LINGUISTIC PATHFINDER



Project Number: 2024-1-PT01-KA220-SCH-000250257

Education Guide



Funded by the European Union, Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.





O3 ADAPTIVE LEARNING

18 MACHINE LEARNING IN EDUCATION

38 A PRACTICAL GUIDE FOR TEACHERS

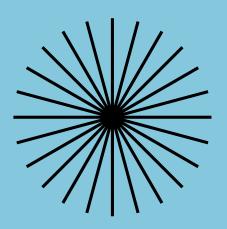
63 CASE STUDIES

ABOUT

ADAPTIVE LEARNING

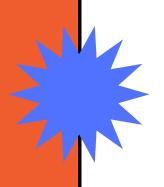


Adaptive learning systems can record data such as student progress, engagement and performance and use this data to provide personalised learning experiences' (Information Technology Division Services, n.d.). In this way, adaptive learning aims to provide personalised responses to each student's specific problems or challenges, unlike more traditional methodologies, which are based on the idea that all students learn at the same pace and basically from the teacher's content.



With adaptive learning, the learning pace of each student is respected, as the system returns instructions according to the student's responses.





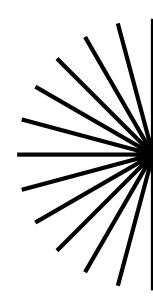
In fact, a complete, detailed and real-time analysis of each student's performance can only be carried out with the external help of a system capable of simultaneously analysing different parameters in order to return personalised content and instructions.

This is only possible through the analysis of students' interactions and levels of performance that are then returned in an appropriate sequence of content that will be crucial for the learning process and progress of each student (Rincon-Flores et al., 2024).

Rincon-Flores (2024) also states that that for this purpose are used algorithms, assessments, feedback from students and instructor adjustments that will play an important role for both, students who have already achieved mastery and to those who have not.

This educational approach is innovative and particularly relevant in that it responds to students' real needs, promoting equity and inclusion in education. Adaptive learning has benefited and developed rapidly with the integration of Artificial Intelligence systems into the process, which are now playing a key role in its development.

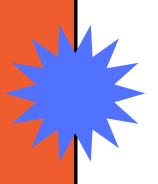




Adaptive learning aligns with contemporary educational goals, such as those outlined in the United Nations' Sustainable Development Goals (SDGs), particularly the Goal number 4: Quality Education.



By ensuring inclusive and equitable quality education, adaptive systems address disparities in access, enhancing lifelong learning opportunities to all students. For educators, this new approach means a transition from traditional lecturing to facilitating learning, where they play a central role in interpreting data, supporting individual learners, and ensuring holistic development of each student. In this way, the role of teachers must change to assure that adaptive learning systems are used with their full potential.



Classrooms are rich in diversity, with students from different cultural and personal backgrounds and with different needs. While some students need to be constantly challenged because they have proven learning skills that can lead to a loss of interest in more mundane content, others need continuous reinforcement in order to understand content and relate to it effectively. Diversity in the classroom can also be related to more specific learning problems, such as dyslexia or attention deficit hyperactivity disorder, which require specialized support.

Today, schools are also faced with the need to include migrant students, who are still learning the language of their new country and often need language support to understand content effectively. Other factors can bring diversity to schools, such as socioeconomic factors, cultural differences, and different levels of prior knowledge.



In general, traditional teaching methods struggle to respond to this wide range of needs, often leaving some students behind while others are not challenged enough. Adaptive learning seeks to bridge these gaps by creating personalised learning experiences that take into account the individual strengths and growth areas of each student.



Not all students engage with content in the same way, perceive it and assimilate it. For example, visual learners learn more easily through multimedia elements, while kinesthetic learners benefit more from interactive environments. Adaptive systems also analyse these preferences and provide content that respects and effectively adapts to the student.

Adaptive learning also caters for students with disabilities who can benefit, for example, from the use of text-to-speech functionality, personalised instructions or interactive simulations, which the more traditional model cannot provide.

Diversity (social or cultural) is also a relatively easy aspect to utilise in an adaptive system, which can integrate culturally adapted content, ensuring that the materials provided are accessible and respectful of students from different backgrounds and ethnicities.



Adaptive learning systems are not only prepared to deal with different learning paths, but also, according to Capuano and Caballé (2020), allow the use of conversational agents with natural language processing capabilities, that are also able to analyse students' emotions and provide them with adapted emotional feedback, thanks to the integration of Artificial Intelligence.

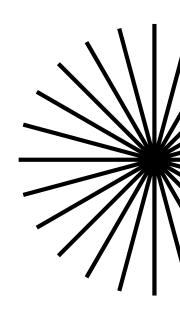
Advances in technology, and Artificial Intelligence in particular, are facilitating the integration of adaptive learning in three main areas: adaptive content, adaptive sequence and adaptive assessment. The authors point out that, in terms of content, feedback plays a key role in, for example, providing tips or additional reference materials, without altering the overall sequence of learning competences. On the other hand, they point out that it continuously collects and analyses student interaction data and is able to automatically adapt the sequence of content to be presented to the student. In terms of adaptive assessment, they mention that the system is able to change the questions a student sees based on their answer to the previous question. In this way, the difficulty of the questions increases as the student answers them correctly, while if the student has difficulties, the questions become easier (Capuano & Caballé, 2020).

To use adaptative learning is becoming easier every day. Different digital tools that can be used for educational proposes are now being adapted with Artificial Intelligence features. Below we can find a list of several activities/uses that can be done using digital tools and that can help to incorporate adaptative learning to any lesson:

- To adapt lessons to the students' needs, can be used the DreamBox Learning, the Smart Sparrow, or ALEKS. These tools take advantage of the integration of AI;
- To use conversational support, understanding and responding to student queries in natural language, tools like chatbots and virtual tutors can be used;
- To gamify and use game mechanic elements into the lessons such as badges, points, and leaderboards, can be used Kahoot! and other adaptive games like Edmentum. These gamified activities are excellent to engage students into the lessons;

IN





 To integrate adaptive learning modules to track progress and tailor learning experiences into lessons, can be used LMS platforms like Moodle and Blackboard;



- To take advantage of analytics to enhance adaptive learning, allowing for timely interventions and real time adaptative help can be used IBM Watson Education;
- To suggest learning materials based on a student's progress and preferences can be used Systems integrated into ebook platforms like McGraw-Hill's SmartBook;
- To use in evaluations and assess complex answers using Al-driven techniques can be used Turnitin Gradescope. It can be also integrated with Learning Management Systems like Canvas and Blackboard for seamless classroom use;



- To take advantage of Al-powered grading for structured assignments like multiple-choice and numerical problems, as well as unstructured content such as essays and programming code can be used Gradescope. It enables consistent and efficient evaluation while providing insights to adapt teaching strategies based on student outcomes;
- To use AI to analyze students' written or mathematical problems, offering feedback and suggesting resources for further learning can be used Socratic by Google. It can adjust its responses based on the complexity and type of queries it receives from students;
- To create interactive simulations, particularly in STEM subjects taking advantage of Augmented Reality (AR) and Virtual Reality (VR) can be used zSpace. With it, students can, for example, dissect virtual frogs or explore the solar system in a 3D space;
- To interact with 3D models, such as the human heart, planets, or ancient artifacts can be used Merge Cube. It is particularly useful for subjects like biology, astronomy, and history.



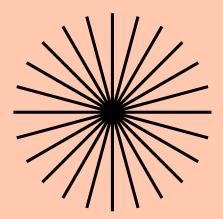
As this guide is part of an Erasmus project that aims to promote language literacy and the richness of minority language learning, the following are examples of digital tools, many of which have already been adapted to use adaptive learning in language learning:

- To learn languages with a classroom management feature, teachers can assign lessons and track progress in multiple languages, using Duolingo for schools. Adaptive learning is built into its exercises to adjust difficulty levels based on the student's performance. It is also based in a gamification feature, where students can track the progress of each other's;
- To help students with instant text, voice, and image translations in over 100 languages can be used Google Translate. This is particularly helpful for students to understand instructions and communicate with peers and teachers in the first steps of a non-native language (as the case of migrants);

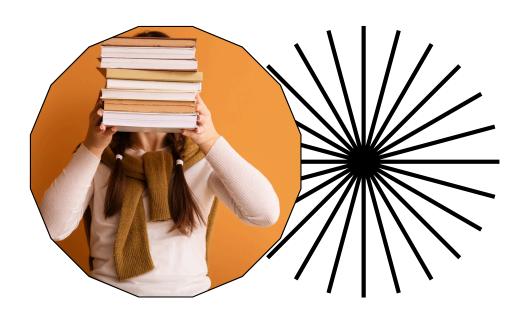
 To provide multilingual support, including text-to-speech, picture dictionaries, and translation features can be used part of Microsoft Office (Microsoft Immersive Reader) and other platforms. It helps students read and understand content in their native language alongside the target language;

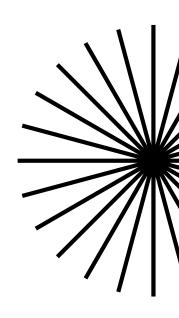


- To provide a multilingual communication between teachers and parents can be used the TalkingPoints app. It automatically translates messages into parents' preferred languages, fostering collaboration and support for migrant students;
- To provide an online collaborative platform that supports multilingual input and multimedia posts can be used Padlet. Students can share content in their native languages while learning to contribute to the classroom's language;



 To take advantage of a social learning platform with translation options for posts, quizzes, and assignments can be used Edmodo. Through the use of adaptative learning, it allows teachers to create personalized learning experiences for diverse language needs.





To create classes'
 content in multiple
 languages, such as
 Spanish, French, and
 Portuguese can be used
 the Khan Academy. Its
 adaptive features provide
 tailored exercises based
 on a student's progress;



- To take advantage of a literacy support tool offering translation, text-to-speech, and writing assistance can be used Read&Write by Texthelp. Its adaptive features cater to students' reading and writing skills in various languages;
- To designed activities specifically for English language learners, providing engaging, animated content for vocabulary, grammar, and listening skills can be used BrainPOP ELL. Its adaptive quizzes and activities adjust to the student's language proficiency;
- To provide a language authentic content, such as podcasts and articles, tailored to students' levels and interests can be used LingQ. It provides built-in dictionaries and translation support.



McGuire (2021) recognizes a list of potential benefits to adaptative learning implementation, namely:

- It boosts students' success and autonomy, since the data collected and displayed by the adaptive learning software allows students to realise which content they still need to work on;
- It respects the students' learning pace, making them focus on the content where they still have difficulties;
- Guides students through their learning while respecting the subject's objectives, lessons, activities and assessments. On the other hand, it also provides information to the teacher about the possible need to adapt some content or strategies to the general objectives of the subject;
- It provides relevant information that can be used by teachers and others to identify the performance of certain students or subgroups of students, such as minorities or students with economic problems;



- Allows teachers and administrative staff to provide timely support to identified students;
- Allows comparison of current data with previous data to identify aspects for improvement in terms of student learning.

Realizing the potential benefits of adaptive learning requires research-based approaches, thoughtful instructional design, strategic implementation, processes for continuous improvement, and a commitment to equity and student care" (McGuire, 2021).



Reterences:

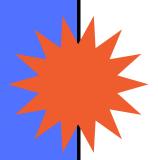
Capuano, N., & Caballé, S. (2020). Adaptive learning technologies. Al Magazine, 41(2), 97–99. https://doi.org/10.1609/aimag.v41i2.5317

Information Technology Division Services. (n.d.). Adaptive learning. Montclair State University. https://www.montclair.edu/itds/digital-pedagogy/pedagogical-strategies-and-practices/adaptive-learning/

McGuire, R. (2021). What is adaptive learning and how does it work to promote equity in higher education. Every Learner Everywhere.

https://www.everylearnereverywhere.org/blog/what-is-adaptive-learning-and-how-does-it-work-to-promote-equity-in-higher-education/

Rincon-Flores, E. G., Castano, L., Guerrero Solis, S. L., Olmos Lopez, O., Rodríguez Hernández, C. F., Castillo Lara, L. A., & Aldape Valdés, L. P. (2024). Improving the learning-teaching process through adaptive learning strategy. Smart Learning Environments, 11(27). https://doi.org/10.1186/s40561-024-00314-9



Machine Learning in Education

Machine Learning (ML) is a sub-field of Artificial Intelligence (AI) which consists of the enablement of machines and computers to imitate the methods and ways humans learn, to perform tasks in complete autonomy and to improve their accuracy thanks to the exposure to large set of data (IBM, n.d.).

In practice, Machine Learning is the creation of systems and computers that function autonomously without the need for a programmer to explicitly write code for a specific task. This development in the technological field can provide significant innovations and breakthroughs in various fields, while it also comes with some challenges to its implementation.

In this section we will go through the application of Machine Learning in the field of education, highlighting its importance and the potential impact it may bring. Then, we will continue with some practical examples on how Machine Learning may be applied in education and we will conclude with the challenges that come with its implementation in educational settings.

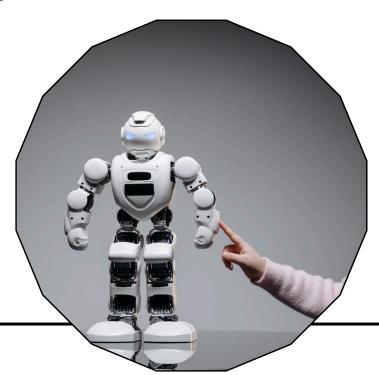


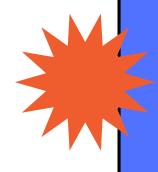
Educational methodologies and learning experiences can be significantly advanced and developed by the integration of Machine Learning technologies in traditional educational contexts in every level.

As Joseph and Nwankwo (2024) suggest, Machine Learning systems and applications can provide both students and teachers with valuable tools and opportunities that can transform the educational landscape. More specifically, ML-based systems can revolutionise the way students learn, while also systematising and simplifying the teaching methodologies for teachers.

Similarly, Forero-Corba & Bennasar (2024) highlight the importance of integrating these emerging technologies in education, as they bring significant innovations that may render the students' educational experiences more engaging and exciting.

Additionally, they enhance the levels of accessibility and inclusion in classrooms, as they may be used to cater to the needs of students with special educational needs, students with disabilities or those coming from a different cultural, social and/or linguistic background (Martins et al., 2024).





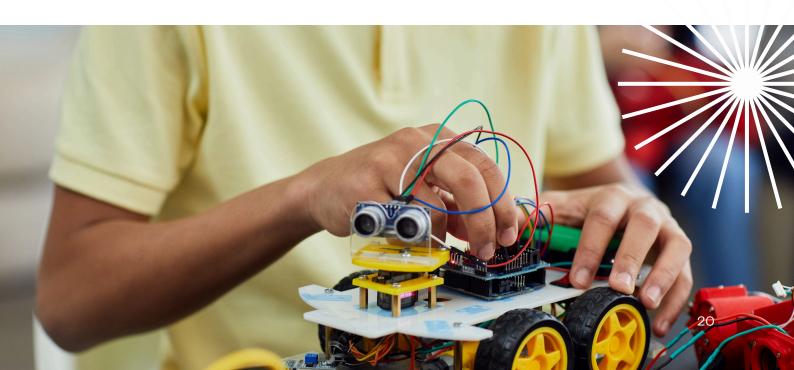
But what are the specific opportunities and benefits that integrating ML-based technologies may bring to the primary and secondary education context? Let's go through some of the most important ones:

Personalised Learning and Assistance

One of the most important benefits of using ML-based technologies in classrooms is the facilitation of providing personalised learning opportunities to every student, based on their needs and preferences (Fomunyam, 2022; Joseph & Nwankwo, 2024).

This incorporates both the adjustment of teaching and learning materials to the specific needs and preferences of each student, as well as the recognition of the special parts in which an individual student may need more assistance.

This is achieved thanks to the ML-based systems' ability to quickly and effectively run through a large number of data and recognise specific patterns and needs in other similar cases and consequently propose strategies and methodologies that may be proven beneficial for the student.

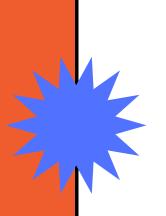




Improvement of Student Engagement

The integration of modern technologies and the refinement of schools' curricula could tackle the issue of student engagement and active participation in education. According to recent data collected by Eurostat (2024), a total 10.6% of 14 to 16 year-old students in Europe do not follow secondary education, which can be addressed to the education systems' inability to create an inclusive, accessible and engaging learning environment for them.

Consequently, ML-based systems will provide teachers and school administrators with new, up-to-date tools and materials that will assist them render the educational experiences of students more interesting and appealing, tackling thus the issues of early leaving from education and lack of active participation.



Efficient Assessment of Students' Performance

As Chassignol et al. (2018) observe, Machine Learning may play a crucial role in the more efficient and just assessment of students' performance in school.

The benefits of this process may be summarised in the following points:

- Instant and Constant Evaluation:
 Thanks to ML-based systems'
 capability to quickly process
 large sets of data, the
 assessment process, for
 example in a written exam, can
 be done in a short time, if not
 automatically. Additionally, such
 technologies can be used to
 track and evaluate the
 students' process on a long term basis.
- Evaluation Refinement
 Opportunities: These
 technologies may be used by
 teachers in order to locate
 more efficient learning and
 teaching strategies for each
 student based on their strong
 points, personalising thus the
 evaluation process, leading to
 better results.
- Prediction Models and Personalised Feedback: MLbased technologies can be proven useful for providing a more fair assessment of each student. The systems can give a personalised feedback based on each student's past grades, while also proposing specific and detailed learning paths for each individual.



Simplification of Learning Materials

As already mentioned, ML-based technologies have the capability to easily assess the students' academic progress, while also relating it to the extent that the learning materials and teaching methods used have an impact in the students' results.

It is therefore apparent that teachers, through the use of Machine Learning technologies, are able to locate which concepts are difficult for students to understand and/or are taught with inappropriate materials regarding the students' age or educational level and abilities (Joseph & Nwankwo, 2024).

These technologies and strategies are able to detect the individual parts of the teaching materials that are incomprehensible by most students and assist teachers to make the needed changes and refinements.

They can also be used to specifically facilitate education for students that need special assistance, such as students who have a different mother tongue and/or have origins from another country students with disabilities or with special educational needs.

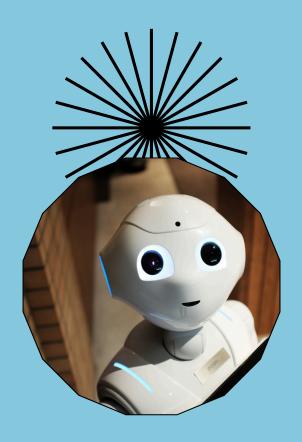


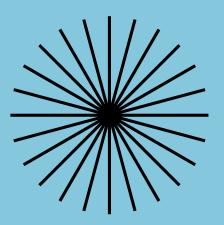
Familiarisation with Digital Tools and Technologies

Developing students' digital skills is one of the key objectives set for modern educational systems. It is necessary that students come into contact and familiarise themselves with up-to-date digital and technological tools in order to be able to succeed in their professional, social and personal ventures.

This highlights the importance of actively integrating and applying ML-based technologies in educational contexts, as they constitute an opportunity for both teachers and students to gain experience and expertise in their usage.

The active and regular utilisation of these technologies during classes and evaluation processes, apart from facilitating the learning and teaching experiences, can also constitute an ideal strategy for letting students use and engage with this type of modern assistive technologies and new, innovative learning methodologies, and get to know more about them.





Even though at first the use of ML-based technologies may sound something that is not applicable in today's classrooms, it is important to note that a big number of this type of technologies and systems are already used in formal and informal education settings all over the world. This is due to the fact that Machine Learning still constitutes a severely unfamiliar topic for the vast majority of the population.

Most ML-based systems in use today effectively cover the following learning and teaching needs:

- Personalisation of learning paths for students
- Language learning
- Adjustment of learning materials to cater to the needs of students that need special assistance
- Evaluation and assessment of students' progress
- Provision of assistance to teachers to render their lessons more engaging and interactive

Here follow some of the most significant examples of systems based on Machine Learning that are actively used in formal and informal education processes:

<u>Duolingo</u>

Duolingo is probably the most famous language-learning platform in the world. It provides a series of short courses for a big number of languages and its interactive and fun interface has rendered it popular to users across the world.

Duolingo is a ML-based platform, as it is developed using algorithms that enable the personalisation of the courses on each learner's level and preferences. Its advanced algorithms allows the platform to offer different learning paths to each user, tailoring the learning experience to their individual needs. It also refines and adjusts its offered courses based on real feedback and input received from learners.

Duolingo has been proven an efficient and impactful way for introducing children in a new language and has significantly assisted students who have a different linguistic or cultural background.





Gradescope by Turnitin

Gradescope is an online platform that allows both students and teachers evaluate and grade students' work and provide useful feedback.

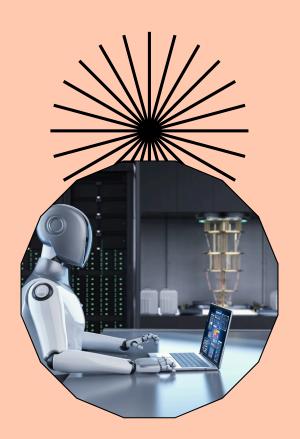
This collaborative system of grading schoolwork is created through Machine Learning development strategies. It has been proven a valuable tool for teachers, as it offers them the possibility to quickly and correctly assess their students' online homework and keep track of their progress.

The data collected by teachers can then be used for locating the concepts that their students may find difficult and also detect potential elements that would indicate that a student may need special assistance.

This process facilitates the work of teachers and gives them the opportunity to be more adaptable and flexible in their teaching methodologies.

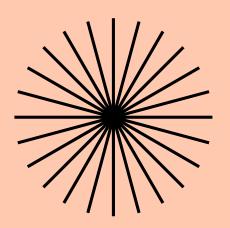
Course Hero

Course Hero is an online e-learning platform that is completely developed based on Machine Learning technologies.



The platform allows users to follow fully personalised learning paths created based on their individual interests, level, needs and preferences. Users are able to choose courses from a variety of fields and sectors.

Course Hero is a tool that is actively used by teachers around the world, as it presents complex topics in a simple and engaging way. Given the system's ability to adapt to the learners' different ages and education levels, it presents knowledge in small pieces that can be easily comprehensible by everyone.



It also provides a great opportunity for schools and education systems to refine and update their learning materials, rendering them more inclusive and accessible to every student.

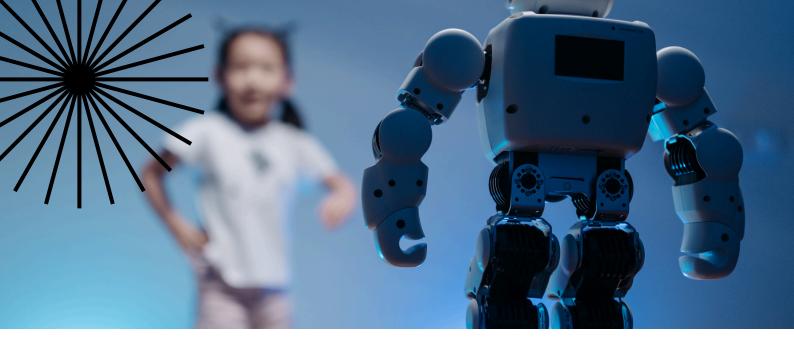


McGraw-Hill's ALEKS

ALEKS is an assessment and tutoring platform that was developed using Machine Learning algorithms, allowing it to perform its tasks autonomously.

It is used to detect students' personal learning and knowledge patterns based on their results, grades and other parameters.

This is a valuable tool for teachers, as the system makes suggestions on how they can more effectively adjust the materials to cater to the needs of each student, while also giving constant feedback on the latter's progress.



Integrating new innovative technologies in educational settings does not come without challenges. For their effective and impactful use, educational systems should overcome several challenges. The third part of this section is dedicated to presenting some of the most significant ones and are the following:

Ethical Considerations

The use of ML-based systems in classrooms may pose some serious ethical challenges (Joseph & Nwankwo, 2024).

Teachers should make sure that the technologies they are using are appropriately developed to eliminate any potential bias, unfairness between different students and to sufficiently tackle with inequalities and transparency issues.

Students should be also be made aware of the ethical implications that using this type of technologies have, given that they constitute elements that they will encounter throughout their life and their academic and professional careers.



Insufficient Teacher Training

Before making use of the ML-based technologies, teachers should ensure that they are familiar enough with how they can be used and be efficiently integrated in their classes and their teaching effors in order to maximise their impact.

Additionally, teachers should ensure that they give clear instructions and actively support their students throughout this learning process to avoid any potential misconceptions and cases of misuse. This will facilitate the learning process and will have a bigger impact for students.

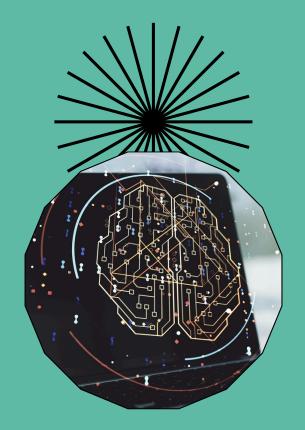
Teachers should also be familiar with the ethical lines of integrating ML-based technologies in the learning processes, so that they do not exceed or violate the students' personal limits and rights to privacy.

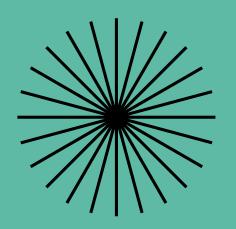
Appropriateness of Systems

The systems used in classrooms should be thoroughly controlled and tested by teachers, school administrators and experts in the field to ensure that they are appropriate to be used by students of every age, educational level and linguistic background (Forero-Corba & Bennasar, 2024).

This enables education systems to make sure that no student is left behind and that every individual has equal access to the technologies. In cases this is not secured, teachers and school staff should put efforts to individually assist any student that may be having trouble with their use. If this does not resolve the issue of inequality, then the system should not be used and be replaced by another more appropriate one.

Recent advancements in technology and the fast-growing character of this field has provided teachers with a multitude of tools to choose from. However, it is highlighted that specific testing processes should be put into place so that further problems are avoided.





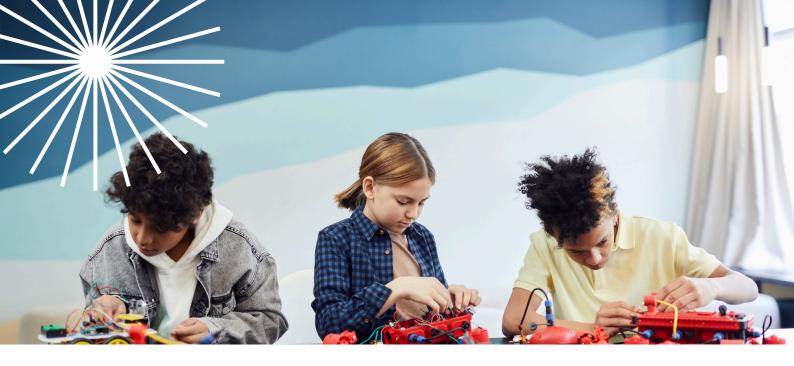


Financial Issues

The successful integration of ML-based technologies in traditional public educational settings may be proven a costly activity, not allowing thus schools in disadvantaged areas make use of these innovations. This element has a general effect in the level of education students are receiving.

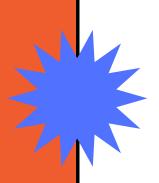
Even though many ML-based systems are available online for free, some other ones have a subscription fee that needs to be paid. Most of the times, teachers and schools do not have the necessary funds to cover this cost, so they completely give up on the efforts to integrate these systems in classrooms.

Furthermore, schools in poorer and more disadvantaged areas do not possess the technological equipment (computers, projectors, interactive boards) to allow for the use of these new systems in the classrooms, widening thus the gap between educational institutions across different regions.



The presentation of the challenges above made clear that Machine Learning can successfully be integrated in education only if certain standards and criteria are met. Efficient ways through which these challenges can be overcome are the following:

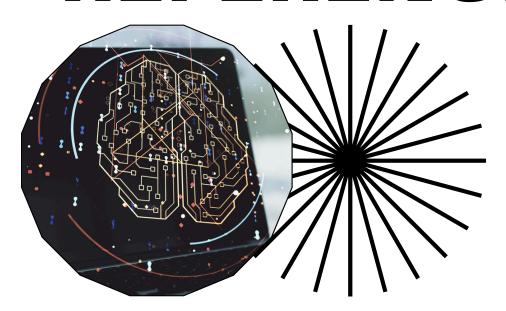
- Proper funding to be given to schools by the governments
- Teachers to follow proper training in order to ensure their ability to correctly use these new technologies in their teaching
- Sufficient testing and controlling processes before a new system is integrated in the classroom
- Creation of easy-to-follow instruction guides to assist students navigate through these new technologies
- Personalised assistance to students that may need it
- Creation of an Ethics Guide to ensure that students' personal data are secured.

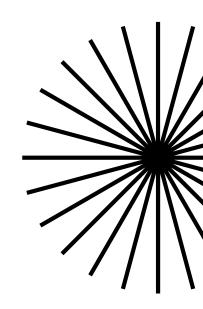


This second unit of the Linguistic Pathfinder provided useful insights on the reality of applying Machine Learning technologies in education.

- It was presented that Machine Learning can provide significant benefits to education, assisting both students and teachers in their educational journeys. The crucial role of Machine Learning in creating personalised learning paths for each student, widening thus the gap that may be existent between students, was highlighted.
- In addition to that, examples of practical application of these new technologies in classrooms were shown, in contrast to the idea that school systems have to go through a long reformation in order to be ready to integrate them in their curricula and learning processes.
- Finally, the third part of the unit was focused on the challenges that the adoption of these new methodologies is accompanied by, while also proposing potential solutions to facilitate the schools and teachers' efforts to make use of these new tools.

REFERENCES





References:

Chassignol, M., Khoroshavin, A., Klimova, A., & Bilyatdinova, A. (2018). Artificial Intelligence trends in education: a narrative overview. Procedia Computer Science, 136(1877-0509), 16–24. https://doi.org/10.1016/j.procs.2018.08.233

Eurostat. (2024). Secondary education statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php?
title=Secondary_education_statistics

Fomunyam, K. G. (2022). Machine learning and stem education: Challenges and possibilities. International Journal of Difference Equations, 17(2).



Forero-Corba, & Bennasar, (2024). Techniques and applications of Machine Learning and Artificial Intelligence in education: a systematic review. ProQuest, 27(1), 209–238. https://doi.org/10.5944/ried.27.1.37491

IBM. (n.d.). What Is Machine Learning (ML)?. https://www.ibm.com/think/topics/machine-learning

Joseph, O., & Nwankwo, C. (2024). Integrating AI and Machine Learning in STEM education: Challenges and opportunities. Computer Science & IT Research Journal, 5, 1732–1750. https://doi.org/10.51594/csitrj.v5i8.1379

Martins, R. M., von Wangenheim, C. G., Rauber, M. F., & Hauck, J. C. (2024). Machine Learning for All!—Introducing Machine Learning in Middle and High School. International Journal of Artificial Intelligence in Education, 34(2), 185–223. https://doi.org/10.1007/s40593-022-00325-y

A PRACTICAL GUIDE FOR TEACHERS: STRATEGIES FOR A MULTILINGUAL CLASSROOM



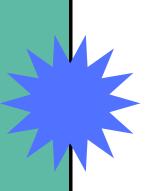


In today's globalized world, classrooms are becoming increasingly multilingual. Across Europe, immigration, mobility, and cultural diversity have led to a growing number of students who speak multiple languages, often different from the primary language of hosting country (García & Li Wei, 2014).

This guide is designed to support secondary school educators, thus responding effectively and confidently to the needs of multilingual learners.

These students, often bring valuable skills and experiences to hosting schools. They usually have strong thinking and communication skills, and they can offer different points of view. But learning in a different language than they one they are still developing can be difficult. If their language needs aren't supported, they might struggle with lessons or feel left out.

As teachers, we play an important role in helping all students take part, feel confident, and do well, no matter what languages they speak.



Across Europe, classrooms are becoming more linguistically diverse due to migration, and multicultural communities. EU sees multilingualism as both a common reality and a valuable asset. Supporting students who speak different languages is also part of building more equitable and successful education systems for the future.

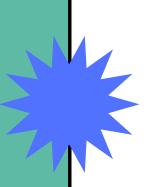
What a Multilingual Classroom Looks Like

- In today's classrooms, multilingual students bring diverse experiences and strengths. Each learner is unique, but all deserve the chance to grow and succeed. For example, some students might:
- Be new to the country and just beginning to learn the school's language
- Speak the school language well but need help with academic vocabulary
- Use a different language at home than the one used in class
- Have gaps in their education and need extra support from their teachers

Understanding Multilingual Learners

Multilingual students are a group of students with different backgrounds, needs, and strengths. For a teacher to support them effectively, it's important to understand who they are, how they learn, and what challenges they may face. Usually these students are categorized in the following groups:

- Newcomers: These students have recently arrived in the country and may have a limited knowledge of the school language. They need time to adjust linguistically, socially and emotionally.
- Heritage Speakers: These students grow up in a home where a primary language is spoken whereas at school they communicate in another language. They may understand or speak the school language fluently but have limited reading and writing skills in that language.
- Students with interrupted or limited formal education: Some students who had interruptions in education have experienced gaps in schooling due to conflict, migration, or other disruptions. They may need extra support in both language and subject knowledge.
- Long-term multilinguals: Students who have lived in the country for many years, appear fluent in everyday communication but still struggle with academic language used in subjects like science or history.



Language Proficiency vs. Cognitive Ability

It's important for teachers to remember that just because a student is still learning the language of instruction doesn't mean they're less intelligent. Many multilingual learners are strong problem-solvers, deep thinkers, and creative minds — they just haven't yet found the words to show it in the classroom language.

Often, students pick up everyday conversational language much faster than the more complex academic language used in textbooks and assignments. Developing that academic language takes time — sometimes years — and needs to be supported across all subjects, not just in language lessons. (Sources: Edutopia, ResearchGate)

Creating a safe, respectful, and welcoming classroom is just as important as teaching language. Small gestures for example learning how to pronounce a student's name correctly, or inviting them to share something from their culture can make a big difference.

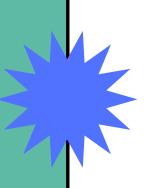
<u>Creating an Inclusive Classroom Culture</u>

An inclusive classroom is one where every student feels part of it, no matter what language they speak. Students feel safe and valued. For multilingual learners, this kind of environment builds confidence, boosts motivation, and encourages participation. Students learn best when they feel a genuine connection with their teachers and classmates, usually by a warm greeting from the teacher and generally by showing real interest in each student's background and story (Lo et al., 2021).

Gaining students trust through small actions

Here are a few simple ways teachers can help build an inclusive classroom:

- By Involving students in creating class rules to give them a sense of belonging in the class
- By using group work and peer support to promote cooperation
- By checking in regularly on multilingual students' progress — both academically and emotionally
- By learning a few greetings or key words in your students' home languages as a sign of respect and care (Cenoz & Gorter, 2017)



Teachers must not ask students not to use their language and culture in the class. They can recognize and use their full range of language as a resource. This helps students feel proud of who they are and encourage cross cultural understanding among classmates.

<u>Suggestions for the teacher and</u> the school:

The teacher can create signs or posters using several languages, not only the main schools language The teacher may allow students to use their home language as much as possible, especially for group work

The school can organize a special "language day" where students can share songs, stories, or anything the desire from their cultures
The class can read literature from different linguistic and cultural backgrounds

Multilingual learners can sometimes face stereotypes, low expectations and discrimination. Teachers have an important role in overcoming this create a respectful behavior.

<u>Useful tips:</u>

Stopping or preventing disrespectful language or behaviors, immediately and calmly Encouraging curiosity instead of judgment when students ask about language or culture Using classroom materials that reflect a range of languages, ethnicities, and stories

Instructional Strategies for Multilingual Classrooms

Teaching in a multilingual classroom means planning lessons in order to support understanding, language development, and active participation at the same time. This section offers practical, research-informed strategies that can be used across subjects to support multilingual students while engaging everyone in the learning process. (Cenoz & Gorter, 2017).

Scaffolding Techniques

Scaffolding means supporting students to reach a learning goal, and then gradually removing that support (like removing a scaffold) as they become more confident.

For multilingual students, this might include:

- Teaching required vocabulary before a lesson
- Giving students sentence starters
- Breaking tasks into smaller, manageable steps
- Giving students the time to think before answering
- Instead of just solving a problem, talk through each step. (Edutopia, 2020; García & Li Wei, 2014)



Visual Aids, Graphic Organizers, and Gestures

Visual support is a powerful tool in a multilingual classroom. It helps make lessons clearer and helps students who are still building vocabulary.

Helpful tools include:

- Images, diagrams, charts, and maps that illustrate key concepts
- Graphic organizers (like Venn diagrams or story maps) to help students organize their thinking
- Gestures and facial expressions to support oral instructions
- Writing down keywords during discussions. (MDPI, 2022).



Language Development Across the Curriculum

Language learning undoubtedly, happens throughout all subjects. Simultaneously, while teaching history, science, or math, students learn and develop the language they need to understand content, express ideas, and succeed in school.

Supporting language development across the curriculum means planning lessons with targets in both taught language and specific subject at the same time.

Integrating Language and Content Learning

In a multilingual classroom, students are learning new content and new language at the same time. This is called dual focused learning, and it works best when lessons:

Make the language demands of the task clear (e.g. explain, compare, describe)

Include explicit teaching of key phrases students will need in the lesson

Encourage talking, writing, and reflecting as part of content learning (European Commission, 2015; MDPI, 2022)

For example, in a science lesson on ecosystems, students might learn both the content vocabulary ("habitat", "adaptation") and the language functions needed to explain processes ("if... then...", "because...").



Vocabulary Building in Subject Areas

Academic vocabulary can be difficult, especially when it uses subject-specific terms such as physics. To help multilingual students:

- Teach the necessary vocabulary before class and link it to real-life examples
- Create word walls or visual glossaries with students
- Focus on technical terms (e.g., "photosynthesis") and general terms (e.g., "analyze," "identify," "cause-and-effect") (Edutopia, 2020; Lo et al., 2021).

Encouraging Academic Language Use

Multilingual students often speak fluently in everyday life but have difficulty with the academic language used in textbooks, tests and formal writings.

Teachers can help with this:

- Model academic language in speech and writing, that is, provide students with a written or oral model of the language the teacher would like the student to produce.
- Give students the opportunity to practice formal discussion in pairs or small groups
- Support students and help them feel confident to try, make mistakes, and grow in their use of language. (Edutopia, 2020; Lo et al., 2021).



Assessment in a Multilingual Context

Assessment is not only about grading the knowledge but is for the techer to understand what students know, how they're progressing, and how to assist them to improve. In a multilingual classroom, assessment needs to take both language development and content knowledge into account.

In order to be fair and meaningful, ideal assessments must be accessible, inclusive, and flexible, giving all students a chance to show what they know regardless of their language level.

Formative vs. Summative Assessment

Formative assessment is ongoing and used during learning. It helps teachers understand the level in which students are and adjust teaching as needed. For example a teacher can use exit tickets, peer feedback, discussions, quick quizzes.

Summative assessment happens at the end of a learning period and measures what students have learned. Foe example: final projects, tests, essays, presentations.

(Lo et al., 2021)

Fair and Valid Assessment Practices

To ensure assessments are fair to multilingual students:

- Separate language requirements from content knowledge as much as possible
- Simplify instructions, use visual representations, and check basic knowledge understanding before starting
- Allow students to use word banks and bilingual dictionaries
- Offer different formats for responses (e.g. oral, visual, written)
- Avoid penalizing students for grammar or spelling. (European Commission, 2015; MDPI, 2022).





Language-Friendly Feedback

Feedback must be clear, helpful and kind comments should accompany it.

Good feedback for multilingual learners should:

- Focus on meaning first, not just language mistakes
- Use simple and clear language
- Highlight what the student did well, before suggesting improvements
- Give one or two specific goals they can work on
- Encourage students to reflect in their own language
- Provide visual or oral feedback, or ask students to respond to feedback to make sure they understand.

Collaborating with Families and Communities

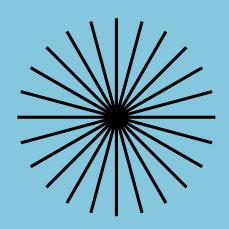
Families are very important in a student's success. Multilingual students feel more supported, confident, and connected with others, when schools work closely with families and the wider community. Even when language barriers exist, strong school-family partnerships are possible and valuable. (UFT, 2020)

Communication Across Language Barriers

Communication is the first step to building trust with families who speak a different language.
What helps:

- Use translated materials for newsletters, school policies, and key announcements
- Offer interpreters or translation apps during parent meetings
- Keep written messages short and clear
- Use visuals, infographics, or videos to explain school events or procedures
- Reach out through platforms families are comfortable with (e.g. WhatsApp, school apps) (Lo et al., 2021).







Engaging Families as Partners

Families have valuable knowledge about their children and their cultures. It is important for school to include this knowledge, for everyone's benefit.

Ways to engage families:

- Invite parents to share stories, songs, or traditions related to their culture
- Organize multilingual or multicultural events (e.g. international days, shared meals)
- Ask for family input during parent-teacher conferences
- Provide simple guides to help parents support their children's' learning at home, even if they don't speak the school language
- Celebrate students achievements in multiple languages in newsletters or school displays. (García & Li Wei, 2014)

Community Resources and Cultural Mediators

Local communities often have resources that can support schools and multilingual families. For example:

- Cultural mediators, ie people who can bridge communication and cultural gaps between school and multilingual students.
- Community centers and libraries that offer language support and homework help
- Bilingual staff or volunteers who can assist students during school events or open days
- Religious or cultural groups that may offer useful insights on different cultures



Teacher Reflection and Professional Development

Teaching in a multilingual classroom is a demanding process that changes as time passes. It requires effort for development that includes reflection, flexibility, and a willingness to learn.

Reflecting on Teaching Practices

Reflection helps teachers understand what is effective, what needs adjustment, and how to effectively support multilingual learners.

Simple ways to reflect:

- Ask yourself after each lesson: Did all students have access to the content? Was language an obstacle?
- Keep a teaching journal to note the strategies that really were helpful
- Collect student feedback about important lessons
- Review student work regularly to identify patterns in understanding or language use (MDPI, 2022).

Collaborative Learning Among Teachers

- Working with colleagues of the same or even of a different subject, can be a powerful way to learn new strategies and share good practices in order to teach multilingual learners better.
- Co-planning lessons with colleagues to build in language support
- Starting or joining a peer learning group focused on successful practices that include all students
- Observing each other's classes and offering constructive feedback
- Sharing resources and ideas during staff meetings or informal chats.

Resources for Ongoing Development

Many free, high-quality resources are available online for teachers who want to deepen their understanding of multilingual education:

- European Commission Multilingual Classrooms Study PDF
 - https://ec.europa.eu/assets/eac/languages/library/st udies/multilingual-classroom_en.pdf
- Edutopia Articles on multilingual learners and inclusive teaching strategies (edutopia.org)
- MDPI Special Issues Research articles on multilingual education (mdpi.com)
- ResearchGate Access to open research papers on teaching in diverse classrooms (researchgate.net)



Appendices & Practical Tools

This section offers practical resources to support teachers in planning and executing successful lessons for multilingual learners. These tools are designed to be simple and easily adjustable to different subjects. Whether a teacher is just beginning to work with multilingual students or looking to improve a current approach, these materials can be helpful.

Sample Lesson Scaffolds

Below are examples of how you might scaffold a lesson in any subject:

• Example: History Lesson – Causes of World War I Teach essential vocabulary before the lesson: alliance, nationalism, assassination, empire

Use visuals: timeline, country flags, cartoon of alliances Sentence starters:

"One main cause of World War I was..."

"Another important reason was..."

Group work: Students discuss causes using sentence frames

Assessment: Students match images to causes, write a short paragraph with support (García & Li Wei, 2014).

• Example: Science – The Water Cycle

Vocabulary: Emphasis important terms like evaporation, condensation, precipitation, collection

Diagram: Make a diagram of the water cycle

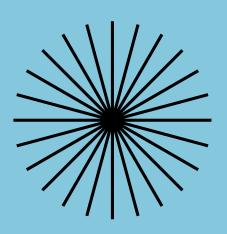
Speaking frame: Sentences like "Water changes from a liquid to a gas during..."

Extension task: Students can explain the cycle in their home language and compare terms

Exit ticket: Ask students to draw and label the water cycle using three of the most important terms

CHECKLIST FOR INCLUSIVE LESSON PLANNING





Use this simple checklist when planning lessons to ensure that multilingual learners are supported as much as possible:

- Have I used the key words repeatably and emphasized them as needed?
- Are there visuals or real life examples to accompany the lesson?
- Am I using word banks or writing frames?
- Have I given opportunities to students to talk and interact with each other?
- Are students allowed to use their home language when they really needed it?
- Is the task clear, with instructions presented in multiple ways (spoken, written, modeled)?
- Have I included different ways for students to show what they know (e.g. drawing, speaking, writing)?
- Is there time built in for review, reflection, or peer support? (UFT, 2020).

SUGGESTED READINGS AND DIGITAL TOOLS

List of free resources for further learning and classroom support:

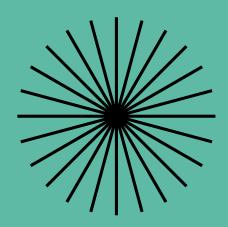
Readings:

- European Commission Report:
 <u>Language Teaching and Learning in</u>
 <u>Multilingual Classrooms (PDF)</u>
- MDPI Open Access Book: Learning and Teaching of English in the Multilingual Classroom
- García & Li Wei: Translanguaging: Language, Bilingualism and Education (available in summaries and extracts online)
- Cenoz & Gorter: Pedagogical Translanguaging (many chapters accessible via open repositories)

Digital Tools:

- Wordwall (wordwall.net): Create multilingual vocabulary games
- Quizlet (<u>quizlet.com</u>): Digital flashcards that support visual and bilingual learning
- Google Translate / SayHi: Help with basic translation and pronunciation
- Canva for Education
 (canva.com/education): Design visual
 scaffolds, posters, and learning
 templates
- Newsela (<u>newsela.com</u>): Current articles at different reading levels, great for building subject vocabulary
- Learning Apps.org: Free interactive learning tools in multiple languages





<u>Turning Language Diversity Into</u> <u>Classroom Strength</u>

Today's classrooms are more diverse than ever. Many students aged 12 to 18 are growing up with more than one language. Some speak a different language at home, others are new to the country, and some have been navigating multiple languages for years. This means for teachers that learning how to teach and communicate in a way that supports everyone, regardless the language they speak is a key factor to their job.

This guide was created to offer practical, easy-to-use strategies for teachers who teach in multilingual classrooms. At the heart of it is a simple idea: language differences aren't obstacles, they're opportunities. When students bring their languages and cultures into the classroom, they make learning richer for everyone.

CONCLUSION

CONCLUSION

The first step is understanding who your multilingual learners are. Some of them may be just beginning to learn the school language. Others might seem more fluent with the language but still struggle with specific subject vocabulary or with academic writing. Every student is different, and one-size-fits-all doesn't work here. That is why an adjustable teaching makes such a big difference.

Creating an inclusive classroom is not only about helping students understand lessons. It's about making them feel safe, welcome, and respected. This starts with small things: learning how to say a student's name correctly, allowing them to use their home language when needed, and showing genuine interest in their culture. When students feel that they are an equal member of the class, they're more likely to take part and succeed. Teaching strategies like scaffolding, visuals, group work, and using students' first languages as a resource can help break down language barriers. These tools don't just support multilingual students—they often make learning better for everyone. The same goes for vocabulary building and encouraging students to use academic language across subjects. Whether it's science, history, or math, students need language to fully express what they know.

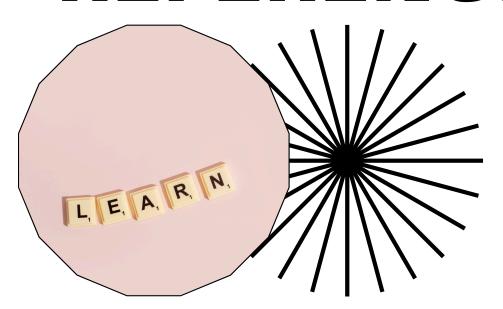


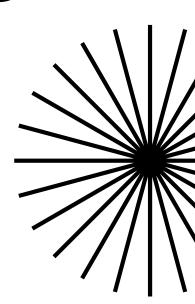
Assessment also needs to be fair. Multilingual students should be able to show what they've learned in ways that aren't limited by their language skills. That might mean using visuals, giving oral presentations, or allowing more time. Clear, supportive feedback helps students grow and shows them that effort is just as important as results. Working with families and the wider community is another key piece. When schools reach out in ways families can understand through translated materials, interpreters, or simple messages they build trust. And when families are involved, students do better.

Finally, teachers don't have to do this alone. Reflecting on your own practice, learning with colleagues, and making use of free online resources can help you feel more confident and inspired. Teaching in a multilingual classroom is challenging, but also incredibly rewarding.

In the end, supporting multilingual learners is about more than teaching language. It's about giving every student a fair shot at success and showing them that who they are, and what they bring with them, truly matters. By embracing the languages and stories students carry with them, we build stronger classrooms, stronger schools, and stronger communities.

REFERENCES





European Commission & ICF Consulting Services Ltd. (2015). Language teaching and learning in multilingual classrooms. In European Commission.

https://ec.europa.eu/assets/eac/languages/library/studies/multilingual-classroom_en.pdf

Learning and teaching of English in the multilingual classroom: English teachers' perspectives, practices, and purposes. (2023). In MDPI eBooks. https://doi.org/10.3390/books978-3-0365-7728-9

Wagner, Christopher. (2021). Teacher language practices that support multilingual learners: classroom-based approaches from multilingual early childhood teachers. TESOL Journal. 12. 10.1002/tesj.583.

Burner, Tony & Carlsen, Christian. (2023). Teachers' multilingual beliefs and practices in English classrooms: A scoping review. Review of Education. 11. 10.1002/rev3.3407.



Wikipedia contributors. (2024, December 24). Jasone Cenoz. Wikipedia. https://en.wikipedia.org/wiki/Jasone_Cenoz

Wikipedia contributors. (2025, March 16). Translanguaging. Wikipedia. https://en.wikipedia.org/wiki/Translanguaging

Said, S. (2025, January 14). Supporting neuroplasticity in multilingual learners. Edutopia. https://www.edutopia.org/article/maintaining-high-standards-multilingual-learners

Zuniga, J. (2024, October 3). Strategies that help multilingual students learn content and English at the same time. Edutopia. https://www.edutopia.org/article/teaching-ells-content-english-simultaneously

Online teaching resources for multilingual learners. (n.d.). United Federation of Teachers.

https://www.uft.org/teaching/classroom-resources/online-teaching/learning-activities-students/online-teaching-resources-multilingual-learners



CASE STUDIES





Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.



At a glance

The Portuguese as a Non-Mother Tongue (PLNM) project promotes linguistic, social, and academic integration for students whose first language is not Portuguese, ensuring their success and inclusion.

Key individuals



Immigrant Students



School

Context

Located in a multicultural region, Barreiro School Cluster receives immigrant students from countries such as Belarus, Bangladesh, Moldavia, Ukraine, Nepal, China, etc. These students face challenges adapting to the Portuguese education system due to varying levels of language proficiency. The PLNM program, aligned with the Common European Framework of Reference for Languages (CEFR) levels A1, A2, and B1, addresses these challenges.



The PLNM program is designed to support non-native Portuguese-speaking students by improving their language proficiency and integration. It is structured into three levels: A1 (Beginner) for basic vocabulary and simple writing, A2 (Elementary) for short text comprehension and basic interaction, and B1 (Intermediate) for more complex interactions and text production. The key learning domains include oral comprehension, production, reading, writing, and grammar, with continuous assessment at each level. Methodologies involve small group welcoming classes, adapted materials like visual aids and multimedia resources, and practical activities such as role-playing dialogues and writing simple texts. Cultural projects foster intercultural exchange through shared stories, music, and traditions. The program has improved students' language skills, enabling their participation in other subjects, and enhanced their self-esteem and social integration. Additionally, it strengthened family involvement through

Lesson learnt

environment.

outreach initiatives, ensuring a more inclusive and supportive learning

Organizing learning into A1, A2, and B1 levels provides tailored language support, while practical activities and diverse methodologies ensure the program's success. Valuing students' cultural backgrounds promotes an inclusive environment, and continuous evaluation enables progress monitoring and strategy adjustments.



At a glance

Mentoring project and other support practices for immigrant students, promoting linguistic, academic, and social inclusion.

Context

Located in a multicultural region, the school welcomes a growing number of immigrant students from different countries. These students face language barriers and difficulties adapting to the Portuguese education system, requiring specific measures for welcoming and integrating them.

Key individuals



Immigrant students



School



Description

The Mentoring Program aims to support students' school integration and learning recovery through peer mentoring. Volunteer or selected mentors with strong academic performance help mentees, adapt to the school environment. The Psychology and Guidance Service ensures progress through follow-ups and family involvement. Operation:

- Selection of mentors and mentees: Volunteer students or those indicated by the class council are selected based on motivational interviews conducted by the Psychology and Guidance Service;
- Peer partnerships: Experienced students (mentors) assist newly arrived peers (mentees) in adapting to the school environment and curriculum.

Lesson learnt

The Mentoring Program strengthens bonds between students, promoting inclusion and academic success for immigrant students.



At a glance

Linguistic and cultural adaptation of Brazilian immigrant students, due to the wave of migration that is currently taking place in the country.

Key individuals







School

Context

Portugal is welcoming a huge wave of Brazilian migrants all over the country. The school, like all other Portuguese schools, is currently welcoming numerous students from this background who speak Portuguese with regional and national differences, since Portuguese in Portugal differs greatly from Portuguese in Brazil. The main challenge is to ensure the linguistic and cultural integration of these students.

Support for Brazilian immigrant students PORTUGAL - AE IDÃES

Description

To support and integrate these students, the school organises or offers:

- Specific classes for Brazilian students, with individualised support or in small groups, where the differences in vocabulary, expressions and grammatical norms of European Portuguese compared to Brazilian Portuguese are worked on.
- Use of real-life situations and practical examples to facilitate linguistic adaptation in everyday school life.
- Organisation of extracurricular activities where students present their cultures through different artistic expressions and stories, promoting cultural exchange.
- Portuguese students act as mentors, helping their Brazilian classmates adapt to the school rhythm and the use of European Portuguese.

Lesson learnt

- Working on language differences in Portuguese promotes a smoother transition for Brazilian students.
- Valuing the students' culture of origin strengthens their sense of belonging and inclusion



At a glance

Portugal is receiving many migrants from non-Portuguese-speaking countries who come in search of work and end up bringing their families with them. The integration of immigrant pupils from non-Portuguese-speaking countries and their ongoing support in learning Portuguese is an ongoing challenge for schools.

Key individuals





Immigrant students

School

Context

The school receives immigrant students from various European countries and beyond, who arrive with little or no command of the Portuguese language. The challenge is to help the students quickly acquire mastery of the Portuguese language (B2 level) so that they are able to follow the curriculum of the different subjects. Until they reach this level, the students have differentiated Portuguese classes.

Support for immigrant students from nonlusophone countries

PORTUGAL - AE IDAES

Description

To support and integrate these students, the school organises or offers:

- Portuguese as a second language classes (a national project called "Português Língua Não-Materna" – PLNM in English would be 'Portuguese as a Non-Mother Tongue'), focused on basic oral and written communication skills, are taught in place of the Portuguese subject.
- Use of educational technology, such as videos, interactive games and digital language learning tools and even mobile phones for instant translation and communication mediator.
- Extracurricular activities that encourage interaction between students from different backgrounds, using Portuguese as a common language.

Lesson learnt

- Intensive PLNM programmes accelerate the learning of Portuguese in immersive contexts.
- Extracurricular activities create an inclusive environment, promoting socialisation and the practice of the Portuguese language.



At a glance

The "Alloglosson" program is designed to provide an inclusive environment for students who do not speak Greek and cannot be integrated into a regular classroom. Managed MESY, this program is available in schools with a high number of non-Greekspeaking students.

Key individuals







Schools

Context

Cyprus, situated in the heart of the Mediterranean, often serves as a refuge for thousands of refugees from war-torn regions of Africa, Asia, and Europe. Additionally, as a gateway to Europe, it welcomes thousands of economic migrants, who often arrive with their families. As an educational institution, our school embraces the program "Allogloson" that is managed by the Ministry of Education, Sport and Youth (MESY), and implemented at schools that need it.



In this program, students whose mother tongue is not Greek and who do not have the core knowledge of the language, making it difficult for them to follow a lesson offered in Greek, are included. Teachers who will teach in this program attend a seminar at the beginning of the school year to receive information and instructions on how to assist these students. The program teaches basic core knowledge: vocabulary and simple rules of grammar and syntax through simple texts. They do not follow the YPAN curriculum, and the goal is for them to be able to communicate and process a text. These students are integrated into classes as auditors. That is, they attend lessons normally (except for the hours they leave the class to attend the program's lessons), but they are not examined or graded. At the end of the school year, if they are ready, they take a special examination, and if it is determined that their language ability is at a satisfactory level, they are integrated into their class as regular students.

Lesson learnt

Schools learn that language support is key to student integration and academic success. Teachers need training and adaptive strategies to help non-Greek-speaking students. Flexible programs and assessments ensure a smooth transition into regular classes



The program provides Greek and math lessons to help refugee and asylum-seeking students develop basic communication and academic skills. Students are in a separate section, not integrated into regular classes. Their future integration into the mainstream system depends on assessment outcomes.

Key individuals







School

Context

This program is intended for students who are refugees and asylum seekers. These students are not integrated into any class but form a separate section of our school. They attend Greek and mathematics lessons and are taught basic principles of the language and fundamental concepts of mathematics. The goal in this case is also for students to learn to communicate and understand simple texts. At the end of the school year, it is uncertain whether these students are entitled, after examination, to be integrated into the system as regular students or if they continue in this manner for all years.



Cyprus offers a structured support system for refugees and asylum seekers, focusing on education, integration, and rehabilitation. The Ministry of Education Sport and Youth provides Greek language courses to help non-Greek-speaking students integrate into the school system. Schools adopt inclusive strategies, such as peer support systems and collaboration with refugee families. Specialized rehabilitation services are available through the Unit of Rehabilitation of Victims of Torture (URVT), offering psychological, legal, and social assistance. Employment programs help refugees adjust to the Cypriot work culture and improve their job prospects. The United Nations High Commissioner for Refugees in Cyprus runs public awareness campaigns to foster understanding and provides training for professionals working in refugee protection. These initiatives ensure that asylum seekers receive education, employment opportunities, and social support, contributing to their overall well-being and integration into Cypriot society.

Lesson learnt

Holistic support, including psychological, legal, and employment assistance, improves long-term outcomes for asylum seekers. Collaboration between schools, government, and NGOs is essential for effective refugee inclusion.



ALI (WINGS) is a national school project whose objective is to integrate non-native students, with a focus on unaccompanied minors, in traditional educational environments, through the provision of Italian language courses, following a personalised teaching method with the use of digital tools.

Key individuals







Schools

Context

Integrating migrant students originating from various diverse cultural and linguistic backgrounds poses several significant challenges for schools and educational institutions.

Providing high-quality and impactful education to migrant students, especially unaccompanied minors, is a difficult task every school tries to carry out effectively, as language is not the only gap that needs to be filled. Initiatives and projects of a nation-wide character aiming at the provision of a comprehensive transformation of schools' curricula are important in these efforts.



ALI Project (in English: Linguistic Literacy and access to Education for Unaccompanied Foreign Minors Project) is a national project implemented in several schools across Italy, with the objective of integrating unaccompanied migrant students in schools and providing them with high-quality education.

The main activities carried out in schools are:

- <u>Italian Language Courses:</u> Italian as a Second Language courses specifically developed to cater to the cultural and linguistic needs of migrant students.
- Awareness on Unaccompanied Minors Issue: Initiatives that render the school community familiar with the complex notions and concepts surrounding the topic of unaccompanied migrant minors.
- <u>Personalised Learning Paths:</u> With the assistance of digital ML-based tools, teachers get to create personalised learning paths for every student, based on their needs.

Lesson learnt

Awareness on migration issues - Integration of migrant students in schools - New technologies as tools for refining and developing teaching methods.



Insieme si può is a project carried out by the "F. Crispi - P. Vetri" school in Ragusa, Sicily and aims to the development and implementation of intervention methodologies and strategies for the successful integration of students do not have Italian as mother tongue in the school environment.

Key individuals



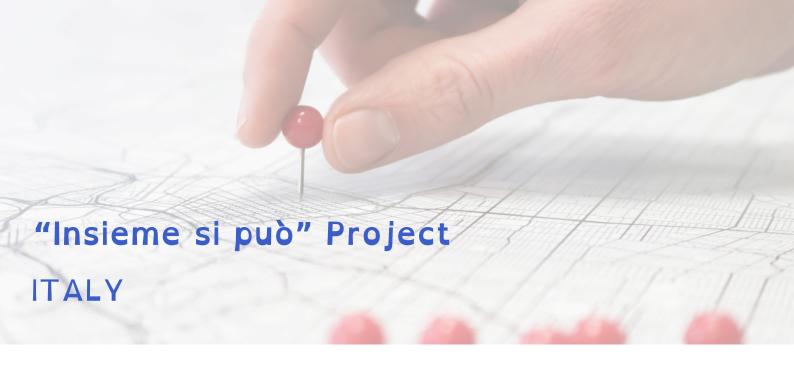




Schools

Context

It is observed that in Italy a significant number of students participating in school education do have Italian as their mother tongue. Italy is a country in which a lot of local dialects and minority languages are still spoken today, putting thus obstacles to young children who have to follow an education that is conducted primarily, if not solely, in standard Italian. Schools need to find effective solutions to this issue, ensuring equal educational opportunities for each student.



The "Insieme si può" (Together we can) project is an initiative carried out by the "F. Crispi - P. Vetri" school in Ragusa, Sicily. Given the school's diverse range of students' cultural and linguistic backgrounds and with a large number of them not having Italian as their mother language, school administrators and teaching staff located the need for the creation of such a project.

This way, the school ensures that every student has access to educational materials, assisting them thus succeed in their school and personal ventures.

The project consists of:

- <u>Italian Language Courses:</u> Intensive Italian as a Second Language courses adapted to the needs of each individual student.
- <u>Labs and Workshops:</u> Interactive sessions in specifically created laboratories, making students familiar with new technologies and how they can assist them in their educational journeys.

Lesson learnt

Personalised Italian language courses - Utilisation of modern technologies - Holistic education model - Acceptance and integration of students originating from diverse cultural and linguistic backgrounds.



It's important to understand the phenomenon of bilingualism observed in the Martinican population, considering that French and Creole are developing as coexisting common languages in a population that is schooled in one of them (French) and uses the other (Creole) independently in their daily lives, in the family, at work, formally and informally...

Context

In Martinique everyone speaks
Creole and French. The population
of Martinique is bilingual:
everyone speaks Creole within
their families and among
themselves, with a strong oral
component, and everyone is
educated in French.

This study investigates how young Martinican students perceive and categorize the mixture between French and Creole in their daily linguistic practices.

Key individuals







Schools

"Mixture" between Creole and French in Martinique - Representations

MARTINIQUE (FRANCE)

Description

The study uses perceptual linguistics, an approach that examines how speakers perceive and categorise linguistic variations.

Written samples were collected from students living in Martinique and attended school there. They were asked to give examples of sentences that they considered to be 'mixtures' between French and Creole.

The aim of this study was to understand how the two linguistic systems (French and Creole) coexist and interact in usual everyday communication of martican people based on the opinions of native speakers who had the opportunity, through this study, to reflect on the coexistence of the two languages in their daily lives. Some phenomena have been identified:

Syntactic interference - when Creole rules influence the structure of French, such as in the use of prepositions.

Example: Mets ton casque dans ta tête (Put your helmet on your head), influenced by Creole, where dan can mean both 'in' and 'on'.

Code switching - When students mix French and Creole in the same sentence.

Lesson learnt

Students clearly distinguish French and Creole as separate systems, but recognise that mixed linguistic practices are common. This perception reflects the sociolinguistic reality of Martinique, where the majority of young people grow up with French as their L1, but in an environment strongly influenced by Creole. The study suggests that instead of considering these 'mixtures' as errors, they should be analysed as a natural part of bilingual communication in Martinique.



French teaching should be adapted to recognise and integrate students' linguistic variation, rather than simply imposing a rigid model of standard French.

- Teachers need better training in bilingualism and contact linguistics in order to deal more effectively with students' difficulties.

Key individuals





Teachers



Schools

Context

The simple and paradoxically complex duality of teaching/learning of French as a language of schooling in Martinique, this study analyses the relationship between French teaching and the sociolinguistic reality of Martinique, where French and Creole coexist. The focus is on the challenges faced by students and teachers in teaching French in a bilingual environment. The polylectal model could be

useful, allowing students to navigate between standard French, Martinique regional French and Creole, depending on the communicative context.



MARTINIQUE (FRANCE)

Description

It's a qualitative study based on lesson observation, interviews with teachers and analysis of oral and written productions by pupils (aged 8 to 12).

- The study, which although not recent is one of the most important on this subject, was carried out in primary schools in Martinique between 2006 and 2007.
- The data includes transcripts of interactions between teachers and pupils and highlights specific language difficulties.

Lesson learnt

Teaching of French at school doesn't reflect the students' linguistic practices, that makes learning difficult to them.

Many teachers consider Creole interferences in French beeing 'mistakes', rather than seeing them as natural adaptations of bilingualism. The study proposes a pedagogical approach called 'pedagogy of variation', which recognises the coexistence of different varieties of French and Creole and suggests a more flexible integration of these languages in teaching.

An example:

Use of Creole instead of standard French - A student says: J'ai pris sommeil (I fell asleep), influenced by the Creole pwan somey (to sleep).

The teacher corrects this to Je me suis endormi (I fell asleep). However, the teacher doesn't explain why 'prendre sommeil' is ungrammatical in French, missing an opportunity for comparative teaching.

83



Bilingual education into
French and Flemish was first
introduced in the Brussels
primary school Charles Buls
in 2020. With this approach,
students are learning by
being immersed in both
languages, taking a great
step towards the "living
together" Brussels' principle.

Key individuals







Schools

Context

Belgium has three distinct linguistic. federal communities: French, Flemish, and German speaking. The political history of Belgium has influenced language teaching in schools and has derived into legal constraints regarding the language(s) of instruction and foreign languages education. While this process has led to the "one community - one language" principle, this school has been a pioneer in bilingual education in French and Dutch in the region of Brussels.



This initiative was implemented in September 2020, four years after the creation of the first Bachelor's degree in bilingual teaching. As part of the City of Brussels intentions of offering its students high-quality multilingual education and its general focus on language learning, this bachelor's degree was developed to instruct teachers capable of this task in the Brussels region.

The Charles Buls School, located in the multicultural neighbourhood of Marolles, is the first one to carry out this immersion programme, which started with a first year of primary classes and subsequently opening for the entire school the following years. This initiative affects not only the content of the lessons, but also the library, extracurricular activities, and playgrounds. Two teachers, one French-speaking and other Flemish-speaking, work closely together to enable children to learn in both languages, ensuring that pupils follow half of the courses in each language in a ludic and spontaneous manner.

Lesson learnt

The Charles Buls School case highlights the importance of immersive, playful learning in fostering linguistic and social cohesion, paired with careful teacher training and strong institutional support.



Over 50 Dutch-speaking schools in the Brussels region have joined a multilingualism initiative to offer educational support in Dutch, French, English, and other languages spoken by students at home. The projects implemented under this programme have been compilated in a online gateway for teachers in Brussels.

Key individuals







Schools

Context

In the City of Brussels mission to promote bilingualism in education, the Flemish Community Commission (VGC) offers a open Dutch-speaking network of services and facilities in matters of education and culture. This hub developed new regulations and subsidies to enhance multilingualism in schools. The projects stemming from this initiative has led to the online repository for teachers "Brussel Vol Taal".

Brussel Vol Taal & Flemish Community Commission Multilingual Projects BELGIUM

Description

The Flemish Community Commission (VGC) introduced special regulations in 2023, paired with subsidies, to enable Dutch-speaking primary and secondary schools to develop multilingual projects. It resulted in 52 schools responding to the VGC's call to participate. This was the double of schools that were involved in this scheme the previous year.

The initiatives that these schools have been implementing are have being compilated in "Brussel Vol Taal" (Brussels Full of Language). This online gateway targeted towards Dutch-speaking schools in Brussels aims to provide with resources to the city teachers that deal with multilingual students everyday. It contains guidelines, materials, tools and resources for teachers on how children learn a new language, the specific context of students in the region of Brussels, and access to practical examples set by different schools. Such projects range from one-off actions to structural interventions, finding a myriad of opportunities for inspiration or replication.

Lesson learnt

The growing participation in multilingualism initiative demonstrate a strong demand for language-inclusive education. Creating online shared resources fosters collaboration in this mission and provides practical tools to support multilingual students effectively.

LINGUISTIC PATHFINDER



Project Number: 2024-1-PT01-KA220-SCH-000250257 Education Guide













