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Manifest Flipped Learning 3.0
An Adult Education Approach

Peer-reviewed document

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Abstract

This document provides a comprehensive guide to the adoption and application of Flipped Learning 3.0 within adult education. It begins with an introduction that outlines how to utilize the document, the evolution of Flipped Learning, and its significance for adult learners. A detailed examination of the adult learner's profile, including comparisons with other learner types, motivations, challenges, and the impact of technology, sets the foundation for understanding the targeted demographic.

Core concepts of Flipped Learning 3.0 are then expounded, highlighting its definition, key principles, and the pedagogical shift from traditional to flipped learning, along with specific benefits for adult education. Instructional design is addressed through an analysis of learning objectives, the role of backward design, competency-based approaches, and the incorporation of interactive activities, assessment, content creation, and technology.

The document offers strategic guidance for adult education organizations and instructors on implementing Flipped Learning 3.0, with particular focus on infrastructure, educator training, and program evaluation. Potential challenges, such as technological hurdles, resistance, and the need for inclusivity, are acknowledged with suggested solutions. Looking forward, the document contemplates the future trajectory of Flipped Learning 3.0 in adult education. Supplementary materials, including a glossary, additional resources, and terminology, provide further depth and context, underscoring the document's utility as a resource for enhancing learning outcomes through innovative pedagogical strategies.

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1 Introduction

Flipped Learning is a transformative educational approach that reimagines the traditional classroom structure. Unlike the conventional method where instructors primarily deliver content during class and assign homework for outside of class, Flipped Learning inverts, or "flips," this model.

In the Flipped Learning approach exist two major learning spaces and learning approaches. In the Pre-Class Learning learners are introduced to new content at home, often through digital means like interactive videos, active learning assignments, or interactive modules. This allows them to gain foundational knowledge at their own pace, pausing, rewinding, or revisiting material as needed. On-site classroom time is now freed up for more interactive and practical activities, moving away from traditional lecture-based instruction. With the basic knowledge already acquired, learners engage in discussions, problem-solving sessions, group projects and other collaborative activities. The teacher shifts from being the primary source of information to a facilitator or guide, helping learners deepen their understanding and apply what they have learned.

1.1 How to use this Document?

Up to date, there are hardly any published or FLGlobal authorised materials available for Flipped Learning 3.0. In order to keep this document comprehensible, the authors have mainly used the 187 Global Elements of Efficient Flipped Learning and put them into the appropriate context. The intention is to make it easier to understand these elements. The authors did not use the system set out by Jon Bergmann in the form of a periodic table but rather transferred the content and the insights of these elements into the reading text.

1.2 Background and Development of Flipped Learning

The concept of the "Flipped Classroom" began as a pedagogical approach where traditional teaching methods are inverted or "flipped." In a traditional classroom, an instructor typically presents new content during class time, and learners then work on homework and problem-solving outside of class. The flipped classroom turns this model on its head:

Flipped Classroom (The Initial Model)

In the original flipped classroom model, learners first gain exposure to new material outside of class, usually through video lectures or reading assignments. Then, classroom time is used to deepen understanding through discussion and problem-solving activities with the peer group and instructor. This approach leverages out-of-class time for initial content engagement and uses valuable in-class time for higher-order thinking activities.

As educators began to adopt and adapt the flipped classroom approach, they noticed the potential for further enhancement, leading to the development of what is known as Flipped Learning.

Flipped Learning (Evolution)

Flipped Learning is a more comprehensive instructional strategy that takes the principles of the flipped classroom to the next level. It's not just about shifting when and where content is delivered; it focuses on creating a learner-centered classroom that gives learners more responsibility for their learning. It uses the individual space (where learners work alone) and the group space (where learners work together) more effectively and emphasizes the four pillars of F-L-I-P:

- F for Flexible Environment
  Teachers can create flexible spaces where learners choose when and where they learn. It also involves flexible learning modalities and expectations to accommodate different learning styles and speeds.
- L for Learning Culture
  The shift is from the traditional teacher-centered model to a learner-centered approach where learners take more responsibility for their learning, and the teacher becomes a guide or facilitator.
- I for Intentional Content
  Teachers consider what material learners should explore on their own and what they should cover in the group space. This ensures that classroom time is used optimally for engaging learners in higher-order thinking.
- P for Professional Educator
  The role of the teacher changes from that of a deliverer of information to a learning coach. Professional educators continually observe their learners, providing feedback and assessing their work.

Flipped Learning 3.0 (Current Framework): Flipped Learning has further evolved into a more dynamic framework called Flipped Learning 3.0. This iteration incorporates the rapid advancements in technology, globalization, and an understanding of pedagogy. Here are some of the advancements in Flipped Learning 3.0:

- Global Standards
  The establishment of global standards for Flipped Learning practices helps ensure consistency and quality in implementation.
- Advanced Technologies
  The use of technology and ed-tech tools are integrated into the Flipped Learning model.

- Deeper Integration
  Flipped Learning 3.0 goes beyond the classroom and curriculum to influence the entire ecosystem of education, including how schools are designed and how teacher training is conducted.

- Community and Collaboration
  There is a greater emphasis on forming global communities of flipped educators for sharing resources, strategies, and experiences. Professional development and ongoing collaboration are key.

- Research-based Strategies
  Flipped Learning 3.0 is driven by research and data. Educators are encouraged to use evidence-based practices to make informed decisions about their teaching.

- Personalization and Differentiation
  With the help of technology, teachers can personalize learning paths and content for learners, which allows for a more differentiated approach to accommodate varied learning needs.

- Comprehensive Strategies
  The model includes strategies for complex areas such as assessment, observation, and reporting in the flipped learning context.

- Learning Spaces
  In flipped learning, the Individual Learning Space refers to the portion of learning where learners engage with instructional content independently at their own pace, often outside of the classroom, using resources like video lectures or reading materials. The Group Learning Space, conversely, is where learners apply, analyse, and synthesize the knowledge they've acquired individually, often within the classroom setting through collaborative activities, discussions, and hands-on projects facilitated by the instructor.

- Bloom's Taxonomy
  In Flipped Learning, Bloom's Taxonomy guides the structuring of tasks so that lower-level cognitive skills are addressed during individual study, while higher-level analytical and creative skills are fostered through collaborative activities in the classroom.

In summary, the progression from the flipped classroom to Flipped Learning 3.0 has been about refining the practice to be more holistic, adaptable, and integrated into the fabric of education. It recognizes the complexities of the modern learning environment and seeks to equip educators with the tools, skills, and networks they need to facilitate learner-centered learning effectively.

Flipped Learning is a framework and a relatively new pedagogical approach. The major issue in this framework is to reverse the approach to traditional lecture and homework. Learners acquire new knowledge outside of the classroom by handling different active and interactive learning materials. Class time is then used for in-depth learning activities, such as problem-solving, discussions, collaborative assignments and projects.

Despite various challenges as explained later in this document, Flipped Learning 3.0 is a promising approach for Adult Education. It offers a number of benefits for adult learners, such as increased engagement and motivation, improved learning outcomes, greater flexibility and control over their own learning, as well as increased opportunities for collaboration and social learning.

1.3 Importance of Flipped Learning in Adult Education

Flipped Learning is particularly well-suited for Adult Education because it takes into account the needs of adult learners, who are often self-motivated and independent. Adult learners also have a variety of work and life commitments, so Flipped Learning gives them the flexibility to learn when and where they want.

The authors identified several benefits of Flipped Learning for Adult Education. One is the increased engagement and motivation. Adult learners are more engaged and motivated when they have control over their own learning. Flipped Learning allows learners to learn at their own pace and in their own learning style. Another address improved learning outcomes. Studies have shown that Flipped Learning can lead to improved learning outcomes for adult learners. One study found that learners in Flipped Learning courses outperformed learners in traditional courses by an average of 6% on standardized tests.

Adult learners benefit from greater flexibility and control in Flipped Learning, as it allows them to progress at their own pace and aligns with their unique learning styles. This approach enables them to revisit materials as often as needed and to bypass content with which they are already familiar. Additionally, Flipped Learning fosters increased collaboration and social learning. Platforms such as online discussion forums and group projects are integral to this method. Such collaborative avenues are particularly advantageous for adult learners, given their rich reservoir of life and work experiences that they can share with peers. Furthermore, Flipped Learning places a strong emphasis on the cultivation of higher-order thinking skills. Classroom sessions are dedicated to activities that challenge learners to apply their knowledge to tangible, real-world issues, thereby enhancing their critical thinking and problem-solving abilities.

Here are some of the benefits of Flipped Learning 3.0 for Adult Education:

- **Increased engagement and motivation**
  Adult learners are more engaged and motivated when they have control over their own learning.
- **Improved learning outcomes**
  Studies have shown that Flipped Learning can lead to improved learning outcomes for adult learners.
- **Greater flexibility and control over their own learning**
  Adult learners can learn at their own pace and in their own learning style.
- **Increased opportunities for collaboration and social learning**
  Flipped Learning 3.0 encourages collaboration and social learning through discussion, collaborative assignments, and other activities.
- **Enhanced development of critical thinking and problem-solving skills**
  Flipped Learning 3.0 uses Bloom's Taxonomy and focuses on higher-order thinking skills, such as critical thinking and problem-solving.

2 Understanding the Adult Learner

Adult learners come from diverse backgrounds, bringing a wealth of life and work experience to the classroom. They are often self-directed and motivated, seeking education for specific personal or professional goals. Due to other commitments like work and family, adult learners prefer flexible learning schedules, such as evening or weekend classes, online courses, or part-time programs. They value practical applications of knowledge that can be immediately applied to their job or daily life. However, adult learners may face barriers such as balancing work, family, and education; potential gaps in prior education; or feeling out of place in traditional educational settings.

2.1 Comparing Different Types of Learners

It is important to distinguish between different types of learners because they have different needs and preferences. This allows us to design more effective learning experiences for each group.

For example, adult learners are characterized by diversity and by the need to balance their various commitments, all of which may lead them to show preference for more flexibility in their learning and more practicality in the knowledge they amass.

Figure 1: Adult learners characteristic is different from other learning groups.

University learners, on the other hand, are typically full-time learners who are exploring a broad range of subjects. They may also be more interested in the social aspects of campus life.

Finally, school-aged learners are still developing academically, socially, emotionally, and physically. This requires a structured and holistic learning approach.

Characteristic	Adult Learners	University Student	School-aged Learners
Background	Diverse	Traditional	Age cohorts
Motivation	Self-directed	Exploring broad range of subjects	Foundational learning
Learning schedule	Flexible	Full-time	Structured
Social environment	Important	Important	Important
Learning goals	Specific personal or professional	Broad exploration	Academic, social, emotional, and physical development

Table 1: Overview of different learners' characteristics

2.2 Motivations and Challenges in Adult Learning

In the evolving educational landscape, Flipped Learning 3.0 is a beacon of innovation, particularly in Adult Education. The motivation for instructors and Adult Education organisations to adopt this approach is multifaceted, rooted in both the potential benefits for learners and the broader goals of the educational community.

Addressing the Unique Needs of Adult Learners

Adult learners are distinct from traditional learners in their learning needs and life circumstances. They often juggle multiple responsibilities, from work commitments to family obligations. Flipped Learning 3.0 offers flexibility, allowing adult learners to engage with content at their own pace and on their own schedule. For instructors and organizations, this means a greater likelihood of learner engagement and retention.

Maximizing Classroom Interaction

The essence of Flipped Learning 3.0 is to shift content acquisition outside the classroom, reserving face-to-face time for deeper discussions, problem-solving, and practical applications. For instructors, this transition transforms their role from mere information dispensers to facilitators of active learning. This dynamic environment can be more rewarding for educators as they witness firsthand the 'aha' moments and conceptual breakthroughs of their learners.

Leveraging Technological Advancements

The digital age has ushered in a plethora of tools and platforms conducive to Flipped Learning. Adult Education organizations see the potential of harnessing these tools,

not just as a nod to modernity, but as a genuine enhancement to the learning experience. Interactive videos, discussion forums, and digital assessments provide rich feedback, enabling instructors to tailor their instruction more precisely to individual needs.

Enhancing Learner Autonomy

Flipped Learning 3.0 inherently promotes self-directed learning. For adult learners, who often enter educational settings with a clear purpose or goal, this autonomy is empowering. Instructors and organizations are motivated by the prospect of fostering a learning environment where learners take charge of their educational journey, leading to deeper understanding and long-term retention.

Offering Economic and Scalable Solutions

From an organizational perspective, Flipped Learning 3.0 can be an economically viable model. Digital content, once created, can be reused and accessed by an unlimited number of learners. This scalability ensures that organizations can reach wider audiences without proportionally increasing their resource investment.

Staying Ahead in the Educational Curve

The world of education is in constant flux, with new methodologies and approaches emerging regularly. For Adult Education organizations, adopting Flipped Learning 3.0 is also about staying relevant and ahead of the curve. It signals a commitment to innovation and a dedication to offering the best possible learning experiences.

After looking at the motivation to foster change in Adult Education, one must also not lose sight of the problem areas and challenges. Here are some specific challenges that instructors and Adult Education organizations may face when implementing Flipped Learning 3.0:

Creating high-quality digital learning content

Flipped Learning 3.0 relies on learners acquiring new knowledge outside of the classroom, so it is important that the digital learning content is engaging, informative, and accessible. This can be a time-consuming and expensive endeavour.

Further educating instructors

There is also the need to train instructors on how to use Flipped Learning 3.0 effectively. Flipped Learning 3.0 is more than just flipping the lecture and homework elements of a course. It requires instructors to design learning experiences that are personalized, collaborative, and social.

Changing the mindset of adult learners

Many adult learners are accustomed to a traditional learning environment where the instructor is the expert, and the learners are passive recipients of information. Flipped Learning 3.0 requires adult learners to be more self-directed and active learners. This can be a difficult transition for some learners.

Overcoming resistance to change

Some instructors and Adult Education organizations may be resistant to change. They may be comfortable with their current teaching methods and may not see the need to switch to Flipped Learning 3.0. It is important to address these concerns and to demonstrate the benefits of Flipped Learning 3.0.

"Traditional Learners" facing adjustment/adaptation challenges.

Finally, Flipped Learning 3.0 can be challenging for adult learners who are not familiar with technology or online learning. instructors and Adult Education organizations need to provide support to these learners to help them succeed.

Despite these challenges, Flipped Learning 3.0 has the potential to transform Adult Education. By personalizing the learning experience, encouraging collaboration and social learning, and using technology effectively, Flipped Learning 3.0 can help adult learners achieve their educational goals.

2.3 The Role of Technology in Adult Learning

Flipped Learning 3.0 represents an evolved iteration of the flipped classroom model, emphasizing not just the inversion of instructional time but also the personalization, flexibility, and adaptability of the learning experience. Central to this evolution is the role of technology, which intertwines with the framework's principles to create a more dynamic and responsive educational environment.

In the Flipped Learning 3.0 framework, technology serves as the backbone for content delivery. With advancements in digital platforms, educators have a broader array of tools at their disposal to create diverse instructional materials. Videos, interactive simulations, and digital readings can be seamlessly integrated, allowing learners to access a rich repository of content. This asynchronous access ensures that learners can delve into materials at their own pace, revisiting complex topics or accelerating through familiar ones, tailoring the learning experience to their individual needs.

Beyond mere content delivery, technology in Flipped Learning 3.0 facilitates a deeper level of engagement and interaction. Virtual classrooms, discussion forums, and collaborative digital workspaces enable real-time communication and collaboration among peers and educators. This interconnectedness ensures that the classroom's boundaries extend beyond physical walls, creating a continuous learning

environment where discussions, debates, and problem-solving can occur anytime and anywhere.

The adaptive nature of Flipped Learning 3.0 is further bolstered by technology through data analytics. Modern educational platforms can track learners' interactions, assess their performance in real-time, and provide immediate feedback. For educators, this data is invaluable. It offers insights into each learner's learning journey, highlighting areas of struggle and success. With this information, educators can adapt their instruction, providing additional resources or interventions where needed, ensuring that the learning experience remains responsive and personalized.

Additionally, the Flipped Learning 3.0 framework recognizes the importance of lifelong learning and the need for learners to be adept at navigating an ever-changing technological landscape. By integrating technology into the core of the learning experience, learners not only engage with the content but also develop digital literacy skills, preparing them for the demands of the modern world.

3 Flipped Learning 3.0: Core Concepts

The Flipped Learning 3.0 Framework is an instructional approach that aims to transform traditional classroom learning by flipping the traditional learning model. In a traditional classroom, learners receive instruction during class time and complete homework or assignments outside of class. However, in the Flipped Learning 3.0 model, this approach is reversed.

3.1 Definition and Key Principles

In the Flipped Learning 3.0 Framework, learners engage with instructional content outside of class, typically through active learning material, readings, or other online resources. This allows them to learn at their own pace and review the material as needed, in what is called the "Individual Learning Space". Class time is then used for active learning activities, such as discussions, group work, problem-solving, and hands-on projects. This is called the "Group Learning Space".

The key idea behind the Flipped Learning 3.0 Framework is to shift the focus of classroom time from passive consumption of information to active application and interaction. By providing learners with pre-lesson materials, they can come to class prepared and ready to engage in deeper discussions and collaborative activities that promote critical thinking and problem-solving skills.

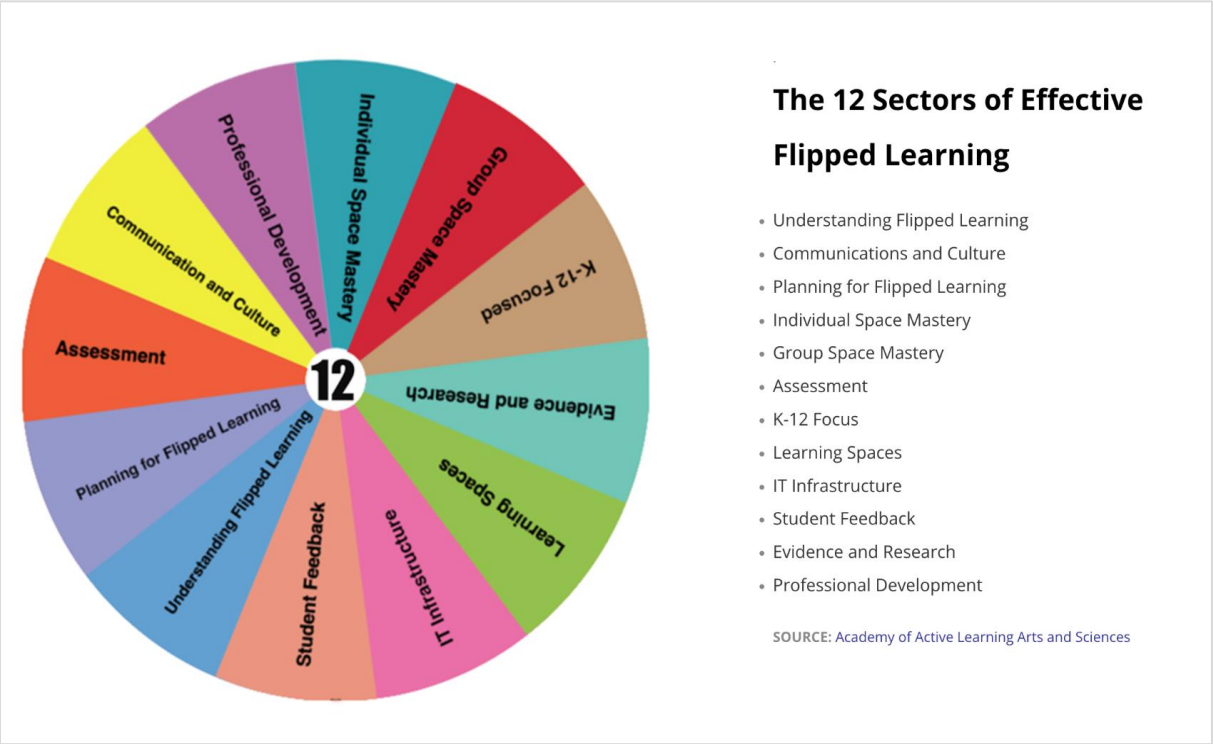
The Flipped Learning 3.0 Framework also emphasizes personalized learning and learner autonomy. Learners have the flexibility to learn at their own pace and revisit concepts as necessary. The role of the instructor shifts from a traditional instructor to a facilitator or coach who supports Learners in their learning journey and provides individualized guidance.

Benefits of the Flipped Learning 3.0 Framework include increased learner engagement, improved understanding and retention of content, development of higher order thinking skills, and the opportunity for teachers to provide targeted support to learners based on their individual needs.

Definition for Flipped Learning 3.0

> *Flipped Learning is a framework that enables educators to reach every learner student. The Flipped approach inverts the traditional classroom model by introducing course concepts before class, allowing educators to use class time to guide each student through active, practical, innovative applications of the course principles.*
>
> *Source: Updated Definition of Flipped Learning - Academy of Active Learning Arts and Sciences (aalasinternational.org)*

Flipped Learning 3.0 is a forward-thinking educational framework that moves traditional lectures outside the classroom, reserving in-class time for active engagement and problem-solving. This document outlines an instructional design based on the Flipped Learning 3.0 model, adhering to the classic instructional design approach. It references the "Global Elements of Effective Flipped Learning" (GEEFL), a guide developed from the contributions of educators like Jon Bergmann and Aaron Sams. This framework highlights key components adaptable to different educational settings, forming the foundation for flipped instructional design.



The Academy of Active Learning Arts and Sciences (AALAS) introduced twelve sectors to ensure comprehensive understanding and application of Flipped Learning. These sectors range from understanding the philosophy of Flipped Learning, fostering a collaborative culture, planning and allocating resources, ensuring learner autonomy, promoting group collaboration, applying appropriate assessment methods, catering to K-12 needs, designing conducive learning environments, ensuring robust IT support, gathering learner feedback, and basing practices on evidence and research to facilitating continuous professional development for educators. A more detailed explanation of these 12 fields is in the appendix.

3.2 Essentials of a Flipped Learning 3.0 Approach

Central to Flipped Learning's efficacy are several foundational pillars, namely the distinction between Individual and Group Learning Spaces, the strategic application of Bloom's Taxonomy, and the incorporation of Backward Design to ensure competency-based outcomes.

Individual and Group Learning Spaces

In the field of Flipped Learning 3.0, the demarcation between Individual and Group Learning Spaces is of central importance. The Individual Learning Space is where learners engage with content independently, often outside the classroom. This space is characterised by self-paced learning, allowing learners to consume content, such as videos or readings, at their own rhythm. It ensures that foundational knowledge is acquired before learners enter the classroom, setting the stage for deeper exploration.

Conversely, the Group Learning Space, typically within the classroom, is where active, collaborative learning occurs. Here, learners, facilitated by their educators, delve into discussions, problem-solving sessions, and collaborative projects. It's a dynamic environment where knowledge is not just absorbed but actively applied, debated, and contextualised.

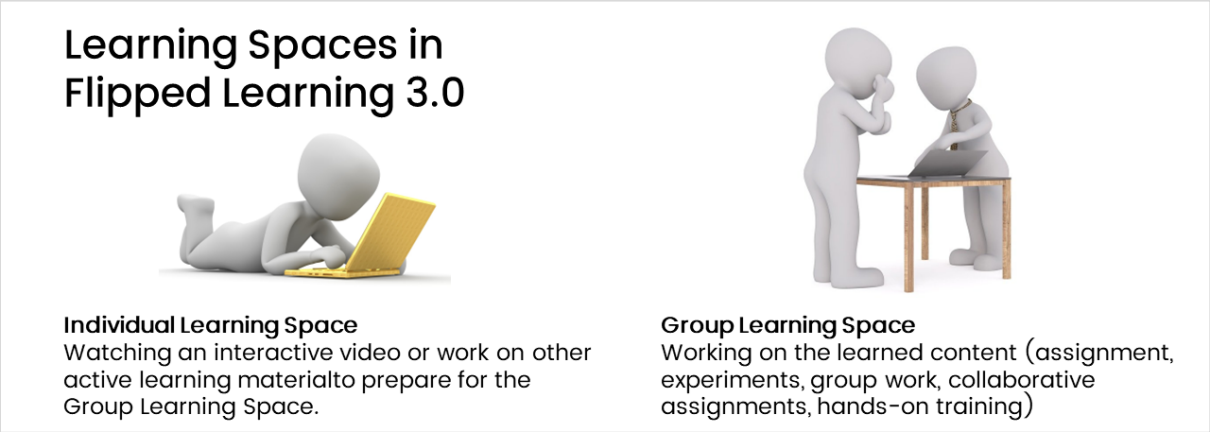


Figure 2: The two characteristic Learning Spaces of Flipped Learning 3.0 visualized.

Bloom's Taxonomy in Assigning Content

Bloom's Taxonomy, a hierarchical model of classifying learning objectives, plays a pivotal role in the Flipped Learning 3.0 approach. The lower levels of the taxonomy, such as 'Remembering' and 'Understanding', are best suited for the Individual Learning Space. Here, learners can absorb foundational knowledge, rewatching or revisiting content as needed to ensure comprehension.

The higher levels of Bloom's Taxonomy, including 'Applying', 'Analysing', 'Evaluating', and 'Creating', come to the fore in the Group Learning Space. With the foundational knowledge already in place, learners can engage in activities that challenge them to apply concepts in new contexts, analyse information critically, evaluate scenarios, or even create novel solutions or perspectives. By aligning content with Bloom's Taxonomy in this manner, Flipped Learning 3.0 ensures a progressive and structured learning journey.

Backward Design for Competency-Based Outcomes

Backward Design, a principle that starts with the end in mind, is integral to Flipped Learning 3.0. Instead of beginning with content, educators start by defining the desired learning outcomes or competencies they want learners to achieve. Once these outcomes are clear, educators design assessments to measure these competencies and only then decide on the content and instructional strategies to be employed.

This approach ensures that the learning experience is competency-based, focusing on tangible skills and knowledge that learners should possess upon completion. It aligns the entire educational process, from content delivery to assessment, with clear, predefined objectives, ensuring that every aspect of the learning journey is purposeful and directed.

3.3 Differences between Traditional Learning and Flipped Learning 3.0

Traditional Learning and Flipped Learning 3.0 are two different approaches. Traditional learning is a teacher-centered approach where the teacher delivers lectures to learners in a classroom setting. Flipped Learning 3.0 is a learner-centered approach where learners learn new knowledge outside of the classroom through digital learning content, such as videos, articles, and simulations. Class time is then used for in-depth learning activities, such as problem-solving, discussions, and projects.

Characteristic	Traditional Learning	Flipped Learning 3.0
Focus	Teacher-centered	Learner-centered
Learning environment	Classroom	Inside and outside of the classroom
Role of the teacher	Expert	Facilitator and expert
Role of the learner	Passive recipient of information	Active learner
Technology	Limited use of technology	Extensive use of technology
Assessment	Individual	Individual and collaborative

3.4 Benefits of Flipped Learning 3.0 for Adult Learners

Adult learners are more engaged and motivated when they have control over their own learning. Flipped Learning 3.0 allows learners to learn at their own pace and in their own learning style.

Studies have shown that Flipped Learning can lead to improved learning outcomes for adult learners. For example, one study found that learners in Flipped Learning courses outperformed learners in traditional courses by an average of 6% on standardized tests.

Adult learners often have busy work and family schedules, so Flipped Learning 3.0 gives them the flexibility to learn when and where they want.

Implementation of Flipped Learning 3.0 as the training approach encourages collaboration and social learning through online discussion forums, group projects, and other activities. This can be especially beneficial for adult learners, who often have a wealth of life and work experience to share with their classmates.

Flipped Learning 3.0 focuses on higher-order thinking skills, such as critical thinking and problem-solving. This is because class time is spent on activities that require learners to apply what they have learned to real-world problems.

Furthermore, Flipped Learning 3.0 offers adult learners a tailored learning experience with its emphasis on digital platforms and resources, Digital platforms can provide adaptive content, adjusting based on the learner's performance and needs. For instance, if an adult learner struggles with a particular concept, supplementary resources or tutorials can be recommended. This personalised approach ensures that learning is efficient, targeted, and responsive to each individual's requirements.

Flipped Learning 3.0, with its blend of flexibility, active engagement, personalisation, and promotion of lifelong learning, emerges as a potent model for Adult Education. It respects the unique challenges faced by adult learners while offering a robust framework that maximises learning outcomes.

4 Instructional Design for Flipped Learning 3.0

Instructional design (ID) is the systematic process of designing, developing, and delivering instructional materials and experiences, both digital and physical, to support learning. It is a science-based approach to creating learning experiences that are effective, engaging, and efficient.

Instructional design is needed for a number of reasons. First, it helps to ensure that learning experiences are aligned with specific learning objectives. Second, instructional design helps to create learning experiences that are accessible to all learners. Third, instructional design helps to create well-structured learning experiences that are cost-effective.

4.1 Understanding Instructional Design

At its core, instructional design is about understanding the needs of learners and developing a structured learning path to meet those needs. It involves identifying the learning objectives, understanding the audience's prior knowledge and potential challenges, and then crafting a curriculum or training program that bridges the gap between current understanding and desired outcomes.

In this document, we use the "Flipped Learning 3.0 Framework" to describe the "Flipped Instructional Design.

4.2 Key Components of Instructional Design in Flipped Learning 3.0

The identified key components of instructional design in Flipped Learning 3.0 are:

- Learning objectives: Flipped Learning 3.0 is designed to help learners achieve specific learning objectives. ID professionals work with instructors to identify the desired learning outcomes for each lesson or module.
- Learning activities: Flipped Learning 3.0 focuses on active learning activities, such as problem-solving, discussions, and projects. ID professionals design learning activities that will help learners achieve the learning objectives and develop the desired skills and knowledge.
- Assessment: Flipped Learning 3.0 uses a variety of assessment methods to measure learner progress and achievement. ID professionals design assessments that are aligned with the learning objectives and that provide feedback to learners.
- Technology: Flipped Learning 3.0 uses technology to deliver learning content and to facilitate learning activities. ID professionals choose and implement appropriate technologies for the learning environment and the needs of the learners.

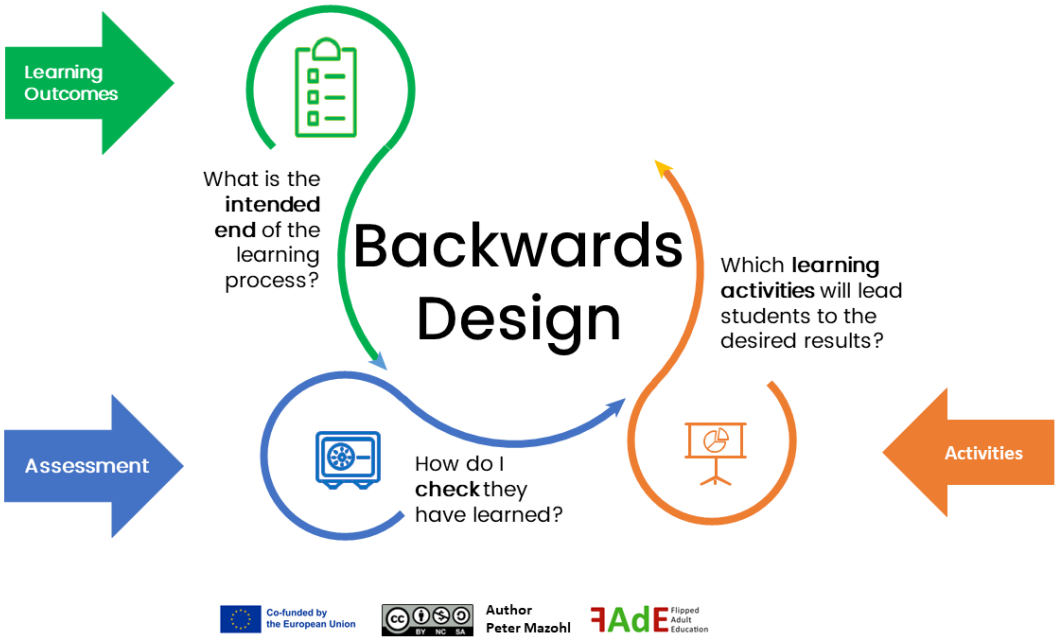
- **Content creation and curation**: Content creation involves developing new digital learning content, such as videos, articles, and interactive simulations. Content curation involves selecting and organizing existing digital learning content.

4.2.1 Learning Objectives

In the Flipped Learning 3.0 framework, the identification and definition of learning objectives are essential. These objectives serve as the foundation upon which the entire learning experience is built. By leveraging the "Backward Design" approach, educators begin with the end in mind, focusing on the desired outcomes or competencies that learners should achieve by the conclusion of the learning process.

4.2.2 The Role of Backward Design

Backward Design is a strategic approach in instructional planning where educators first define the desired outcomes or competencies. These are not mere statements but are articulated in terms of specific competencies. They paint a clear picture of what learners should know (knowledge), what they should be able to do (skills), and how they should apply and integrate these in real-world contexts (attitudes). Once these outcomes are crystalised, educators can then design the curriculum, instructional strategies, and assessments that align with these objectives.



Backward Design is a Top-down strategy, starting with the question on the “intended end” of the learning process = objectives. This is followed by the assessment which means “what should learners be able to do after the learning process?”. Finally, the necessary content to be able to manage the assessment is created.

4.2.3 Competency-Based Approach to Learning Objectives

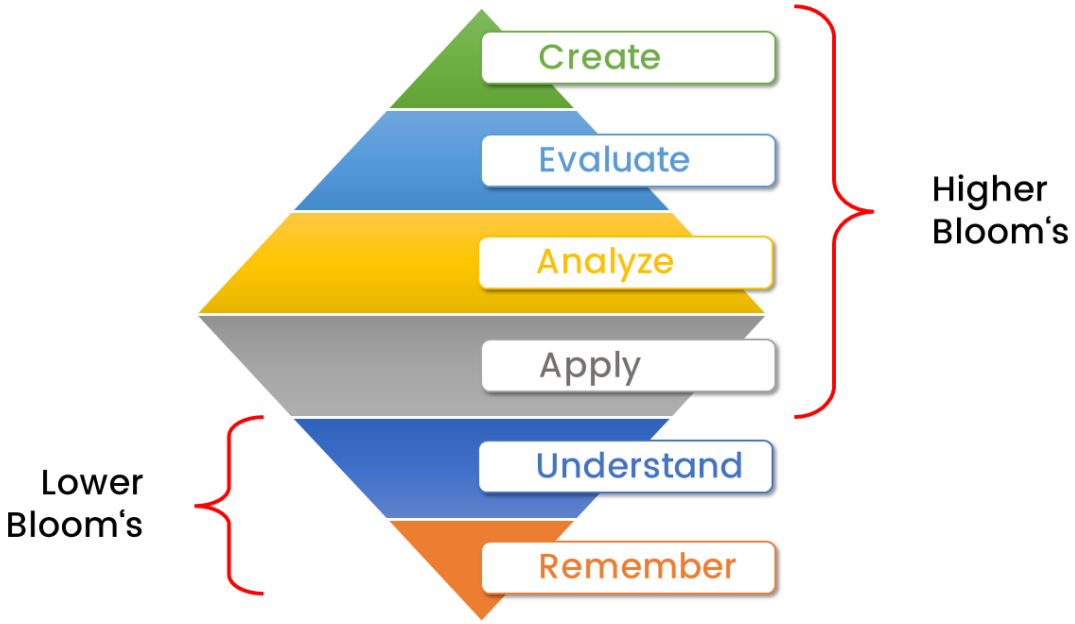
When we delve into the field of competencies, we find that learning objectives in Flipped Learning 3.0 are rooted in a competency-based approach. This approach accentuates the development of specific competencies that learners should master by the end of their educational journey. It's a holistic approach, intertwining knowledge, skills, and attitudes to empower learners to perform tasks effectively across varied contexts.

In this framework, "competence" is not just about theoretical knowledge. It encapsulates the practical application of this knowledge and the adaptability to face and overcome new challenges. The three pillars of competence in this context are knowledge, skills, and attitude.

4.2.4 Knowledge, Skills, and Attitude in Flipped Learning 3.0

"Knowledge" in Flipped Learning 3.0 is the bedrock of the learning experience. It pertains to the theoretical grasp of a subject, encompassing the foundational concepts, principles, and theories. In the Flipped Learning paradigm, this knowledge, often associated with "Lower Bloom's" items from the revised Bloom's Taxonomy, is primarily conveyed in the Individual Space.

"Skills", on the other hand, signify the practical proficiencies that learners hone over time. These are the abilities that allow learners to apply their foundational knowledge to achieve specific outcomes. In the Flipped Learning 3.0 framework, skills, linked with "Higher Bloom's" items from the revised Bloom's Taxonomy, find their application in the Group space.



Lastly, "Attitudes" play a pivotal role in shaping how learners perceive, engage with, and apply their knowledge and skills. It's about the values, beliefs, and dispositions that influence a learner's approach to tasks and interactions. Cultivating positive attitudes can significantly bolster a learner's overall competence, preparing them for both personal and professional challenges.

4.2.5 Interactive and Collaborative Activities

Interactive activities in the Flipped Learning 3.0 framework are designed to engage learners actively. Instead of being passive recipients of information, learners are encouraged to interact with the content, their peers, and the educator. These activities can range from hands-on experiments and simulations to problem-solving sessions and case study analyses. The primary goal is to ensure that learners are not just absorbing information but actively engaging with it, questioning it, and applying it in various contexts.

Flipped Learning 3.0 is characterised by collaboration. The model recognises that learning is often a social endeavour and that much can be gained from interactions with peers. Collaborative activities are therefore designed to harness the collective knowledge, perspectives and skills of the group.

In a Flipped Learning 3.0 classroom, learners might work together on group projects, engage in peer reviews, participate in debates, or collaboratively solve complex problems. These activities not only foster a deeper understanding of the content but also help in developing essential soft skills like communication, teamwork, and critical thinking. Moreover, by working together, learners can learn from each other's perspectives, challenge each other's assumptions, and arrive at a more nuanced understanding of the subject matter.

In the Flipped Learning 3.0 environment, interactive and collaborative activities are often intertwined. For instance, a group might collaboratively engage with an interactive digital simulation, discussing their observations, making predictions, and drawing conclusions together. This synergy ensures that learners are not only actively engaged with the content but also with each other, creating a rich, dynamic learning environment.

4.2.6 Assessment and Feedback Mechanisms

Developing tools and procedures to measure learner performance and achievement of learning objectives is an essential part of any instructional design process. Assessment methods should be aligned with the defined approach in the Backward Design, the developed recognition model, and the general approach to active learning.

Formative assessment is an ongoing process that helps instructors gather information about participants' learning progress and understanding throughout the instructional period. It aims to provide feedback to learners and instructors to improve the learning process.

Summative assessment is a comprehensive evaluation of one's learning at the end of a unit or course. Its purpose is to measure learners' understanding and knowledge after completing a unit or course. Summative assessments are used to decide grades, promotions, or certifications.

Micro conversations are brief interactions between instructors and learners and are designed to provide ongoing feedback and support for learning. They can be used to assess a learner's understanding of a concept, track their learning progress over time, and support their social-emotional well-being. Micro conversations are a powerful assessment tool because they allow for ongoing feedback and support, promote learner engagement and ownership of learning, and help instructors to identify and respond to the diverse needs of their learners.

Providing **feedback** is an important part of any learning process, and it is especially important in Flipped Learning. In such a setting, learners are responsible for learning new material outside of the classroom, and then using class time to engage in active learning activities. This means that it is essential for learners to have the opportunity to provide feedback on their learning experience, so that the instructor can make adjustments and ensure that all learners have successfully met the learning outcomes.

Learner feedback is provided in a variety of ways, such as through surveys, interviews, focus groups, and informal conversations. Additionally, it is used to improve the Flipped Learning process in a number of ways.

4.2.7 Content Creation and Curation

Flipped Learning 3.0 offers a dynamic and flexible approach to education, but its success hinges on the thoughtful creation and curation of content. By designing content that aligns with Bloom's Taxonomy and caters to both the Individual and Group Learning Spaces, educators can ensure that learners receive a holistic, engaging, and effective learning experience.

Content Creation and Curation in Flipped Learning 3.0: A Dual-Space Approach

Flipped Learning 3.0 represents a paradigm shift in the educational landscape, offering a stringent learner-centric approach that capitalises on the advantages of both digital and face-to-face instruction. Central to the success of this model is the strategic creation and curation of content. This content is bifurcated into two distinct

spaces: the Individual Space and the Group Learning Space. Each space serves a unique purpose and, when designed effectively, can significantly enhance the learning experience.

The Individual Learning Space: Laying the Foundations with Lower Bloom's Levels

The Individual Space in Flipped Learning 3.0 is where learners first encounter new information. This space is primarily digital, allowing them to engage with content asynchronously, at their own pace. The content curated for this space should be rooted in the lower levels of Bloom's Taxonomy, i.e., knowledge and understanding.

Content creation for the Individual Space will include interactive explanatory videos, readings combined with related assignments, multimedia-based and interactive learning content and interactive simulations. These materials aim to introduce foundational concepts, ensuring that learners have a solid grasp of the basics before proceeding to more complex tasks. Given the self-paced nature of this space, it's crucial that content is clear, concise, and easily digestible. Interactive quizzes built in as self-evaluations and formative assessments can also be integrated to allow learners to test their understanding and receive immediate feedback.

The Group Learning Space: Elevating Understanding through Collaboration

Once learners have engaged with the foundational content in the Individual Space, they transition to the Group Learning Space. This space is typically a classroom or collaborative online environment where learners come together to delve deeper into the content. Here, the focus shifts to the higher levels of Bloom's Taxonomy: application, analysis, synthesis, and evaluation.

In the Group Learning Space, content curation involves designing activities that promote critical thinking, problem-solving, and collaboration. This might include for example group projects, case study analyses, debates, role games, and peer teaching. The role of the educator in this space is not to introduce new content, but to facilitate discussions, pose challenging questions, and guide learners as they apply and extend their understanding.

Balancing Creation and Curation

While content creation is essential, educators must also become adept at content curation. The vast digital landscape offers a plethora of resources that can be integrated into the Flipped Learning 3.0 model. Curating high-quality, relevant materials can save time and provide learners with diverse perspectives. However, it's crucial that curated content aligns with the learning objectives and is appropriate for the intended space (Individual or Group).

4.2.8 Technology

Technology plays a vital role in Flipped Learning 3.0, both in the Individual and the Group Learning Space.

Multiple Devices

The term "multiple devices" refers to all the possible devices that could be used to display content in a Flipped Learning 3.0 experience. Course providers need to create content that can be used on all these devices. If certain content causes display problems on a particular device, learners must be informed in advance. In most cases learners use devices: such as Desktop computers, laptops, tablets, smartphones, smartboards, and Chromebooks.

Figure 3: Selection of common devices used in Flipped Learning Training 3.0 courses (source: Pexels, CC0 license).

Individual Learning Space.

In this learning space the instructors deliver instructional materials, such as interactive video lectures, articles, multimedia-based and interactive material and simulations. Furthermore, they must provide opportunities for self-assessment and practice as well as personalized feedback and support.

- Access to the learning platform:
  Learners are responsible for learning new material outside of the classroom. This means that they need to have access to high-quality digital learning

content, such as interactive videos, articles, specific assignments, and simulations.

- Devices for viewing and interacting with digital content
  Learners need to have devices that allow them to view and interact with digital learning content. This could include a computer, tablet, or smartphone.

- Tools for creating and submitting assignments
  In Flipped Learning 3.0, learners may be asked to complete assignments that involve creating and submitting digital content. This could include writing a paper, creating a video, or designing a presentation. Learners need to have access to the necessary tools and software for completing these assignments.

Group Learning Space

This learning space facilitates collaboration and communication and must support collaborative learning activities, such as problem-solving, discussions, and projects. Finally, it must provide opportunities for peer feedback and review.

- Technical equipment for the on-site training
  A large-screen display is useful for sharing instructional materials and for collaborating on group projects. A Whiteboard and/or projector should be available and supported to be used by learners. These are used to display notes, results, created content and ideas during group discussions and presentations.

- Devices for collaboration and communication
  In Flipped Learning 3.0, learners are encouraged to collaborate and communicate with each other. This could involve working on group projects, participating in online discussions, or giving and receiving feedback on each other's work. Learners need to have access to devices and software that allow them to collaborate and communicate effectively.

- Tools for displaying and sharing content
  In the group learning space, learners may need to display and share content with each other. This could involve displaying a video on a projector, sharing a presentation on a whiteboard, or working together on a document on a computer. Learners need to have access to the necessary tools and equipment for displaying and sharing content.

A social-economic aspect is the fact that not all learners have equal access to technology. Instructors should be mindful of this and provide alternative options for learners who do not have access to the necessary equipment. For example,

instructors can provide learners with printed copies of instructional materials or allow them to use their own devices.

The same applies as far as inclusive approaches to the training are concerned. Possible disabilities of the learners as well as physical impairments (as these can occur with older learners for example), must be included in the training concept within the framework of instructional design.

4.3 Tailoring Instructional Design for Adult Learners

Instructional design encompasses the systematic approach of formulating and delivering learning experiences that captivate and educate. When tailoring instruction for adult learners, it's paramount to factor in their distinct requirements and attributes.

Understanding Adult Learners

Adult learners exhibit a keen motivation to assimilate knowledge pertinent to both their personal and professional spheres. They contribute a vast reservoir of experiences and insights to the educational setting. Furthermore, they exhibit a strong inclination to apply their newfound knowledge to practical scenarios. A notable trait of adult learners is their self-directed approach to learning, where they exhibit a preference for steering their educational journey themselves.

Tailoring Instructional Design

The learning material's relevance to the personal and professional contexts of the learners is essential. Active engagement is crucial, and the instructional activities should not only be immersive but should also challenge learners, enabling them to implement their learnings.

A degree of autonomy, allowing learners to dictate the trajectory of their learning, is crucial. The design should be cognizant of and integrate the learners' previous knowledge and experiences. Lastly, the instructional blueprint should be versatile, catering to the diverse learning modalities and requirements of the learners.

Strategies for Tailoring Instructional Design

Introducing new ideas becomes more effective when anchored to real-world instances, enabling learners to discern the material's relevance. The design should encompass activities like case studies, simulations, role-playing, and group tasks, allowing learners to transpose their learnings to practical contexts.

Granting learners the discretion to choose their learning activities, the sequence of topics, or even their assessment methods can be beneficial. Activities should be structured in a way that acknowledges the pre-existing knowledge of learners. This can be achieved through preliminary assessments or by fostering an environment

where learners share insights. Presenting learners with varied learning pathways, be it online modules, self-directed content, or a blend of both, can be advantageous.

5 Implementing Flipped Learning 3.0 in Adult Education

Flipped learning 3.0 prioritises active, in-class engagement, while the acquisition of foundational knowledge is shifted outside the classroom. For adult learners, often juggling professional commitments, personal responsibilities, and the desire for continuous learning, this approach offers flexibility, autonomy, and a tailored learning experience. In this chapter we will provide the readers with facts, experience, and recommendations in context with implementing Flipped Learning 3.0. This covers benefits, and practical strategies for effectively implementing Flipped Learning 3.0 in the field of Adult Education, ensuring that learning is not just informative but truly transformative.

5.1 Strategies for Adult Education Organizations

Tailoring instructional design for adult learners is not just about adjusting content; it's about recognising and respecting the unique characteristics, experiences, and needs of adults. By creating a learning environment that is relevant, flexible, interactive, and respectful of their autonomy and experiences, instructional design can truly resonate with adult learners, making their educational journey both meaningful and impactful.

What Adult Education Organisations should know

Adult learners, often referred to within pedagogical circles as 'andragogic' learners, differ significantly from younger, 'pedagogic' learners. They bring a wealth of experiences, established beliefs, and specific needs to the learning environment.

Their motivations for learning are often intrinsic, rooted in personal or professional aspirations, and they typically seek education that is directly relevant and applicable to their lives. Recognising these unique characteristics is the first step in tailoring instructional design for adult learners.

Relevance and Practicality

Adult learners are goal-oriented. They often enrol in educational programmes to achieve specific personal or professional objectives. In many cases, they even are not interested in any certificate – they simply want to learn something because they are interested in the subject or want to get specific skills.

The experience from language trainings go in this sense, where – for example - the intention is to be able to converse abroad or to be able to speak with the son-in-law from another European country in his mother tongue. Therefore, instructional design for Adult Education must ensure that the content is immediately relevant. Courses should be structured around real-world applications, allowing learners to see the direct impact and utility of what they're learning.

Leveraging Prior Experience

Adults come to the learning environment with a rich tapestry of life experiences. Effective instructional design will tap into this reservoir, integrating prior knowledge and experiences into the learning process. This not only makes the content more relatable but also fosters a deeper understanding as learners can contextualise new information within their existing knowledge framework.

Self-directed Learning

Adult learners value autonomy. They prefer to take charge of their learning journey, setting their own goals, and determining the pace and approach that suits them best. Instructional design should, therefore, provide opportunities for self-directed learning. This could be through offering a range of resources for learners to explore independently or providing flexible learning pathways that learners can navigate based on their interests and needs.

Interactive and Collaborative Learning

While adult learners value autonomy, they also benefit immensely from interactive and collaborative learning experiences. They often learn best through discussion, debate, and collaborative problem-solving. Instructional design should incorporate opportunities for peer interaction, group projects, and discussions, allowing learners to share their perspectives, challenge each other's views, and collaboratively construct knowledge.

Create a supportive learning environment.

Adult learners often have busy work and family schedules. Instructional designers should create a supportive learning environment that is flexible and accommodating.

Immediate Feedback

Given their goal-oriented nature, adult learners appreciate timely feedback. They want to know how they're progressing, where they might be going wrong, and how they can improve. Instructional design for Adult Education should incorporate mechanisms for immediate and constructive feedback, allowing learners to adjust their strategies and improve continuously.

Flexibility in Delivery

Considering the multiple responsibilities that adult learners often juggle, flexibility is crucial. Whether it's offering courses in modular formats, providing online learning options, or allowing for asynchronous participation, instructional design should be flexible enough to accommodate the varied schedules and commitments of adult learners.

5.1.1 Infrastructure and Technology Considerations

The training organisation must provide a certain level of infrastructure – otherwise they will fail in the training implementation.

Digital Learning Platforms

To facilitate the 'flipped' aspect of Flipped Learning 3.0, Adult Education organisations need a robust digital learning platform or Learning Management System (LMS). This platform will host the content that learners engage with outside of the classroom, such as video lectures, readings, and interactive modules. Platforms like Moodle, Blackboard, or Canvas are popular choices.

The authors recommend MOODLE as a versatile and flexible LMS. Nevertheless, the distribution of content and collaboration can be enabled with simple web platforms, like WordPress.

Recording and Editing Software

For educators to create their video lectures or tutorials, they will require recording software and video editing tools. Tools like Camtasia or OBS Studio can capture both screen recordings and webcam footage.

Additionally, other tools enabling the development of multimedia-based and interactive training content must be available. Furthermore, the content creators need the skills and appropriate software to create interactive videos out of the recorded material.

Interactive Tools

To make online content engaging, tools that allow for interactivity are essential. This could include quiz software, interactive simulation tools, or platforms like Kahoot and Quizlet that allow for gamified learning experiences.

The authors recommend various freeware tools, that are affordable also for small Adult Education organisations. These include the H5P framework, the online tool animator and the CANVA suite.

Collaboration and Communication Tools

Given the emphasis on collaborative learning in the Flipped Learning 3.0 model, tools that facilitate communication and collaboration are crucial. Platforms like Zoom or Microsoft Teams can be used for virtual discussions, group work, or even full-class sessions. Additionally, tools like Google Workspace or Microsoft Office 365 can facilitate collaborative document creation and editing.

Reliable IT Infrastructure

A strong and reliable IT infrastructure is foundational, especially in the on-site training. This includes high-speed internet connectivity, sufficient server capacity (if hosting content in-house), and regular backup solutions. Given the reliance on online resources in Flipped Learning 3.0, ensuring that learners and educators can access content reliably and quickly is paramount.

Mobile Learning Solutions

Considering the flexibility often sought by adult learners, offering mobile learning solutions can be beneficial. This means ensuring that digital content is accessible and optimised for tablets and smartphones, possibly through dedicated apps or mobile-responsive web platforms.

This item addresses the problem of “Multiple Devices”. This means the enabling of displaying all content on all possible devices, starting from Laptops until smart phones.

5.1.2 Training and Professional Development for Educators

Within the framework of Effective Flipped Learning, various sectors ensure the holistic implementation of the model. One such integral sector is "Professional Development." This sector underscores the importance of equipping educators with the knowledge, skills, and tools necessary to effectively implement Flipped Learning 3.0.

Here are some issues that must be considered by Adult Education organisations to keep the quality level and to follow the continuous development of Flipped Learning 3.0.

- **Complexity of Implementation**
  Flipped Learning 3.0, with its blend of out-of-class content delivery and in-class active learning, requires educators to adopt new teaching strategies, integrate technology, and design interactive classroom activities. Without proper training, educators might struggle to effectively navigate and implement this multifaceted approach.

- **Optimising Technology Use**
  The Flipped Learning 3.0 model is heavily reliant on technology, from digital learning platforms to interactive tools. Professional development ensures that educators are not only familiar with these tools but can also leverage them to enhance the learning experience.

- **Addressing Diverse Learner Needs**
  Adult learners come with varied backgrounds, experiences, and learning preferences. Training equips educators with strategies to cater to this diversity,

ensuring that all learners, regardless of their starting point, can benefit from the Flipped Learning 3.0 approach.

- **Continuous Evolution of the Model**
  As with any educational model, Flipped Learning 3.0 is not static. It evolves based on research, technological advancements, and feedback from educators and learners. Continuous professional development ensures that educators stay updated with the latest best practices and innovations in the field.

- **Building Confidence and Efficacy**
  For educators accustomed to traditional teaching methods, transitioning to Flipped Learning 3.0 can be daunting. Training and professional development provide them with the knowledge and skills needed, boosting their confidence and ensuring that they can effectively facilitate the learning experience.

This is not a comprehensive list but addresses the major issues addressing the professional development of instructors.

5.1.3 Evaluating the Effectiveness of Flipped Learning Programs

Evaluating the effectiveness of flipped learning programs is crucial for ensuring that learners are learning the desired material and that the program is meeting its goals. Here are three approaches to evaluating flipped learning programs, both for instructors and learners. The authors recommend using all three methods in the first turn of the training and use them repetitively due to the fact that environmental and other conditions may change.

The three proven approaches to evaluating the effectiveness of flipped learning programs for instructors include all primary involved stakeholders of the training.

- **Survey instructors**
  Instructors can be surveyed about their perceptions of the flipped learning program, such as their satisfaction with the program, their learners' learning outcomes, and their own professional development.

- **Analyse learner learning outcomes**
  Instructors can analyse learner learning outcomes, such as test scores, assignments, and projects, to assess the effectiveness of the flipped learning program.

- **Observe classroom instruction**
  Instructors can observe classroom instruction to assess the level of learner engagement, the quality of teacher-learner interactions, and the use of effective teaching practices.

- Additionally, they may use **action research methods** during the on-site training as well an evaluation of learners' feedback, especially during the Individual Learning Space phases. **Focus Group Discussions**, where small groups of learners and instructors discuss their experiences allow for a deeper insight into specific aspects of the program and can uncover nuanced insights. **Post-Course Interviews** with both instructors and learners also proved to be useful. This method allows for a more personalised feedback process and can uncover individual challenges or successes that might not emerge in group discussions or surveys.

Evaluating the effectiveness of Flipped Learning programs requires a multi-faceted approach, considering learner the perspectives of both instructors and learners. By employing a combination of feedback mechanisms, assessments, and long-term tracking, educators can gain a comprehensive understanding of the program's impact and areas for enhancement.

5.2 Tips for Instructors and Training Course Developers

In the dynamic world of education and training, instructors and course developers play pivotal roles in shaping impactful learning experiences. Their expertise, approach, and adaptability can significantly influence the success of any training program. Here are some general tips to guide instructors and training course developers in their endeavours.

5.2.1 Engaging Adult Learners

Engaging adult learners requires a nuanced approach, recognising their unique experiences, motivations, and learning preferences. Tailoring educational experiences to resonate with their real-world contexts and aspirations is pivotal for effective engagement and meaningful learning outcomes.

Besides the well-known standard methods (like Create a positive learning environment, make the learning relevant, provide opportunities for active learning, provide feedback and support, or recognize and celebrate learners' successes), the training teams of the partners had good experience with these three approaches.

- **Use a variety of teaching methods**
  Adult learners have different learning styles and preferences. Use a variety of teaching methods to reach all learners.

- **Be flexible**
  Adult learners often have busy work and family schedules. Be flexible with due dates and assignments.

- **Offer opportunities for choice**
  Give adult learners choices in how they learn and demonstrate their learning.

5.2.2 Incorporating Real-world Applications

Incorporating real-world applications into training is essential, especially for adult learners, as it bridges the gap between theoretical knowledge and practical utility. Besides the mentioned need this approach is an essential element in Flipped Learning as it implements active learning. The authors selected some examples to explain how to integrate real world into the training.

1. **Case Studies**
   Use real-life scenarios or past events relevant to the topic. For instance, in a business management course, instructors could discuss the strategic decisions made by companies like Apple or Tesla during pivotal moments in their histories.

2. **Simulations**
   Create mock scenarios that mimic real-life challenges. For a sales training, participants could engage in role-playing exercises where they navigate customer objections or pitch products.

3. **Field Visits**
   Organise trips to relevant sites or companies. For an architecture course, visiting construction sites or landmark buildings can offer practical insights.

4. **Problem-solving Sessions**
   Present real-world challenges and encourage learners to brainstorm solutions. In a finance course, instructors could present a company's financial dilemma and ask participants to analyse and suggest remedies.

5. **Project-based Learning**
   Assign projects that require learners to apply their knowledge in real-world contexts. For instance, in a graphic design course, learners could be tasked with designing a brochure for a hypothetical client.

6. **Role games**
   They support learners mainly in language learning. They can be prepared easily in the Individual Learning Space and executed in the Group Learning Space.

5.2.3 Continuous Feedback and Iteration

Continuous feedback and iteration are essential in FL 3.0 because they allow instructors to permanently improve the flipped learning process and ensure that all learners are successfully in meeting learning outcomes.

Feedback is essential for learning. It helps learners to identify their strengths and weaknesses, and to make necessary adjustments to their learning strategies. In FL 3.0, instructors can collect feedback from learners in a variety of ways, such as through surveys, interviews, and focus groups. Feedback and summarising the learning results should be a standard at each end of an on-site learning session (in the Group Learning Space).

Iteration is the process of making changes to a system or process based on feedback. In FL 3.0, instructors can use feedback from learners to make changes to the flipped learning process, such as the instructional materials, learning activities, and assessments.

5.2.4 Other considerations

Besides the periodized tips, the authors would also like to share their experience in common issues with you.

Stay Updated

The world of education is ever evolving. New methodologies, technologies, and insights emerge regularly. It's essential for instructors and developers to stay updated with the latest trends, research, and best practices in their field.

Know Your Audience

Understanding the needs, backgrounds, and learning preferences of your target audience is crucial. Tailor your content and delivery methods to resonate with and engage your learners effectively.

Embrace Technology

The digital age offers a plethora of tools and platforms that can enhance the learning experience. From interactive modules to collaborative platforms, leverage technology to make your training more engaging and accessible.

Feedback is Gold

Always seek feedback from your learners. It provides invaluable insights into what's working and what needs improvement. Regularly update and refine your courses based on this feedback.

Interactive Learning

Engage learners actively. Incorporate discussions, group activities, and hands-on tasks. Active participation often leads to better retention and understanding.

Clear Objectives

Every training session or course should have clear, defined objectives. Ensure that learners are aware of these objectives and that the content aligns with them. In the

supplementary document "Flipped Instructional Design", the project team describes the content development using a training framework.

Flexibility is Key

Not all learners are the same. Some might grasp concepts quickly, while others may need more time. Be flexible in your approach, offering additional resources or varying your teaching techniques to cater to diverse needs.

Continuous Self-Improvement

Just as learners are on a journey of education, instructors and developers should also be on a continuous path of self-improvement. Attend workshops, take courses, and seek mentorship to enhance your skills.

Practical Application

Theory is essential, but practical application cements learning. Ensure that your training includes real-world examples, case studies, and opportunities for learners to apply their knowledge.

Build a Supportive Environment

A positive, supportive learning environment can make a significant difference. Encourage questions (for example with micro-conversations) to fostering open discussions and ensure that every learner feels valued and heard.

6 Challenges and Solutions

Every endeavour has its own unique challenges, which require creative solutions. By carefully studying these challenges and their solutions, we can gain a comprehensive understanding of them, which will prepare us to solve them effectively.

6.1 Potential Hurdles in Implementing Flipped Learning 3.0 for Adult Education

The experience exchange between the authors has highlighted the following hurdles and problem areas:

Technological Barriers

While Flipped Learning 3.0 heavily relies on technology, not all adult learners may be tech-savvy. This can pose challenges in accessing, navigating, and benefiting from digital resources and platforms.

Time Constraints

Adult learners often juggle multiple responsibilities, including work, family, and personal commitments. Finding time to engage with pre-class content can be challenging for them.

Varied Learning Paces

Adult learners come with diverse backgrounds and experiences, leading to varied learning paces. Ensuring that all learners are on the same page can be a challenge for instructors.

Resistance to Change

Some adult learners might be accustomed to traditional learning methods and may resist or be sceptical about the flipped approach, preferring face-to-face lectures over digital content.

Limited Access to Resources

Not all learners may have consistent access to the necessary resources, such as high-speed internet or suitable devices, which are essential for a flipped learning environment.

Lack of Immediate Support

When engaging with content independently, learners might encounter doubts or challenges. The absence of immediate support or clarification can hinder their learning process.

Lack of awareness and understanding

Many adult learners and trainers may not be familiar with Flipped Learning 3.0 or its

benefits. This lack of awareness and understanding can make it difficult to implement Flipped Learning 3.0 successfully.

Ensuring Engagement

Keeping adult learners consistently engaged with the content, especially when they are learning independently, can be a challenge. It requires high-quality, relevant, and interactive content.

Assessment Difficulties

Flipped Learning 3.0 emphasises active application and collaboration. Designing assessments that accurately measure these aspects, rather than just theoretical knowledge, can be challenging.

instructor Preparedness

Not all instructors may be familiar or comfortable with the Flipped Learning 3.0 approach. They might require training and resources to effectively implement this model.

Feedback Mechanisms

Given the autonomous nature of Flipped Learning 3.0, establishing effective and timely feedback mechanisms to guide and support learners becomes crucial, yet challenging.

6.2 Overcoming Technological Barriers

In this context, we have to distinguish between the organisations with their instructors and the affected learners.

6.2.1 Adult Education organizations

- **Provide training and support** for instructors and learners. Adult Education organizations can provide training and support for instructors and learners on how to use the technology required for flipped learning. This can include training on how to use learning management systems, video conferencing software, and other online tools.
- **Invest** in affordable **technology**. Adult Education organizations can invest in affordable technology for instructors and learners. This could include providing laptops, tablets, or other devices to learners who need them.
- **Provide user-friendly Platforms**. Choose learning management systems and digital tools that are intuitive and user-friendly. This reduces the learning curve for both instructors and learners.

6.2.2 Instructors

- Be flexible and understanding. Instructors should be flexible and understanding with learners who may be struggling with the technical aspects of flipped learning. This could involve providing extra help, support, or offering alternative assignments or activities.
- Use a **variety of teaching methods**. Instructors should use a variety of teaching methods to reach all learners, including those who may have difficulty with technology. This could involve using traditional classroom-based methods, as well as online and blended learning methods.
- Create a **supportive learning environment**. Instructors should create a supportive learning environment where learners feel comfortable asking questions and seeking help. This can help learners to overcome their technical challenges and succeed in their learning.

6.2.3 Learners

- **Ask for help** when needed. Learners should not be afraid to ask for help from their instructors or classmates if they are struggling with the technical aspects of flipped learning. There are many people who are willing to help, and it is important to remember that you are not alone.
- Take advantage of available resources. Many Adult Education organizations offer resources to help learners overcome technical barriers. This could include access to online tutorials, help desks, or one-on-one support.
- Even if it is hard to do so, be **patient and persistent** during the complete learning experience. Overcoming technical barriers takes time and effort. Be patient with yourself and don't give up.

6.3 Addressing Resistance and Scepticism

Resistance and scepticism are natural reactions to change, especially in the realm of education where traditional methods are deeply ingrained. However, with proactive communication, support, and a focus on the tangible benefits of the new approach, Adult Education organisations and instructors can effectively address and minimize these challenges, paving the way for a more receptive and enthusiastic learner base.

6.3.1 For Adult Education Organisations and Instructors

1. Foster an environment where concerns and scepticisms can be openly discussed. Understanding the root of resistance can help in addressing it effectively. We call this “to implement an open dialogue”.

2. Another option is to showcase "**Success Stories**". Highlighting examples of learners who have benefited from the new approach can serve as powerful testimonials. Real-world success stories can often alleviate doubts.
3. Invest in small-scale **Pilot Programs**. Before a full-scale implementation, run pilot programs. This allows instructors and learners to experience the benefits firsthand, potentially reducing resistance for the broader rollout.
4. Make **Continuous Training for Instructors** a permanent principle in the organisation. Ensure that instructors are well-equipped and confident in the new methodologies. A instructor's enthusiasm and proficiency can be contagious, helping to reduce learner scepticism.
5. Work with broadly spread **Feedback Mechanisms**. Establish robust feedback mechanisms. When learners and instructors feel their concerns are heard and acted upon, it can reduce resistance.
6. Creatively highlight the benefits of Flipped learning 3.0-based training. Clearly communicate the advantages of the new approach, emphasising how it caters to adult learners' unique needs and lifestyles.
7. Involve all types of Stakeholders from the begin of implementing Flipped Learning programs. Engage instructors and even learners in the decision-making process. When they feel a sense of ownership and involvement, resistance can diminish.

6.3.2 For Learners

All the mentioned items are part of the twelve sectors of efficient Flipped Learning.

1. Organise sessions that **introduce learners** to the benefits and mechanics of the new approach. Familiarity can often reduce apprehension.
2. Provide the **best support** for learners. Ensure that learners have access to resources and support, especially in the initial stages. This can include mentorship programs, help desks, or additional resources.
3. **Use flexibility as the key to teaching.** Recognise that change can be overwhelming for some. Offer flexible learning paths, allowing learners to transition at their own pace.
4. Start encouraging collaboration from the beginning. Foster a collaborative learning environment where learners can share their experiences, challenges, and solutions related to the new approach.

6.4 Ensuring Accessibility and Inclusivity

Accessibility and Inclusion are well described in the Flipped Instructional Design document which is a base for this summary. The authors recommend the following approach to this topic.

Understanding the Need

At the heart of accessibility and inclusivity lies the recognition that learners come with diverse backgrounds, abilities, and needs. In the context of Flipped Learning, where much of the content is accessed independently, it's crucial to ensure that all learners can engage with the material without barriers.

Multiple Content Formats

Offer learning materials in various formats. For instance, if a video lecture is provided, also offer a transcript or an audio version. This ensures that learners with visual or hearing impairments can access the content in a format that suits them.

User-friendly Platforms

Choose digital platforms that are intuitive and have built-in accessibility features, such as screen readers or the ability to adjust font sizes and contrasts. Platforms should comply with accessibility standards like the Web Content Accessibility Guidelines (WCAG).

Language Considerations

For a diverse cohort, offer content in multiple languages or provide translation tools. This ensures that non-native speakers can engage with the material effectively. This might be essential in context with trainings including adults with migration background.

Flexible Pacing

Recognise that learners might need different amounts of time to process and understand content. Allow for flexible pacing, so learners can move through the material at a speed that's comfortable for them.

Diverse Assessment Methods

Not all learners express their understanding in the same way. Offer a variety of assessment methods, from written assignments to oral presentations or practical demonstrations, catering to different learning and expression styles.

Physical Accessibility

Since the Flipped Learning model involves in-person sessions held in the Group Learning Space on-site, ensure that the physical locations are accessible to everyone, including those with mobility challenges.

Regular Feedback

Establish mechanisms for learners to provide feedback on accessibility and inclusivity issues. This ensures that any barriers or challenges they face can be addressed promptly.

Training for Instructors

Equip instructors with the knowledge and skills to create inclusive learning environments. This includes understanding different learning needs, using inclusive language, and being aware of potential barriers learners might face.

7 The Future of Flipped Learning 3.0 in Adult Education

Flipped Learning 3.0 framework, an evolution of the original flipped classroom model, has been making waves in the educational landscape. With its emphasis on leveraging technology to deliver content outside the classroom and using classroom time for active, collaborative learning, it holds particular promise for Adult Education. As we look to the future, several trends and developments suggest that Flipped Learning 3.0 will play an even more significant role in shaping Adult Education.

Unfortunately, many people working in education are not aware of the potential and possibilities of Flipped Learning.

On the other hand, the authors met people who, confusing the Flipped Learning 3.0 framework with the Flipped Classroom, consider the development of this approach to teaching and learning as completed, under the motto: "We already know that".

The team has summarised here some ideas and possible future developments that can subsequently be topics in the further development of Flipped Learning and the associated research.

The Rise of Lifelong Learning

In an ever-evolving global economy, the need for continuous upskilling and reskilling has become paramount. Adults are increasingly seeking educational opportunities throughout their lives, not just in their younger years.

Flipped Learning 3.0, with its flexible and learner-centric approach, is perfectly poised to cater to these lifelong learners, offering them the convenience and efficiency they need.

Technological Advancements

As technology continues to advance, the tools and platforms available for Flipped Learning 3.0 will also evolve. We can expect more immersive learning experiences using augmented reality (AR) and virtual reality (VR). These technologies can bring complex topics to life, offering adult learners practical, hands-on experiences from the comfort of their homes.

Personalisation and AI

Artificial Intelligence (AI) will play a significant role in personalising learning experiences. AI-driven platforms can analyse a learner's progress and preferences, tailoring content delivery to their specific needs. For adult learners, who often juggle multiple responsibilities, this personalised approach ensures efficiency and relevance in their learning journey.

Collaborative Learning Environments

The future of Flipped Learning 3.0 in Adult Education will see a greater emphasis on collaborative learning. Digital platforms will facilitate global collaborations, allowing learners from different parts of the world to work together on projects, share insights, and learn from diverse perspectives.

Recognition of Informal Learning

As Flipped Learning 3.0 gains traction, there will be a growing recognition of informal learning. Platforms will likely integrate features that allow learners to document and showcase their learning from various sources, not just formal courses. This holistic approach recognises the varied ways in which adults learn throughout their lives.

Challenges Ahead

While the future looks promising, there will be challenges. Ensuring equitable access to technology, addressing the digital divide, and training educators to leverage Flipped Learning 3.0 effectively will be crucial. Additionally, as the model becomes more prevalent, maintaining the quality of content and ensuring rigorous assessment methods will be vital.

8 References

These references have been used to compile the present document. It must be remembered that the research is currently still focused on the Flipped Classroom, which is a preliminary stage of the Flipped Learning 3.0 framework. The authors have brought in many of their practical experiences from the FL 3.0 courses they have held. Please take into account that we list only a brief selection of the material used.

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8.3 Flipped Learning 3.0: Core Concepts

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Ceccarelli, C., Mendes, J., & Savchev, M. (2021, March 12). Multiple Devices (Version 2.0). DOI: 10.13140/RG.2.2.32945.10084. Retrieved from https://www.intermedia-project.eu/web/?sdm_process_download=1&download_id=478

9 Appendices

Here we provide additional information that is not essential to the main body of the document but may be helpful to readers. The glossary of terms is a list of definitions of key terms used in the document.

9.1 Glossary of Terms

Backward design

This term addresses a curriculum design approach that starts with the desired outcomes of learning and then works backward to plan the learning experiences and assessments that will help learners achieve those outcomes.

Bloom's Taxonomy

Bloom's Taxonomy is a classification of learning objectives that organizes educational goals into three domains: cognitive, affective, and psychomotor.

The cognitive domain involves mental skills, such as knowledge comprehension, application, analysis, synthesis, and evaluation. This addresses knowledge, understanding, applying, analysis, synthesis, and evaluation.

The affective domain involves emotions, attitudes, and values. Lastly, the psychomotor domain involves physical skills and movements.

Group Learning Space

A group learning space is a physical or virtual space that is designed to support collaborative learning activities. It is a space where learners can come together to work on projects, discuss ideas, and learn from each other.

Individual Learning Space

An individual learning space is a physical or digital environment that is designed to support and enhance individual learning. It is a space where learners can feel comfortable and supported to take ownership of their learning, explore their interests, and develop their skills at their own pace.

Multiple Devices

Multiple devices are used to access and process information, such that users can seamlessly switch between devices depending on their needs and preferences. This can include smartphones, tablets, laptops, desktops, and other devices. Multiple devices have become increasingly ubiquitous in our lives, and their use has had a profound impact on the way we work, learn, and communicate.

Top-down process

Top-down processes start with a general overview and then move to more specific details. They are used to solve complex problems by breaking them down into smaller, more manageable parts.

9.2 Additional Resources and Reading

Here you will find more detailed information that might disturb the reading flow of the main document if integrated in the text.

9.2.1 The twelve sectors of Effective Flipped Learning 3.0

The 12 sectors of the Flipped Learning 3.0 are (we use the original text for school education using "student" instead of "learners"):

- **Understanding Flipped Learning:** This sector ensures that everyone involved in the Flipped Learning process understands the philosophy and principles of Flipped Learning.
- **Communications and Culture:** This sector focuses on creating a shared understanding of Flipped Learning and building a culture of collaboration and support.
- **Planning for Flipped Learning:** This sector involves developing a plan for how Flipped Learning will be implemented in the classroom, including identifying resources, creating learning materials, and scheduling activities.
- **Individual Space Mastery:** This sector ensures that learners have the opportunity to learn at their own pace and in their own way, with access to the resources they need.
- **Group Space Mastery:** This sector focuses on creating opportunities for learners to collaborate and learn from each other.
- **Assessment:** This sector ensures that learners are assessed in a way that is consistent with the Flipped Learning approach, and that feedback is provided in a timely and constructive manner.
- **K-12 Focus:** This sector ensures that Flipped Learning is implemented in a way that is appropriate for the needs of K-12 learners.
- **Learning Spaces:** This sector focuses on creating learning spaces that are conducive to Flipped Learning, such as classrooms with flexible seating and access to technology.
- **IT Infrastructure:** This sector ensures that there is adequate IT infrastructure in place to support Flipped Learning, such as access to high-speed internet and video streaming.
- **Learner Feedback:** This sector ensures that learners have opportunities to provide feedback on the Flipped Learning process, so that it can be continuously improved.
- **Evidence and Research:** This sector involves collecting evidence of the effectiveness of Flipped Learning, so that it can be used to inform future practice.
- **Professional Development:** This sector ensures that teachers have the opportunity to learn about Flipped Learning and implement it effectively.

9.2.2 The 187 Global Elements of Efficient Flipped learning

As mentioned in the introduction, Jon Bergmann ordered and structured the major elements in a table similar to the periodic system. The team has used this table and included the relevant elements into the text (without giving reference to them).

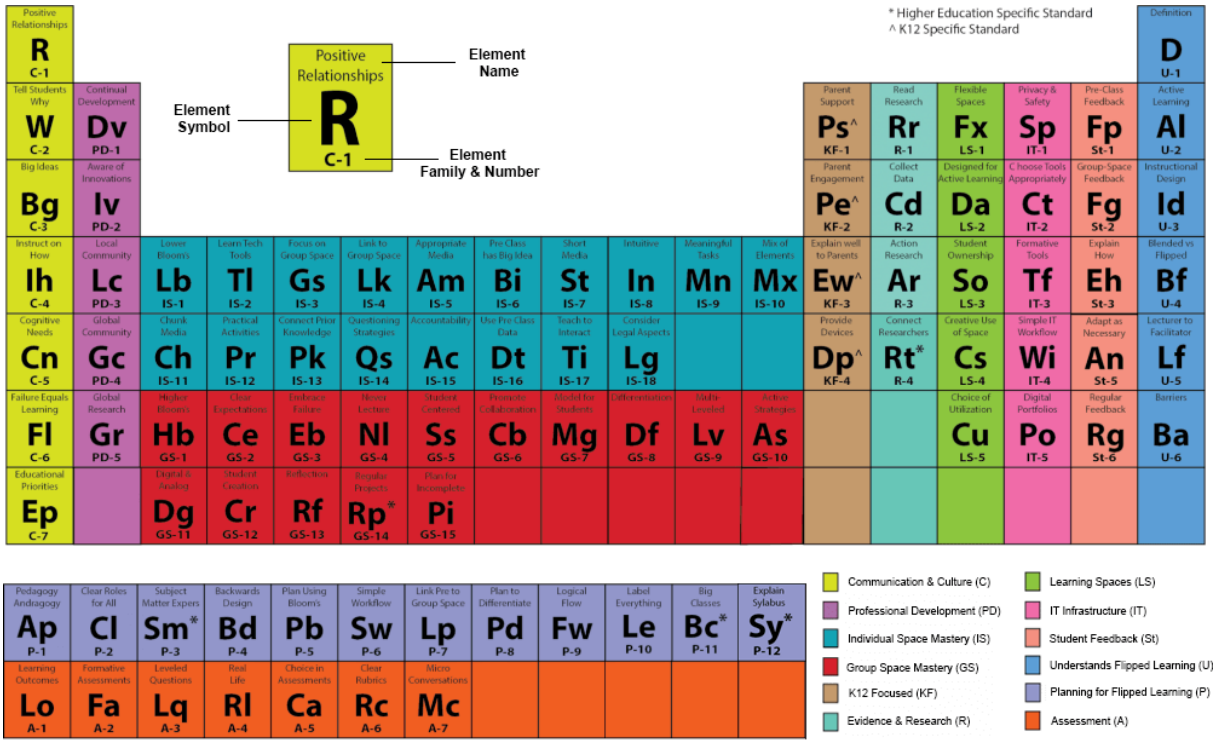

Figure 4: Global Elements of Efficient Flipped Learning (Source: FLGlobal, with authorisation of the FLGlobal).

9.2.3 Framework

A framework is a conceptual structure that provides guidance and support for a particular activity. It can be seen as a blueprint or template that can be used to create something new or to improve something that already exists. Frameworks are often used in software development, business, engineering, and other fields.

9.3 Used Terminology

In the context of constructivist theorizing, which underpins pedagogies such as flipped learning, the terms "instructor" and "learner" are intentionally chosen to reflect a shift away from traditional educational roles:

Instructor: Instead of being the primary source of knowledge, the instructor is seen as a facilitator or guide. Their role is to create an environment where learners can construct their own understanding through experiences, activities, and reflection. This term is used to replace teacher, trainer, and similar synonyms.

Learner: The term emphasizes the active role of the student in the learning process. Learners are not passive recipients of information but are actively engaged in the

construction of knowledge through inquiry, discussion, and application. This term is used instead of pupil, student and other similar nouns.

This language shift is documented to highlight the changing dynamics in the classroom, where the focus is on the learner's active participation and the instructor's supportive role in fostering a learner-centered educational experience.