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Article

Meaningful Learning, Bloom's Taxonomy, Active Learning Methodologies and the Flipped Classroom: Theoretical Contributions to Library and Information Science Education

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Resumo: As transformações ocorridas no ensino superior e as demandas contemporâneas da formação profissional têm ampliado o debate sobre abordagens pedagógicas capazes de promover processos de aprendizagem mais participativos, reflexivos e significativos. No contexto da Biblioteconomia, essas discussões assumem especial relevância diante da necessidade de formar profissionais aptos a atuar em ambientes informacionais cada vez mais complexos e dinâmicos. Este estudo teve como objetivo analisar comparativamente a Aprendizagem Significativa, a Taxonomia de Bloom, as Metodologias Ativas e a Sala de Aula Invertida, identificando suas principais características, convergências, distinções e possibilidades de articulação para o ensino superior em Biblioteconomia. Trata-se de uma pesquisa qualitativa, de caráter descritivo-comparativo e de abordagem teórico-conceitual, desenvolvida por meio de revisão integrativa da literatura. Os resultados indicam que, embora possuam naturezas e funções distintas no processo educacional, as perspectivas analisadas apresentam convergências relacionadas à participação do estudante, à autonomia na aprendizagem, à valorização de processos cognitivos mais complexos e à articulação entre teoria e prática. A comparação realizada também permitiu identificar possibilidades de articulação entre essas perspectivas, evidenciando seu potencial para subsidiar reflexões sobre práticas pedagógicas voltadas à formação bibliotecária. Conclui-se que a análise comparativa dessas abordagens oferece contribuições teóricas para a discussão de alternativas metodológicas alinhadas aos desafios contemporâneos da formação em Biblioteconomia.

Palavras-chave: ensino superior; biblioteconomia; aprendizagem significativa; taxonomia de Bloom; metodologias ativas.

Meaningful Learning, Bloom's Taxonomy, Active Learning Methodologies and the Flipped Classroom: Theoretical Contributions to Library and Information Science Education

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Abstract: Transformations in higher education and the contemporary demands of professional education have intensified discussions about pedagogical approaches capable of fostering more participatory, reflective, and meaningful learning processes. In the field of Library and Information Science, these discussions are particularly relevant due to the need to prepare professionals capable of working in increasingly complex and dynamic information environments. This study aimed to comparatively analyze Meaningful Learning, Bloom's Taxonomy, Active Learning Methodologies, and the Flipped Classroom, identifying their main characteristics, convergences, distinctions, and possibilities for articulation in higher education in Library and Information Science. This qualitative study adopted a descriptive-comparative and theoretical-conceptual approach and was developed through an integrative literature review. The results indicate that, although these perspectives have distinct natures and functions within the educational process, they present convergences related to student participation, learner autonomy, the promotion of higher-order cognitive processes, and the articulation between theory and practice. The comparative analysis also revealed possibilities for articulation among these perspectives, highlighting their potential to support reflections on pedagogical practices aimed at Library and Information Science education. It is concluded that the comparative examination of these approaches provides theoretical contributions to discussions on methodological alternatives aligned with contemporary challenges in Library and Information Science education.

Keywords: higher education; library and information science; meaningful learning; Bloom's taxonomy; active learning methodologies.

Aprendizaje Significativo, Taxonomía de Bloom, Metodologías Activas y Aula Invertida: Contribuciones Teóricas para la Formación en Bibliotecología

Resumen: Las transformaciones ocurridas en la educación superior y las demandas contemporáneas de la formación profesional han ampliado el debate sobre enfoques pedagógicos capaces de promover procesos de aprendizaje más participativos, reflexivos y significativos. En el contexto de la Bibliotecología y Ciencia de la Información, estas discusiones adquieren especial relevancia ante la necesidad de formar profesionales capacitados para actuar en entornos informacionales cada vez más complejos y dinámicos. Este estudio tuvo como objetivo analizar comparativamente el Aprendizaje Significativo, la Taxonomía de Bloom, las Metodologías Activas y el Aula Invertida, identificando sus principales características, convergencias, diferencias y posibilidades de articulación en la educación superior en Bibliotecología y Ciencia de la Información. Se trata de una investigación cualitativa, de carácter descriptivo-comparativo y enfoque teórico-conceptual, desarrollada mediante una revisión integradora de la literatura. Los resultados indican que, aunque las perspectivas analizadas poseen naturalezas y funciones distintas dentro del proceso educativo, presentan convergencias relacionadas con la participación del estudiante, la autonomía en el aprendizaje, la valoración de procesos cognitivos más complejos y la articulación entre teoría y práctica. El análisis comparativo también permitió identificar posibilidades de articulación entre estas perspectivas, evidenciando su potencial para fundamentar reflexiones sobre prácticas pedagógicas dirigidas a la formación bibliotecológica. Se concluye que el examen comparativo de estos enfoques aporta contribuciones teóricas al debate sobre alternativas metodológicas alineadas con los desafíos contemporáneos de la formación en Bibliotecología y Ciencia de la Información.

Palabras-clave: educación superior; bibliotecología y ciencia de la información; aprendizaje significativo; taxonomía de Bloom; metodologías activas.

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1 Introduction

The technological, social and informational transformations of recent decades have brought significant changes in teaching and learning processes in higher education. In this context, there is a growing search for pedagogical approaches capable of promoting greater student participation, the development of critical thinking and intellectual autonomy, thereby moving beyond practices centered exclusively on the transmission of content.

In the field of Library and Information Science, these changes take on particular relevance owing to the new demands related to the organization, mediation and use of information. Such challenges require the training of professionals capable of acting critically, reflectively and adaptively in the face of complex and constantly changing contexts (Oliveira *et al*., 2009; Solano; Rocha, 2015; Tanus, 2018).

In this scenario, pedagogical approaches constitute important frameworks for the planning and conducting of teaching-learning processes, since they offer theoretical and methodological foundations for the construction of more meaningful educational experiences (Peres *et al*., 2014). Among the perspectives and frameworks discussed in the educational literature are Meaningful Learning, Bloom's Taxonomy, Active Methodologies and the Flipped Classroom.

Although widely discussed in the field of Education, these approaches also show a propensity to contribute to training in Library and Information Science, especially in the development of competencies related to information analysis, problem-solving, decision-making and the articulation between theoretical knowledge and professional practice. However, it is observed that they are frequently studied in isolation, with few discussions about their convergences and possibilities for integration in the context of librarian education (Peres *et al*., 2014; Solano; Rocha, 2015).

In light of this gap, this article aims to analyze, comparatively, the characteristics, convergences and possibilities for integration among Meaningful Learning, Bloom's Taxonomy, Active Methodologies and the Flipped Classroom, discussing their contributions to the improvement of the teaching-learning process in higher education in Library and Information Science.

As for the methodological procedures, a qualitative study of a descriptive-comparative nature and a theoretical-conceptual approach was conducted, grounded in an integrative literature review. The analysis focused on publications related to the four selected approaches, seeking to identify their main foundations, characteristics and possibilities for articulation.

The article is structured into four main sections. First, the theoretical framework underpinning the analyzed approaches is presented. Next, the methodological procedures adopted are described. Subsequently, the results of the comparative analysis are presented and discussed. Finally, the concluding remarks are presented, highlighting the contributions, limitations and possibilities for future research.

2 Theoretical foundations of the analyzed perspectives and their contributions to training in Library and Information Science

Library and information science education has been affected by transformations related to the production, organization, mediation and use of information in increasingly digital and dynamic environments. In this context, the development of professional competencies derives from the capacity for critical analysis, problem-solving, decision-making and continuous learning.

In view of these demands, it becomes relevant to understand how different pedagogical approaches can contribute to the improvement of teaching-learning processes in librarian education. Among the various perspectives discussed in the educational literature, Meaningful Learning, Bloom's Taxonomy, Active Methodologies and the Flipped Classroom stand out. Although they rest on distinct foundations, these approaches share the potential to foster learning that is more closely aligned with the development of the competencies necessary for the librarian's professional practice.

Thus, this section presents the main theoretical foundations of these four approaches, discussing their characteristics and their possible contributions to higher education in Library and Information Science.

2.1 Teaching and learning in Library and Information Science education

The teaching-learning process can be understood as a complex system of interactions between teachers and students, characterized by the development of critical and reflective skills. For Libâneo (2006), the role of teaching is to promote and conduct the students' learning process, highlighting that:

> [...] the relationship between teaching and learning is not mechanical [...]. On the contrary, it is a reciprocal relationship in which the directing role of the teacher and the activity of the students stand out (Libâneo, 2006, p. 90, our translation).

From this perspective, the teaching functions in higher education, as in Library and Information Science, must be grounded in mastering the specific content of the field and in pedagogical competencies capable of fostering adequate conditions for learning. According to Santos (2001), the outcomes of the educational process are directly related to the stance adopted by the teacher and to the way in which he or she articulates content, methodologies and educational objectives. Thus, pedagogical strategies that favor student agency, critical reflection and the articulation between theory and practice become fundamental.

It is in this scenario that the pedagogical approaches analyzed in this study present themselves as possibilities for the qualification of educational processes, contributing to the construction of learning experiences that are more meaningful and aligned with the contemporary demands of the profession.

2.2 Meaningful Learning

Meaningful Learning, developed by David Ausubel, is based on the principle that learning occurs more effectively when new information is related to the previously existing knowledge in the student's cognitive structure. From this perspective, learning ceases to be the memorization of content and comes to involve the construction of meanings and relations among concepts (Lima, 2004).

According to Ausubel (1968), the cognitive structure corresponds to the organized set of knowledge already existing in the individual. When new content manages to relate to this prior knowledge, meaningful learning occurs.

In the teaching of Library and Information Science, the principles of Meaningful Learning show the capacity to foster the understanding of complex and interdependent content, such as classification. By encouraging the articulation between prior knowledge and new concepts, this approach can help students understand the conceptual foundations that guide its application in professional contexts.

2.3 Bloom's Taxonomy

Although it does not constitute a pedagogical approach in the strict sense, Bloom's Taxonomy is widely used as a planning instrument. Its inclusion in this study is justified by the influence it exerts on the definition of cognitive competencies and on the structuring of teaching strategies.

Developed by Benjamin Bloom and collaborators, and subsequently revised by Anderson and Krathwohl (2001) and Krathwohl (2002), the taxonomy organizes cognitive

processes into six hierarchical levels: remember, understand, apply, analyze, evaluate and create. This structure enables teachers to plan educational objectives of different levels of complexity and to align assessment activities with the desired learning outcomes (Ferraz; Belhot, 2010).

In the context of education in Library and Information Science, Bloom's Taxonomy can assist teachers in defining objectives related both to the mastery of technical content and the development of analytical and critical competencies. Its use favors the construction of activities aligned with the contemporary demands of the profession, allowing the student to progress gradually from conceptual understanding to the analysis and resolution of informational problems.

2.4 Active Methodologies

Active Methodologies represent a set of teaching strategies grounded in perspectives that value autonomy and shift the focus of pedagogical action from the teacher to the student, promoting the student's participation in the construction of knowledge (Moran; Bacich, 2018; Barbosa; Moura, 2013). Berbel (2011) observes that active methodologies are based on real or simulated experiences that enable the student to face challenges related to social and professional practices.

In this model, the teacher acts as a mediator and facilitator of the learning process, while students assume a more participatory stance and take responsibility for the construction of their own knowledge (Marques *et al*., 2021). Among the main strategies associated with Active Methodologies, Problem-Based Learning (PBL) stands out (Marin *et al*., 2010; Paiva *et al*., 2016).

In the field of Library and Information Science, Active Methodologies can contribute to bringing learning situations closer to concrete professional demands. Case studies, collaborative projects and problem-solving enable students to mobilize knowledge related to the demands of librarianship in contexts close to professional reality.

2.5 Flipped Classroom

Frequently associated with Active Methodologies, the Flipped Classroom constitutes a pedagogical strategy that reorganizes the times and spaces of learning by transferring students' initial contact with content to moments prior to the in-person class. In this way, class time comes to be used for activities of discussion, problem-solving, conceptual deepening and practical application of knowledge.

The teacher assumes the role of mediator, guiding more complex activities and promoting the interaction among participants, while students have prior access to content through videos, texts and other digital materials, which allows them to arrive at classes with initial knowledge already constructed (Bergmann; Sams, 2016).

In Library and Information Science courses, the Flipped Classroom can favor the use of in-person meetings for practical activities related to the subjects, in which moments of interaction can be devoted to the development of more complex professional competencies.

2.6 Potential contributions of the approaches to training in Library and Information Science

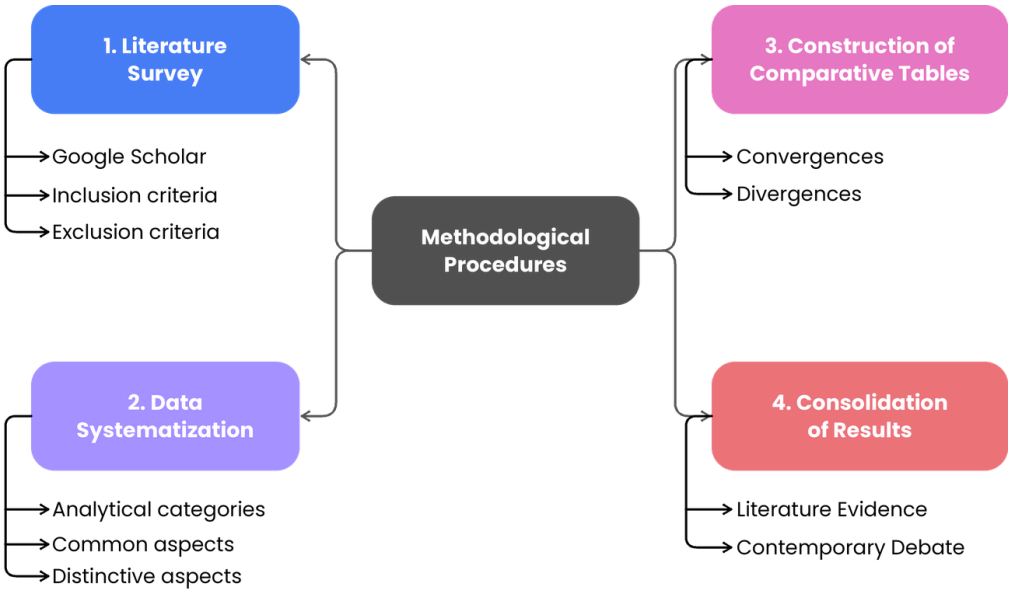
Although they present distinct characteristics, the approaches discussed share convergent elements that can contribute significantly to education in Library and Information Science. Considered in an integrated manner, these perspectives can support the construction of educational experiences that are more closely aligned with the current demands of the field, contributing to the training of professionals capable of interpreting, organizing, retrieving and mediating information in complex and constantly changing contexts.

From this theoretical framework, the following section presents the methodological procedures adopted for the comparative analysis of these approaches and for the identification of their potential contributions to higher education in Library and Information Science.

3 Methodology

This study is characterized as qualitative research, with a descriptive-comparative focus and a theoretical-conceptual approach. The investigation was developed through an integrative literature review, gathering and analyzing scientific productions on a given topic in order to understand different theoretical perspectives and to identify convergences and divergences among them. The methodological procedures were developed in four complementary phases, as illustrated in Figure 1, presented below.

Figure 1 – Methodological procedures



Source: Prepared by the authors, 2026.

The choice of an integrative review is justified by the aim of comparatively analyzing the four approaches discussed previously, in Section 2, seeking to identify their contributions to the improvement of the teaching-learning process in higher education and their possible applications to education in Library and Information Science.

3.1 Literature survey and selection

The bibliographic survey was conducted using the scientific literature retrieval tool Google Scholar. The documents retrieved through the bibliographic review covered the period from 2001 to 2024, during which contemporary discussions on active methodologies and pedagogical innovation were consolidated. Classical theoretical references were also used, such as the original publication of Bloom's Taxonomy (1968) and the review of Bloom's Taxonomy by Anderson and Krathwohl (2001) and Krathwohl (2002).

For the retrieval of documents, the descriptors in Portuguese shown in the following table were used.

Table 1 – Search Terms

Portuguese
Meaningful Learning
Bloom's Taxonomy
Active Methodologies
Flipped Classroom
Higher Education

Source: Prepared by the authors, 2026.

Scientific articles, books, book chapters, theses, dissertations and reference documents were considered. The inclusion criteria adopted were: thematic relevance to the approaches analyzed, theoretical relevance to the educational field and full availability of the document. Duplicate works, extended abstracts, materials without identified authorship and publications not adhering to the scope of the research were excluded.

At the end of the selection process, 22 publications were included, which constituted the analytical *corpus* of the study, comprising 15 retrieved documents and 7 theoretical reference documents.

3.2 Organization, systematization and analysis of the data

A full reading was carried out, and the information was systematized into analytical categories constructed from the research objective. This organization made it possible to produce two comparative tables designed to highlight convergences and divergences among the approaches studied. Generative artificial intelligence Gemini was used as a support tool. Tables 2 and 3 are presented below.

Table 2 – Comparison: common aspects

Common Aspect	Meaningful Learning	Bloom's Taxonomy	Flipped Classroom	Active Methodologies
Student-centered	Centered on the student's construction of meaning.	Helps defining objectives that challenge the student to think.	The student is the protagonist of his or her own learning.	Student at the center of the process, active and engaged.
Active Engagement	Requires the student to actively relate the new to the pre-existing.	Promotes active thinking at different levels.	Requires the student's active participation in both preparation and class.	Based on the student's action and participation.
Deep Understanding	Seeks understanding and lasting retention.	Encourages progression to higher cognitive levels.	Frees up class time for discussion and deepening of concepts.	Focus on the application and contextualized understanding of knowledge.
Skills Development	Develops the ability to relate and contextualize information.	Guides the development of cognitive skills from lower to higher levels.	Stimulates autonomy, responsibility and problem-solving.	Foster skills such as collaboration and creativity.
Contextualization	Occurs when knowledge is relevant and makes sense to the student.	Allows objectives to be adapted to different contexts and levels of education.	Makes learning more relevant by focusing on practical application in class.	Connects learning to real situations and challenges of the world.
Teacher's Role	Facilitator who builds bridges between the new and the known.	Guides the teacher in designing challenging activities.	Acts as a mentor and facilitator during in-class activities.	Mediator who guides and supports the student's process of discovery.

Source: Prepared by the authors, 2026.

Table 3 – Comparison: distinctive aspects

Distinctive Aspect	Meaningful Learning	Bloom's Taxonomy	Flipped Classroom	Active Methodologies
Nature	Pedagogical theory/concept of how learning takes place.	Tool/framework for classifying learning objectives.	Strategy/model for organizing learning time and space.	Approaches/set of pedagogical practices.
Main Focus l	The internal cognitive process of connecting new knowledge with the pre-existing mental structure.	The hierarchy of cognitive processes involved in learning.	The inversion of the dynamics of content exposure (at home) and application (in class).	The enhancement of teaching through the student's active participation.
Orientation	Psychopedagogical: explains "how" the student learns in depth.	Didactic/Planning: guides "what" and "at what level" to teach/assess.	Logistical/Practical : organizes "where" and "when" certain stages of learning take place.	Pedagogical/Experie ntial: focuses on "how" to engage the student in practical activities.
Applicability	A guiding principle for any effective teaching approach.	Can be applied in any methodology to define and measure objectives.	A specific implementation that restructures the classroom environment.	A broad set of approaches that can be used in isolation or in combination.
Expected Outcome	Integrated, lasting and applicable knowledge.	Clear learning objectives achieved at different levels of complexity.	More time for interaction and practical application in the classroom.	More autonomous, engaged students with developed skills.
Flexibility	An ideal to be pursued, adaptable to any context.	A fixed structure of levels, but applicable to various content.	A structured model that requires planning of pre-class materials.	Varied and adaptable to different subjects and objectives.

Source: Prepared by the authors, 2026.

The analysis, carried out through the comparison of the categories identified in the literature, made it possible to understand how each approach contributes to the teaching-learning processes and to librarian education.

4 Results

Although the approaches analyzed have distinct origins and purposes, the comparison made it possible to identify convergences related to student protagonism and the development of autonomy. These dimensions were subsequently discussed in light of the formative demands of Library and Information Science, especially with regard to the articulation between theoretical knowledge, professional competencies and problem-solving in information environments.

The systematization of the data was carried out from analytical categories previously defined in the methodology, involving aspects related to the role of the student, the role of the teacher, educational objectives, cognitive development and the possible contributions to the teaching of Library and Information Science.

The comparison shows that three of the approaches assign a central role to the student in the learning process, albeit from distinct perspectives. In Meaningful Learning, this centrality is manifested through the valuing of prior knowledge; in Active Methodologies, through protagonism in the construction of knowledge; and in the Flipped Classroom, through the student's responsibility for the prior study of content. Convergences related to the role of the teacher were also identified, who ceases to act exclusively as a transmitter of information and assumes functions of mediation and guidance of learning.

In the context of Library and Information Science, the results indicate that the four approaches show potential to contribute to the development of competencies related to the organization, representation, retrieval and mediation of information. It was also observed that their characteristics can favor the articulation between conceptual and procedural knowledge, an aspect particularly relevant in subjects that require, simultaneously, theoretical mastery and practical application, such as cataloging and indexing.

Overall, the results indicate that the approaches analyzed should be understood as frameworks that present complementary elements. This finding provides support for the analysis of the possibilities of integration among them and of their contributions to librarian education, a discussion presented in the following section.

5 Analysis

The comparative analysis shows, initially, that Meaningful Learning, Bloom's Taxonomy, Active Methodologies and the Flipped Classroom do not occupy the same place in the educational process. Meaningful Learning constitutes a theory concerned with understanding how new knowledge relates to the student's cognitive structure.

Bloom's Taxonomy presents a framework for the definition and organization of learning objectives. Active Methodologies, in turn, bring together different strategies that presuppose greater student participation in the learning process, while the Flipped Classroom constitutes a specific strategy for organizing learning activities and times. These differences must be considered before discussing the possible relations among them.

The comparison also allowed the identification of convergences related to student participation, autonomy and the development of cognitive processes that go beyond the memorization of content. These convergences take distinct forms in each perspective and indicate possibilities for organizing teaching that value greater student participation in the construction of learning. In education in Library and Information Science, these aspects can favor the articulation between conceptual knowledge, technical procedures, analysis and decision-making in different learning situations. One of the main potentialities identified in the literature concerns the development of intellectual autonomy.

In addition to the convergences identified, relevant differences are observed among the approaches. Meaningful Learning focuses on the processes of meaning construction from students' prior knowledge, not proposing specific social dynamics for the classroom, but clarifying the cognitive conditions necessary for information to make sense, while Bloom's Taxonomy acts as an instrument for planning and organizing educational objectives, providing parameters for the alignment among intended objectives, pedagogical activities and assessment instruments.

Active Methodologies constitute a set of pedagogical strategies oriented toward student agency, favoring the construction of knowledge through active participation, investigation, problem-solving and collaboration among students. The Flipped Classroom, in turn, represents a specific strategy that reorganizes the times and spaces of the educational process, shifting the first contact with content to autonomous study moments and devoting in-person meetings to conceptual deepening, interaction and the practical application of the knowledge constructed.

The differences identified do not prevent the articulation among these perspectives; on the contrary, they allow us to understand that each can contribute in a distinct way to the planning and conduct of the teaching-learning process. The principles of Meaningful Learning can guide the consideration of prior knowledge and of the relations established between new content and what the student already knows (Ausubel, 1968; Moreira, 1999). Bloom's Taxonomy can assist in defining the objectives and the cognitive processes one intends to develop (Anderson; Krathwohl, 2001; Krathwohl, 2002). Active Methodologies offer strategies that favor student participation, problem-solving and decision-making (Berbel, 2011; Bacich; Moran, 2018), while the Flipped Classroom makes it possible to reorganize the initial contact with content and the development of activities in the classroom (Bergmann; Sams, 2016). Therefore, the possibility of integration does not stem from an equivalence

among these perspectives, but from the different contributions they can offer to the educational process.

In the scope of Library and Information Science, this articulation can be discussed considering the specificities of a training that involves conceptual knowledge and, at the same time, the mastery of technical procedures. Solano and Rocha (2015), in reporting the use of card sorting in a Library and Information Science teaching experience, show possibilities for adopting participatory strategies and for bringing theoretical foundations closer to application situations. Subjects such as Cataloging, Classification, Indexing and Information Organization present, in this sense, possibilities for the use of the perspectives analyzed, since they articulate concepts, instruments, norms and procedures that need to be understood and applied in different situations.

In articulating the approaches analyzed, one perceives the valuing of problem-solving and of the practical application of knowledge, favoring the rapprochement between curricular content and the demands of professional practice (Andrade, 2024; Fujita, 2010). In addition to the technical aspects traditionally associated with the field, such approaches also show the capacity to strengthen competencies related to the analysis, organization, representation and use of information in different professional contexts, favoring the articulation between conceptual and procedural knowledge (Fujita, 2010; Lima, 2020).

Another relevant aspect concerns the preparation of professionals able to act in contexts marked by technological transformations, by the expansion of digital information environments and by changes in the forms of production, organization and access to knowledge, phenomena that have been affecting the training and professional practice of the librarian (Oliveira *et al*., 2009; Tanus, 2018). By stimulating active learning, critical reflection and autonomy, these approaches can contribute to the development of competencies necessary for information mediation, content curation and decision-making in different professional environments (Lima, 2020).

Finally, the analysis indicates that these approaches should not be understood as competing proposals, but as complementary frameworks. Their integration can contribute to the construction of pedagogical practices more aligned with the contemporary demands of librarian education, favoring the development of professionals who are critical, reflective and prepared to act in dynamic and constantly changing informational scenarios (Evangelista; Gomes, 2022; Lima, 2020; Santa Anna, 2018).

6 Concluding remarks

The transformations observed in higher education and the contemporary demands of professional training have driven the search for pedagogical approaches capable of promoting more participatory, reflective and meaningful learning processes. In this context, this study aimed to comparatively analyze Meaningful Learning, Bloom's Taxonomy, Active Methodologies and the Flipped Classroom, identifying their main characteristics, convergences and possibilities for integration in higher education in Library and Information Science.

The analysis carried out made it possible to observe that, although they have distinct foundations, natures and functions in the educational process, Meaningful Learning, Bloom's Taxonomy, Active Methodologies and the Flipped Classroom present convergences related to student participation in learning, the development of intellectual autonomy, the valuing of more complex cognitive processes and the articulation between theory and practice, especially with regard to pedagogical planning, the organization of learning experiences and the development of competencies relevant to librarian education.

From this analysis, it is argued that the articulation among such perspectives can offer theoretical support for reflection on pedagogical practices aimed at the teaching of Library and Information Science, particularly in light of the technological and informational transformations that demand professionals capable of acting in the organization, representation, retrieval and mediation of information in different contexts and formats. In this sense, the integration of these contributions can constitute a theoretical possibility for the construction of more participatory, reflective and contextualized pedagogical practices.

As a limitation, the exclusively theoretical nature of the research is highlighted, grounded in an integrative literature review and conceptual analysis, without empirical applications of the approaches in specific subjects or teaching contexts in Library and Information Science. Thus, the contributions identified should be understood as theoretical potentialities derived from the literature analyzed, and not as evidence resulting from educational interventions or learning assessments.

It is recommended that future research investigate the application of these approaches in specific subjects within Library and Information Science, especially in curricular components related to Information Organization, Cataloging, Classification, Indexing, Information Literacy and Information Mediation. Empirical studies may contribute to evaluating the impacts of these proposals on academic performance, on the development of

professional competencies and on the training of librarians prepared to act in increasingly complex and dynamic informational contexts. The investigation of the integration of these approaches into virtual learning environments and into the use of digital technologies aimed at the training of information professionals is also recommended.

In sum, the study reinforces the relevance of the debate on pedagogical innovation in Library and Information Science education and offers theoretical support for reflection on strategies capable of qualifying teaching-learning processes in higher education. By identifying convergences, divergences and possibilities for integration among different pedagogical approaches, the research contributes to broadening the understanding of methodological alternatives applicable to librarian education. It is not, however, the empirical validation of an integrated teaching model, but the proposal of theoretical possibilities grounded in the literature analyzed that may be explored and evaluated in future investigations.

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