyse these concepts.
2.2.2. Linking the knowledge	There was no space for the students to link the new abstract information with the previous concrete experiences and concepts.	There was space for the students to link some of the new abstract information with the previous concrete experiences and concepts.	There was space for the students to link all of the new abstract information with the previous concrete experiences and concepts.	There was space for the students to link all of the new abstract information with the previous concrete experiences and concepts and they had opportunity to create their own knowledge.

2.2.3. Resources of Knowledge	There were no resources of knowledge shared with the students.	Resources of knowledge on some of the subjects were shared with students by the teacher.	Resources of knowledge on all subjects were shared with the students by the teacher.	Resources of knowledge on all subjects were shared with the students and the students had the opportunity to bring and share their resources.
2.3. Evaluator	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
2.3.1. Setting the Standards	There were no performance standards/learning objectives set.	The performance standards/learning objectives were set only by the teacher according to the content of the subject.	The performance standards/learning objectives were set by the teacher according to the content of the subject and real-life challenges of the students. This was done by active involvement of the students.	The performance standards/learning objectives were set by the teacher according to the content of the subject and real-life challenges of the students. This was done by active involvement of the students and development goals were personalized for each student together with the student.

2.3.2. Feedback	The students didn't practice their new knowledge and they didn't get feedback.	The students had chance to try/practice their new knowledge within the course, but they didn't receive constructive feedback from the teacher.	The students had chance to try/practice their new knowledge within the course and received constructive feedback from the teacher.	The students had chance to try/practice their new knowledge within the course and received constructive feedback from the teacher according to the performance standards that were set together with the students.
2.3.3. Self-Assessment	The students didn't have any chance to make self-assessment.	The students had chance to make self-assessment but not according to the performance standards.	The students had chance to make self-assessment according to the performance standards.	The students had chance to make self-assessment according to the performance standards and they had space to set new goals based on the assessment with the support of the teacher.
2.4. Coach	Unacceptable	Unsatisfactory	Needs Improvement	Satisfactory
2.4.1. Coaching	There was no coaching support for the students.	The students received coaching support partly, but the coaching was not completely planned.	The students received planned and timely coaching support.	The students received planned and timely coaching support which was structured according to experiential learning cycle.

2.4.2. Learning Plan	The students didn't make any learning plan for the future.	The students determined what they need to learn more at the end of the course, but they didn't create individual learning plans which have concrete and timely actions.	The students determined what they need to learn more at the end of the course, and they created individual learning plans which have concrete and timely actions.	The students determined what they need to learn more at the end of the course, and they created individual learning plans which have concrete and timely actions. This plan included a future meeting with the teacher to evaluate the progress.
2.4.3. Practice in Real Life	There was no practice of new knowledge in real life context.	The students had chance to practice their new knowledge in real life context but there was no evaluation afterwards.	The students had chance to practice their new knowledge in real life context and these new experiences were reflected and evaluated by the students and the teacher.	The students had chance to practice their new knowledge in real life context, these new experiences were reflected and evaluated by the students and the teacher, and the students set new goals and action plans based on the evaluation results.

FINAL CONCLUSION

The need for student-centred educational activities is increasing, and experiential learning with its theory and praxis provides great insight for educators. Experiential learning theory has been used widely in non-formal and higher education, and its application in formal education is increasing recently. With this document, it is tried to provide a theoretical and practical background of experiential learning to be used in

formal education. Research and focus group interviews stated that educators are willing to use more experiential learning theory in their teaching. It is essential to acknowledge that this might be a new approach for some educators, learners, administrators, parents, and the national educational system, even though theory and its practice have been widely known for years. Because of that, there will be some difficulties in applying experiential learning theory in formal education. The key is to have skilled educators who internalise experiential learning theory and are competent in its application. This document and project will help educators in their experiential learning journey in formal education.

REFERENCES

DeM, M. (Ed.). (2017). *Ezilenlerin Deneyimsel Pedagojisi*. İstanbul: DeM Deneyimsel Eğitim Merkezi.

Deneyimsel Eğitim Merkezi (Experiential Training Center), (2017). *Experiential Pedagogy of the Oppressed*.

Dewey, J. (1938) *Education and experience*. N.Y.: Simon and Schuster.
EU Fact-sheet about Key Competences - available at https://ec.europa.eu/education/sites/education/files/document-library-docs/factsheet-key-competences-lifelong-learning_en.pdf

European Commission. (2020, July 1). Commission presents European Skills Agenda for sustainable competitiveness, social fairness and resilience. Retrieved April 16, 2022, from https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1196

Gencel, İ E. (2006). Öğrenme Stilleri, Deneyimsel Öğrenme Kuramına Dayalı Eğitim, Tutum ve Sosyal Bilgiler Program Hedeflerine Erişi Düzeyi. Dokuz Eylül Üniversitesi Eğitim Bilimleri Enstitüsü.

Experience Based Learning Systems. (n.d.). Retrieved April 8, 2022, from <https://learningfromexperience.com>

Gencel, İ.E., Erdogan, M., Kolb, A.Y. & Kolb, D.A. (2021). Rubric for Experiential Training . *International Journal of Progressive Education*, 17(4), 188-211. doi: 10.29329/ijpe.2021.366.13

Green F. (2013). *Skills and Skilled Work—An Economic and Social Analysis*. Oxford: Oxford University Press

Greenaway, R. (1992). Reviewing by Doing. *Journal of Adventure Education and Outdoor Leadership*, 9(2), 21-25.

Healy, M. ve A. Jenkins (2000). Kolb's experimental learning theory and its application in geography in higher education. *Journal of Geography*,

IELN - International Experiential Learning Network. (n.d.). Retrieved May 3, 2022, from <https://experientiallearning.net/>

Kolb, A. Y., & Kolb, D. A. (2013). *The Kolb Learning Style Inventory 4.0 A Comprehensive Guide to the Theory, Psychometrics, Research on Validity and Educational Applications*.

Kolb, A. Y., & Kolb, D. A. (2013). *The Kolb Learning Style Inventory- Version 4.0 A Comprehensive Guide to the Theory, Psychometrics, Research on Validity and Educational Applications*. Experience Based Learning Systems.

Kolb, A. Y., & Kolb, D. A. (2017). *The Experiential Educator: Principles and Practices of Experiential learning*. Kaunakakai, HI: EBLS Press.

Kolb, A. Y., Kolb, D. A., Passarelli, A., & Sharma, G. (2014). On Becoming an Experiential Educator. *Simulation & Gaming*, 45(2), 204-234. doi:10.1177/1046878114534383

Kolb, D. A. (1984). *Experiential learning: experiences as the source of learning and development*. Englewood Cliffs, N.J.:Prentice-Hall.

Nicholson, S. (2012). Completing the Experience: Debriefing in Experiential Educational Games. *Proceedings of The 3rd International Conference on Society and Information Technologies*, 117-121.

Office for Official Publications of the European Communities (2008). *The European Qualifications Framework for Lifelong Learning (EQF)*. Luxembourg.

Questions and answers: European Skills Agenda for sustainable competitiveness, social fairness and resilience

Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962/EC)

Recommendation of the European Parliament and of the Council of 18 June 2009 on the establishment of a European Credit System for Vocational Education and Training (ECVET).

Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning. *Sept/Oct; 99,5:185-195*.

The Common European Framework of Reference for Languages: Learning, teaching, assessment (CEFR). (2002). Available at: <http://assets.cambridge.org/052180/3136/sample/0521803136WS.pdf>

The European Entrepreneurship Competence Framework (EntreComp) <https://ec.europa.eu/social/main.jsp?catId=1317&langId=en>

Thiagarajan, S. (2004). Thiagarajan, S. Six Phases of Debriefing. *Play for Performance*. Retrieved March 10, 2018, from <http://thiagi.net/archive/www/pfp/IE4H/february2004.html#Debriefing>