CHOPIN
language learning in sCHoOls:
Preferably Immersive and
billiNgual

PEDAGOGICAL GUIDELINE

CHOPIN - LANGUAGE LEARNING IN SCHOOLS: PREFERABLY IMMERSIVE AND BILLINGUAL

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When talking to teachers participating in training courses dedicated to bilingualism, a very common theme that comes up is the lack, or severely limited amount of materials or resources dedicated to bilingual content in correlation with the core curriculum of the subject.

This is undoubtedly one of the biggest challenges a bilingual innovator has to face.

An innovator, because we are talking about a teacher who designs bilingual activities based on knowledge, experience, and available resources.

In their daily work, many educators have become familiar with a range of tools that can be used and, at the same time, absorb the student's attention and interest. The school is not only understood as a place, but as an environment, a community, it is a very dynamically developing organism. The needs of a 21st-century learner concern not only the theoretical aspect but the practical, empirical aspect of learning about and discovering a world that sometimes seems extremely distant.

One of the greatest challenges of today's education is to meet ever more ambitious expectations and challenges. The way to convey the content referred to in the CLIL methodological principles as fully as possible, through language understood as a tool, is to visualize certain content and issues, engaging the natural curiosity and polysensory capacity of children and young people.

The student of a Polish school is ready for change and seeks new opportunities for development and improvement not only in the country, but very often in Europe or even worldwide. As an explorer and seeker, he is increasingly aware of the use of a foreign language as a key to opening new doors.

The latest technological solutions are the answer to the demands and needs of young people. The Laboratory of the Future program is an educational initiative that has given many establishments the opportunity to explore the latest solutions and implement technological innovations in schools at every educational level. Already among these are activities designed with Photon robots. The next step could be VR or AR goggles. In a nutshell, AR is a technology that 'mixes' digital reality with the world we physically inhabit. Images from our physical world, captured by a camera, are synchronized with computer graphics and 3D animations. This is realized so that we have a sense of the unity of the two realms.

Unlike virtual reality, which immerses us in a 3D simulation and detaches us from our physical world, augmented reality seamlessly combines the two parallel orders.

To navigate in the world of augmented reality, all you need is a smartphone with the right app or special glasses.

Virtual reality is the so-called native medium. No other medium (neither radio, television, cinema, or the internet) allows such a degree of engagement as when using VR.

In the world of virtual reality, we move in exactly the same way as in the real world. Depending on the type of application and the equipment we have - we can move freely, pick up objects, drop them, etc. We interact with experiences in the VR world in exactly the same way as we do in the real world. We engage with this world 100 per cent. Using VR in education, therefore, we can engage the viewer much more effectively, resulting in better understanding and memorization of the subject matter.

The Świętokrzyskie region is increasingly opening up to bilingualism. Teachers are themselves de-glamorizing CLIL so as to provide the fullest and best possible content to help their pupils understand the reality around them.

Listening to needs and dilemmas as well as findings and recommendations from 1 October 2022. The Świętokrzyskie Centre for Teacher Training in Kielce has embarked on the project 'CHOPIN - language learning in sCHools: Preferably Immersive and bilingual, or CHOPIN for short. In a way, this is the aftermath of seeing digital education and language learning as a kind of tandem. The implementation of activities in the CHOPIN project aims to improve the practical dimension of in-service teacher training in the partner countries through the implementation of the Content and Language Integrated Learning (CLIL) method with elements of virtual reality (VR).

The workshops, planned for 2023, will support teachers interested in implementing digital bilingual solutions at all educational levels.

The main objective of the activity is to develop teachers' professional, personal and digital skills in language learning and the use of VR.

Analyzing available studies and reports, the question arises whether virtual reality is the future of education, including bilingual education. Looking through the search results after typing the phrase 'AR augmented reality application' into the browser and reading through the articles searched, the answer seems to be an obvious YES. The automotive industry, augmented logistics, AR in the laboratory are just some examples. Artificial intelligence is creating ever new networks of neurons to stimulate our behavior. American researcher, scientist, and New York Times best-selling author Kelly Weinersmith, said "I don't think kids need augmented reality as much as we do - we want to be able to think like kids again because of it." The above quote is a kind of confirmation of the need to implement VR & AR in the educational sphere, making it both effective and impactful.[1]
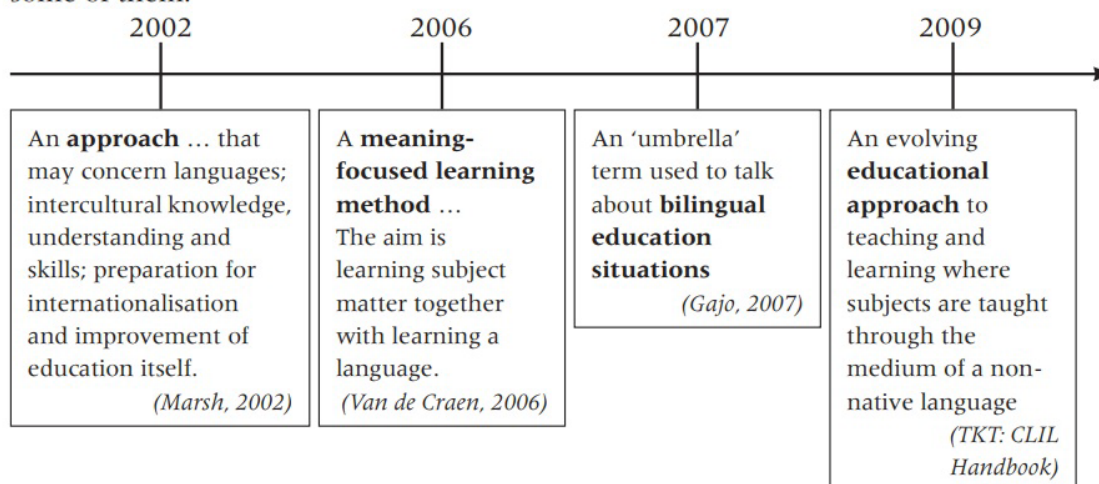
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[1] Inspiracje ……

■ What is CLIL?

CLIL, or Content and Language Integrated Learning, has many definitions. Here are some of them:

2002	2006	2007	2009
An **approach** … that may concern languages; intercultural knowledge, understanding and skills; preparation for internationalisation and improvement of education itself. *(Marsh, 2002)*	A **meaning-focused learning method** … The aim is learning subject matter together with learning a language. *(Van de Craen, 2006)*	An 'umbrella' term used to talk about **bilingual education situations** *(Gajo, 2007)*	An evolving **educational approach** to teaching and learning where subjects are taught through the medium of a non-native language *(TKT: CLIL Handbook)*

CLIL (Content and Language Integrated Learning) is an educational approach that aims to teach both content and language in an integrated way. The 5Cs of CLIL learning framework are:

Content: Refers to the subject matter that is being taught. In CLIL, content is the primary focus of instruction.

Communication: Refers to the use of language to transmit and receive information. In CLIL, communication is used to facilitate the learning of content.

Cognition: Refers to the mental processes involved in learning and thinking. In CLIL, cognition is used to help learners understand and remember the content.

Culture: Refers to the beliefs, values, customs, and practices of a particular society or group. In CLIL, culture is integrated into the teaching and learning of content and language.

Community: Refers to the social environment in which learning takes place. In CLIL, community refers to the group of learners who are engaged in the learning process together.
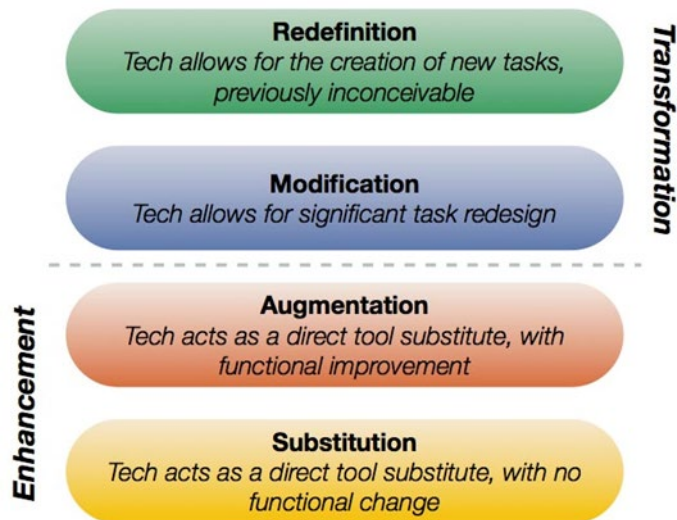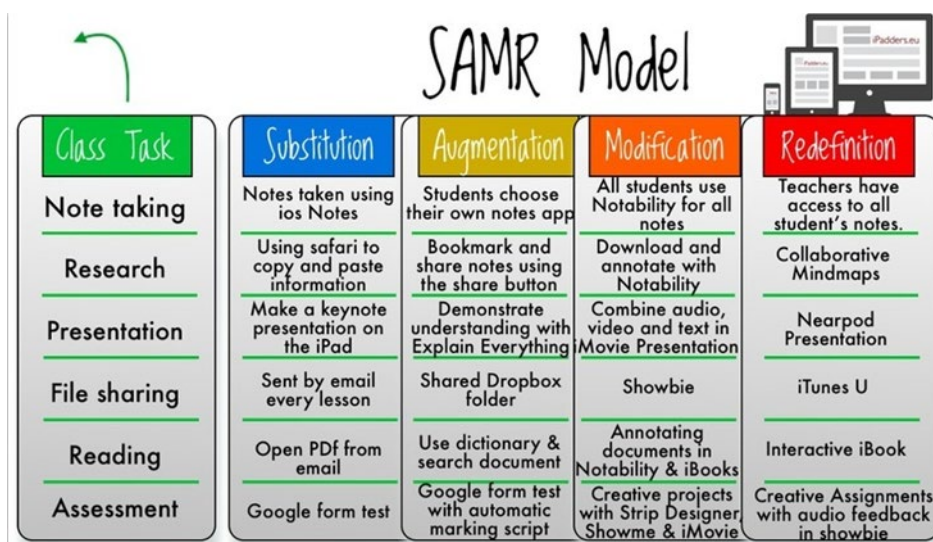
Figure 1

Figure 2

3.SAMR Model

The SAMR Model is a framework created by Dr. Ruben Puentedura that categorizes four different degrees of classroom technology integration. The letters "SAMR" stand for Substitution, Augmentation, Modification, and Redefinition.


SMR Model with examples

More information and examples : https://www.3plearning.com/blog/connectingsamrmodel/

Videos: https://www.youtube.com/watch?v=9b5yvgKQdqE

2.TPACK Model

Punya Mishra and Matthew J. Koehler's 2006 TPACK framework, which focuses on technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK), offers a productive approach to many of the dilemmas that teachers face in implementing educational technology (edtech) in their classrooms. By differentiating among these three types of knowledge, the TPACK framework outlines how content (what is being taught) and pedagogy (how the teacher imparts that content) must form the foundation for any effective edtech integration. This order is important because the technology being implemented must communicate the content and support the pedagogy in order to enhance students' learning experience.
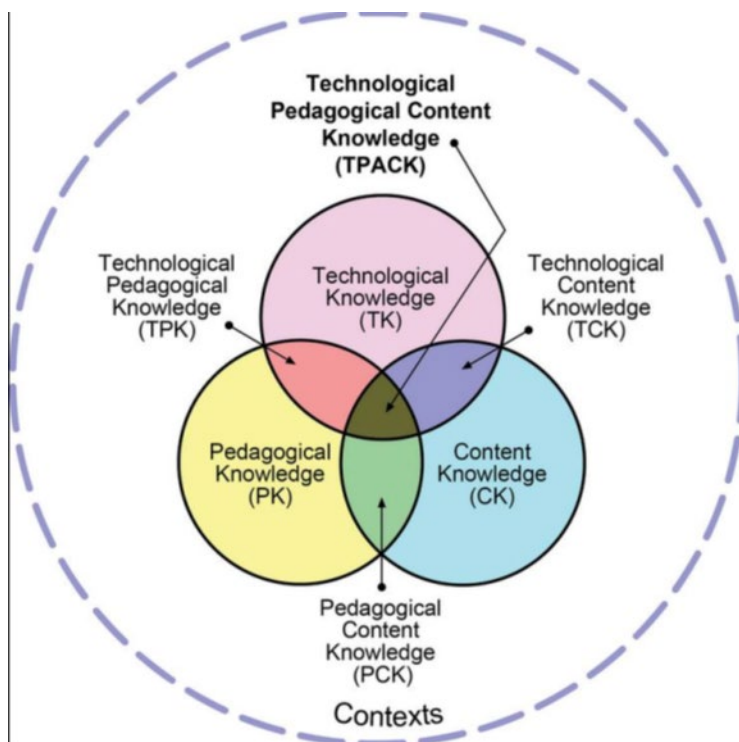
TPACK identifies three forms of knowledge:

Technological Knowledge: Knowledge about technology, including thinking about and working with technology, tools, and resources.

Pedagogical Knowledge: Knowledge about pedagogy, including practices or methods of teaching and learning.

Content Knowledge: Knowledge about the content or subject area to be learned or taught.

More information and examples : https://www.powerschool.com/blog/the-tpack-framework-explained-with-classroom-examples/

Videos: https://www.youtube.com/watch?v=yMQiHJsePOM

BLOOM'S TAXONOMY: LEARNING GOAL FORMULATION

1.   Bloom's Taxonomy

The framework elaborated in 1956,by Benjamin Bloom and his collaborators consisted of six major categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The categories after Knowledge were presented as "skills and abilities," with the understanding that knowledge was the necessary precondition for putting these skills and abilities into practice.

While each category contained subcategories, all lying along a continuum from simple to complex and concrete to abstract, the taxonomy is popularly remembered according to the six main categories.
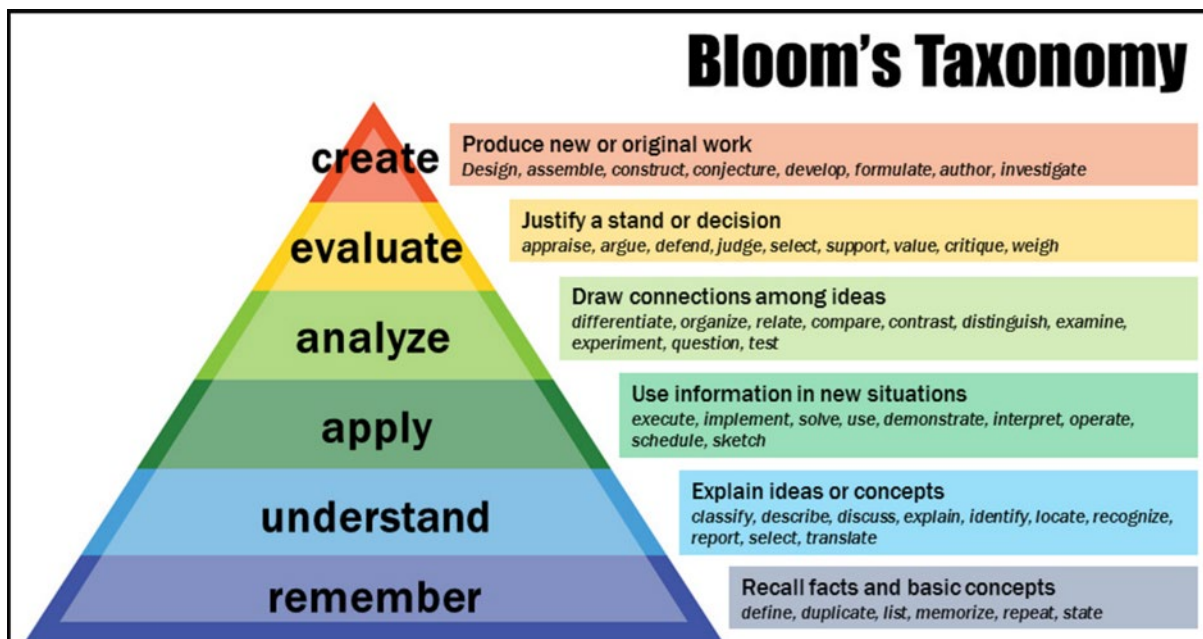
There are many pros related to Bloom's taxonomy. One being that this taxonomy creates organization in lessons and teaching which, in-turn, allows for collaboration. It also establishes and clarifies learning goals for both the student and teacher to achieve.

However, a con of this theory is that some people claim that "learning is not a hierarchy" and that the taxonomy tries to claim that some levels of skill hold more importance than other levels. Another con for Bloom's taxonomy is its claim to be "outdated" despite its revision in 2001.

More information and examples: https://www.educationise.com/post/30-bloom-s-taxonomy-examples-of-learning-objectives-for-teachers

Videos: https://www.youtube.com/watch?v=ayefSTAnCR8

Survey and interview

To effectively communicate the demands of reorganization and the adoption of new standard occupational positions in the craft trades, along with the essential technical and pedagogical proficiencies, it is crucial to eliminate the present gaps in qualification related to both methods and substance. To achieve this objective, CHOPIN has initiated a survey and interview process to curate customized teaching and learning resources, tailored to specific qualification requirements, thereby ensuring efficient acquisition of the necessary knowledge and skills.

Survey questions:

1. How long have you been teaching?

- Less than 1 year

- 1-3 years

- 3-5 years

- 5-10 years

- More than 10 years

2. What is your area of specialization?

- Science

- Technology

- Engineering

- Arts

- Math

- Other (please specify)

3. Do you feel confident in your ability to integrate digital media in your teaching?

- Yes

- No

- Somewhat

4. Have you received any professional development or training on the integration of digital media in the classroom?

- Yes

- No

5. Which of the following digital media tools are you familiar with and comfortable using in the classroom?

- Interactive whiteboards

- Educational apps

- Virtual reality/augmented reality

- Video creation/editing tools

- Podcast creation tools

- Other (please specify)

9. How would you rate your school's support for the integration of digital media in courses?

- Excellent

- Good

- Fair

- Poor

- Very poor

10. What type of professional development or training would you like to receive to better integrate digital media courses in your teaching?

- Technical training on digital media tools

- Pedagogical training on integrating digital media in the classroom

- Other (please specify)

11. Any additional comments or suggestions? (optional)

Interview

A focus interview could be conducted to determine the qualification needs of school teachers concerning technical and pedagogical needs to integrate digital media and courses:

1. Identify the research questions: The research questions for the focus interview could be: What are the technical and pedagogical needs of teachers to effectively integrate digital media into courses? What qualifications or training do teachers need to meet these needs?

2. Recruit participants: Participants could be recruited from schools that have already integrated digital media into their courses. Teachers who have experience in teaching courses, as well as those who have experience with digital media, could be considered.

3. Conduct the focus interview: The focus interview could be conducted with a small group of teachers, or individually. Questions could be asked about their experiences with integrating digital media into courses, the challenges they faced, and the qualifications or training they think they need to effectively integrate digital media.

Sample interview questions could include:

- What digital media have you used in your courses? How did you use it?

- What challenges did you face when integrating digital media into your courses? How did you overcome these challenges?

- What technical skills do you think teachers need to effectively integrate digital media into courses?

- What pedagogical strategies do you think are effective in teaching courses using digital media?

- What training or qualifications do you think are needed to effectively integrate digital media into your courses?

TRAINING METHODS

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TEACHER - STUDENTS

- **Direct Synchronous: The teacher can use the projector and cast the live video from oculus to show the EU Parliament and flags in real-time to the students. The teacher can guide the students through the virtual environment, explaining the history and significance of the EU and the flags. The teacher can also ask students to participate in discussions and answer quiz questions related to the EU Parliament and flags.**
- **Indirect Synchronous: In this method, the teacher can create pre-recorded videos that show the EU Parliament and flags. The teacher can also provide commentary and explanations to guide the students through the virtual environment. Students can watch the videos at their own pace and answer quiz questions related to the EU Parliament and flags.**
- **Asynchronous: The teacher can provide students with access to a VR headset and a pre-loaded virtual environment of the EU Parliament and flags. Students can explore the virtual environment at their own pace, observe details, and learn about the EU. The teacher can also provide resources such as articles, videos, and quiz questions related to the EU Parliament and flags for students to access and complete independently.**

STUDENT - STUDENTS

- **Direct Synchronous:** Bilingual students can take turns wearing the VR headset and leading a live video conference call where they guide their classmates through the virtual environment of the EU Parliament and flags. Students can take turns leading the discussion and asking quiz questions related to the EU Parliament and flags.
- **Indirect Synchronous:** Bilingual students can create pre-recorded videos where they explore the virtual environment of the EU Parliament and flags, provide commentary, and ask quiz questions. They can then share these videos with their classmates who can watch them at their own pace and answer the quiz questions.
- **Asynchronous:** Bilingual students can create VR recordings of the tour of the EU Parliament and flags using a tool. They can add annotations, text descriptions, and quiz questions to guide their classmates through the virtual environment. They can then share the VR tour with their classmates who can explore it at their own pace and answer the quiz questions.