



Overview of research program in teaching-learning principles

Teaching-Learning Principle		Practical tools and support	ICLON research staff involved	PhD, post-doc and ongoing projects	Sector (PE, SE, HE)
Adaptive	Learning is promoted when help is tailored to what a pupil or student needs.	<ul style="list-style-type: none"> Scrum-aanpak Game-elementen in digitale oefenprogrammema's Book: Uitdagend gedifferentieerd vakonderwijs 	Dam Janssen	<ul style="list-style-type: none"> Dam: Using a modular, success-oriented approach to make activating teaching methods practical for pre-service science teachers De Boer: Multiple perspectives and learning from success in lesson design Pouwelse: Primitive functions in maths 	SE
Goal system based	Learning is fostered when productively builds on existing multiple goals.	<ul style="list-style-type: none"> Laddering interview method for co-constructing goal systems PPA-CCT methodology for studying career choice for teaching See also bridging methodology (below) 	Dam De Jong Janssen Tigelaar	<ul style="list-style-type: none"> Wieringa: Biology Lesson design Oyserman: Sign language Zweeris: Balancing qualification, socialization and personal development Çal: English medium instruction in higher education Jia: Chinese math reform Kuijpers: Teacher career choices in STEM Ouden: Practical knowledge for promoting religious identity development 	PE, SE, HE
Formative	Learning is promoted if it is evaluated to learn from again.	<ul style="list-style-type: none"> Tools for (peer) feedback Book: Formative assessment and teacher professional learning Tips for improving internal consistency of assessment and evaluation 	Admiraal Saab Tigelaar Van der Rijst	<ul style="list-style-type: none"> Jin: Novice-expert interaction in professional learning Zhang: University-school partnerships in professional learning Wurth: Feedback in L1 teaching Day: Intermediate assessment in higher education Huisman: Peer feedback in higher education NRO-project (PPO): Teaching with computer-based assessments CEL-project: Self- and peer assessment in teacher education Wei: Assessment of outcomes of college students' online learning in China 	SE, HE
Inclusive	Learning is promoted when it meets the needs of all	<ul style="list-style-type: none"> List of democratic values in education 	Admiraal Mearns Saab	<ul style="list-style-type: none"> Moses: Student-teachers engagement with teaching Kroneman: Peer educator intervention in LGTB education Klunder: Remote teaching with chronic-ill children 	SE, HE

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	learners and all learners belong to it.	<ul style="list-style-type: none"> QTI-SE: Quantitative measurement of teachers' self-efficacy in interpersonal relationships with students Set of tasks to trigger intercultural sensitive teaching Book on inclusive teaching approaches 	Tigelaar Van der Rijst	<ul style="list-style-type: none"> Le: Democratic values in Vietnamese education Veldman: Interpersonal relationships of veteran teachers Wang: Technology in rural schools Louws: Teachers' learning during their career Chen: Teachers' identity in language teaching Theeuwens: Preparing teachers for teaching culturally diverse classes Keijzer: Vocational identity of at-risk adolescents in basic VET and rebound programmes Lamers: Teaching and Professional Development in Transnational Education in Oman Smit: Teachers and students as partners in researching educational practice Zweiris: Onderzoek naar brede vorming van leerlingen Wurth: Ontwikkelen van culturele sensitiviteit in de lerarenopleiding 	
Modular	Learning is promoted when teachers rearrange their existing teaching-learning principles for educational design.	<ul style="list-style-type: none"> Toolkits for making a range of general and domain specific teaching approaches practical TTQ: Teaching with technology Questionnaire 	Admiraal Dam Janssen Van der Rijst	<ul style="list-style-type: none"> Jia: Chinese math reform Soto Koelemeijer: Shaping Mathematics into stories Van den Otter: Demonstration practicals in Chemistry education Ottenhof: Ecological perspective in Biology education De Vrind: Adaptive teaching of speaking skills De Winde: Paragraph writing in Dutch language education Baas: Teaching with open online resource in higher education Hendriksen: Reclaiming Teachers' Agency in Educational Innovation in Higher Education: The introduction of an instrument 	SE, HE
Multiple perspective based	Learning is promoted if multiple domain-specific thinking and working methods give direction to this.	<ul style="list-style-type: none"> Perspectives elaborated for many subjects. Mapping and sorting tasks for eliciting perspectives Perspectives as design tool (lessons, learning progressions and curricula) Perspectives as thinking tools for students 	Dam Janssen Van der Rijst	<ul style="list-style-type: none"> Landa: Particle and thermodynamical perspectives Chemistry Kraakman: Experimental design perspective in Chemistry Van den Otter: Demonstration practicals in Chemistry Ottenhof: Ecological perspective in Biology De Boer: Multiple biological perspectives for lesson design in Biology Huang: Interdisciplinary teaching in higher education 	PE, SE, HE
Inquiry based	Learning is promoted when researchable questions are asked for which data is collected to arrive at answers.	<ul style="list-style-type: none"> Student perception research integration questionnaire (SPRQ) Metaphors of research and researchers PST PAR: Principles for participative action research 	Dam Janssen Tigelaar Van der Rijst	<ul style="list-style-type: none"> Van der Rijst: The research-teaching nexus in higher education contexts Dam: How to create coherence in higher education curriculum content for biology Smit: Teachers and students as partners in researching educational practice 	SE, HE
Collaborative learning	Learning is promoted when pupils and students work together effectively and	<ul style="list-style-type: none"> Design tool for collaborative learning tasks in higher education List of open resources for HE SCAN Schools as PLC 	Admiraal Saab Van der Rijst	<ul style="list-style-type: none"> De Hei: Collaborative learning Smit: Teachers and students as partners in research Van Schaik: Teachers' knowledge co-construction Rumiantsev: Learning labs in conservatoire education 	PE, SE, HE

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	share responsibility to achieve a common goal.	<ul style="list-style-type: none"> SCSS: Sense of Community in School Scale 		<ul style="list-style-type: none"> De Jong: Professional learning communities Galikyan: Collaborative learning in online settings Guo: Remote learnings labs Jin: The Development of community and learning process Baas: Teaching with open online resource Rijksen: Kenmerken en condities van reflectieve dialoog in de context van samenwerkende en samen lerende docenten in het Nederlandse basisonderwijs NRO-project (OPRO): schools as professional learning communities NRO-project (PPO): Teachers' knowledge sharing 	
Whole task based	Learning is promoted when subject matter is taught in the context of an authentic whole task.	<ul style="list-style-type: none"> Guidelines for professional development of teacher in transnational higher education Critical incident tasks Geographical mysteries Scrum scenario Overview of serious games Eye-tracking set 	Admiraal Dam De Jong Janssen Saab Van der Rijst	<ul style="list-style-type: none"> Tran: Intercultural awareness in EFL teaching Karkdijk: Mysteries in Geography teaching Van der Kamp: Creative problem-finding in visual arts education Vogelzang: The use of Scrum pedagogy in chemistry education Huizenga: Games-based learning Kragten: Process diagram in Biology Landa: Particle and thermodynamical perspectives in Chemistry Kraakman: Experimental design perspective in Chemistry Van den Otter: Demonstration practicals in Chemistry Ottenhof: Ecological perspective in Biology De Boer: Multiple biological perspectives for lesson design Wieringa: Lesson design in Biology De Vrind: Adaptive teaching of speaking skills De Winde: Paragraph writing in Dutch language Van Kampen: CLIL teaching Zee: Teaching open online education in higher education Lamers: Transnational higher education and professional learning Theeuwes: Intercultural sensitivity in teaching Stollman: Adaptive teaching NRO-project (PPO): Students' learning to do research NRO-projects (OPRO) Teaching with technology NRO-project (Lerarenagenda): Inquiry-based teaching Research lab Calvijn Goes: Teaching reading skills in Science and Social Sciences Research lab Lucas Den Haag: Teaching autonomy in primary education NRO-project: Learning progressions of science teachers in inquiry-based teaching 	PE, SE, HE
Content and Language integrated	Learning is promoted if attention is paid to both the substantive and the linguistic aspects of the subject matter.	<ul style="list-style-type: none"> Motivation questionnaire for students bilingual education Talk script to automatically measure fluency (pauses, speaking speed, "uhm"s) 	Admiraal De Jong Mearns	<ul style="list-style-type: none"> Cal: English medium instruction in higher education Chen: Intercultural identities of non-native teachers of English Ertugruloglu: Language scaffolding in world orienting subjects in the context of bilingual secondary and international introductory class Harmanto: The relationship between English for Specific Purposes (ESP) teachers' interpersonal self-efficacy and the use of Mobile Assisted Language Learning 	SE, HE

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		<ul style="list-style-type: none"> Online written and oral tasks, including dialogues with information-gap tasks 		<ul style="list-style-type: none"> Hong: Gamifying flipped EFL classes: Class design and effectiveness assessment Liu: Teaching Chinese as a foreign language in an intercultural context Saadatpour Vahid: Teachers and students as partners in researching educational practice Mohammad: The influence of teachers' technology-related practices on EFL learners' language learning outcomes and technology self-efficacy Wang: CLIL pedagogy in business English related courses of Chinese universities 	
Safe and participative	Learning is promoted if it takes place with (active) participation of all parties involved, in a safe learning climate.	<ul style="list-style-type: none"> Taxonomy of MOOCs Tool to measure L2 motivation Matrix SPinSTAR (student participation) PST PAR: Principles for participative action research Handbook Klassecontact 	Admiraal Mearns Saab Van der Rijst	<ul style="list-style-type: none"> Kroneman: Peer educator intervention in LGTB education Hendriks: Cognitive engagement in medical MOOCs Vereijken: Student engagement with research in medical education Pilli (postdoc): Learning objectives and outcomes of MOOCs De Heer: Teaching talent development in primary education NRO-project (Lerarenagenda): Teacher research NRO-project (PROBO): Teachers' professional space NRO-project (PPO): Principals' support to engage teachers 	PE, SE, HE
Self-regulated	Learning is promoted when pupils, students, and teachers themselves increasingly steer their own learning process.	<ul style="list-style-type: none"> Technology for regulation of learning SpeakTeach 	Admiraal Tigelaar Van der Rijst	<ul style="list-style-type: none"> De Vrind: Adaptive teaching of speaking skills Haenen: Student agency in open learning environments in higher education Kusters: Teacher agency and educational change in university education Schoot: Student agency in secondary schools 	SE, HE