

## **ABSTRACT**

**JONSON RAJAGUKGUK. NIM. 8186114004.** *Development of Training Management Model Based on Collaborative Learning in The Organized Training System (CarLOS) to Improve the Pedagogical Competence of Primary School Teachers in Dairi Regency. Dissertation. Medan. Postgraduate Education Management Study Program, Universitas Negeri Medan, 2025.*

*This research aims to develop a CarLOS-based training management model to improve the pedagogical competence of primary school teachers in Dairi Regency. The objectives of this study include: (1) identifying the characteristics of the CarLOS-based training management model, (2) assessing the feasibility of the model in improving the pedagogical competence of primary school teachers, and (3) evaluating the effectiveness of the model in enhancing pedagogical competence. This study uses the Research and Development (R&D) method with a procedural model that adopts the ADDIE steps (Assume, Design, Development, Implementation, and Evaluation). The results of the study indicate that the characteristics of the CarLOS model include five main elements: Collaborative Design, Adaptive Flexibility, Active Collaborative Learning, Technology-Enhanced Collaborative Learning, and Theory Integration. This model is designed to accommodate the evolving training needs, actively involve participants, and integrate technology to enhance the effectiveness of learning. The feasibility of this model is assessed as very good, with an average feasibility score of 94%, indicating that the model is highly suitable for implementation. Furthermore, the trial results show high effectiveness, with significant improvements in pedagogical competence in both limited and wide trials, with N-Gain values of 76.08% and 77.87%, respectively, both categorized as highly effective. The implications of this study reinforce the theory supporting the importance of teacher training as an effort to improve pedagogical competence. Practically, the CarLOS model significantly contributes to enhancing teachers' understanding of students' characteristics, learning theories, curriculum development, and the use of information technology in the learning process. This study also provides recommendations for the Dairi District Education Department to expand the implementation of this model and for elementary school principals and teachers to integrate this training model into their professional development.*

**Keywords:** *training management model, CarLOS, pedagogical competence, primary school teacher*

## ABSTRAK

**JONSON RAJAGUKGUK. NIM. 8186114004.** Pengembangan Model Manajemen Pelatihan Berbasis *Collaborative Learning in The Organized Training System (CarLOS)* Dalam Meningkatkan Kompetensi Guru SD di Kabupaten Dairi. **Disertasi. Medan. Program Studi Manajemen Pendidikan Pascasarjana, Universitas Negeri Medan, 2025.**

Penelitian ini bertujuan untuk mengembangkan model manajemen pelatihan berbasis CarLOS guna meningkatkan kompetensi pedagogik guru SD di Kabupaten Dairi. Tujuan penelitian ini meliputi: (1) menemukan karakteristik model manajemen pelatihan berbasis CarLOS, (2) mengetahui kelayakan model dalam meningkatkan kompetensi pedagogik guru SD, dan (3) menilai efektivitas model ini dalam meningkatkan kompetensi pedagogik. Penelitian ini menggunakan metode Research and Development (R&D) dengan model prosedural yang mengadopsi langkah-langkah ADDIE (*Assume, Design, Development, Implementation, and Evaluation*). Hasil penelitian menunjukkan bahwa karakteristik model CarLOS mencakup lima elemen utama: *Collaborative Design, Adaptive Flexibility, Active Collaborative Learning, Technology-Enhanced Collaborative Learning*, dan *Theory Integration*. Model ini dirancang untuk mengakomodasi kebutuhan pelatihan yang terus berkembang, melibatkan peserta secara aktif, dan mengintegrasikan teknologi untuk meningkatkan efektivitas pembelajaran. Kelayakan model ini dinilai sangat baik dengan skor rata-rata kelayakan 94%, menunjukkan bahwa model ini sangat layak diterapkan. Selain itu, hasil uji coba menunjukkan efektivitas yang tinggi dengan peningkatan kompetensi pedagogik yang signifikan pada kedua uji coba terbatas dan luas, dengan nilai N-Gain yang mencapai 76,08% dan 77,87%, masing-masing, yang tergolong dalam kategori sangat efektif. Implikasi dari penelitian ini memperkuat teori yang mendukung pentingnya pelatihan bagi guru sebagai usaha meningkatkan kompetensi pedagogik. Secara praktis, model CarLOS memberikan kontribusi signifikan dalam meningkatkan pemahaman guru terhadap karakteristik peserta didik, teori belajar, pengembangan kurikulum, serta pemanfaatan teknologi informasi dalam proses pembelajaran. Penelitian ini juga memberikan rekomendasi kepada Dinas Pendidikan Kabupaten Dairi untuk memperluas penerapan model ini, serta kepada kepala sekolah dan guru SD untuk mengintegrasikan model pelatihan ini dalam pengembangan profesionalisme mereka.

**Kata kunci:** model manajemen pelatihan, CarLOS, kompetensi pedagogik, guru SD