

## Curricular integration and education for the future - a possible solution

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### Abstract

How can the school ensure the success of its students, how does it prepare them for a world that is constantly changing? What values, attitudes, what knowledge, skills do they form to really support them in facing these challenges? Teachers acknowledge that it is also a challenge for them.

This paper supports the idea that curriculum integration is a potential solution, because it supports a quality education, which focuses on training student's skills for the 21st century - flexible, creative thinking, critical thinking, cooperation and communication, but also character formation, of the civic spirit.

**Keywords: Education; curriculum; training; integration; skills; students.**

Recent studies (Chu, Reynolds, Tavares, Notary, 2017; Popovici Borzea, 2017, Drake and Reid, 2018) on the urgent need for change in the school training process show that new competencies need to be set as targets in the training of educated people to really prepare young people for the demands of the future society. In a world where change, novelty will be permanent, there will be constants of life, in a world of "radical uncertainties (...), the last thing a teacher has to offer his students is more information. They already have too much. " (Harari, 2018); more importantly, they should be trained to interpret and capitalize on information in various contexts of life and thus understand the world and the life they live.

An analysis on "skills change" can be found in The Future of Jobs Report -2018; The report presents skills that are declining, skills that are currently required in different professions and skills of the future; from the first category, that of competencies that will not be so sought after in the future, are presented: manual dexterity, endurance and precision, memory, verbal, auditory and spatial abilities, technology installation and maintenance, reading, writing, math and active listening, personnel management, quality control and safety awareness, coordination and time management, visual, auditory and speech abilities, technology use, monitoring and control.

Regarding the competencies of the future or "competencies of the 21st century" it is stated: "Proficiency in new technologies is only one part of the 2022 skills equation, however, as 'human' skills such as creativity, originality and initiative, critical thinking, persuasion, and

negotiation will likewise retain or increase their value, as will attention to detail, resilience, flexibility and complex problem-solving. Emotional intelligence, leadership and social influence as well as service orientation also see an outsized increase in demand relative to their current prominence. ” (idem)

Some authors (Chu, Reynolds, Tavares, Notari and Lee, 2017 apud. Drake S. M& Reid, J,2018) summarize these skills in a group of the most representative, called "the 6 C's": communication, character, critical thinking, creativity, citizenship, collaboration. ( ) These six competencies appear in the general curriculum of several countries, such as: Australia, Hong Kong, Singapore, Finland, Canada, USA.

Recent studies (Drake & Reid, 2018) highlight the changing emphasis at the international level in the field of training and propose the KDB approach: - Know, do and be, where knowledge implies the transition from memorization facts to conceptual thinking, Do - involves a transition from lower order skills to some complex ones, such as communication, collaboration, critical thinking, creativity, information management, etc.; equally important here are research / investigation, inquiry; and it also involves new accents because, at the educational level, there are guidelines that put the mental health of educated people first, their personal growth / development, socio-emotional learning and the internalization of values, as well as the formation of attitudes.

Character education occupies a special place among educational concerns, as does the civic spirit. The latter is illustrated at the behavioral level through individual responsibility (integrity, dignity, conflict resolution strategies, etc.), the choice and practice of a healthy lifestyle, the promotion of democratic principles of freedom, justice, equality, participation in the common good. (L. Ciolan, 2008) It should be noted that this Framework - KDB - structurally covers the elements of competences: knowledge (know), skills (Do) and attitudes / behaviors (Be).

How are these skills of the 21st century formed? The specialists consider that the integrated approach of the curricular contents is suitable for this approach; and the benefits of such an approach are highlighted:

- Provides a broad picture and deep meanings of the world and life;
- Stimulates communication, collaboration between students, free expression and involvement;
- Stimulates, motivates and maintains students' interest in researching and understanding the world and life;
- Empowers students in solving tasks and maintains a positive attitude towards learning, a good self-image, confidence, enthusiasm, perseverance;
- Supports a deep learning, based on understanding and not a superficial one;
- Promotes values and supports the formation of positive attitudes;
- Allows the formation of a realistic, nuanced thinking (multidisciplinarity), but also of an integrative one (interdisciplinarity) ( Stanciu, M, 2018)
- Encourages them to “take risks, explore models and understand the different points of view of particular problems” (Pigdon & Woolley, 1992)

- „The idea of ICM (Integrated Curriculum Model n.n.) is to scaffold learning for students in a worldly manner, and allow the students the opportunity to explore deep understanding of content and concepts” (Van Tassel-Baska Joyce)

We live in an interactive, dynamic, ever-changing world, and the integrated curriculum approach offers a holistic view of the world, which implies a higher level of education organization, creating openness to the "logic of further approaches to cross-curricular topics." which “have a strong connection with the daily life of students and aim directly or indirectly to contribute to the formation of values and attitudes” (Ciolan, L. 2008)

At the level of the specialized literature are specified models of integration; among these we present interdisciplinarity, multidisciplinary and transdisciplinarity, trying to emphasize how these ways of curricular integration can support the idea of skills training for the 21st century.

**Interdisciplinarity** is concerned with “the links and transfer of knowledge, methods, concepts and models from one discipline to another ”; this transfer of knowledge from one field to another can sometimes lead to a new discipline. For example, “when domains nuclear physics and medicine have merged, given a new treatment called chemotherapy ”(Choi &Pak 2006).

**Multidisciplinary** focuses on themes or issues that belong to a field; they are subject to analysis from the perspective of several disciplines, which do not necessarily belong to the same area, or to close fields. In this process of correlation (which aims to build explanations to support the understanding, even predictions about the topic or issue under consideration), the disciplines remain autonomous. (Ciolan, L.2008)

In the school activity there is a complementary multidisciplinary, where the correlations are made between related fields / disciplines and parallel multidisciplinary, where the correlations are made between disciplines "that are not in epistemological neighborhood (see - biology, technology, computer science)" (Cristea, S. 2019)

**Transdisciplinarity** is distinguished by the fact that “its entry point is not the subject, but the intellectual, affective and motor skills of the student.”(D’ Hainaut, L., 1981); represents the "highest degree of integration, going as far as merging". At the curriculum level, a distinction is made between instrumental transdisciplinarity, which offers students methods and techniques of intellectual work transferable to new situations, "more oriented towards solving certain problems than on the acquisition of knowledge for the sake of knowledge" and behavioral transdisciplinarity. to organize each of his approaches in situations significant for the learner. ”(Ciolan, L, 2008)

Therefore, it supports the idea (see Albright, J., 2016) that effective teaching is a teaching that is based on the integration of content, a teaching that supports rich and consistent dialogues between students on real life issues, dialogues that maintain collaboration and understanding, but and building unique, original answers that stand out from models and templates.

However, we must draw attention to the fact that integrated learning does not detach from disciplines, because in the first stage, the basic knowledge and skills, the fundamentals are assimilated / formed within them, and then to support the integrated approach.

<b>Curricular integration and skills training for the 21st Century</b>	
<b>21st Century Skills</b>	<b>Approaching the Integrated Curriculum - "Earnings"</b>
<b>Creativity, originality, initiative</b>	Problem-solving skills; Curiosity for the new; Creative thinking; Developed imagination; Involvement, active participation; Launching personal proposals; Training in activities, stimulating others; Motivation for learning etc. Critical thinking Interest in the process of understanding (in learning) etc.
<b>Critical thinking</b>	Interest in the process of understanding (in learning); Appreciation of their knowledge and understanding, reflectivity; Flexibility of thinking; Feeling of self-efficacy; Better academic results etc.
<b>Communication</b>	Supporting and sharing one's own ideas, proposals, solutions; Rich, consistent, authentic dialogue / communication; Open attitude; assertiveness; Ability to speak directly about one's own ideas and opinions; Self-knowledge etc.
<b>Cooperation</b>	Higher degree of engagement in joint actions, socialization empathy; Searching for teamwork strategies; Addressing diversity etc.
<b>Character</b>	Respect, tolerance, teamwork; Autonomy, Initiative, responsibility Courage to think outside the box and innovate; Empathy; Compassion etc.
<b>Citizenship</b>	Respect for others; Respect for the common good; Social initiatives; Understanding pluralism etc.

Table 1: *Curricular integration and skills training for the 21st Century*

For the training of 21st century competencies and, implicitly, for the integrated approach to the curriculum, teachers need to change their way of thinking and achieve teaching and support student learning ( Caciuc, V. T, 2012, Jeder, 2014, 2014; Gürkan Burcu,2020) while learning

how to put different emphasis and help students to build their knowledge through personal effort.

To get here, we need consistent teacher training programs to carry out activities that involve curricular integration, we need "learning communities" in which teachers share experiences that support a visible, effective and deep learning, based and experience-oriented.

Teachers need to "become skilled in facilitating small group learning", but also in using "authentic assessment strategies such as portfolios, performance exams and rubrics to document students' progress." Schools also need to provide teachers with materials and tools specific to such a curriculum approach; on the other hand, it is necessary for the community to be informed about the "new paradigm on education". (Loepp, F.L., 1999)

## **Conclusion**

Curricular integration is a way that education systems need to take into account more than they do at the moment, given these perspectives of supporting the training of skills needed for the world to come; by training them in skills that support them to face the challenges of a world with major changes, schools / universities will fulfill their mission, that of preparing a real integration of individuals in society.

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