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THE CONNECTED MODEL IN INTEGRATED LEARNING: AN APPROACH TO CONNECTING CONCEPTS, TOPICS, AND SKILLS

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Abstract

Integrated learning is an approach that organizes learning experiences through connections among concepts, topics, skills, and knowledge so that students gain coherent and meaningful understanding. One of its forms is The Connected Model, which builds connections internally within a single field of study while maintaining the identity of the discipline. This study aims to analyze and describe The Connected Model as a form of integrated learning, covering its characteristics, forms of connection, organizing principles, the role of the teacher, implementation, and its strengths and limitations. The study employed a literature review with a descriptive-qualitative approach. The data sources were relevant academic books and scholarly journal articles, prioritizing publications from 2021–2026 and using seminal sources as the conceptual foundation. The data were analyzed through identification, selection, thematic grouping, and descriptive synthesis. The review shows that The Connected Model centers on the systematic building of relationships among learning components within one field of study. Connectedness can be built through relationships among concepts, among topics, among skills, and between prior and new knowledge. Its implementation requires structured planning and a teacher who acts as the designer and facilitator of connections. The model supports coherent, meaningful, and flexible learning, but it requires the selection of relevant connections, careful planning, and adequate time management.

Keywords: Integrated learning; The Connected Model; connectedness of concepts; organization of learning; meaningful learning

INTRODUCTION

Learning in elementary school is not only oriented toward mastering a number of concepts in isolation; it also needs to help students understand the relationships among the concepts, skills, experiences, and knowledge they learn. Such connectedness is important because knowledge that is understood in an interrelated way can help students build a more complete and meaningful understanding. In the context of learning, integration does not merely mean placing several topics in one activity; it involves organizing learning experiences so that there are clear and relevant relationships among the components of learning (Drake & Burns, 2004).

Integrated learning is one approach that can be used to build such connectedness. It organizes learning by connecting various concepts, skills, experiences, or subject matter so that students gain more coherent learning experiences. This kind of organization enables students to see a topic not as a stand-alone piece but as part of an interrelated structure of knowledge.

Therefore, the success of integrated learning is determined not only by the amount of content that is combined but also by the quality of the connections built in the learning process (Fogarty, 1991; Fogarty & Pete, 2009).

Previous studies, which are reviewed in the next section, show that The Connected Model has a fairly broad scope of application. However, existing studies are still largely situated within particular objectives, materials, learner characteristics, or instructional strategies. As a result, discussion of The Connected Model as an integrated learning structure has not always been presented comprehensively. Its characteristics, the forms of connection that can be built, the principles of organizing learning, the role of the teacher, the implementation process, and its strengths and limitations are often discussed separately according to the focus of each study.

This condition indicates a need to examine The Connected Model not only through the results of its application but also through the conceptual structure that underlies it. Understanding this structure is important because connectedness in learning does not occur automatically. Teachers need to determine which parts of the content are related, organize those relationships systematically, and design activities that enable students to understand the links among learning components. Accordingly, a review of the principles and characteristics of The Connected Model is needed to provide a more complete picture of how the model can be used in learning.

The novelty of this study lies in its effort to synthesize The Connected Model comprehensively through six main aspects, namely the characteristics of the model, the forms of connection, the principles of organizing learning, the role of the teacher, the implementation of learning, and the strengths and limitations of the model. Unlike studies that focus on applying The Connected Model to achieve particular learning outcomes or abilities in a specific learning context, this study aims to build a conceptual understanding of connectedness as the core of the model. Thus, it is not intended to test the effectiveness of The Connected Model in one subject or with one group of students, but to provide a conceptual synthesis that can serve as a basis for understanding and designing the application of an integrated learning model.

Based on the above, this study aims to analyze and describe the concept of The Connected Model as a form of integrated learning, covering its main characteristics, the forms of connection it builds, the principles of organizing learning, the role of the teacher, implementation in the learning process, and its strengths and limitations. Theoretically, the study is expected to provide a more systematic understanding of the position of The Connected Model within integrated learning. Practically, it is expected to serve as a conceptual foundation for teachers and researchers in developing learning that prioritizes connectedness among components of knowledge and learning experiences.

LITERATURE REVIEW

One form of integrated learning that emphasizes such connectedness is The Connected Model. This model integrates concepts, topics, skills, or learning experiences that remain within one field of study. Connections are built internally within a discipline so that the identity of the subject is maintained, while parts of the content that were previously learned separately are organized to relate to one another. With these characteristics, The Connected Model differs from integration models that connect several fields of study at once, because its emphasis is on internal integration within a single discipline (Fogarty, 1991).

Connectedness in The Connected Model needs to be designed deliberately through the selection of related concepts, the organization of the sequence of content, and the design of activities that help students understand those relationships. Relationships can be built between the content being studied and prior knowledge, between one concept and another, and between concepts and the skills developed through learning activities. Organizing knowledge in a way that attends to its connection with prior knowledge can also help students build more meaningful understanding (Bransford et al., 2000). Thus, The Connected Model concerns not only the arrangement of content but also how teachers help students recognize and use those relationships in the learning process.

A number of studies show that The Connected Model has been applied in various learning contexts. Its application has been examined in thematic learning and elementary school learning, including in relation to students' learning outcomes and skills (Avandra et al., 2023; Novelita et al., 2023; Syarifah & Andini, 2024). Other research links the model with differentiated learning as an effort to adjust the learning process to students' abilities and needs (Maruni, 2024). In addition, studies of the Connected Model show attention to learning outcomes and the development of particular abilities through its application in different learning contexts (Fatmawati, 2022; Febriya et al., 2023).

RESEARCH METHOD

This study used a literature review with descriptive-qualitative analysis to examine in depth the concept and application of The Connected Model in integrated learning. A literature review was chosen because the study focuses on a conceptual understanding of the characteristics, principles, forms of connection, implementation, and strengths and limitations of the Connected model, based on published research results and scholarly sources. The analysis was not aimed at testing hypotheses empirically but at identifying and synthesizing relevant research findings to obtain a systematic picture of the application of the Connected model in learning.

The data sources were scholarly journal articles, academic books, and other relevant scholarly sources on integrated learning and The Connected Model. The literature search was conducted through Google Scholar, Garuda, and the websites of scholarly journals that publish research on the Connected learning model. Journal articles were prioritized from the last five years, namely 2021–2026, so that the discussion reflects recent research developments. Meanwhile, several older sources were used on a limited basis where they serve as conceptual sources or primary references in the development of integrated learning theory, particularly Fogarty's work on the Connected model.

The keywords used in the search included “Connected Model”, “Connected learning model”, “model pembelajaran terpadu tipe connected”, “pembelajaran terpadu model connected”, “integrated learning connected model”, and “Connected Model in elementary school”. The search was also extended with keywords related to the application of the model, such as the Connected Model in science learning, thematic learning, differentiated learning, and ethnoscience-based learning. These keywords were intended to obtain literature that not only discusses the definition of the Connected model but also provides evidence on its application in the learning process.

The literature was selected using several criteria. The inclusion criteria were: (1) directly discussing the concept, characteristics, implementation, or results of applying The Connected Model; (2) being published in a scholarly journal, academic book, or other accountable scholarly source; (3) being related to education and learning, particularly at the primary education level or in science learning; and (4) for journal articles, being published in 2021–2026 as a priority. Literature that mentioned the Connected model only in passing, was not related to the focus of the review, or came from popular sources without an adequate academic basis was not used as a main reference.

The analysis was carried out in four steps: identification, selection, grouping, and synthesis. In the identification stage, the literature related to the research keywords was collected. The selection stage was conducted by reading the title, abstract, and relevant parts of each source to determine its suitability to the focus of the review. The selected sources were then grouped by theme, namely the basic concept of The Connected Model, the characteristics of connectedness, the principles of application, application in elementary school learning, and the strengths and limitations of the model. In the synthesis stage, findings from the various sources were compared and linked to obtain a more complete understanding of the position and relevance of The Connected Model in integrated learning.

The trustworthiness of the review was maintained through source comparison, by not basing any conclusion on a single article. Findings from empirical studies were used to strengthen the conceptual discussion, while theoretical sources were used to explain the basis and characteristics of the model. For example, research on the application of Connected in elementary school science learning showed an improvement in learning outcomes after the model was applied (Novelita et al., 2023), while other research examined its use in thematic and differentiated learning (Avandra et al., 2023). A meta-analysis also showed that the Connected model has been studied in science learning at various levels of education (Febriya et al., 2023). In addition, ethnoscience-based application of Connected shows an extension of the model's context to learning that links scientific concepts with local knowledge (Avifatun & Firdaus, 2024). Thus, the analysis in this study does not merely describe theory but also links the conceptual foundation with recent research results.

The results of the analysis are then presented narratively and systematically in accordance with the objectives of the review. The presentation covers the definition of The Connected Model, the characteristics and principles of connectedness, forms of application in learning, its relevance in primary education, and its strengths and limitations. This approach was used to produce a synthesis that provides a conceptual understanding as well as a practical picture of the use of The Connected Model in integrated learning.

RESULT AND DISCUSSION

Findings

1. Main Characteristics of The Connected Model

The main characteristic of The Connected Model is the connectedness of various learning elements that remain within one field of study. These connections can occur between one concept and another, between one topic and the next, and between the knowledge and skills developed in the learning process. With this characteristic, content is not placed as stand-alone

parts but is arranged so that students can understand the relationships among the material they study. This principle is an important basis for understanding the Connected model because its integration takes place through internal relationships within a discipline (Fogarty, 1991; Drake & Burns, 2004).

Connectedness in the Connected model differs from simply delivering several pieces of content in sequence. A sequence of content can be said to reflect the Connected principle only if there is a relationship that can be explained conceptually between earlier and later content. Such relationships can be used to help students build understanding gradually. Thus, continuity in learning becomes an important characteristic, because knowledge that has been acquired does not remain the result of previous learning but becomes the foundation for understanding subsequent knowledge (Fogarty & Pete, 2009).

These characteristics are also evident in studies that apply the Connected model in different learning contexts. The literature shows that the model is used to connect topics, concepts, and skills in thematic learning as well as in particular fields of learning. Studies of the Connected Model in thematic learning show that connectedness can be used to create continuity among content so that students gain more organized learning experiences (Syarifah & Andini, 2024). The application of the Connected Model in problem-based learning also shows that relationships among learning components can be used to direct students toward achieving the specified competencies (Chamisijatin et al., 2022).

Another characteristic found is the relationship between the knowledge students already have and new knowledge. Learning does not begin with new content that is entirely separate; it can be developed from the experiences or understanding students have previously acquired. Such relationships allow the learning process to proceed more continuously because every new concept has a context that can be linked to prior knowledge. This principle of connectedness is in line with the view that meaningful understanding can develop when new knowledge is linked to the knowledge structures students already hold (Bransford et al., 2000).

Based on the literature, the characteristics of the Connected Model can also be seen in its flexibility in connecting concepts with skills. Skills are not placed as components entirely separate from content mastery but can be developed together with conceptual understanding. The application of the Connected Model in differentiated learning shows that connectedness can be used to organize learning activities by taking into account students' abilities and needs (Maruni, 2024). Other research also shows the use of the Connected model to support the development of communication skills in the learning process (Ardiny et al., 2023).

Thus, the main characteristics of The Connected Model can be understood through three important elements: internal relationships within one field of study, continuity between prior and new knowledge, and the link between concepts and skills. These three elements show that integration in the Connected model lies not in the amount of content placed in one lesson but in the quality of the relationships built among learning elements. The more clearly these relationships are designed and understood by students, the stronger the Connected character formed in the learning process (Fogarty, 1991; Syarifah & Andini, 2024).

2. Forms of Connection in The Connected Model

Based on the synthesis of the literature, connectedness in The Connected Model can be realized through several interrelated forms of relationship, namely relationships among concepts, among topics, among skills, and between previous knowledge and the knowledge being learned. These forms show that integration in the Connected model takes place through the internal organization of learning content. In other words, content is not merely placed in one learning sequence but is connected on the basis of conceptual relationships that help students build understanding continuously (Fogarty, 1991; Drake & Burns, 2004).

The first form is connectedness among concepts. It occurs when one concept is used as the basis for understanding another concept that remains within the same field of study. A concept that has been understood earlier can serve as prior knowledge for forming the next concept. This pattern enables students to develop understanding gradually and reduces the tendency to view each concept as separate knowledge. Relationships among concepts also provide a clearer structure because students can understand the position of a concept within the whole body of material they study (Fogarty & Pete, 2009).

The second form is connectedness among topics. In this pattern, several topics within one subject are arranged so that they are continuous. An earlier topic can become an introduction or foundation for the next topic, while the later topic can extend or deepen understanding of the earlier material. Studies of the Connected Model in thematic learning show that relationships among topics can be used to make learning more organized because students do not study each topic separately (Syarifah & Andini, 2024). The application of the Connected model in different learning contexts also shows that linking topics can help direct learning activities toward more integrated competencies (Chamisijatin et al., 2022).

The third form is connectedness between concepts and skills. In the Connected Model, understanding of a concept can be developed together with the skills related to that concept. Skills such as reading, communicating ideas, solving problems, processing information, or carrying out particular procedures can be connected to the material being studied. In this way, students acquire not only declarative knowledge but also opportunities to use that knowledge in an activity. Research that links the Connected Model with the development of communication skills shows that the model can be used to connect content mastery with the development of students' skills (Ardiny et al., 2023).

The fourth form is connectedness between prior knowledge and new knowledge. This relationship is important because learning essentially proceeds gradually. Knowledge that students already have can be used as a starting point for understanding new concepts or topics. When this relationship is built clearly, students can see that new content is not stand-alone information but an extension of knowledge they have already acquired. This principle supports the formation of more structured and meaningful understanding (Bransford et al., 2000).

In addition to these four forms, the literature also shows a connection between learning experiences and the application of knowledge. This relationship enables students to use the concepts they have learned in relevant activities or situations. At this stage, connectedness occurs not only at the level of content but also in students' learning experiences. Knowledge gained through one activity can be reused in the next activity so that continuity of learning experience is formed. The flexibility of the Connected Model in linking content with various

learning approaches also allows such experiences to be designed according to students' needs (Maruni, 2024).

These various forms of connection ultimately show that The Connected Model has a structure that is gradual and mutually continuous. Connectedness among concepts can become the basis for connectedness among topics, while connections among concepts and topics can be strengthened through the use of skills and learning experiences. These relationships do not always have to appear in the same form in every lesson. Teachers can determine the form of connection based on the characteristics of the content, the learning objectives, and the conditions of the students. Thus, flexibility is an important characteristic in applying the Connected model without losing its main principle, namely building meaningful relationships within one field of study (Fogarty, 1991; Syarifah & Andini, 2024).

Overall, the forms of connection in The Connected Model can be understood as a network of relationships that organizes students' learning experiences. These relationships include concept with concept, topic with topic, concept with skill, old knowledge with new knowledge, and learning experience with the application of knowledge. The presence of these various relationships gives learning continuity and a clearer structure. Therefore, the success of the Connected model is determined not by the number of elements connected but by the accuracy of the connections and their meaningfulness for students' learning process.

3. Principles of Organizing Learning in The Connected Model

The synthesis of the literature shows that applying The Connected Model requires learning to be organized consciously and systematically. Connections among concepts, among topics, or between concepts and skills do not form simply because content is placed in one learning sequence. Teachers first need to identify the learning elements that are related and then determine how those relationships are presented in the objectives, content, activities, and evaluation. Thus, the main principle of organizing the Connected Model lies in clearly planned relationships among the various components of learning.

The first principle is determining the main concept or topic as the organizing center. Teachers need to know the main idea at the core of the lesson before determining which other concepts or topics can be connected to it. Determining the center of learning helps avoid connections that are too broad and irrelevant. Every piece of content that is included must have a function in strengthening understanding of the main concept or topic. With this pattern, the connections built remain within the structure of the field of study and do not turn into a merging of content that has no conceptual relationship (Fogarty, 1991).

The second principle is identifying relationships among content based on conceptual structure. Once the main concept has been determined, teachers need to identify concepts or topics that are logically related. Such relationships can take the form of simple-to-complex relationships, cause-and-effect relationships, part-whole relationships, or relationships that show the development of a concept. Organizing on the basis of such structures enables students to follow the flow of learning more easily because each piece of content has a clear position and function. In the context of integrated learning, planned relationships can also help reduce repeated or fragmented presentation of content (Drake & Burns, 2004).

The third principle is building continuity between prior knowledge and new knowledge. The Connected Model not only connects content within one learning unit but can also connect

ongoing learning with the knowledge students already have. Prior knowledge can be used as a foothold for understanding new concepts so that learning develops gradually. Such a relationship is important because students do not begin learning from an empty state; they bring experiences and knowledge that have already been formed. Organizing learning with prior knowledge in mind can help students integrate new information into their existing knowledge structures (Bransford et al., 2000).

The fourth principle is arranging the sequence of learning on the basis of meaningful relationships. The sequence of content in the Connected Model is not merely an administrative sequence based on textbook pages or a list of competencies but one that takes into account the relationships between one piece of content and another. Prerequisite content can be placed before more complex content, while concepts that reinforce one another can be placed in one learning sequence. Such arrangement helps form a coherent learning flow so that students can understand the development of an idea from one stage to the next (Fogarty & Pete, 2009).

The fifth principle is connecting content with learning activities. The relationships that have been designed need to be realized in activities that enable students to discover or use them. If teachers only explain that two concepts are related without giving students the opportunity to explore the relationship, connectedness is likely to be understood only at a verbal level. Therefore, discussion, observation, problem solving, practice, exploration, and reflection can be used to strengthen the relationships among learning components. Research on the application of the Connected Model shows that the model can be combined with problem-based learning and other approaches to support students' attainment of competencies (Chamisijatin et al., 2022).

The next principle is adjusting connectedness to students' characteristics. A relationship that is academically obvious to a teacher is not necessarily understood immediately by students. Therefore, the level of complexity of the relationships needs to be adjusted to students' cognitive development, prior knowledge, and learning needs. The application of the Connected Model in differentiated learning shows that the organization of learning can be adapted to students' abilities and needs so that the relationships built are not uniform for all students (Maruni, 2024). Such adjustment shows that the Connected Model concerns not only the structure of the content but also how that structure can be understood by students.

The last principle is maintaining the consistency of relationships through to the evaluation stage. If learning is designed to connect several concepts or skills, evaluation also needs to give students the opportunity to use those relationships. Assessment that only measures the ability to recall each concept separately does not fully reflect the integration built through the Connected Model. Evaluation should be able to measure students' ability to explain relationships, apply interrelated concepts, or use several pieces of knowledge to solve a problem. Thus, connectedness appears not only in the planning and implementation of learning but is also reflected in students' learning achievement.

Based on all of these findings, the organization of The Connected Model can be understood as a sequential process, starting from determining the main concept, identifying relationships, arranging the sequence of content, developing activities, and adjusting learning to students, to ensuring that the relationships are reflected in evaluation. This pattern shows that the Connected Model requires planning that goes beyond merely combining several pieces

of content. The quality of the model is largely determined by the teacher's accuracy in finding and building relationships that are truly meaningful (Fogarty, 1991; Fogarty & Pete, 2009).

Thus, the organizing principles are an important part that determines whether a lesson truly reflects The Connected Model. Connectedness must be present consistently from planning to evaluation and must be recognizable in students' learning experiences. When the relationships among components are designed logically, continuously, and in line with students' characteristics, the Connected model can form more coherent learning without eliminating the identity of the field of study that underlies the lesson.

4. The Role of the Teacher in Implementing The Connected Model

The review shows that teachers play a central role in translating the principle of connectedness into students' learning experiences. The Connected Model cannot be applied simply by arranging several pieces of content in sequence; it requires the teacher's ability to identify the relationships among concepts, topics, and skills. Such planning is important because the quality of the connectedness built in learning is strongly influenced by the teacher's ability to understand the structure of the content and to determine relevant relationships. Research on the implementation of the Connected Model in integrated learning shows that teachers need to organize content systematically so that the relationships among learning components can be seen clearly (Iskandar et al., 2024).

The next role of the teacher is to guide students to discover the relationships that have been designed. Teachers need to provide learning experiences that enable students not only to receive information but also to identify the links between one piece of content and another. Triggering questions, discussion activities, continuing tasks, and reflection can be used to clarify those relationships. In applying the Connected Model to thematic learning, connections among topics need to be displayed through learning activities so that students can understand the content as an interrelated whole (Syarifah & Andini, 2024).

Teachers also play a role in adapting the application of the Connected Model to differences in students' characteristics. The designed connections are not always understood in the same way by all students because of differences in prior ability, learning pace, and learning needs. The application of the Connected Model combined with differentiated learning shows that the structure of learning can be adjusted on the basis of students' ability characteristics. Such adjustment allows the principle of connectedness to be maintained while giving students room to learn through experiences that suit their needs (Maruni, 2024).

In addition to being designers and facilitators, teachers play a role in developing students' skills through the relationships built in learning. Connectedness can be used not only to deepen content mastery but also to develop skills that support the learning process. The application of the Connected Model in developing communication skills shows that the relationship between content and skills can be part of learning design. This indicates that teachers can use connectedness as a means of developing students' competencies more broadly, rather than merely pursuing mastery of particular content (Ardiny et al., 2023).

Thus, the role of the teacher in The Connected Model includes planning, facilitation, adjusting learning, developing skills, and evaluating the connections that have been built. The variety of studies shows that this role can be realized in different learning contexts, including thematic learning, differentiated learning, and skills development. These findings show that the

success of the Connected Model is determined not only by the characteristics of the model but also by the teacher's ability to translate the principle of connectedness into learning activities that suit the objectives and characteristics of the students (Chamisijatin et al., 2022; Avandra et al., 2023; Iskandar et al., 2024).

5. Implementation of The Connected Model in the Learning Process

Implementation of The Connected Model begins with determining the main concept or topic that becomes the center of learning, then identifying other concepts, topics, skills, or learning experiences that are directly related to it. This process aims to ensure that content is not learned as stand-alone parts but is arranged on the basis of relationships that help students build a more complete understanding. In integrated learning, the main concept can serve as the basis for organizing content and learning activities so that the links among components become clearer (Avandra et al., 2023).

At the implementation stage, connectedness needs to be realized through activities that enable students to discover and use the relationships among concepts. Learning can begin by activating prior knowledge, followed by the introduction of the main concept, exploration of related concepts, discussion or problem-solving activities, and closed with activities that help students conclude the relationships they have learned. The application of the Connected model in classroom action research shows that the model can be implemented gradually through several learning cycles and activities adjusted to the learning objectives (Novelita et al., 2023).

Connectedness in the learning process can also be strengthened through the use of appropriate media and learning resources. Media are not a main part of the model, but they can help students see relationships among concepts more concretely. Research on the application of the Integrated Learning Model Connected with audiovisual media shows that the model can be combined with learning media to support the learning process and the attainment of learning outcomes (Fatmawati, 2022). Thus, the application of Connected is not rigid, because teachers can choose media and activities that suit the characteristics of the content and the conditions of the students.

Implementation of The Connected Model can also be adjusted to students' needs and differences in ability. Studies of integrated thematic learning with the Connected model through differentiated learning show that connectedness among concepts can be maintained while giving students the opportunity to learn according to their characteristics and needs (Avandra et al., 2023). Other research on the application of differentiated learning through the Connected type also shows changes in students' level of thinking ability after the learning was applied (Maruni, 2024). This shows that Connected can be placed within a flexible learning design without losing its main principle of connectedness.

Overall, implementation of The Connected Model can be understood as a process that includes selecting the main concept, mapping relationships, arranging activities, carrying out learning, and reflecting on the connectedness that has formed. The model does not have a single learning procedure that must be used absolutely; rather, it provides an organizing framework so that content within a field of study can be learned in an interrelated way. Research findings show that Connected can be applied in various forms of activity and combined with particular media or learning approaches as long as conceptual connectedness remains the basis of its organization (Fatmawati, 2022; Avandra et al., 2023; Novelita et al., 2023).

6. Strengths and Limitations of The Connected Model

One strength of The Connected Model lies in its ability to organize learning more coherently because related concepts, topics, and skills are learned in an interrelated way. This pattern can help students understand that a piece of knowledge does not stand alone but is related to other knowledge that has been or is being learned. Such organization can also reduce overly rigid separation of content so that learning has clearer continuity. Studies of integrated learning with the Connected model show that the links among learning components can support more meaningful learning experiences for students (Syarifah & Andini, 2024; Iskandar et al., 2024).

Another strength is flexibility in its application. The Connected Model does not require teachers to use one particular method, medium, or learning strategy, so it can be adjusted to the characteristics of the content and students' needs. The model can be combined with audiovisual media, differentiated learning, and other learning approaches as long as relationships among concepts remain the basis for organizing learning (Fatmawati, 2022; Avandra et al., 2023; Maruni, 2024). In addition, the review of the application of the Connected model shows potential for supporting learning outcomes and the development of students' abilities, although the results may differ depending on the research context and the characteristics of the learning (Febriya et al., 2023).

Besides its strengths, The Connected Model has limitations that need attention. The model requires teachers to be able to find truly meaningful relationships among the concepts or topics to be connected. Not all content has strong links, so forcing relationships among content can actually make the learning structure less logical and confusing for students. Research on the implementation of integrated learning shows that organizing connectedness requires careful planning so that the relationships among components are not merely formal but truly support the learning objectives (Chamisijatin et al., 2022; Iskandar et al., 2024).

Another limitation relates to the time and planning that learning requires. Teachers need to analyze competencies, determine the main concept, map relationships, choose suitable activities, and design evaluation that can measure students' understanding of those relationships. If the planning stage is rushed, the connectedness built can become shallow and learning returns to an orientation of delivering content separately. Differences in students' abilities also need attention because relationships among concepts that are easily understood by some students are not necessarily easy for others (Maruni, 2024; Ardiny et al., 2023).

Thus, The Connected Model has the strengths of more coherent, meaningful, and flexible learning that allows links between knowledge and skills, but its application also has limitations in planning, selecting appropriate relationships, time, and adjusting to students' characteristics. These strengths cannot be separated from the conditions of application, because the effectiveness of the model is strongly influenced by the quality of the learning design and the teacher's ability to build relevant connections. Therefore, The Connected Model is better understood as an organizing framework for learning that offers opportunities to build links among knowledge, with its success still depending on the accuracy of implementation in the classroom.

Discussion

1. The Connected Model as a Form of Internal Integration

The findings show that the main characteristic of The Connected Model is the connectedness of various learning elements that remain within one field of study. These connections can occur among concepts, among topics, among skills, and between previous knowledge and the knowledge being learned. Thus, integration in this model is shown not primarily through combining several subjects but through how teachers organize the elements within a field of study so that students see the relationships among them. This concept shows that integration does not always mean expanding the boundaries of a discipline; it can also be achieved by strengthening the internal relationships within a discipline (Fogarty, 1991; Drake & Burns, 2004).

These findings have important implications for understanding integrated learning. Learning that uses the Connected Model retains the identity of the field of study, but content is not presented as separate units of knowledge. Each concept can be placed in a sequence that is related to other concepts so that students gain a more organized structure of knowledge. In this context, integration functions as a way to strengthen the coherence of learning, not merely to increase the amount of content learned at one time (Fogarty & Pete, 2009; Syarifah & Andini, 2024).

Such connectedness is also related to the process by which students build knowledge. When new concepts are linked to knowledge students already have, students have the opportunity to build understanding through the relationship between new information and their previous knowledge structures. This process is in line with the view that learning is more effective when new knowledge is built on prior knowledge and when students understand the conceptual structure of the material they study (Bransford et al., 2000). Therefore, the Connected Model can be seen not only as a technique for arranging content but also as a way of organizing learning experiences so that the development of knowledge proceeds continuously.

2. Connectedness as the Basis of Meaningful Learning

One important finding of this review is that the quality of the Connected Model depends heavily on the quality of the relationships built. Relationships among concepts cannot be based merely on topic proximity or the order in which content is delivered. Connectedness must have a clear pedagogical rationale, namely helping students understand the concepts being studied. If a relationship lacks a strong conceptual basis, learning risks becoming a mere juxtaposition of content that does not produce deeper understanding.

From the perspective of meaningful learning, the relationship between old and new knowledge is an important part of understanding content. Students do not only receive new concepts; they connect them with the knowledge structures they already have. Therefore, learning activities in the Connected Model need to give students the opportunity to identify, explain, compare, and use the relationships among concepts. Learning with such a pattern can help students build a more organized knowledge structure (Bransford et al., 2000).

The review also shows that connectedness can be developed through various forms of learning activity. Discussion, problem solving, continuing tasks, the use of media, and reflective activities can be used as long as they help students see the relationships that are the

focus of learning. Research on the application of Connected in various contexts shows that the model can be combined with different approaches and media so that the learning process is not tied to one particular form of activity (Fatmawati, 2022; Chamisijatin et al., 2022).

Thus, the meaningfulness of The Connected Model is determined more by the quality of the relationships than by the number of concepts successfully connected. The clearer the conceptual relationships that are built, the greater the chance that students understand the structure of the material as a whole. Conversely, too many irrelevant relationships can increase cognitive load and obscure the main concept that should be understood. Therefore, teachers need to consider the depth and relevance of relationships, not merely the amount of content that has been integrated.

3. The Connected Model and the Teacher's Role in Building Learning Coherence

The findings show that the teacher is an important component in the successful application of The Connected Model. The model does not automatically produce connectedness simply because several pieces of content are placed in one learning sequence. Teachers need to analyze the structure of the content, determine the main concept, find relevant relationships, and design activities that help students understand those relationships. This role shows that applying Connected requires pedagogical ability and planning that go beyond arranging the sequence of content.

The teacher's role is also related to the ability to adjust connectedness to students' characteristics. Differences in prior ability, learning needs, and level of concept mastery can affect how students understand the relationships among content. Studies on applying Connected through differentiated learning show that the principle of connectedness can be maintained by providing variation in learning experiences according to students' characteristics (Avandra et al., 2023; Maruni, 2024). This strengthens the view that Connected is a flexible model in implementation, but that flexibility still requires pedagogical decisions from the teacher.

Teachers also need to ensure that the links among objectives, content, activities, and assessment run consistently. If the learning objectives emphasize understanding relationships among concepts but the learning activities only ask students to memorize information separately, the Connected principle has not been fully realized. Therefore, integration needs to be built throughout the learning process, from planning to evaluation. Research findings on applying Connected in thematic learning show the importance of organizing learning components so that the designed relationships can be seen in students' learning experiences (Iskandar et al., 2024; Syarifah & Andini, 2024).

4. Flexibility and Limits of Applying The Connected Model

One prominent characteristic of The Connected Model is its flexibility. The model can be applied with various strategies, media, and approaches as long as the internal relationships among learning components remain the main principle. This flexibility allows Connected to be adjusted to classroom conditions and the characteristics of the content. Research that combines Connected with audiovisual media or differentiated learning shows that the model can be developed according to learning needs without losing its basic characteristics (Fatmawati, 2022; Avandra et al., 2023).

Nevertheless, flexibility is also an aspect that needs to be controlled. The broader the possibilities for teachers to develop relationships among concepts, the greater the need to ensure that those relationships are truly relevant. Forced relationships can cause learning to lose focus and make it difficult for students to identify the main concept. Therefore, Connected should not be understood as freedom to connect all content but as selective and purposeful organization of relationships.

Another limit relates to time and teacher competence. Designing Connected learning requires concept mapping, determining relationships, arranging activities, and developing appropriate assessment. Under conditions of limited learning time, this process can be a challenge in itself. In addition, teachers need a sufficient understanding of the structure of the content so that the relationships they create are not merely thematic on the surface but truly conceptually related (Chamisijatin et al., 2022; Iskandar et al., 2024).

Based on these findings, the application of The Connected Model should consider a balance between connectedness and learning focus. Too few relationships can cause the model to lose its integrative character, while too many relationships can make learning complex and unfocused. Thus, the more important principle is not to connect as many concepts as possible but to choose the relationships that are most relevant to the learning objectives and the development of students' understanding.

5. Synthesis of Findings and Implications for Learning

Based on the review as a whole, The Connected Model can be understood as an approach to organizing learning that places internal relationships among components of knowledge at the center of learning. This characteristic distinguishes it from learning that presents concepts separately and also explains why the model can support more coherent learning. These relationships include concepts, topics, skills, experiences, and prior knowledge that are deliberately arranged to form continuity of understanding. The synthesis of the findings is summarized in Table 1.

Table 1. Synthesis of the findings of the study

Aspect	Main finding	Implication for learning
Focus of integration	Internal relationships within one field of study	Content retains the identity of the field of study but is arranged so that its parts are interrelated
Forms of connection	Concepts, topics, skills, and prior–new knowledge	Teachers need to determine connections that have pedagogical relevance
Organization	Relationships are designed systematically	Planning needs to include concept mapping and the sequencing of learning
Role of the teacher	Designer, facilitator, and director of connections	Teachers need to help students discover and use relationships among concepts
Flexibility	Can be combined with different strategies and media	Implementation can be adjusted to students' needs
Limitations	Requires planning, time, and the selection of appropriate relationships	Not all content needs to be, or can be, connected directly

Source: Authors' synthesis of the reviewed literature

The table shows that the main strength of The Connected Model lies in its ability to build learning coherence, while its main challenge lies in the process of determining the right relationships. Therefore, the success of the model is determined not merely by the use of the label “Connected” but by the quality of the underlying learning design. This finding also shows that the Connected model has broad room for adaptation, but that adaptation must still maintain the principle of meaningful and relevant relationships.

Conceptually, the results of this review show that The Connected Model can be positioned as a bridge between concept mastery and the development of learning skills. When relationships among concepts are well designed, students not only acquire a body of information but also understand how that knowledge is interrelated. This implication is important for learning that emphasizes understanding, because the goal of learning does not stop at the ability to recall concepts but develops toward the ability to use relationships among concepts to understand problems and learning situations.

Thus, The Connected Model is relevant as an integrated learning approach that emphasizes continuity and coherence of knowledge. However, its application requires care so that the connections built do not become artificial. Teachers need to consider the structure of the content, students' prior knowledge, learning objectives, activities, and assessment in an integrated way. Based on this synthesis, Connected can be viewed not merely as a way of combining content but as a way of designing learning experiences so that students understand knowledge as an interrelated structure.

CONCLUSION

Based on the results of the review and discussion, The Connected Model is an integrated learning model that emphasizes connectedness among concepts, among topics, among skills, and between prior and new knowledge within a field of study. These connections are designed systematically so that content is not learned as separate parts but as knowledge that has continuity and meaningful relationships. With these characteristics, The Connected Model can be an approach to building more coherent learning without eliminating the identity of the field of study.

Applying The Connected Model requires careful planning, especially in determining the main concept, identifying relevant relationships, arranging learning activities, and ensuring alignment among objectives, content, activities, and assessment. Teachers play an important role as designers and facilitators who help students discover the relationships among learning components. The model is also flexible enough to be adapted to strategies, media, and students' characteristics, but this flexibility needs to be accompanied by consideration so that the relationships built are not artificial or merely a combination of content.

This review also shows that The Connected Model has strengths in building coherence, continuity, and meaningfulness in learning, but that its application has limitations, namely the need for teachers' planning ability, time, understanding of the structure of the content, and accuracy in determining relationships among concepts. Therefore, the effectiveness of the model cannot be separated from the quality of its implementation and should not be understood as an automatic result of using the model.

Practically, The Connected Model can be considered in lesson planning that aims to help students understand the relationships among knowledge and develop skills continuously.

Academically, future studies can deepen empirical research on applying Connected at different levels, with different student characteristics, in different fields of study, and with different forms of learning activity. Further research is also needed to examine how the quality of relationships among concepts affects students' understanding, so that the application of The Connected Model is assessed not only by learning outcomes but also by the quality of the process of knowledge connectedness that is formed.

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