

## INTISARI

**Latar Belakang:** Penalaran klinis merupakan aktivitas intelektual berupa strategi untuk mengintegrasikan informasi yang relevan dalam menentukan diagnosis dan terapi kepada pasien. Peningkatan kemampuan penalaran klinis dapat dilakukan dengan peningkatan kualitas pembelajaran pendidikan kedokteran. Dosen memiliki peran yang penting dalam pembelajaran penalaran klinis. Sementara itu dosen memiliki keterbatasan baik terkait dengan cara pengambilan keputusan klinis, interaksi dengan mahasiswa, dan dikaitkan dengan factor pendukung lain yang memengaruhi. Oleh karena itu perlu dikembangkan bentuk fasilitasi pembelajaran penalaran klinis dengan berdasar praktik baik pengalaman dosen klinis.

**Metode:** Penelitian ini dilakukan dengan pendekatan kualitatif dan kuantitatif. Tahapan penelitian ini mengacu pada tahap penelitian dengan pendekatan perancangan dan penelitian pengembangan (*design and development research*) yang menekankan pada pengembangan model dan validasi model. Penelitian ini dilakukan dalam 2 tahap:

Tahap 1. Pengembangan Model, terdiri dari: 1) identifikasi teknik fasilitasi pembelajaran penalaran klinis berdasarkan literatur dengan *scoping review*; 2) identifikasi pengalaman dosen klinis dalam memfasilitasi penalaran klinis pada *setting* klinis dengan penelitian kualitatif, dan 3) perumusan dan validasi model pembelajaran penalaran klinis dengan *review* oleh pakar.

Tahap 2. Implementasi dan Evaluasi Model. Tahap penelitian dilakukan dengan pendekatan kuantitatif dan kualitatif. Penelitian kuantitatif (kuasi eksperimental *with pre-post-test group design without control*) digunakan saat implementasi model pada stase Ilmu Kesehatan Anak (IKA) dan Ilmu Penyakit Dalam (IPD) selama 11 minggu dengan pemberian alat ukur berupa *Script Concordance Test* (SCT) dan *Diagnostic Thinking Inventory* (DTI). Penilaian penalaran klinis dengan DTI dan SCT dilakukan di awal stase (*pre-test*), akhir stase (*post-test*), dan 2 minggu setelah stase (*late post test*). Penelitian kualitatif dilakukan dengan wawancara mendalam dosen klinis dan FGD mahasiswa.

**Hasil penelitian:** Pada tahap 1 didapatkan hasil identifikasi teknik fasilitasi pembelajaran penalaran klinis yang merupakan praktik terbaik para dosen pendidik klinis dan teknik fasilitasi dari literatur. Pada tahap 2 dihasilkan Model REASON sebagai model fasilitasi pembelajaran penalaran klinis. Model REASON terdiri dari beberapa tahap yaitu tahap *pre* interaksi (terdiri dari kesiapan (*Readiness*) dan lingkungan pembelajaran (*Environment*)), tahap interaksi (terdiri dari penguasaan pengetahuan (*Ability of knowledge application*) dan strategi (*Strategy*)), dan tahap *post* interaksi (terdiri dari penilaian (*Output based assessment*) dan umpan balik narasi (*Narrative feedback*)). Ujicoba Model REASON dianalisis dengan *Repeated Measures Anova*. Hasilnya didapatkan perbedaan bermakna nilai DTI dan SCT mahasiswa pada *pre-test* dan *post-test* stase IKA dan IPD *p value* 0,000 ( $p < 0,05$ ). Terdapat perbedaan nilai DTI dan SCT pada stase IPD dan IKA sebelum dan sesudah dilakukan model REASON pada *pre-test* dan *late post-test* dengan *p value* 0,000; 0,000; 0,02 ( $p < 0,05$ ). Tidak terdapat perbedaan yang signifikan pada nilai DTI pada *post-test* dan *late post-test* dengan *p value* 1,000; 0,074; 0,08 ( $p > 0,05$ ).

**Diskusi:** Peran dosen dalam pembelajaran penalaran klinis di *setting* klinis membantu mahasiswa dalam percepatan penyesuaian diri mahasiswa. Model REASON memberikan intervensi dalam akselerasi peningkatan kemampuan penalaran klinis.

**Kesimpulan:** Terdapat beberapa pendekatan fasilitasi dosen klinis dalam menguatkan kemampuan penalaran klinis mahasiswa. Model REASON dapat membantu meningkatkan kemampuan penalaran klinis mahasiswa di *setting* klinis.

**Kata kunci:** penalaran klinis, model, pembelajaran, *setting* klinis, *dual process*, *cognitive load*

## ABSTRACT

**Background:** Clinical reasoning is an intellectual activity as a strategy for integrating relevant information in determining patient diagnosis and therapy. Increasing clinical reasoning abilities can be done by improving the quality of learning. Clinical facilitators have an essential role in learning clinical reasoning, with several limitations related to how clinical decisions are made, interactions with students, and several influencing factors. Therefore, it is necessary to develop a form of facilitating clinical reasoning learning using the experience of clinical facilitators in Indonesia.

**Method:** This research was conducted with a qualitative and quantitative approach. The stages of this research refer to the research stage with a design and development research approach that emphasizes model development and model validation. This research was conducted in 2 stages:

Stage 1. Model Development, consisting of: 1) identification of clinical reasoning learning facilitation techniques based on literature with a scoping review; 2) identification of clinical lecturers' experiences in facilitating clinical reasoning in clinical settings with qualitative research, and 3) formulation and validation of a clinical reasoning learning model with expert review.

Stage 2. Model Implementation and Evaluation. The research stage was conducted with a quantitative and qualitative approach. Quantitative research (quasi-experimental with pre-post-test group design without control) was used during the implementation of the model at the Pediatrics (IKA) and Internal Medicine (IPD) stages for 11 weeks by providing measuring instruments in the form of the Script Concordance Test (SCT) and Diagnostic Thinking Inventory (DTI). Implementation monitoring was carried out by providing an electronic logbook (E-log book) of the learning model. Qualitative research was conducted through in-depth interviews with clinical lecturers and student FGDs after implementation. **Results:** In stage 1, the results of the identification of clinical reasoning learning facilitation techniques were obtained which were the best practices of clinical educator lecturers and facilitation techniques from the literature. In stage 2, the REASON Model was formulated as a clinical reasoning learning facilitation model. The REASON Model consists of several stages, namely the pre-interaction stage (consisting of readiness (Readiness) and learning environment (Environment)), the interaction stage (consisting of mastery of knowledge (Ability of knowledge application) and strategy (Strategy)), and the post-interaction stage (consisting of assessment (Output based assessment) and narrative feedback (Narrative feedback)). The REASON Model trial was analyzed using Repeated Measures Anova. The results showed a significant difference in students' DTI and SCT values in the pre-test and post-test of the IKA and IPD stages  $p$  value 0.000 ( $p < 0.05$ ). There was a difference in DTI and SCT values in the IPD and IKA stages before and after the REASON model was carried out in the pre-test and late post-test with  $p$  values 0.000; 0.000; 0.02 ( $p < 0.05$ ). There was no significant difference in DTI values in the post-test and late post-test with  $p$  values of 1.000; 0.074; 0.08 ( $p > 0.05$ ).

**Discussion:** The role of clinical facilitators in learning clinical reasoning in clinical settings helps students accelerate student adjustment. The REASON Model provides interventions to accelerate the improvement of clinical reasoning abilities. **Conclusion:** There are several facilitation approaches by clinical educators in strengthening students' clinical reasoning abilities. The REASON Model can help improve students' clinical reasoning abilities in clinical settings.

**Keywords:** clinical reasoning, model, learning, clinical setting, dual process, cognitive load