Curricular Integration in Primary Education

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Abstract

The integrated approach to educational content is one of the elements that defines the curriculum for primary education. An integrated curriculum is focused on the student and his training needs, allowing a holistic learning. The article proposes an introductory theoretical approach on this topic, representing a minimum basis for designing a further study on the importance and benefits of an integrated curriculum in primary classes. By reviewing the literature, the article clarifies the concept of the integrated curriculum and identifies some of the benefits that it has. It also identifies a number of curricular integration models and interactive methods that can be used in an integrated activity, as well as some of the advantages of curricular integration in primary education.

Keywords: *integrated curriculum, primary education, competence;*

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the authors' contribution to the elaboration of the work is equal.

Introduction

Contemporary challenges lead to learning based on skills training and the development of new problems in appropriate contexts. Therefore, it is important that the teaching-learning process be based on an integrated approach to educational content, addressing a topic from the perspective of several disciplines, in order to respond to new challenges. The traditional approach is no longer recommended where teaching is focused only on limited content, specific only to a certain discipline.

Literature review

There is a wide range of definitions of the concept of integrated curriculum in the literature. An integrated curriculum is a curriculum in which students explore knowledge from different fields (Humphreis, 1981, after John, 2015). From the point of view of the author Boyer (in Ciolan & Ciolan, 2008, p.5), integration is "the process and the result of the process by which the student interprets the matter that is transmitted to him starting from his life experience and from knowledge that already and appropriated them".

Campbell and Henning (2010, in Maisyafriana, Siahaan, Evi, Wijayanti, 2020), consider that an integrated curriculum involves organized learning around students' problems. Shriner, Schlee, and Libler (2010) note that an integrated curriculum involves multi-faceted skills to solve a central topic (ibid.).

Drake and Reid (2018) mention in their paper that curricular integration can be a way to meet the challenges associated with the

development of 21st century skills. Curricular integration is done between two or more study disciplines (Wall and Lackie, 2017).

In the national literature, the author Popovici Borzea (2017, in Pânișoară, Manolescu, 2019, p. 238) defines the integrated curriculum, in a general sense, as “the action of making various elements interrelate in order to build a harmonious whole”, and in a narrow sense “the process and the result of the process by which a new element becomes part of an already existing ensemble or contributes to the development of a new ensemble”.

If we analyze other definitions regarding this concept, we will find that various meanings and definitions have been attributed by the authors who approached the field of curricular integration. In 1981 Humphreys (in Pânișoară, Manolescu, 2019, p. 238) stated that "the integrated study is the one through which students have the opportunity to extensively explore knowledge belonging to different disciplines, but correlated with aspects of real life". Shoemaker (1989) offers the ugly definition of the concept of integrated curriculum: "education that is organized to overcome disciplinary barriers, combining various aspects of the curriculum within significant associations to focus in this way on broad areas of knowledge" (ibid.).

Curriculum for primary education

The current school curriculum is focused on the formation of competencies according to the curricula for the subjects studied and at the level of the primary cycle, such as general competences and specific competences, the latter being derived from the general ones.

An integrated curriculum can also lead to the formation of transversal competencies. According to the authors Potolea, Toma and Borzea (2012), competence is the central element of the curriculum.

Competence is defined by "knowledge and skills acquired through learning" (Cucoș, 2014, p.248), with the help of which problems can be solved. A competence can not only represent the possession of knowledge specific to a certain field, but also the ability to apply them in various contexts.

In order to form the competencies provided by the school curricula, the curriculum for primary education is also focused on the integrated approach of the educational contents / integrated activities. These integrated activities represent one of the characteristics of the primary curriculum and are carried out in order to form specific competencies for two or more disciplines (Pîslaru, Gheorghe, in Pânișoară, Manolescu, 2019).

The integrated activities are characterized by approaching a content from the perspective of several disciplines, using a wide range of modern methods that ensure the formation of specific skills and the achievement of the proposed educational objectives.

Another feature of the integrated curriculum specific to primary education is the emergence of curricular areas. We notice in the framework the presence of disciplinary fields created by joining two disciplines, for example mathematics is joined with natural sciences forming the curricular area Mathematics and environmental exploration, which offers an inter and multidisciplinary vision on the study disciplines. Also, other curricular areas newly appeared in the

new framework plan are: Music and movement, Visual arts and practical skills, Game and movement (Landmarks for designing, updating and evaluating the national curriculum, ISE, 2020).

Modalities of curricular integration

In the literature, we find the following approaches to disciplinary integration of content:

- monodisciplinarity;
- multidisciplinarity;
- interdisciplinarity;
- transdisciplinarity.

Monodisciplinarity is specific to independent study objectives.

Multidisciplinarity or pluridisciplinarity involves approaching a topic that belongs to a particular field, from the perspective of several disciplines.

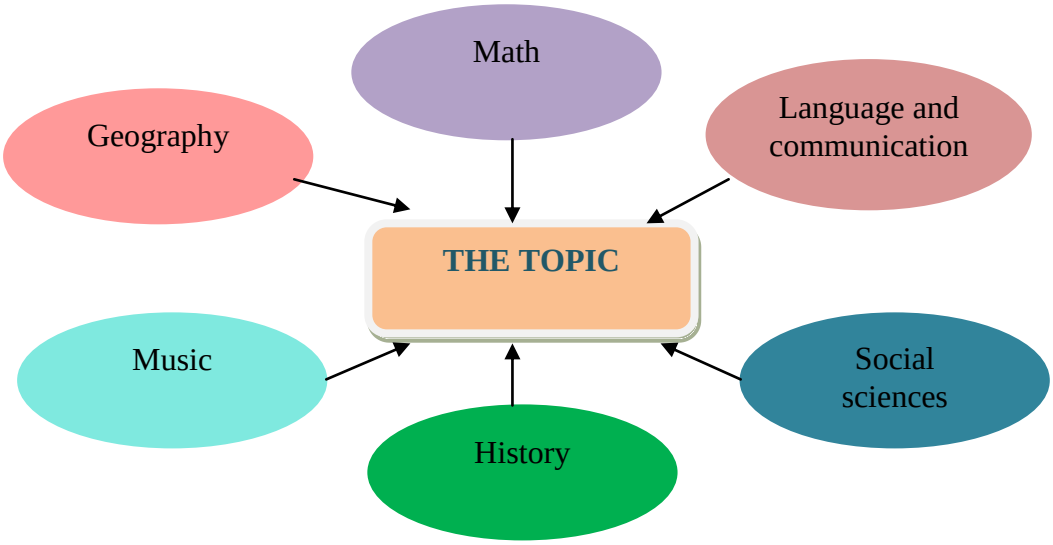

Figure no. 1. Multidisciplinary approach (A. Popovici Borzea, 2017, in Pânișoară, Manolescu, 2019).

Interdisciplinarity implies, unlike the multidisciplinary approach, the intersection of different disciplinary areas, being sought common themes specific to different disciplines of study. In this case, the limits of the disciplines disappear and the emphasis is on transversal competences (Ciolan, Ciolan, 2008).

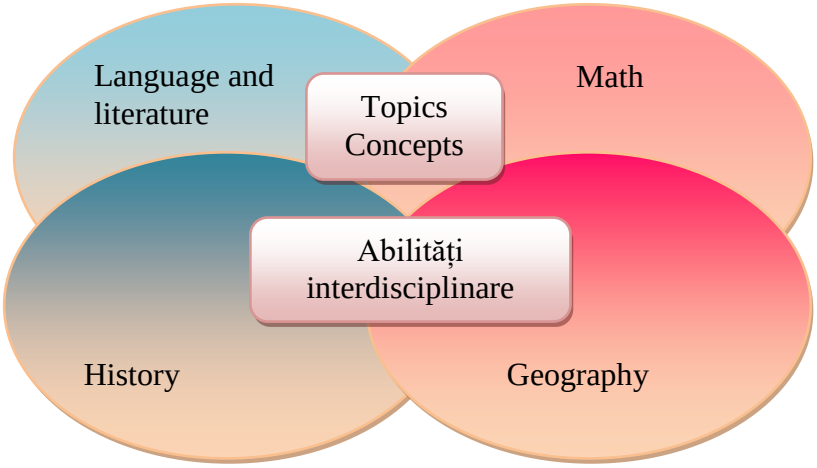

Figure no. 2 Interdisciplinary approach (A. Popovici Borzea, 2017, in Pânișoară, Manolescu, 2019).

Transdisciplinarity consists in the complete "decompartmentalization" of the study disciplines and is centered on real life contexts. In this case, the skills are developed by applying the knowledge held by students in real life. Transdisciplinary integration can take place through curricular negotiation and project-based learning (Borzea, 2017, in Pânișoară, Manolescu, 2019).

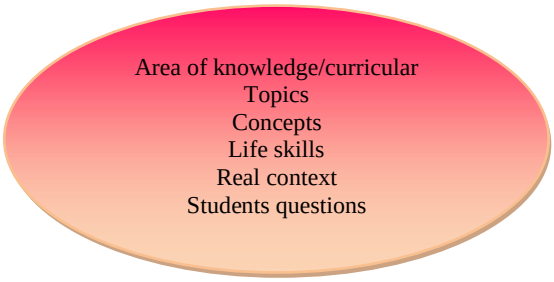

Figure no. 3 Transdisciplinarity approach (A. Popovici Borzea, 2017, in Pânișoară, Manolescu, 2019).

Models of integrated curriculum approach

T. Callo (2015) presents a series of pedagogical models for integrated curriculum approach:

- ***the J.Y. Boyer*** - the integration of knowledge / subjects has several hierarchical levels; integration involves the organization and linking of school subjects, with the aim of avoiding their traditional isolation;
- ***Fogarty model*** - is a model that is based on interdisciplinarity, integration being in this case a means of facilitation in creating links between study disciplines;
- ***Erickson model*** - in the case of this model the basic theme of a concept is at the center of learning;
- ***Lowe model*** - the integrated curriculum presupposes in this case similarities between the study disciplines;
- ***Ciolan model*** - involves transdisciplinarity and integration of skills in a flexible framework for action;
- ***Galison model*** - involves a fruitful collaboration between disciplines when they have the same methods (Caloo, Hadîrcă et al., 2015, pp. 19-22).

Advantages of curricular integration

Curricular integration has a number of advantages and positive effects, as follows:

- helps students to apply their skills;
- promotes values and attitudes;

- encourages deep learning;
- leads to a more integrated knowledge base (Lipson, 1993, in Ciolan and Ciolan, 2008, p. 14);
- allows students a direct involvement in learning activities;
- have the opportunity to make connections between personal experiences and classroom activity;
- develops their interest in learning and helps them to develop their critical thinking skills (Maisyafriana, Siahaan, Wijayanti, 2020).

Curricular integration or the introduction of an integrated curriculum is profitable because it responds to the needs of today's society, stimulates the active role of the student, allows the relationship with current experiences and events in the student's life (Ciolan & Ciolan, 2008, p. 14).

Interactive methods that support curricular integration

In Integrated Approaches to Primary Education (2008), the authors Ciolan and Ciolan present several strategies that support curricular integration in primary education, such as projects, problem-based learning or adventure learning.

Project-based learning is an interactive teaching-learning method, which involves the active involvement of students in the activities and ends with a portfolio, an exhibition, a collection, etc. It involves the collection of information on a certain topic, their processing and interpretation (Ciolan & Ciolan, 2008).

Problem-based learning puts students in a position to identify and find solutions to certain problems, using previous learning acquisitions.

Adventure learning offers a new way to experience and understand the world, but also to learn. This concept has several coordinates: non-formal learning in real contexts, exploring the natural environment and adventure, communication and intercultural community, investigation and reflection, orientation on values and attitudes, peer learning.

STEAM approach at primary education level

Not so long ago, the STEM or STEAM type approach appeared in Romania, an approach focused on integrated learning of sciences, mathematics, engineering, technologies and arts.

Brown et al. (2011) defined STEM education as a meta-discipline at school level, where all teachers of science, engineering, technology and mathematics have an integrated approach in teaching-learning, and the content of the discipline is not divided.

This relatively new approach involves the formation of key competencies in the fields of exact sciences, through real applications, so that the student is attracted and learns as easily as possible such disciplines considered difficult by most students. According to a recent study conducted on teachers in primary and preschool education (Bărnuțiu-Sârca, Ciascai, 2021), regarding this type of approach, the results surprised their need to acquire solid knowledge about STEM / STEAM in order to achieve integrated activities based

on this approach. The study also surprises the difficulty of implementing this approach due to the large workload and lack of resources required.

Conclusions

In order to form the competencies provided by the school curricula, an integrated approach to the educational contents is needed. As it appears from the curricular documents specific to primary education, we find an inter or multidisciplinary vision in teaching educational content. All the more so at this level of education such an approach is needed to facilitate the process of learning and understanding difficult knowledge by students.

Such an approach has various benefits in the teaching-learning process, involves students in activities, gives them the opportunity to apply in real life what they learn in class, develops critical thinking and creativity.

References

- Bărnuțiu-Sârca, M., Ciascai, L. (2021). Primary and pre-school teachers views on STEM based approaches. În Social and Behavioural Sciences. DOI:10.15405/epsbs.2021.03.02.11.
- Brown, R., Brown, J., Reardon, K., & Merrill, C. (2011). Understanding STEM: Current perceptions. În Technology and Engineering Teacher, vol. 70, nr. 1, pp. 5-9.

https://www.researchgate.net/publication/234659554_Understanding_STEM_Current_perceptions.

- Callo, T., Hadîrcă, M. (coord) et al. (2015). Educația integrală: Fundamentări teoretico-paradigmatice și aplicative. Chișinău: IȘE. Available on: http://ise.page.md/uploads/files/1460559097_1.-educatia-integrala-fundamentari-teoretico-paradigmatice-si-aplicative.pdf
- Ciolan, L., Ciolan, L.E. (2008). Pedagogia învățământului primar și preșcolar. Demersuri integrate în învățământul primar. Minsiterul Educației, Cercetării și Tineretului. Proiectul pentru învățământul rural.
- Cucoș, C. (2014). Pedagogie. Iași: Editura Polirom.
- Drake, S.M., Reid, J. (2018). Integrated curriculum as an effective way to teach 21st century capabilities. În Asia Pacific Journal of Educational Research, vol. 1, nr.1, pp. 31-50.
- John, Y.J. (2015). A ”new” thematic, integrated curriculum for primary school of Trinidad and Tabago: a paradigm shift. În International Journal of Higher Education, vol. 4, nr. 3. DOI:10.5430/ijhe.v4n3p172.
- Maisyafriana, Siahaan, A., Wijayanti, E.M. (2020). The Implementation of Integrated Curriculum in the Primary School: A Case Study of Sekolah Alam Cikeas. În *Advances in Social Science, Education and Humanities Research*, vol. 434. https://doi.org/10.2991/assehr.k.200427.014.
- OMEC 5765/15.10.2020 Repere pentru proiectarea, actualizarea și evaluarea Curriculumului Național. Cadrul de referință al Curriculumului Național. Available on: https://www.isjcs.ro/documente/noutati/OMEC%205765%20din%2015%20oct%202020%20REPERE%20PT%20PROIECTAREA%20CURRICULUMULUI%20NATIONAL.pdf.
- Pânișoară, I.O., Manolescu, M. (2019). Pedagogia învățământului primar și preșcolar. Iași: Editura Polirom.
- Popovici Borzea, A. (2019). Perspectiva structurală de abordare a curriculumului școlar. În Pânișoară, I.O., Manolescu, M. (coord), Pedagogia învățământului primar și preșcolar, pp. 210-246. Iași: Polirom.

- Potolea, D. Toma, S. (2010). *Conceptualizarea ”competenței”: implicații pentru proiectarea, implementarea și evaluarea programelor de formare.* În 10 ani de dezvoltare europeană în educația adulților - a III –a Conferință Națională de Educația adulților, vol. 1, pp. 39-47, Editura Eurostampa, Timișoara.
- Potolea, D., Toma, S., Borzea, A. (2012). *Coordonate ale unui nou cadru de referință al curriculumului național.* București: Editura Didactică și Pedagogică.
- Wall, A, Leckie L (2017). Curriculum Integration: An Overview, Current Issues in Middle Level Education, vol. 22, nr. 1, pp. 36-40.