Full Length Article

Beyond Bloom's: Fink's taxonomy as a catalyst for meaningful learning in nursing education

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ABSTRACT

This article explores the integration of the six dimensions of Fink's taxonomy of significant learning into a nursing course and how course learning outcomes can be effectively mapped to these dimensions as well as the American Association of Colleges of Nursing Essentials. By aligning instructional strategies and assessments with these dimensions, educators can create a more engaging and effective learning experience for students. The article provides a practical example of how Fink's taxonomy was incorporated, highlighting the benefits of using this framework to foster deeper learning.

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Introduction

Nursing education is undergoing a transformative process as educators work to deliver meaningful learning experiences that effectively prepare students for the demands of clinical practice settings. In the realm of student learning, Bloom's taxonomy plays a significant role in categorizing various cognitive skills. However, Fink's newer taxonomy of significant learning aims to provide a more holistic approach, encompassing not only cognitive skills but also personal, social, and emotional dimensions, thus offering a comprehensive framework for designing impactful educational experiences. While the literature suggests several advantages of employing Fink's interactive taxonomy over Bloom's hierarchical taxonomy (Burwash et al., 2016; Fallahi, 2008; Segarra & Gomez, 2014), few researchers have examined implementing Fink's taxonomy in nursing education. Therefore, the purpose of this work is to present a practical application of Fink's taxonomy in an undergraduate nursing research course. Moreover, this article provides an illustrative example of how Fink's taxonomy can be mapped to the essential student sub-competencies outlined in the publication, *The Essentials: Core Competencies for Professional Nursing Education*, produced by the American Association of Colleges of Nursing (AACN, 2021), hereafter referred to as the *AACN Essentials*.

Background

The hierarchical six-level structure of Bloom's taxonomy is used extensively in nursing education to establish unambiguous and measurable learning objectives that align with diverse levels of cognitive complexity and learning (Bloom et al., 1956). Fink's Taxonomy of Significant Learning, a newer framework, offers a holistic and meaningful design with potential nursing education applications. In contrast to Bloom's Taxonomy, Fink's taxonomy presents a cyclical model of learning that extends beyond traditional cognitive aspects, providing learning opportunities designed to connect with students on a deeper, emotional level, ultimately guiding them to become self-directed learners (Fink, 2013). Fink's taxonomy is characterized by six interactive dimensions used to guide the development of learning activities that promote significant learning: 1) foundational knowledge, 2) application, 3) integration, 4) human dimension, 5) caring, and 6) learning how to learn (Fink, 2013). According to Mokel (2021), using Fink's taxonomy in course design promotes a learner-centered experience. This approach encourages course designers to consider each dimension, enabling the inclusion of activities that may not be adequately encompassed by other approaches, such as Bloom's taxonomy. While limited nurse educators have published their experiences with Fink's taxonomy (Magnussen, 2008; Marrocco, 2014; Mokel, 2021), its adoption is pervasive across other academic fields. Following is a brief overview of the six dimensions in Fink's taxonomy.

Description of Fink's Dimensions

Foundational Knowledge

The foundational knowledge dimension focuses on students' ability to understand and remember specific information and ideas. This dimension's value is providing the basic understanding that is necessary for other kinds of learning. Krueger et al. (2011) enhanced

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foundational knowledge in a healthcare policy course by peer-teaching sessions, an individual outlining task, and group worksheet submissions on key points and confusing points.

Application

The application dimension focuses on skills; critical, creative, and practical thinking; and managing projects. In application learning, students learn how to engage in diverse types of thinking and develop specific skills. This dimension's value is that it allows other kinds of learning to become useful. Giddings & Lefebvre (2023) illustrated this in an economics course where students applied supply and demand concepts to analysis of the labor market.

Integration

The integration dimension focuses on connecting ideas, learning experiences, and realms of life. When students can see and understand connections between different things, an important kind of learning has occurred. This dimension's value is that the act of making new connections gives learners a new form of power, namely intellectual power. Mokel (2021) assessed integration in an RN-BSN research course through a final paper and online discussions.

Human Dimension

The human dimension focuses on students learning about themselves and others. This dimension's value is that it informs students about the human significance of what they are learning and enables them to function and interact more effectively. Billiot and Forbes (2021) employed this in a retail marketing course, where students journaled, role-played, and exchanged ideas.

Caring

The caring dimension focuses on students developing new feelings, interests, and values. Sometimes a learning experience can increase students' level of caring about a topic or issue. Such changes can be reflected in the development of new feelings, interests, or values. This dimension's value is that when students care about something, they are more likely to have the motivation needed to learn more about it and make it a part of their lives. Within an introductory macroeconomics course, Kiziler (2023) engaged the caring dimension by having students reflect on wealth distribution disparities, resulting in heightened concern for societal implications.

Learning How to Learn

In this dimension, students learn something about the process of learning itself, which can help them become more effective students, more skilled subject-matter inquirers, as well as self-directed learners. This dimension's value is that such learning enables students to continue learning in the future with greater effectiveness. Branzetti et al. (2019) approached this through incorporating skills training, self-assessments, and introductions to new learning environments.

Methods

Fink recommends a backward course design approach in which the end goals or learning outcomes are identified first, and then the educator selects instruction methods and assignments to teach those outcomes and assessment strategies to measure them. Fink advises educators to consider a series of reflective questions throughout the course design process: What does significant learning look like in my course?, What should they know?, What should they be able to do?, and What assessments or learning activities measure these outcomes and help learners achieve the identified significant learning goals? This step is followed by the creation of content and learning activities designed to help students achieve the outcomes (Fink, 2013).

In an undergraduate nursing research course, course learning outcomes (CLOs) first were examined and mapped to the new AACN essentials and then to the dimensions of Fink's Taxonomy of Significant Learning. Following is a discussion of the specific steps followed in this mapping process.

Aligning Course Learning Outcomes with AACN Essentials

The course instructor mapped the CLOs to the new AACN essentials before linking them to the Fink's dimension. Each CLO was examined to ensure a clear understanding of the information, abilities, and competencies expected of students upon course completion. This examination resulted in some revisions to the course learning outcomes, which were reviewed and approved by the program curriculum committee.

Mapping Course Learning Outcomes to Fink's Dimensions

The principal author subsequently mapped the revised CLOs to Fink's six dimensions. This process involved a thoughtful consideration of each dimension and its potential interaction with each CLO. Guiding questions helped facilitate this process and encompassed aspects such as the students' need to retain specific information; their capacity to perform particular tasks; the requirement to synthesize information or discern relationships; the potential for enhancing self-awareness or the understanding of others; the opportunity to develop a genuine interest in a topic or issue; and the facilitation of learning skill development. Several questions helped guide this process: Is this something the students need to remember?, Is this a task they need to be able to perform?, Does this learning outcome require the ability to synthesize information or describe relationships?, How does this CLO help students better understand themselves or others?, Does this learning outcome give students the opportunity to care about a topic or issue in a meaningful way?, and Does this CLO help students develop learning skills? The secondary author independently reviewed the initial mapping and the two authors achieved consensus through a series of meetings. By systematically applying these guiding questions, the authors ensured that the revised CLOs were comprehensively and purposefully mapped to Fink's dimensions.

Creating Fink's Learning Outcomes

After mapping the CLOs to Fink's dimensions, Fink's Learning Outcomes (FLOs) were created that corresponded to the identified CLOs. To ensure a robust alignment with the Fink's dimensions, specific action verbs associated with each type of learning were employed (Fink, 2013). Using these action verbs helped ensure the FLOs were formulated in a manner that accurately reflected each dimension's intended cognitive and affective aspects.

In some cases, certain CLOs required further disaggregation to encompass multiple FLOs. This breakdown facilitated a more precise articulation of the desired CLOs and allowed for a more comprehensive representation of the specific knowledge, skills, and attitudes students were expected to acquire throughout the course.

Overall, creating FLOs based on Fink's taxonomy action verbs served as a strategic approach to ensure alignment between the CLOs and the dimensions of significant learning. This process facilitated a clear and explicit articulation of the intended outcomes and enabled instructors to design meaningful and purposeful learning experiences designed to foster deep engagement and holistic development in students.

Developing Learning Assessments

Next, learning assessments were either revised or created to align with the FLOs. Fink advises educators to ask themselves what would the students have to do or accomplish to convince both the educators and themselves that they had achieved each learning goal (Fink, 2013). This process involved reflecting on the significant learning goals and determining which strategies best aligned with evaluating whether or not students achieved them.

The following assessment development example is based on the CLO, *Generate appropriate research questions based on identified clinical nursing practice issues.*

What do students need to know?

- The components of a PICOT question and how to identify a clinical practice issue.
- Foundational Knowledge FLOs
  ○ The student will be able to give an example of a clinical practice issue requiring research investigation.
  ○ The student will be able to correctly identify the PICOT components of a research question.

- Assessment = Written Assignment − Creating Clinical Questions

What should they be able to do?

- Develop a correctly formatted PICOT question related to a clinical practice issue.
- Application FLO
  ○ The student will be able to create a well-worded clinical question using the correct PICOT format.

- Assessments
  ○ Written Assignment − Searching databases with a PICO question.
  ○ Evidence-based Project

How can they develop interest, feelings, or values about a subject?

- By selecting a clinical issue of personal interest and presenting their ultimate findings.
- Caring FLO = The student will be able to develop a well-worded research question for a nursing practice issue of deep interest to them.
- Assessments
  ○ Written Assignment − Searching databases with a PICO question
  ○ Evidence-based Project

Mapping AACN Essential Sub-Competencies to Learning Assessments

Lastly, meticulous attention was given to identifying the AACN sub-competencies measured by each learning assessment. Transparent teaching practices emphasize the importance of students being able to readily discern the connection between their learning activities and their overarching goals (Winkelmes et al., 2019). Students were given the AACN Essentials publication and told how their learning activities and assessments will help them achieve each sub-competency. To ensure transparency and clarity, every assignment explicitly specifies the corresponding CLOs, FLOs, and AACN Essential sub-competencies students are working towards by completing it. This explicit alignment between course components and desired learning outcomes allows students to recognize the purpose and relevance of each assignment in their overall development into competent and professional nurses.

Results

Table 1 presents the results of Fink's dimension integration mapping. CLOs were mapped to the appropriate Finks dimensions and FLOs were created. Examples of learning assessments are presented, as well as the AACN Essentials sub-competencies those assessments are linked to. All six of Fink's dimensions were addressed in some way, with some dimensions mapping to more CLOs than others. For example, the foundational knowledge dimension is mapped to five CLOs, while the learning how to learn dimension is mapped to one CLO. Also, some CLOs mapped to more than one dimension. For example, the CLO *Evaluate research evidence, including the evidence's design, methods, strength, appropriateness, outcomes, and implications for nursing practice* mapped to the foundational knowledge dimension (for which students needed to recognize different research designs and methodologies) and the application dimension (for which students needed to critically evaluate research evidence).

Discussion

Fink (2013) encourages educators to dream about what they want students to get out of their courses. Within the learning how to learn dimension, Fink found that two aspirations commonly shared by faculty were for students to be ready to engage in life-long learning and value continuous improvement. For this course, the instructor's dream was for the students to develop a sense of assurance about their capacity to access and analyze research findings when making clinical decisions, as well as appreciate the significance of staying up-to-date with research throughout their nursing careers.

Learning how to learn was one of the new dimensions explored in this transition from Bloom to Fink. Here, the learning goal is for students to develop the knowledge, skills, and strategies for continuing their learning after the course is over (Fink, 2013). To meet this goal, a series of group article critique assignments were created for this course using *Perusall*, a tool used for discussion and collaborative annotation of research articles. Through these formative assignments, students were able to practice their critical appraisal skills with the help of their classmates and instructor. Students learned how to ask relevant questions and seek answers to inquiries.

The use of Fink's taxonomy of significant learning for nursing education has garnered limited attention in the literature. Notably, Mokel (2021) emphasized the effectiveness of incorporating Fink's taxonomy in a course designed for RN-BSN students, which resulted in the creation of a curriculum enriched with diverse learning activities that deviate from the traditional approaches commonly employed in nursing education. Marrocco (2014) highlighted the benefits of designing graduate nursing courses using Fink's taxonomy in conjunction with Wiggin's backward design approach. This combination of approaches ultimately fostered significant learning outcomes and better-prepared nurse practitioners for the evolving healthcare landscape. Magnussen (2008) focused on applying Fink's principles of significant learning within the online course environment, urging instructors to develop learning-centered courses rather than content-centered ones. The author concluded that Fink's taxonomy serves as a valuable framework for guiding course planning and assessing student outcomes, particularly as courses are adapted to web-based platforms.

Table 1
Mapping of Course Learning Outcomes, Finks Dimensions, and AACN Essential Sub-Competencies

Fink's Dimension	Course Learning Outcomes	Fink's Learning Outcomes	Learning Assessments	AACN Essential Sub-Competencies
Foundational Knowledge Learners will understand and remember key concepts, terms, relationships, facts, etc. −−−− Describes what learners will be able to immediately do with their newly acquired information.	Explain the basic elements of the research process and the different approaches to scholarly practice as it relates to knowledge development in nursing.	The student will be able to **indicate** various approaches to scholarly practice in nursing. The student will be able to **identify** key elements of published research reports.	Discussion 1 − What is Scholarship? How to Read Research Articles.	4.1a − Demonstrate an understanding of different approaches to scholarly practice. 4.1d − Demonstrate an understanding of basic elements of the research process.
	Generate appropriate research questions based on identified clinical nursing practice issues.	The student will be able to **give an example of** a clinical practice issue requiring research investigation. The student will be able to correctly **identify** the PICO components of a research question.	Written Assignment − Creating Clinical Questions	4.2a − Evaluate clinical practice to generate questions to improve nursing care.
	Apply a theoretical framework or model to the implementation of a nursing care practice change.	The student be able to **describe** how a theoretical framework was applied in a research article investigating a nursing practice change.	Group Article Critique 3 − Theoretical/Conceptual Frameworks	4.1c − Apply theoretical framework(s)/models in practice. 4.1e − Participate in scholarly inquiry as a team member.
	Recognize the importance of cultural variability related to the research process and the impact of equity issues in research.	The student will **indicate** ethical standards in nursing research related to diversity, equity, and inclusion.	PEERRS Modules	4.3d − Recognize the impact of equity issues in research.
	Evaluate research evidence, including the evidence's design, methods, strength, appropriateness, outcomes, and nursing practice implications.	The student will be able to **recognize** research designs and methodologies.	Discussion 2 − Quantitative Research Designs and Data Collection Group Article Critiques 1, 2, & 3 Discussion 3 − Other types of research.	4.1a − Demonstrate an understanding of different approaches to scholarly practice. 4.1d − Demonstrate an understanding of basic elements of the research process. 4.1e − Participate in scholarly inquiry as a team member. 4.1f − Evaluate research.
Application Learners will perform/do important tasks −−−− Describes the kinds of activities and tasks learners will be able to perform based on the information they have acquired.	Evaluate research evidence, including the evidence's design, methods, strength, appropriateness, outcomes, and implications for nursing practice.	The student will be able to critically **evaluate** research evidence including the design, data collection and data analysis methods, results, and nursing practice implications.	Written Assignment − Quantitative Article Appraisal Written Assignment − Qualitative Article Appraisal Evidence-based Project	4.1b − Demonstrate application of different levels of evidence. 4.1d − Demonstrate an understanding of basic elements of the research process. 4.1f − Evaluate research. 4.2b − Evaluate appropriateness and strength of the evidence. 4.2e − Participate in the evaluation of outcomes and their implications for practice.
	Generate appropriate research questions based on identified clinical nursing practice issues.	The student will be able to **create** a well-worded clinical question using the correct PICOT format.	Written Assignment − Database Search Evidence-based Project	4.2a − Evaluate clinical practice to generate questions to improve nursing care.
	Demonstrate the use of technology and library resources in accessing and retrieving relevant research−based information.	The student will be able to **conduct** literature searches for relevant research evidence using various electronic databases. The student will be able to **examine** the results of a database search and select appropriate research evidence.	Written Assignment − Database Search Written Assignment − Quantitative Article Appraisal Written Assignment − Qualitative Article Appraisal Evidence-based Project	4.2a − Evaluate clinical practice to generate questions to improve nursing care. 4.2b − Evaluate appropriateness and strength of the evidence. 8.3a − Demonstrate appropriate use of information and communication technologies.
	Apply a theoretical framework or model to the implementation of a nursing care practice change.	The student will be able to **apply** a theoretical framework or model to a plan for nursing practice change.	Evidence-based Project	4.1c − Apply theoretical framework(s)/models in practice.
Integration Learners will identify/ consider/describe the relationship between *x* and *y* (or *x*, *y*, and *z*). −−−−	Develop an evidence-based plan aimed at improving nursing care through the implementation of a practice change.	The student will be able to **synthesize** their findings related to a practice change to improve nursing care.	Evidence-based Project	4.1f − Evaluate research. 4.1g − Communicate scholarly findings. 4.2b − Evaluate appropriateness and strength of the evidence.

Table 1 (*Continued*)

Fink's Dimension	Course Learning Outcomes	Fink's Learning Outcomes	Learning Assessments	AACN Essential Sub-Competencies
Describes the kinds of activities and tasks learners will be able to perform when they synthesize, link to, or relate specific information to other information.				4.2c – Use best evidence in practice. 4.2d – Participate in the implementation of a practice change to improve nursing care. 4.2e – Participate in the evaluation of outcomes and their implications for practice.
	Recognize the importance of cultural variability related to the research process and the impact of equity issues in research.	The student will be able to **relate** concepts and content learned concerning ethical behaviors to the development of an evidence-based project reflective of improvements to nursing care.	Evidence-based Project	4.3b – Demonstrate ethical behaviors in scholarly projects including quality improvement and EBP initiatives. 4.3d – Recognize the impact of equity issues in research. 4.3c – Advocate for the protection of participants in the conduct of scholarly initiatives. 4.3d – Recognize the impact of equity issues in research.
Human Dimension – Self Learners will better understand themselves – – – Describes the kinds of activities learners will be able to perform when they apply information to themselves (i.e., from what they come to know about themselves)	Interpret the elements of ethical nursing research, including the rationale for ethical research guidelines and advocacy for the protection of participants.	The student will be able to **critically reflect** on why ethical research practices are important to them.	Written Assignment – Reflections	4.3a – Explain the rationale for ethical research guidelines, including Institutional Review Board (IRB) guidelines.
Human Dimension – Others Learners will interact positively and productively with others – – – Describes the kinds of activities learners will be able to perform when they apply the information to themselves and their interactions with others, (i.e., from what they come to know about others)	Interpret the elements of ethical nursing research, including the rationale for ethical research guidelines and advocacy for the protection of participants.	The student will be able to **advocate** for ethical standards in nursing research.	PEERRS Modules	4.3a – Explain the rationale for ethical research guidelines, including Institutional Review Board (IRB) guidelines. 4.3c – Advocate for the protection of participants in the conduct of scholarly initiatives. 4.3d – Recognize the impact of equity issues in research.
Caring Students will care more deeply about this subject or issues related to this subject – – – Describes the kinds of activities students will be able to perform when they connect the information to themselves and their personal lives in a meaningful way.	Generate appropriate research questions based on identified clinical nursing practice issues.	The student will be able to **develop** a well-worded research question for a nursing practice issue of deep interest to them.	Evidence-based Project	4.2a – Evaluate clinical practice to generate questions to improve nursing care. 4.3b – Demonstrate ethical behaviors in scholarly projects including quality improvement and EBP initiatives.
	Interpret the elements of ethical nursing research, including the rationale for ethical research guidelines and advocacy for the protection of participants.	The student will be able to **express** their commitment to research participant advocacy and equity.	Written Assignment – Reflections	4.3c – Advocate for the protection of participants in the conduct of scholarly initiatives. 4.3d – Recognize the impact of equity issues in research.
Learning How to Learn Students will develop the ability to learn better (more efficiently and effectively) in this course and in their future life – – – Describes the kinds of activities students will be able to perform in order to continue to learn more about this topic in the future.	Participate as a team member in scholarly inquiry and the communication of scholarly findings.	The student will know how to **engage** in scholarly inquiry for the purpose of informing their nursing practice. The student will be able to **interpret** the significance of new evidence.	Group Article Critiques 1, 2, & 3	4.1e – Participate in scholarly inquiry as a team member. 4.1f – Evaluate research. 4.1g – Communicate scholarly findings.

While the literature on the use of Fink's taxonomy in nursing education is limited, its applicability has been explored in other disciplines. In their study of competence-based medical education, Branzetti et al. (2019) found that Fink's taxonomy could address the limitations of such an approach, offering a balanced framework for program design and assessment. Burwash et al. (2016) demonstrated the versatility of Fink's taxonomy in an occupational therapy course, showcasing its ability to effectively represent various types of significant learning within a complex curriculum. Additionally, student feedback regarding Fink's taxonomy has been positive. Segarra and Gomez (2014) found that students highly valued the translatability of theoretical concepts into practices, as well as the approach of mimicking professional practice. Partido et al. (2020) noted that a majority of students in a dental hygiene course were able to recognize the alignment between course assignments and Fink's six dimensions.

Although the use of Fink's taxonomy of significant learning in nursing education is relatively limited within the literature, these studies collectively demonstrate its potential benefits in enhancing teaching and learning experiences. Fink's taxonomy offers a valuable framework educators can use to design meaningful and engaging learning activities that align with desired learning outcomes. By leveraging the principles of significant learning, nursing educators can create a more dynamic and learner-centered educational environment that better equips students for the challenges they will encounter in professional practice.

Conclusions

The integration of Fink's taxonomy in nursing education holds promise for fostering a learner-centered approach that goes beyond cognitive aspects to encompass a variety of significant learning dimensions. By emphasizing the development of meaningful connections and promoting self-directed learning, Fink's taxonomy can equip nursing students with the skills they will need for their future practice. However, the specific application of Fink's taxonomy within the nursing curriculum warrants further exploration and investigation to understand its effectiveness and potential impact on student learning outcomes. Educators who seek to adopt a comprehensive approach to their courses are encouraged to engage with Fink's dimensions of significant learning. By aligning course objectives, activities, and assessments with the dimensions of Fink's taxonomy, educators can provide a rich and engaging learning experience for students. Additionally, mapping Fink's taxonomy to the AACN Essentials ensures that the curriculum is in alignment with the most current professional standards and competencies expected of nursing graduates.

CRediT Authorship Contribution Statement

Beverly W. Dabney: Conceptualization, Methodology, Writing Original draft preparation, Writing - Review & Editing, Visualization. Fatima Eid: Data Curation, Writing Original draft preparation, Writing - Review & Editing.

Declaration of Competing Interest

The authors declare no conflicts of interest.

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