

## Implementation of The Innovation Learning Development Design Model from Jerrold E. Kemp, Gary R. Morrison, And Steven M. Ross: Literature Review and Current Implementation

Dunia Purnama<sup>1</sup>, Rina Martiana<sup>2</sup>, Satutik Rahayu<sup>3</sup>

<sup>1,2,3</sup> Physics Education Study Program, Faculty of Teacher Training and Education, University of Mataram, Indonesia

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### ABSTRACT

This article reviews the instructional design model developed by Jerrold E. Kemp, Gary R. Morrison, and Steven M. Ross, focusing on its structure, characteristics, and implementation in contemporary educational contexts. The study uses a systematic literature review approach to evaluate how the model responds to the demands of modern education, including the learner-centered philosophy, differentiated instruction, and the integration of digital technologies. The Kemp-Morrison-Ross model features nine interdependent components that can be accessed non-linearly, offering high flexibility and adaptability for instructional planning. The findings indicate that this model aligns well with current curriculum reforms such as Indonesia's *Merdeka Curriculum*, supporting personalized and project-based learning approaches. Although conceptually robust, challenges exist in practical implementation, such as limited teacher capacity, lack of systemic support, and uneven access to instructional technology. The discussion suggests that this model can serve as a framework for transformative instructional design when supported by adequate training, policy, and digital infrastructure. The article concludes by highlighting the model's potential in guiding instructional innovation and calls for further empirical research to evaluate its effectiveness in diverse learning environments.

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Al-Qur'an Science University

### Corresponding Author:

**Dunia Purnama**

Physics Education Study Program, Faculty of Teacher Training and Education, University of Mataram,  
Indonesia

[duniapurnama22@gmail.com](mailto:duniapurnama22@gmail.com)

## INTRODUCTION

The development of science and technology in the digital era has driven transformation in the world of education (Yusuf et al., 2023; Ainun et al., 2022). One of its main impacts is the increasing need for learning designs that are not only systematic and efficient, but also flexible, contextual, and student-centered (Mugara & Ali, 2025). In this context, learning design plays a strategic role as a framework for designing effective and adaptive teaching and learning processes to meet changing times.

Jerrold E. Kemp's instructional design model, later developed with Gary R. Morrison and Steven M. Ross, is a prominent approach because it is holistic, flexible, and non-linear. This model is known as the Kemp-Morrison-Ross Model emphasizes nine interrelated core components that are freely accessible to instructional designers as needed. This approach differs from other

instructional design models, such as ADDIE or Dick-Carey, which are linear and sequential ([Akbulut, 2007](#); [Bajracharya, 2019](#)).

The Kemp model provides teachers and instructors with the flexibility to start designing from any component, including analyzing student needs, setting objectives, selecting media, implementing instructional strategies, and evaluating and revising ([Hastutie & Ramli, 2024](#); [Sewu et al., 2021](#)). Therefore, this model is considered more flexible in addressing the increasingly complex and personalized challenges of today's learning. Previous research also shows that this flexible approach can increase student engagement and learning effectiveness ([Defina, 2018](#); [Sujarwo et al., 2017](#)).

In Indonesia, this model has begun to gain attention with the implementation of in-depth learning, which emphasizes differentiated learning, diagnostic assessments, and projects to strengthen Pancasila student profiles. Teachers are encouraged to design learning that is not solely content-based but also considers students' characteristics, interests, and learning styles. The Kemp model is particularly relevant in this context because it supports a less rigid approach and allows for more contextual and transformative learning ([Rusmayana, 2021](#)).

However, the implementation of this model in practice still faces various challenges, such as teachers' limited time to comprehensively design learning, limited understanding of all model components, and a lack of technological support in some educational units ([Kosassy, 2019](#)). Furthermore, there are few comprehensive studies examining how this model develops and is implemented within the digital education ecosystem that now dominates the world of education, especially after the COVID-19 pandemic.

This article aims to conduct a literature review and analysis of the implementation of the Kemp-Morrison-Ross learning design model, both theoretically and practically. The main focus of this article is to explore how this model has evolved over time, evaluate its strengths and weaknesses, and review its relevance in modern educational contexts. This study also aims to contribute to the literature on learning development and encourage more effective implementation of the model in the era of digital learning and immersive learning.

## METHODS

This study uses a literature review approach as developed in the scientific synthesis research by [Snyder \(2019\)](#) to critically analyze the application of the learning design model from Jerrold E. Kemp, Gary R. Morrison, and Steven M. Ross. The study was conducted to explore the development, basic principles, advantages, disadvantages, and relevance of the application of the model in the context of contemporary education. This approach is descriptive-qualitative with an exploratory character, as it seeks to dig deeper into the understanding of the Kemp-Morrison-Ross model concept based on various credible scientific sources.

Data collection was conducted through a literature search of various national and international scientific journals, textbooks, seminar proceedings, and other relevant academic documents. The literature was selected based on several criteria, including having a primary focus on the Kemp learning design model or its variants, being published between 1994 and 2024, being relevant to 21st-century learning, and being published through channels with scientific credibility. The search process was conducted using academic search engines such as Google Scholar, ResearchGate, the Directory of Open Access Journals (DOAJ), and the Garuda database, with keywords such as: "Kemp Learning Model," "Morrison-Ross-Kemp," "Instructional Design," "Learning Development Design," and "Deep Learning."

Data were analyzed using content analysis techniques, with a thematic approach. The initial step was to identify the main themes from each literature, such as the model's structure, its application in various levels of education, and its implications for learning effectiveness. Next, themes were grouped and categorized to examine the extent to which theory and practice can support each other. Then, the researcher compiled a comparative synthesis between the literature discussing the Kemp model and other similar models, such as ADDIE or Dick-Carey, to evaluate the uniqueness and advantages of the Kemp model. Finally, conclusions were drawn that reflect the position and relevance of the Kemp model in supporting learning transformation in the era of immersive learning and digital-based education. This process was also accompanied by a critical interpretation of the sources reviewed to provide a comprehensive and applicable understanding.

## RESULTS AND DISCUSSION

The Kemp, Morrison, and Ross learning design model presents nine holistically integrated development components that can be used flexibly. Literature reviews and field applications demonstrate that this model is highly relevant to the needs of 21st-century learning. However, it is important to not only describe the components but also analyze how each element addresses actual challenges and implementation opportunities in today's educational context, particularly immersive learning and the digital transformation of learning.

**First**, *the student needs analysis* component is a key strength of the Kemp model. In the era of personalized learning and differentiation (especially in deep learning), teachers' ability to understand students' backgrounds, interests, learning styles, and readiness is crucial ([Agustan, 2019](#)). This analysis requires teachers to use not only intuition but also diagnostic assessment data, learning profiles, and student development track records. However, a major challenge is the lack of time and training for teachers to conduct in-depth and systematic needs assessments ([Magdalena et al., 2020](#)).

**Second**, the formulation of learning objectives in the Kemp model is carried out in a hierarchical and specific manner. This aligns with the learning outcomes (CP) requirements in in-depth learning. However, many teachers still experience difficulty translating CP into specific objectives. Operational learning objectives, particularly due to limited literacy in cognitive and affective domain taxonomies. Therefore, competency analysis-based goal formulation training is an important step to support the implementation of this component.

**Third**, the flexible learning strategies in Kemp's model allow teachers to combine various approaches, such as *problem-based learning*, *project-based learning*, and *inquiry-based learning*. This component aligns well with the principles of student-centered learning. However, in practice,

this flexibility can become a trap if not accompanied by a clear learning path. Teachers often find themselves trapped in a variety of methods without a clear understanding of the primary learning strategy being used ([Kosassy, 2019](#)).

**Fourth**, the selection of media and learning resources is a crucial aspect of the Kemp model, which has been further expanded by technological advances. In today's hybrid and digital learning era, learning media extends beyond textbooks and worksheets to include interactive videos, infographics, online simulations, and LMS platforms such as Google Classroom and Moodle. The Kemp model allows for the integration of these media into learning scenarios, but the reality in many schools shows that gaps in teachers' access to and ICT skills are the main obstacles to maximizing the implementation of this component ([Limapornvanitr, 2024](#)).

**Fifth**, learning evaluation in the Kemp model is designed to be continuous and formative ([Kemp et al., 1994](#)). This aligns well with the Deep Learning assessment paradigm, which emphasizes assessment as a learning process, not simply an assessment of outcomes. However, in practice, many teachers still rely primarily on cognitive-based assessments (written tests) and have not utilized portfolios, performance observations, or other authentic assessments as part of their ongoing evaluation. Therefore, strengthening authentic assessment competencies is necessary to support the comprehensive implementation of this component.

The following is a comparison between the Kemp-Morrison-Ros, ADDIE, and Dick-Carey models which are presented in the following table:

Table 1. Comparison between the Kemp-Morrison-Ros, ADDIE, and Dick-Carey models.

Aspect	Model Kemp-Morrison-Ross	ADDIE Model	Dick-Carey Model
<b>Structure</b>	Non-linear, flexible, can start from anywhere	Linear and systematic	Linear and systematic
<b>Main focus</b>	Comprehensive and adaptive learning development	Development of project-based instructional systems	Systematic translation from objectives to evaluation
<b>Approach</b>	Holistic and learner-centered	Product oriented	System-oriented
<b>Flexibility of use</b>	High, can adapt to context and needs	Medium, following the phase sequence	Low, demanding order of sequence
<b>Relevance in Deep Learning</b>	High – supports differentiated, flexible learning	Medium – can be applied in developing teaching modules	Tends to be rigid and difficult to adjust
<b>Technical requirements</b>	High (requires thorough understanding)	Currently	High (especially in the system development stage)

The comparison reveals that the Kemp model has advantages over the ADDIE and Dick-Carey models in terms of flexibility, adaptability to contextual needs, and a more humane approach to the learning process. ADDIE is more systematic and suitable for e-learning content development, but less responsive to changing classroom dynamics. While Dick-Carey requires a rigid sequence, the Kemp model allows teachers to start from anywhere, adapting the flow to real-world conditions ([Bajracharya, 2019](#); [Akbulut, 2007](#)).

However, implementing the Kemp model is not without challenges. Analysis shows that the main challenges stem from human and institutional factors, not the model itself. Lack of teacher training on instructional design, limited time for in-depth lesson design, and suboptimal collaboration among teachers hinder the model's ideal implementation in the field. Therefore, successful implementation of this model requires more than just publicizing the model's structure; it must also be accompanied by training, school policy support, and adequate resources.

On the other hand, there is a significant opportunity to integrate the Kemp model into the development of teaching modules, independent lesson plans, and online learning platforms. If elements of this model are incorporated into digital learning templates that are easily accessible to teachers (for example, in the form of LMS features), their implementation can be more practical and systematic. This integration will strengthen the effectiveness of the Kemp model as a contextual, reflective, and adaptive learning framework. Overall, the results of this study and analysis indicate that the Kemp-Morrison-Ross model is highly relevant in supporting today's educational needs, which demand flexibility, learner-centeredness, technology integration, and sustainable learning. For its implementation to be more effective, support from micro and macro policies, as well as ongoing teacher competency development in the field of instructional design, are needed.

## CONCLUSION

This study confirms that the learning development design model of Jerrold E. Kemp, Gary R. Morrison, and Steven M. Ross is a relevant, adaptive, and applicable approach in addressing today's educational challenges, because it has nine components that are flexibly and non-linearly integrated, thus supporting student-centered, contextual learning, and aligned with the principles of Deep Learning. The results of the discussion show that the Kemp model is able to accommodate digital learning, differentiated learning, and project-based learning that are the demands of 21st-century education, while also proving that the need for a learning design model that is responsive to the changing times as stated in the introduction can be met. However, the implementation of this model requires increased teacher capacity in instructional planning and systematic institutional support, so that its future development needs to be directed at integration with digital platforms and technical simplification in the form of applicable templates. Conceptually, the Kemp model has broad prospects for use in teacher training, teaching module development, and technology-based adaptive learning, and opens up opportunities for further research through empirical studies on face-to-face, online, and hybrid learning to strengthen its practical effectiveness as a foundation for transformative learning design in the future.

## REFERENCES

- Agustan, S. (2019). Designing the development of Kemp model learning tools on the topic of flat-sided geometric shapes for class VIII SMP. In *National Seminar on Education 2015* (pp. 195–203).
- Ainun, FP, Mawarni, HS, Sakinah, L., Lestari, NA, & Purna, TH (2022). Identification of digital transformation in the world of education regarding opportunities and challenges in the era of disruption. *Journal of Citizenship*, 6 (1), 1570-1580.
- Akbulut, Y. (2007). Implications of two well-known models for instructional designers in distance

- education: Dick-Carey versus Morrison-Ross-Kemp. *Turkish Online Journal of Distance Education*, 8 (2), 62–68.
- Bajracharya, J.R. (2019). Instructional design and models: ASSURE and Kemp. *Journal of Education and Research*, 9 (2), 1–8. <https://doi.org/10.3126/jer.v9i2.30455>
- Defina, D. (2018). Research and development model for BIPA (Indonesian for Foreign Speakers) teaching materials. *Indonesian Language Education and Literature*, 4 (1), 36–51. <https://doi.org/10.24235/ileal.v4i1.3070>
- Hastutie, G., & Ramli, M. (2024). Learning Design (Dick & Carey Model, Jerold E. Kemp, et al.). *An-Nashr: Scientific Journal of Education and Social Sciences*, 2 (1), 41-51.
- Kemp, J. E., Morrison, G. R., & Ross, S. M. (1994). *Designing effective instruction* (2nd ed.). Merrill.
- Kosassy, SO (2019). Reviewing learning development models and learning tools. *Pelita Bangsa Pelestari Pancasila*, 14 (1), 11–21.
- Limapornvanitr, T. (2024). Book review: Designing effective instruction, 2013 by Gary R. Morrison, Steven M. Ross, Howard K. Kalman, and Jerald E. Kemp. *International Journal of Industrial Education and Technology*, 6 (1), B1–B4.
- Magdalena, I., Septiarini, AA, & Nurhaliza, S. (2020). Application of learning design models at State Islamic Senior High School 12, West Jakarta. *PENSA: Journal of Science Education*, 2 (2), 241–265. <https://doi.org/10.25037/pensa.v2i2.345>
- Mugara, R., & Ali, EY (2025). *Curriculum and Learning in Elementary Education: Theory, Design, Strategy, and Contextual Implementation for the 21st Century*. Widina Publisher.
- Rusmayana, T. (2021). The ADDIE learning model integrating PEDATI at SMK PGRI Karisma Bangsa as a substitute for field work practice during the COVID-19 pandemic. *Indonesian Journal of Vocational Education*, 1 (1), 1–11. <https://doi.org/10.25041/jpvi.v1i1.1035>
- Sewu, MM, Dhiu, KD, & Maku, KRM (2021). Development of learning objectives for social emotional aspects based on the Morrison Ross and Kemp learning model in the 2013 Early Childhood Education Curriculum for Groups A and B at Citra Bakti Integrated Early Childhood Education. *Jurnal Citra Pendidikan*, 1 (2), 238–247.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Sujarwo, S., Samsi, I., & Wibawa, L. (2017). Design of a learning tour model at Gembira Loka Zoo Yogyakarta as an off-campus laboratory. *Journal of Education and Community Empowerment*, 4 (1), 90–101.
- Yusuf, M., Julianingsih, D., & Ramadhani, T. (2023). Transformation of digital education 5.0 through the integration of scientific and technological innovation. *MENTARI Journal: Management, Education and Information Technology*, 2 (1), 11-19.