

REVIEW

A Comparative Review of Bloom's and Fink's Taxonomies in Nursing Education: Bridging Theory and Practice

Adife Ahsen Çetin¹, Fatma Orgun², Nilay Özkütük²

¹Department of Nursing Education, Maltepe University School of Nursing, İstanbul, Türkiye

²Department of Teaching in Nursing, Ege University Faculty of Nursing, İzmir, Türkiye

Abstract

Bloom's revised taxonomy provides a theoretical framework that enables the systematic structuring of educational program objectives by classifying cognitive learning into six stages. This model, consisting of the stages of knowledge, comprehension, application, analysis, evaluation, and creation, serves as a guide in planning students' cognitive development processes. Case analysis, problem-based learning, clinical skill stations, and scenario-based applications, which are widely used in nursing education, are consistent with Bloom's approach that supports higher-order thinking skills. These activities contribute to the development of students' critical thinking, problem-solving, and clinical decision-making skills. Fink's Meaningful Learning Taxonomy, on the other hand, approaches learning from six dimensions, offering a holistic perspective that goes beyond cognitive skills. This model, which includes the elements of basic knowledge, application, integrated learning, human dimension, change of perspective, and learning to learn, aims to support both the academic and personal development of students. Assessments based on Fink's taxonomy in nursing education contribute to strengthening ethical sensitivity, empathy, self-management, professional identity development, and interdisciplinary connection skills. This study demonstrates the application of Bloom and Fink taxonomies in nursing education programs through examples of case-based teaching, clinical simulations, rubric development, and digital learning environments. The use of taxonomy-based assessment tools enables the objective and systematic monitoring of students' development in cognitive, affective, and psychomotor domains. Therefore, when Bloom's constructivist approach and Fink's student-centered and meaning-focused model are evaluated together, it is possible to develop a nursing education design that is appropriate for the needs of the digital age, ethically grounded, and holistic.

Keywords: Bloom's taxonomy; Fink's taxonomy; Nursing education

The dynamic and rapidly evolving nature of health services requires nursing education to cultivate professionals who can adapt to contemporary needs and demonstrate strong critical-thinking skills.^[1] Therefore, nursing education should extend beyond the transmission of theoretical knowledge and incorporate

active, student-centered, and experience-based learning approaches that promote holistic development across cognitive, affective, and psychomotor domains.^[1]

Learning taxonomies play an essential role in guiding educators as they design and evaluate effective teaching processes.^[2] Bloom's Taxonomy, long used for

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Correspondence: Adife Ahsen Çetin. Maltepe Üniversitesi, Hemşirelik Yüksekokulu, Hemşirelik Eğitim Bölümü, İstanbul, Türkiye

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the classification of educational objectives, provides a structured framework that organizes learning within the cognitive, affective, and psychomotor domains.^[3] Addressing these domains separately is particularly valuable in nursing, where theoretical instruction is closely intertwined with clinical practice.^[4]

Fink’s taxonomy of significant learning, in contrast, offers a multidimensional and student-centered perspective. Rather than focusing solely on knowledge acquisition, it emphasizes the integration of knowledge into real-life contexts, the development of personal and professional values, and the cultivation of self-directed learning skills.^[5] This broader approach is especially beneficial in applied disciplines such as nursing, where meaningful and lasting learning experiences are essential for professional competence.^[6] In this study, the contributions of Bloom and Fink taxonomies to nursing education are discussed comparatively; their effects on the basic stages of instructional design, such as determining teaching objectives, structuring learning processes, and assessment and evaluation practices, are evaluated together with theoretical approaches and application examples. In addition, the integration of both taxonomies with digital educational environments, simulation-based learning, and interdisciplinary practices is discussed, and strategic recommendations for improving the quality of nursing education are provided. This comparison under six main headings aims to help educators understand which model is more functional in which context and contributes to the development of instructional designs that support meaningful and lasting learning. In this context, the study aims to comparatively examine the reflections of Bloom and Fink taxonomies on the establishment of teaching objectives in nursing education, planning of learning processes and evaluation practices, and to develop recommendations for teaching designs appropriate to the field of nursing.

Following this aim, a targeted literature review was conducted to identify studies examining the role of Bloom’s and Fink’s taxonomies in nursing education. The review focused on literature addressing the use of learning taxonomies in defining instructional objectives, structuring active and student-centered learning processes, and developing assessment and evaluation strategies within nursing curricula. Articles were searched using keywords such as “Bloom’s Taxonomy,” “Fink’s Taxonomy,” “nursing education,” “learning outcomes,” “instructional design,” and “simulation-based learning.”

The search was carried out in international databases including PubMed, Scopus, and Web of Science, covering studies published between January 2024 and April 2025 to ensure the inclusion of contemporary evidence relevant to current educational practices. Priority was given to peer-reviewed research that explored cognitive, affective, and psychomotor dimensions of nursing education and examined how taxonomy-based planning supports meaningful and lasting learning. Studies unrelated to nursing or lacking direct relevance to educational taxonomies were excluded. The selected articles were synthesized to comparatively evaluate the theoretical foundations and practical applications of Bloom’s and Fink’s models in modern nursing education.

Nursing Education in the Context of Bloom’s Taxonomy

Bloom’s Taxonomy allows structuring the teaching process by classifying learning objectives in three basic areas: Cognitive, affective, and psychomotor.^[7] In disciplines such as nursing education, which includes both theoretical knowledge and practical skills, structured teaching through these areas directly affects student success and professional competence (Table 1).^[4]

Table 1. Learning areas and applications in nursing education based on Bloom’s taxonomy ^[4]			
Learning area	Definition	Application examples in nursing education	Intended learning outcome
Cognitive domain	Mental processes at the levels of knowledge, comprehension, application, analysis, synthesis and evaluation	Clinical scenarios, case analysis, problem-based learning	Clinical decision making, critical thinking, evidence-based practice
Affective domain	Attitudes, values, empathy, ethical sensitivity and emotional responses	Simulation, role-play, reflective diaries	Ethical sensitivity, empathic communication, internalization of professional values
Psychomotor domain	Acquisition and practice of physical skills	Skills laboratories, simulation environments, clinical applications	Safe and effective nursing interventions, application competence

Table 2. Dimensions of meaningful learning in nursing education based on Fink's taxonomy

Learning dimension	Definition	Application examples in nursing education	Intended learning outcome
Basic information	Acquisition and recall of basic theoretical knowledge	Anatomy, physiology, pharmacology courses	Scientifically based clinical decision making
Application	Use of knowledge and skills in the clinical setting	Simulation, problem-based learning	Application competence, clinical thinking
Integrated learning	Establishing interdisciplinary knowledge relationships	Integration of anatomy-ethics-communication	Holistic professional perspective
Human dimension	Understanding yourself and others	Ethical debates, empathy studies	Patient-centered approach and empathy
Change of perspective	Change in the individual's value and belief system	Public health and inequality cases	Social sensitivity, ethical awareness
Learning to learn	Awareness of the learning process	Reflective journal, portfolio, self-assessment	Lifelong learning, self-regulation

Selecting appropriate methods and measurement tools for each learning area plays a critical role in increasing the professional competencies of student nurses.^[7]

Nursing Education with Fink's Meaningful Learning Taxonomy

Fink's taxonomy of meaningful learning defines learning with a holistic approach that is not limited to the acquisition of knowledge but also includes the student's personal development, competence in practice, value system, and awareness of the learning process.^[5] It is emphasized that this model is especially effective in disciplines such as nursing, which are based on human relations, practice-oriented, and require continuous development.^[6] Fink considers learning in six basic dimensions and aims to create "meaningful" and permanent learning in students by supporting each other.

This 6-dimensional taxonomy provides the basis for nursing students to understand and remember basic theoretical knowledge, such as human anatomy, physiology, pharmacology, and other learning dimensions.^[5] This knowledge enables science-based thinking in clinical decision-making and patient care (Table 2).^[8]

Fink Applications with Clinical Simulation and Case-Based Learning

Fink's learning dimensions can be embodied through interactive methods, especially simulation and case-based learning. While clinical simulation allows students to develop skills in areas such as practice, integrated learning, and human dimension, case-based learning encourages analytical thinking, perspective taking, and empathy.^[8,9] Students' exposure to realistic clinical situations enables

them to transform theoretical knowledge into practice and, at the same time, develop decision-making skills based on ethical values.^[10]

The Role of Fink's Taxonomy in Student-centered Planning

Another important contribution of Fink's model is that it allows for student-centered planning of instructional design. In this approach, teaching objectives focus not only on content transfer but also on the student's personal development, value system, and active participation in learning.^[5] Nursing educators' lesson planning using this model enables individualization of education and increases intrinsic motivation in students.^[6] Thus, nursing students are trained not only as knowledgeable but also as individuals who are sensitive, inquisitive, and open to learning. Learning taxonomies provide an effective structure for planning instructional design and assessment processes. Taxonomies developed by theorists such as Bloom and Fink provide educators with a systematic framework ranging from the formulation of instructional objectives to the development of assessment tools, and in disciplines such as nursing, where cognitive, affective, and psychomotor domains are integrated, taxonomy-based planning contributes to the clearer definition of learning outcomes and the establishment of more objective evaluation processes.^[2,5,8]

Determination of Training Objectives According to Taxonomic Level

Educational objectives, as one of the basic building blocks of the teaching process, explicitly set out the cognitive, affective, and psychomotor levels that students

Table 3. Goal structuring according to Bloom's revised taxonomy^[22]

Learning dimension	Definition	Application examples in nursing education
Remembering	Remembering, listing, recognizing information	"List the basic life support steps."
Understanding	Interpreting, explaining and classifying information	"Explains the clinical significance of vital signs."
Application	Using knowledge in new situations	"Applies injection techniques in a simulation environment."
Analysis	Breaking down information into parts, establishing relationships	"Determines clinical priorities based on patient case."
Evaluation	Making decisions, comparing arguments	"Compares treatment alternatives in light of clinical data."
Creation	Creating a new structure or plan	"Develops and individualizes patient care plan."

are expected to achieve. Structuring these objectives at the taxonomic level provides a systematic road map for both planning the teaching process and developing assessment tools.^[2] Especially in disciplines such as nursing education, where cognitive competence, ethical sensitivity, and practical skills are developed together, taxonomy-based determination of educational objectives is of great importance in terms of clarity, measurability, and evaluability of learning outcomes.

Goal Configuration According to Bloom's Revised Taxonomy

While Bloom's original taxonomy divides the cognitive domain into knowledge, comprehension, application, analysis, synthesis, and evaluation levels, the revised model developed by Anderson and Krathwohl (2001) restructured these levels as knowledge, comprehension, application, analysis, evaluation, and creation. This revision brought a more dynamic and process-oriented approach to learning processes. In nursing education, these levels can be concretized, for example, as follows (Table 3).

These levels give a strong direction to instructional design in terms of representing both the complexity of learning outcomes and higher-order cognitive processes.^[4]

Goal Setting According to Fink's Taxonomy of Meaningful Learning

Fink's taxonomy focuses not only on cognitive learning but also on the personal, ethical and practical development of the learner, defining learning goals in six dimensions: basic knowledge, application, integrated learning, human dimension, perspective change and learning to learn.^[5]

This approach is of great advantage in areas such as nursing education that aim at holistic development. For example, within the scope of a course, the objectives according to Fink's dimensions can be determined as follows: (Fig. 1).

These dimensions are structured in such a way that students not only acquire knowledge but also gain a deeper understanding of themselves, society, and their professional roles.^[6]

Contribution of Taxonomy-based Objectives to the Educational Process

Objectives structured according to taxonomic levels contribute to making the educational process transparent and measurable. Thanks to these objectives, educators can adapt their teaching materials and assessment methods to the students' learning level. At the same time, it becomes easier for students to understand what and why they learn, and their intrinsic motivation increases.^[5,7]

As a result, structuring educational objectives in line with Bloom and Fink taxonomies is a fundamental approach that improves the quality of teaching in nursing education, makes the assessment process objective, and supports the holistic development of the student.

Examples of Taxonomic Alignment of Assessment Tools

Assessing the learning outcomes targeted in the teaching process is one of the most important ways of determining the effectiveness of education. However, this process cannot reflect the multidimensional nature of learning when it is limited to examinations at the knowledge level. Therefore, designing assessment tools in accordance with the specified taxonomic levels ensures the structural integrity between the learning process and assessment.^[2,7]

Assessment Approaches for Bloom's and Fink's Learning Taxonomies

According to Bloom's revised cognitive taxonomy, each level is associated with different types of assessment methods. Below are some examples for nursing education (Table 4).

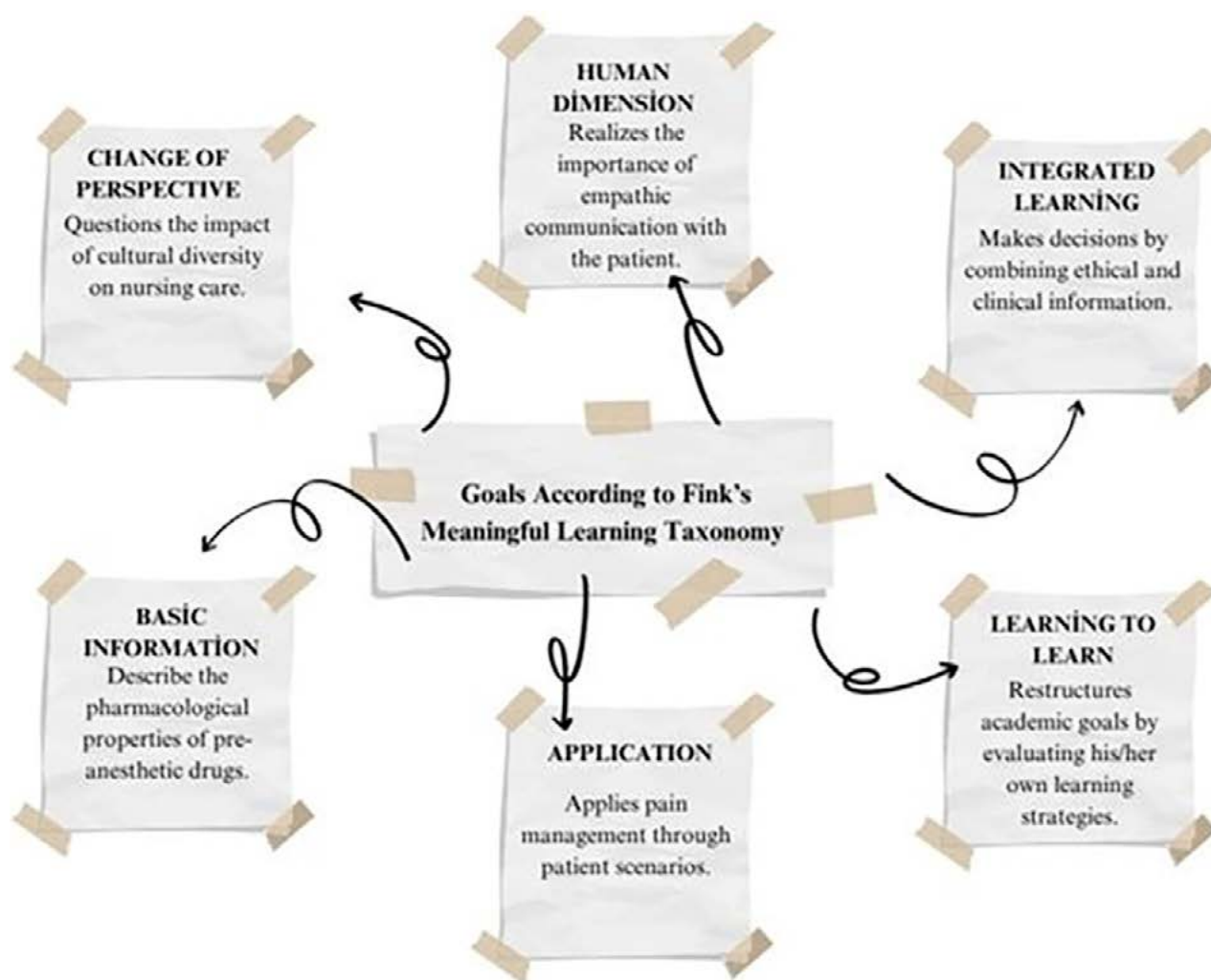


Figure 1. Goals according to Fink's meaningful learning taxonomy.^[5,6]

Thanks to this structure, it is possible for students to reach high-level cognitive processes based on application and critical evaluation, not just rote knowledge.^[4]

Fink's taxonomy requires assessment to focus not only on the level of knowledge but also on the student's experiences, value system, and self-awareness. In this framework, assessment tools specific to each dimension are given below (Table 5).^[5]

These tools encourage student-centered learning and allow multidimensional assessment of the learning process. Especially in a profession that touches people, such as nursing, the inclusion of elements such as empathy, ethical awareness, and continuous learning in the assessment directly affects professional development.^[6]

Using Rubrics in the Evaluation Process

Rubrics provide a transparent and structured method for assessing student performance and are especially effective when learning outcomes are shaped by Bloom's or Fink's

taxonomies. In nursing education, where cognitive reasoning, psychomotor skills, and affective competencies must all be evaluated, rubrics allow instructors to assess complex performance indicators consistently and objectively.^[11]

By breaking down multifaceted skills into observable criteria, rubrics ensure alignment between instructional objectives and assessment practices. For example, a clinical skills rubric may include indicators related to procedural accuracy, patient communication, ethical decision-making, and reflective insight. This structure supports both technical proficiency and humanistic elements of nursing practice, resulting in a more comprehensive evaluation strategy.

Rubric Development Based on Bloom's and Fink's Taxonomies

Rubrics informed by Bloom's taxonomy typically reflect a hierarchical structure, assessing whether students can recall essential knowledge, demonstrate understanding, apply

Table 4. Clinical assessment examples according to Bloom's taxonomy

Grade	Measurement and evaluation methods	Sample learning outcome/question
Information	Multiple choice tests, true-false questions, short answer knowledge tests	"List the injection types."
Understanding	Open-ended questions, concept maps, summary writing	"Explain the difference between sterile technique and aseptic technique."
Application	Practice exams, case studies, OSCE (Structured Clinical Exams)	"Calculate the appropriate drug dose according to the patient scenario and prepare an administration plan."
Analysis	Clinical decision-making simulations, problem-solving focused case scenarios	"Analyze possible causes in a hypotensive patient."
Evaluation	Critical writing, comparison of care plans, reflective reports	"Compare two different treatment approaches with evidence-based data and choose the most appropriate one."
Creation	Project presentations, preparation of patient education materials, innovative plan development	"Design culturally sensitive educational materials for individuals diagnosed with diabetes mellitus."

Table 5. Multidimensional clinical assessment according to Fink's meaningful learning taxonomy

Learning type	Evaluation methods	Sample application/question
Basic information	Conceptual exams, quizzes, knowledge tests	"A multiple choice exam on anatomy knowledge."
Application	Simulation assessments, skills checklists	"Error analysis form in intravenous intervention application."
Integrated learning	Case-based reports, interdisciplinary projects	"Group presentation integrating ethics, pharmacology, and communication skills."
Human dimension	Reflective journals, self-assessment forms	"Written report containing personal analysis of difficulties experienced in communicating with the patient."
Perspective change	Pre-test-post-test comparisons, interview-based evaluation	"Attitude change regarding health inequalities before and after a community health course."
Learning to learn	Portfolio assessment, personal learning plans	"A portfolio that documents the learning strategies and resources developed over the course of an academic term."

concepts in clinical scenarios, analyze case details, evaluate clinical decisions, or generate original care plans.^[11] This format allows educators to measure progression from basic comprehension to higher-order thinking. Rubrics developed according to Fink's taxonomy extend beyond cognitive performance and include dimensions such as integration, the human dimension, ethical awareness, and self-directed learning.^[5] These rubrics are particularly suitable for evaluating reflective journals, simulation debriefings, interprofessional collaborations, and portfolio assignments. Criteria may assess students' ability to connect knowledge across contexts, demonstrate empathy, engage in ethical reasoning, and articulate their own learning strategies.^[12]

Collectively, taxonomy-informed rubrics reinforce the goals of nursing education by promoting critical thinking, reflective practice, and professional identity formation.

Taxonomic Approaches in Nursing Education Program Design

Curriculum design is a multi-layered educational process that includes not only content planning, but also the structuring

of teaching objectives, the selection of teaching methods, and the design of evaluation processes. In disciplines such as nursing education that aim to develop cognitive, affective, and psychomotor domains simultaneously, it is of great importance to carry out this process in a systematic structure. At this point, taxonomy models such as Bloom and Fink contribute to the design of the education program in a balanced and holistic manner in terms of both teaching objectives and learning outcomes.^[2,5]

Education Program Structuring Based on Bloom's Taxonomy

Bloom's taxonomy provides a systematic framework for the teaching process by classifying educational objectives under cognitive, affective, and psychomotor domains.^[3] In the nursing education program, each of these domains represents a different aspect of professional competence. The cognitive domain aims to improve students' acquisition of theoretical knowledge and critical thinking skills. In this context, various learning objectives ranging from knowledge to analysis and synthesis are set in courses such

as anatomy, physiology, and pharmacology. The affective domain covers students' emotional learning, such as professional ethics, empathy, and effective communication skills with patients. At this level, it is aimed to develop cultural sensitivity, professional attitude, and ethical decision-making competencies. In the psychomotor domain, students' acquisition of basic nursing skills is supported through laboratory environments and simulation applications. The development of these three areas in a balanced manner enables nursing students to achieve holistic professional competence. Skills such as injection practices, measurement of vital signs, and wound care are evaluated in this area.^[13]

Bloom's taxonomy facilitates the structuring of the education program in nursing education without separating these areas from each other, but by making each of them separate objectives. Thus, course contents can be planned in a way that aims not only to enable students to acquire knowledge but also to use this knowledge critically and transfer it to practice.^[4,7]

Curriculum Approach Integrated with Fink's Taxonomy of Meaningful Learning

The taxonomy of meaningful learning developed by Fink (2013) brings a more holistic approach to curriculum design. In this model, learning is considered not only as a cognitive process, but also with multidimensional gains such as practical skills, individual development, ethical awareness, social responsibility, and learning to learn. In a field like nursing, which is based on practice and human relations, Fink's six learning dimensions can be integrated into the education program as follows: In these programs, the basic level of knowledge is provided to students through theoretical courses on medical sciences, pathophysiology, and health law. The practical dimension is reinforced through clinical internships, laboratory studies, and simulation-based training. Integrated learning aims to develop students' clinical decision-making skills by bringing together the knowledge gained in different courses through case studies. The human dimension aims to provide students with empathy and professional values through ethical discussions, analysis of patient stories, and cultural competency training. It increases students' social sensitivity by supporting them with interactive training modules on topics such as changing perspectives, health inequalities, and living with chronic diseases.

Finally, the learning to learn dimension encourages students to develop individual learning strategies, engage in self-assessment, and structure their academic goals.

This multi-layered structure supports nursing students to grow not only as knowledgeable but also as caring and competent professionals. This model increases the student's active participation in the learning process, especially by forming the basis of student-centered instructional designs. Structuring the education program in this way contributes to the development of not only professional skills but also professional identity.^[5,6]

Advantages of Taxonomy-based Training Program

Taxonomy-based curriculum design enables the creation of transparent, measurable, and student-centered learning objectives. This approach allows for clarity of expectations for both lecturers and students and more coherent planning of the learning process. At the same time, students are better prepared for the complex nature of the healthcare system through modules enriched by interdisciplinary collaborations.^[14,15]

Designing the curriculum based on Bloom and Fink taxonomies deepens the learning outcomes and enables students to develop holistically in academic, ethical, and practical dimensions. In this way, nursing education becomes a structure that not only conveys knowledge but also aims to think, practice, and internalize human values.

Multidisciplinary and Digital Adaptations of Taxonomy-based Instructional Design

In multidisciplinary health education, it is important for students from different disciplines to learn together in order to develop communication, collaboration, and mutual understanding (World Health Organization, 2010). In this context, taxonomically structuring common educational goals facilitates students from different disciplines to interact at similar cognitive and affective levels.^[14]

For example, nursing and medical students working together in Fink's "practice" and "human dimension" areas in joint case scenarios support not only knowledge sharing but also empathy and professional role awareness.^[16] Bloom's taxonomy also allows for the gradual structuring of objectives in such programs, enabling interdisciplinary learning to take place systematically.^[2]

The proliferation of digital learning environments has necessitated the adaptation of taxonomy-based instructional designs to online systems. Learning management systems, virtual simulations, and interactive content offer powerful tools for designing learning activities in line with Bloom and Fink's taxonomic structures.

For example, Bloom's knowledge and application levels can be easily supported by video lectures and digital quizzes, while case studies, discussion forums, and digital project presentations can be effective for the analysis, evaluation, and creation levels.^[17] According to Fink's model, digital environments can be structured with reflective blog posts, e-portfolios, and interactive scenario-based learning modules that reinforce the "learning to learn" and "integrated learning" dimensions.^[17]

Taxonomy-based digital instructional designs provide great advantages in terms of maintaining learning depth and increasing student engagement, especially in distance education.^[18] In addition, this approach facilitates nursing students to continue their professional development by supporting individualized and self-regulated learning processes.^[19,20]

Conclusion and Recommendations

Nursing education is constantly transforming with rapidly developing health technologies, digital learning tools, and approaches that prioritize interdisciplinary collaboration.^[1] This transformation necessitates teaching strategies to become more flexible, student-centered, and result-oriented. In this context, Bloom and Fink taxonomies provide a theoretical basis not only for current teaching practices but also for research that will shape the future of nursing education.^[2,5]

Bloom's revised taxonomy helps educators structure learning goals by preserving the hierarchical structure of cognitive processes and provides a structure suitable for integration with digital learning environments.^[1,16] Future research should focus on how to optimize these cognitive levels, especially in virtual simulations, AI-supported instructional systems, and personalized learning environments.^[4,8,17,18]

Fink's taxonomy provides a powerful theoretical framework for research that aims to strengthen nursing students' self-awareness, value system, and lifelong learning capacities, as it offers the opportunity to evaluate student experiences in a multidimensional way.^[5,6] Future studies should particularly focus on how to measure and support more holistic learning outcomes such as learning to learn, ethical sensitivity, and social responsibility.

In addition, in-depth studies on how Bloom's and Fink's taxonomies are adapted to hybrid or digital learning environments are important for measuring effectiveness in instructional design.^[20] In addition, how complex learning objectives such as interprofessional education, cultural

competence, and patient safety can be structured at the taxonomic level are interesting topics for new research.^[14,16,19,21]

In conclusion, the theoretical and practical contributions of Bloom and Fink taxonomies to nursing education were examined comparatively. It was determined that both models provide a theoretical basis for student-centered, digital, and flexible instructional designs. Bloom's structured cognitive level approach facilitates the systematic identification of learning objectives, while Fink's holistic structure contributes to the support of meaningful and permanent learning. The future of nursing education should be based on multidimensional learning models that blend the strengths of these two taxonomies. In this context, the most effective approach for educators is to develop hybrid instructional designs that integrate Bloom and Fink taxonomies.

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