

	DOMAINS	BARRIERS	NEEDS	Nudging techniques	Self-nudges	Digitalization
1	<p>Lesson Planning and Curriculum Design:</p> <ul style="list-style-type: none"> • Slogan: "Plan today, teach tomorrow: Make each lesson count!" • Spot: "Your future class starts with a great plan. Update your lesson plan today and lead with confidence tomorrow!" • Visual Cue: A digital sticky note popping up on your calendar or LMS dashboard. 	<ul style="list-style-type: none"> • Time constraints for updating and refining lesson plans. • Difficulty in staying current with emerging educational trends. • Time constraints to search for and learn to manage in short time an AI tool • Resistance to integrating technology or new teaching methods. • Ethical doubts: what is allowed to do with AI? • Missing information on successful AI strategies and examples • Limited infrastructure: technical equipment, licences, tools etc. • Institutional support 	<ul style="list-style-type: none"> • Efficient time management. • Awareness of new pedagogical techniques. • Motivation to incorporate digital resources into teaching. • Availability of and quick and easy access to AI tools, best practices • Ethical best and clear guidelines (not 50 pages PDF to read) • Clear and successful AI examples for each step of the planning of the teaching process, indicating the clear benefit ("AI in teaching for Dummies"). 	<ul style="list-style-type: none"> • Timely Reminders: Setting regular notifications to review and update lesson plans or curriculum. • Default Templates: Offering pre-built digital lesson plan templates to encourage the adoption of structured planning. • Progress Tracking: Using tools like checklists or completion bars (e.g., Trello or Asana) to nudge toward lesson preparation completion. • Peer Comparison: Encouraging sharing of lesson plans within departments to foster innovation through peer practices. • Availability of tools for planning assessing: the quality of AI generated students' products (portfolios, thesis, presentations, texts...) • Quick and easy availability and "training" of AI tools: for planning teaching and evaluation and update 	<ul style="list-style-type: none"> • Setting reminders for reviewing and updating lesson plans based on student feedback or recent developments in the subject. • Using digital tools (e.g., learning management systems, templates) to prompt consistency in lesson structure. • Encouraging integration of active learning techniques or multimedia resources into lesson plans. • Scan the benefits of the use of AI tools when planning: saving time and energy, reduce workload, reduced complexity 	<ul style="list-style-type: none"> • Tools like Trello or Google Calendar for scheduling updates, collaborative platforms for co-creating lesson plans.

2	<p>In-Class Teaching and Student Engagement:</p> <ul style="list-style-type: none"> • Slogan: "Active classes, active minds!" • Spot: "Engage with a question, ignite with a poll. One click can spark a whole class discussion!" • Visual Cue: An interactive "start your class strong" prompt before a lecture, suggesting the use of quizzes or polls. 	<ul style="list-style-type: none"> • Passive teaching styles that rely on traditional lecture formats. • Lack of interaction or low student participation. • Overload of classroom management, making it difficult to adopt new engagement strategies. • Limited infrastructure: technical equipment, licences, tools etc. 	<ul style="list-style-type: none"> • Real-time feedback on student engagement. • Guidance on integrating interactive teaching methods. • Encouragement to diversify teaching techniques. • Time and space for creative and social-relational learning • Positive students' satisfaction and performance results • Optimal infrastructure (tools, equipment, internet, audio, video, etc.) • Authorization and support of the university 	<ul style="list-style-type: none"> • Real-Time Feedback Prompts: Automatic nudges for using interactive tools like quizzes or polls during lectures (e.g., pop-up reminders for Kahoot). • Gamification: Using badges, points, or rewards to encourage interactive teaching strategies. • Behavioral Triggers: Prompts triggered by low participation to switch teaching styles or add interactive elements. • Social Proof: Showing how peer instructors are using digital engagement tools, encouraging adoption. • Availability of tools for teaching • Quick and easy availability and "training" of AI tools: teaching and update 	<ul style="list-style-type: none"> • Timely prompts for incorporating active learning strategies (e.g., polls, discussions) during lectures. • Reminders to encourage student interaction, collaboration, or to ask open-ended questions. • Automatic prompts for including digital tools (e.g., quizzes, simulations) to make lectures interactive. • Scan the benefits of the use of AI tools when teaching: saving time and energy, reduce workload, reduced complexity, increased performance and students' satisfaction 	<ul style="list-style-type: none"> • Use of platforms like Kahoot, Mentimeter, or Zoom breakout rooms to drive engagement. • Authorization and support of the university
3	<p>Didactic Material Creation and Sharing:</p> <ul style="list-style-type: none"> • Slogan: "Create once, share often!" • Spot: "Is your content ready for 	<ul style="list-style-type: none"> • Inconsistent updates or sharing of teaching materials with students. • Lack of access to creative tools 	<ul style="list-style-type: none"> • Simplified material sharing processes. • Access to easy-to-use design tools for creating engaging content. • Awareness of accessibility 	<ul style="list-style-type: none"> • Scheduled Prompts: Regular reminders to create, update, and share didactic materials before each class. • Social Norming: Displaying statistics about how many 	<ul style="list-style-type: none"> • Reminders to update or create new digital learning materials such as slides, videos, and infographics. • Prompts to review materials for 	<ul style="list-style-type: none"> • Cloud-based storage (Google Drive, OneDrive) or content creation tools (Canva, Prezi, etc.) for easy

	<p>students? Share your slides, videos, and notes now—it's just a click away!"</p> <ul style="list-style-type: none"> • Visual Cue: A reminder to upload and share course materials 24 hours before class starts. 	<p>or hesitation in using them.</p> <ul style="list-style-type: none"> • Difficulty in ensuring accessibility for all students. • Lack of time 	<p>standards (e.g., captions, screen reader compatibility).</p> <ul style="list-style-type: none"> • Best practice guide 	<p>instructors share materials in advance to normalize the behavior.</p> <ul style="list-style-type: none"> • Simplification: Nudging through the simplification of material sharing platforms (e.g., one-click upload options on LMS). • Loss Aversion: Highlighting potential student frustration or learning loss if materials aren't shared promptly. • Availability of tools for creating teaching material: the quality of AI generated students' products (portfolios, thesis, presentations, texts...) • Quick and easy availability and "training" of AI tools: for creating material 	<p>inclusivity, accessibility, and alignment with learning objectives.</p> <ul style="list-style-type: none"> • Timely nudges to share materials on platforms like LMS (e.g., Moodle, Blackboard) in advance. • Scan the benefits of the use of AI tools when creating teaching material: saving time and energy, reduce workload, reduced complexity, increased performance and students' satisfaction 	<p>collaboration and sharing.</p> <ul style="list-style-type: none"> • Availability of tools
4	<p>Student Assessment and Progress Monitoring:</p> <ul style="list-style-type: none"> • Slogan: "Assess early, adapt fast!" • Spot: "Check the pulse of your students! Analyze their progress today to guide tomorrow's learning journey." 	<ul style="list-style-type: none"> • Time-consuming manual grading processes. • Lack of real-time progress tracking and individualized student insights. • Difficulty in adapting assessments to different learning styles. 	<ul style="list-style-type: none"> • Efficient grading systems. • Easy to use Tools for ongoing performance tracking and data-driven feedback. • Flexible assessment formats to accommodate various student needs. 	<ul style="list-style-type: none"> • Immediate Feedback Nudges: Prompts to review and comment on student assessments right after they are submitted. • Goal Setting: Encouraging instructors to set student progress milestones with periodic reminders. • Personalization: Nudges that adjust based on 	<ul style="list-style-type: none"> • Automated reminders for setting up formative and summative assessments. • Timely prompts to review and analyze student performance data (e.g., grades, attendance, participation). 	<ul style="list-style-type: none"> • Using tools like Turnitin, Google Forms, or LMS quizzes to automate assessment and data collection. • Availability of tools • Institutional support

	<ul style="list-style-type: none"> • Visual Cue: A notification after class that prompts a quick review of student quizzes or participation. 	<ul style="list-style-type: none"> • Ethical doubts: what is allowed to do with AI? • Missing information on successful AI strategies and examples for assessment • Limited tool availability to assess AI generated products • Shared models between Educators 	<ul style="list-style-type: none"> • Best practices and easy to use examples 	<p>students' progress, signaling the need for differentiated assessments.</p> <ul style="list-style-type: none"> • Performance Analytics: Dashboards with automated reminders to check performance data and student progress on a weekly basis. • Availability of tools for assessing: the quality of AI generated students' products (portfolios, thesis, presentations, texts...) • Quick and easy availability and "training" of AI tools: for assessment and update 	<ul style="list-style-type: none"> • Scheduling reminders for individual feedback sessions or updates on student progress. • Scan the benefits of the use of AI tools when assessing students' products: saving time and energy, reduce workload, reduced complexity, increased performance and students' satisfaction 	
5	<p>Evaluation of Learning Outcomes:</p> <ul style="list-style-type: none"> • Slogan: "Measure success, one outcome at a time!" • Spot: "Are your students hitting the mark? Evaluate learning outcomes today and fine-tune your teaching strategy!" • Visual Cue: A data visualization 	<ul style="list-style-type: none"> • Difficulty in aligning assessments with learning objectives. • Over-reliance on grades without deeper analysis of skill development. • Challenges in tracking long-term knowledge retention. • Missing shared models between Educators 	<ul style="list-style-type: none"> • Structured frameworks for evaluating learning outcomes. • Regular reflection on course effectiveness based on data. • Continuous adjustments to improve the curriculum. • Best practices and easy to use examples 	<ul style="list-style-type: none"> • Reflection Triggers: Automated nudges to reflect on learning outcomes post-assessments, using data analytics tools. • Progress Visualizations: Visual cues like dashboards or graphs tracking course-wide performance in relation to learning outcomes. • Feedback Loops: Nudges that prompt instructors to seek student input on how well outcomes are being achieved. 	<ul style="list-style-type: none"> • Prompts for setting clear, measurable learning outcomes at the beginning of a course or module. • Notifications to reflect on student learning gaps after major assessments. • Encouraging regular use of data analytics to evaluate how well learning objectives are met. • Scan the benefits of the use of AI tools when evaluating 	<ul style="list-style-type: none"> • Prompts for setting clear, measurable learning outcomes at the beginning of a course or module. • Notifications to reflect on student learning gaps after major assessments. • Encouraging regular use of data analytics

	that pops up post-assessment to show learning outcomes alignment.			<ul style="list-style-type: none"> • Benchmarking: Comparison with department-wide or institution-wide learning outcome data to encourage continuous improvement. • Quick and easy availability and “training” of AI tools: for evaluation and update 	<p>students' products: saving time and energy, reduce workload, reduced complexity, increased performance and students' satisfaction</p>	<p>to evaluate how well learning objectives are met.</p> <ul style="list-style-type: none"> • Availability of tools • Institutional support
6	<p>Feedback Mechanisms (Instructor and Student):</p> <ul style="list-style-type: none"> • Slogan: "Feedback fuels growth!" • Spot: "Two minutes for feedback, a lifetime of learning. Ask your students for input now!" • Visual Cue: A prompt after an assignment is graded that encourages you to give students personalized feedback. 	<ul style="list-style-type: none"> • Delayed or insufficient feedback to students. • Lack of regular mechanisms for gathering student feedback on teaching. • Difficulty in interpreting or acting on feedback. • Missing time for in person feedback and debate 	<ul style="list-style-type: none"> • Timely and meaningful feedback to students. • Regular input from students on teaching effectiveness. • Effective use of feedback to refine teaching methods. • Easy to use tools • Feedback examples, specifically for portfolio feedback 	<ul style="list-style-type: none"> • Reflection Triggers: Automated nudges to reflect on learning outcomes post-assessments, using data analytics tools. • Progress Visualizations: Visual cues like dashboards or graphs tracking course-wide performance in relation to learning outcomes. • Feedback Loops: Nudges that prompt instructors to seek student input on how well outcomes are being achieved. • Benchmarking: Comparison with department-wide or institution-wide learning outcome data to encourage continuous improvement. 	<ul style="list-style-type: none"> • Setting up prompts to request feedback from students regularly throughout the course. • Nudging oneself to give timely and constructive feedback to students on assignments or participation. • Utilizing feedback to make data-driven improvements to the course. • Scan the benefits of the use of AI tools during the feedback process: saving time and energy, reduce workload, reduced complexity, increased performance and 	<ul style="list-style-type: none"> • Tools like Google Forms, SurveyMonkey, or LMS feedback features for anonymous student surveys.

7	<p>Tutoring and Mentoring:</p> <ul style="list-style-type: none"> • Slogan: "One conversation can change a student's path!" • Spot: "Check in with your mentees today. A little guidance can make all the difference!" • Visual Cue: A mentoring reminder before office hours, suggesting personalized support. 	<ul style="list-style-type: none"> • Inconsistent student-mentor interactions. • Difficulty in tracking student progress and personalizing mentorship. • Time constraints limiting one-on-one engagement with students. • Need for in person-related tutoring and debate 	<ul style="list-style-type: none"> • Structured mentoring programs with regular touchpoints. • Real-time data on students' academic performance and well-being. • Support for student-specific challenges (e.g., career guidance, academic issues). 	<ul style="list-style-type: none"> • Scheduled Check-ins: Regular nudges to remind instructors to check in with students and provide mentorship. • Reminders for Personalized Support: Prompts to review student-specific needs, based on their performance or feedback data. • Pre-scheduled Meetings: Nudges to set up mentoring or tutoring sessions ahead of time (e.g., calendar nudges). • Gratification Framing: Framing mentorship as beneficial for both the student and instructor to increase engagement. 	<p>students' satisfaction</p> <ul style="list-style-type: none"> • Regular reminders to check in with individual students or groups for mentorship. • Prompts for keeping track of student needs (personal, academic) and offering support accordingly. • Alerts for organizing one-on-one meetings to offer personalized guidance. • Scan the benefits of the use of AI tools during the tutoring process: saving time and energy, reduce workload, reduced complexity, increased performance and students' satisfaction 	<ul style="list-style-type: none"> • Use of platforms like Microsoft Teams or Slack for maintaining regular communication with mentees. • Remote meetings
8	<p>Collaboration with Peers and Continuous Professional Development:</p> <p>Slogan: "Grow together, teach better!"</p>	<ul style="list-style-type: none"> • Isolation in teaching practices and lack of peer support. • Limited time for professional 	<ul style="list-style-type: none"> • Opportunities for collaborative teaching or peer feedback. • Regular professional development and 	<ul style="list-style-type: none"> • Learning Reminders: Regular nudges to participate in online courses, webinars, or professional development workshops. • Peer Benchmarking: Nudges showing 	<ul style="list-style-type: none"> • Reminders to engage in peer observation or co-teaching initiatives to enhance teaching practices. • Prompts to participate in online 	<ul style="list-style-type: none"> • Platforms like LinkedIn Learning or Coursera for upskilling, and discussion boards for collaborative

	<p>Spot: "Share a tip, learn a trick. Collaborate with a colleague today and elevate your teaching game!"</p> <p>Visual Cue: A nudge to join an upcoming professional development workshop or peer feedback session.</p>	<p>development or skills updates.</p> <ul style="list-style-type: none"> • Difficulty in accessing relevant professional resources. • Missing shared models between Educators 	<p>networking opportunities.</p> <ul style="list-style-type: none"> • Access to new teaching strategies and technologies. • Exchange of experiences and best practices 	<p>colleagues' participation in professional development to create a social norm.</p> <ul style="list-style-type: none"> • Actionable Insights: Providing small, actionable insights or tips from peer collaboration or workshops as nudges. • Commitment Devices: Prompts to commit publicly to professional development goals (e.g., posting progress in a teaching forum). • Sell positive results and experiences 	<p>forums, webinars, or workshops for ongoing learning.</p> <ul style="list-style-type: none"> • Nudges for incorporating insights from professional development into teaching practices. 	<p>professional growth.</p> <ul style="list-style-type: none"> • Easy access to learning tools • Institutional support
9	<p>Classroom Management and Student Behavior Tracking:</p> <ul style="list-style-type: none"> • Slogan: "Track today, intervene tomorrow!" • Spot: "Keep a close eye on your class dynamics—spotting trends now can help avoid problems later." • Visual Cue: A dashboard notification showing real-time attendance and 	<ul style="list-style-type: none"> • Challenges in maintaining student engagement and discipline in online/hybrid settings. • Lack of real-time insights into classroom dynamics or attendance. • Difficulty in tracking individual student behavior and participation over time. • Ethical concerns related to 	<ul style="list-style-type: none"> • Challenges in maintaining student engagement and discipline in online/hybrid settings. • Lack of real-time insights into classroom dynamics or attendance. • Difficulty in tracking individual student behavior and participation over time. 	<ul style="list-style-type: none"> • Behavioral Alerts: Automated alerts for low engagement, absenteeism, or disruptive behavior based on digital tracking tools. • Real-Time Dashboard Nudges: Visual dashboards highlighting classroom engagement and student participation rates. • Attendance Reminders: Automatic prompts to take attendance digitally (e.g., QR codes, LMS). • Loss Aversion: Nudges highlighting potential learning loss due to low participation, motivating 	<ul style="list-style-type: none"> • Setting automatic notifications for students' behavioral milestones (e.g., attendance, participation, group dynamics). • Prompts for reviewing classroom interaction trends and making necessary adjustments. 	<ul style="list-style-type: none"> • Behavior tracking software (e.g., ClassDojo) and attendance systems integrated with learning platforms.

	engagement data.	<p>behavior tracking</p> <ul style="list-style-type: none"> • Climate of control vs climate of trust 		teachers to intervene early.		
10	<p>Course Documentation and Administrative Tasks:</p> <p>Slogan: "Organize now, relax later!"</p> <p>Spot: "Tick off your admin tasks today and enjoy a stress-free tomorrow. Grading, reporting, done!"</p> <p>Visual Cue: A checklist prompt to complete administrative tasks before the weekend.</p>	<ul style="list-style-type: none"> • Administrative tasks take away from teaching and student engagement time. • Inconsistent documentation leading to inefficiencies in course management. • Overload of grading, reporting, and student progress updates. 	<ul style="list-style-type: none"> • Streamlined administrative processes. • Consistent and organized course documentation. • Automated grading and reporting tools. 	<ul style="list-style-type: none"> • Deadline Reminders: Calendar-based nudges to remind instructors of administrative tasks (e.g., grading deadlines, syllabus updates). • Task Completion Streaks: Creating a gamified experience where instructors are nudged to maintain streaks of task completion. • Automated Grading Prompts: Encouraging the use of automated grading tools with nudges at the end of assessments. • Social Accountability: Nudging by displaying administrative task completion rates across the department. 	<ul style="list-style-type: none"> • Timely reminders to complete administrative duties such as grading, updating the syllabus, or submitting reports. • Scheduling regular updates for course documentation. • Scan the benefits of the use of AI tools during the documentation: saving time and energy, reduce workload, reduced complexity, increased performance and educator satisfaction 	<ul style="list-style-type: none"> • Administrative task automation via LMS or task management apps (e.g., Asana, Todoist).
11	<p>Time and Resource Management:</p> <ul style="list-style-type: none"> • Slogan: "Your time is precious, use it wisely!" • Spot: "Focus for 30, rest for 5. Block time now" 	<ul style="list-style-type: none"> • Overloaded schedules and inefficient time allocation between teaching, grading, and mentoring. 	<ul style="list-style-type: none"> • Effective time management and resource allocation. • Regular breaks and personal well-being prioritization. 	<ul style="list-style-type: none"> • Time Management Alerts: Nudges for setting aside dedicated time slots for teaching preparation, grading, and student interactions. • Task Prioritization Nudges: Reminders or 	<ul style="list-style-type: none"> • Prompts for allocating time for lesson preparation, grading, and student support activities. • Reminders for personal well-being and work-life 	<ul style="list-style-type: none"> • Use of apps like Toggl for time tracking, or Pomodoro techniques for focused work sessions.

	<p>for grading or lesson prep, and stay in control."</p> <ul style="list-style-type: none"> • Visual Cue: A digital timer or Pomodoro reminder for managing focused work periods. 	<ul style="list-style-type: none"> • Difficulty in managing resources like lesson materials, tools, or technology. • Burnout due to lack of work-life balance. 	<ul style="list-style-type: none"> • Efficient multitasking and work distribution. • Reduce workload • Teamwork 	<p>notifications prompting instructors to focus on high-priority tasks.</p> <ul style="list-style-type: none"> • Digital Break Nudges: Encouragement to take digital breaks (e.g., the Pomodoro technique) to avoid burnout. • Self-Tracking: Nudges to track time spent on teaching-related tasks using apps or LMS tools. 	<p>balance to avoid burnout.</p>	
12	<p>Inclusivity and Accessibility:</p> <ul style="list-style-type: none"> • Slogan: "Teach for all, reach them all!" • Spot: "Have you checked your materials for accessibility? Make learning inclusive today by adding captions or alternate formats." • Visual Cue: An accessibility prompt when uploading new content, asking if it's optimized for all learners. 	<ul style="list-style-type: none"> • Lack of awareness or difficulty in implementing inclusive teaching strategies. • Challenges in ensuring materials are accessible to all students, including those with disabilities. • Limited understanding of how to create diverse and equitable learning environments. • Including elder Educators 	<ul style="list-style-type: none"> • Inclusive and accessible teaching materials. • Knowledge of accessibility standards and tools. • Consistent inclusion of diverse perspectives and equitable practices. • User friendliness, • Liberty of use • Climate of trust not of control 	<ul style="list-style-type: none"> • Accessibility Checks: Automated nudges to run accessibility scans (e.g., using Blackboard Ally or Microsoft Accessibility tools). • Diversity Prompts: Regular reminders to incorporate diverse perspectives and inclusive language in course materials. • Social Accountability: Nudges showing progress toward inclusivity goals compared to institutional benchmarks. • Default Accessibility Features: Encouraging default settings that optimize for accessibility (e.g., automatic captioning for videos). 	<ul style="list-style-type: none"> • Regular reminders to review course content for inclusivity (e.g., gender, cultural diversity). • Prompts to check and improve the accessibility of materials for students with disabilities (e.g., captions, alternative formats). • Breaks 	<ul style="list-style-type: none"> • Tools like Blackboard Ally for assessing content accessibility, or voice-to-text software for lecture notes.