

1. Record Nr.	UNINA9910544852803321
Titolo	Learning to diagnose with simulations : examples from teacher education and medical education / / Frank Fischer, Ansgar Opitz, editors
Pubbl/distr/stampa	Cham, : Springer Nature, 2022 Cham : , : Springer International Publishing AG, , 2022 ©2022
ISBN	3-030-89147-X
Descrizione fisica	1 online resource (vi, 157 pages) : illustrations (some color)
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Soggetti	Diagnosis - Simulation methods Educational psychology Teaching of a specific subject Teacher training Industrial or vocational training Diagnòstic Mètodes de simulació Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. A theoretical framework for learning diagnostic competences with simulations -- 2. Diagnosing primary school children's mathematical competences and misconceptions based on their written work -- 3. Diagnosing mathematical argumentation skills in secondary school based on videos of students attempting to construct proofs -- 4. Diagnosing 6th graders' understanding of decimal fractions – A role-play-based simulation for mathematics teacher students of diagnostic interviews featuring simulated teacher-student interactions -- 5. Diagnosing the instructional quality of biology lessons based on staged-videos -- 6. Diagnosing secondary school students' scientific reasoning skills in physics and biology – A video-based simulation for

pre-service teachers -- 7. Diagnosing students' behavioral, developmental and learning disorders based on records of behavior and performance -- 8. Facilitating Medical History Taking through Live and Computer Simulations -- 9. Learning collaborative Diagnosing in Medical Education : Diagnosing a Patient's Disease in Collaboration with a Simulated Radiologist -- 10. Using simulations to facilitate professional competences: promising trajectories for future research.

Sommario/riassunto

This open access book presents 8 novel approaches to measure and improve diagnostic competences with simulation. The book compares the effects of interventions on these diagnostic competences in both teacher and medical education. It includes analyses showing that important aspects of diagnostic competences and effects of instructional interventions aiming to facilitate them are comparable for teachers and doctors. Through closely analyzing projects from medical education, mathematics education, biology education, and psychology, the reader is presented with multiple options for interventions that may be used in each of the subject areas and the improvements in diagnostic skills that could be expected from each simulation. The book concludes with an outline of promising future research on the use of simulations to facilitate professional competences in higher education in general, and for the advancement of diagnostic competencies in particular. This is an open access book.
