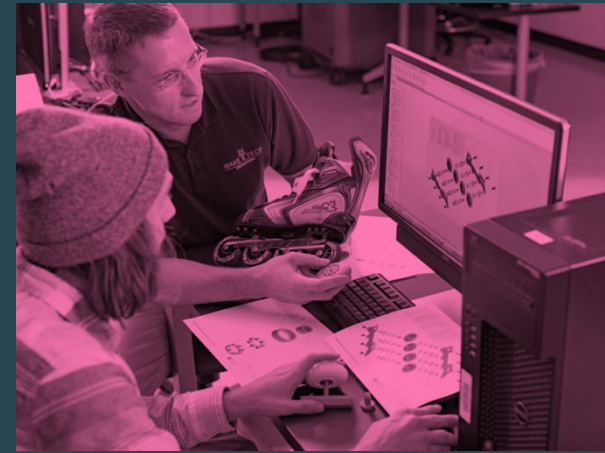


Embedding Instructional Strategies to Support Self- Directed Learning in Online Course Design

Hannah Cheever, SRI Education
Ellen Wasserman, CCRC



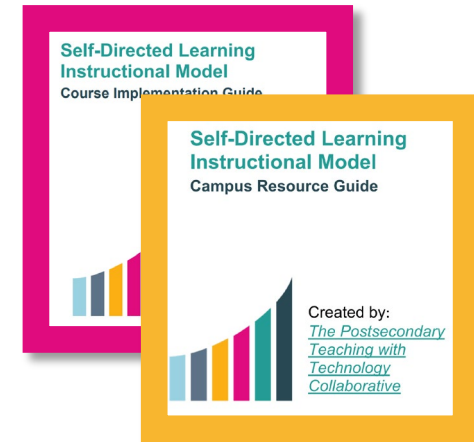
Today we will:



Introduce the Collaborative & SDL framework

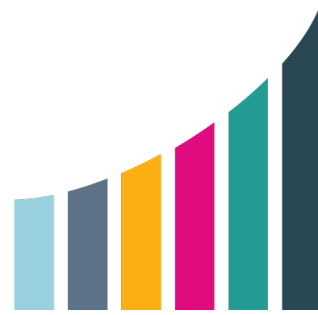


Present the SDL Instructional Model and initial research findings



Share two guides to support implementation of the Model

What is the Collaborative?



An Institute of Education Sciences (IES)-funded research and capacity-building center that aims to study and improve how faculty **teach** and use **technology** to help students apply and strengthen **self-directed learning** in online STEM courses.

SRI Education[™]
A DIVISION OF SRI INTERNATIONAL

CCRC COMMUNITY COLLEGE
RESEARCH CENTER
Teachers College, Columbia University

Why focus on self-directed learning (SDL) in online courses?

Online learning challenges



Student outcomes are generally worse in online courses and degree programs than comparable face-to-face ones



Less engagement and interaction in online environments



Key factors: Greater demands on students' self-directed learning capacities; need for belonging and community

Students face particular challenges in STEM learning



Environmental factors

Individual sink-or-swim culture

Content-heavy courses

Unclear personal relevance

Mismatched expectations about time commitment



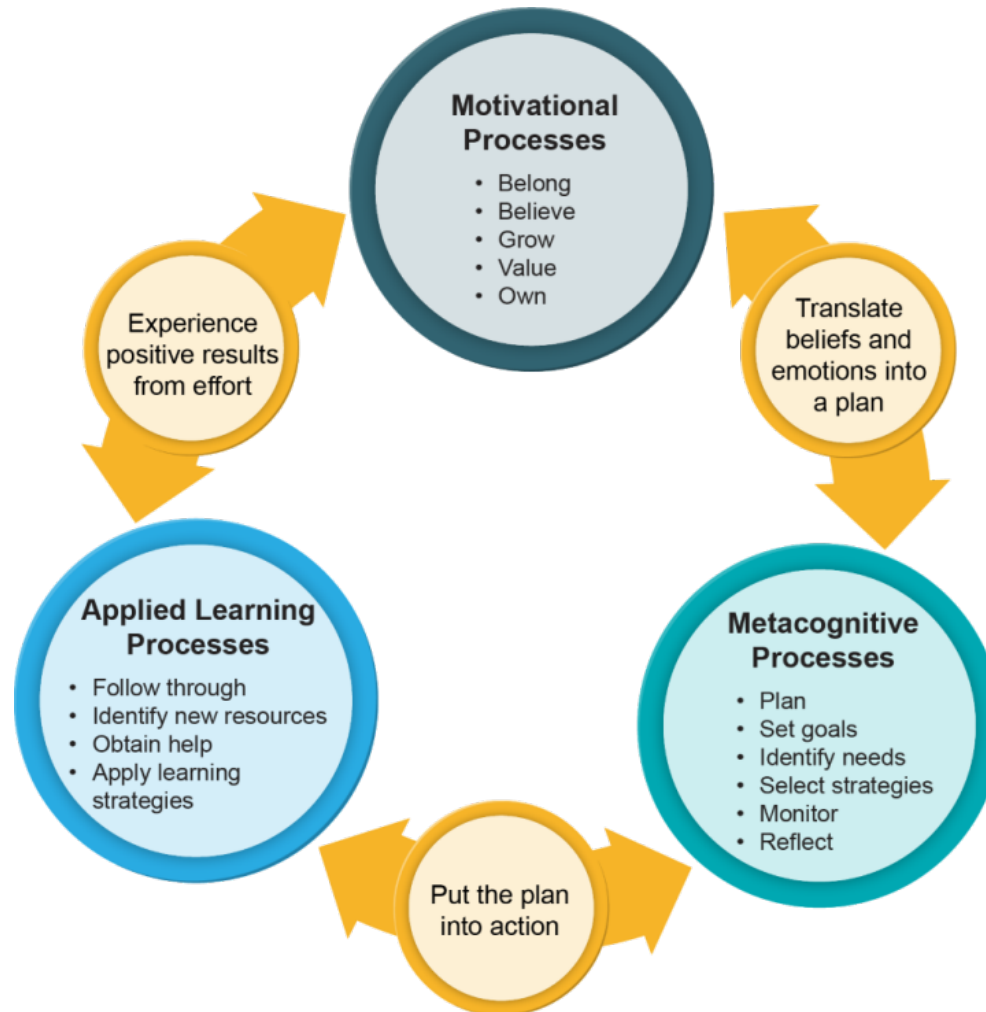
Psychosocial factors

Belonging uncertainty

Stereotype threat

Feelings of isolation

Framework for Self-directed Learning (SDL)



Check out the Collaborative report, Teaching and Designing Online STEM Courses to Support Self-Directed Learning Skills, to learn more!



Reflection



What online learning challenges do your students experience that could benefit from SDL skill support?



Self-Directed Learning (SDL) Instructional Model

SDL Instructional Model



Three evidence-based strategies to help college students manage their online learning better:



Use technology to support student-peer interaction and networking (**SPIN**) and promote help-seeking

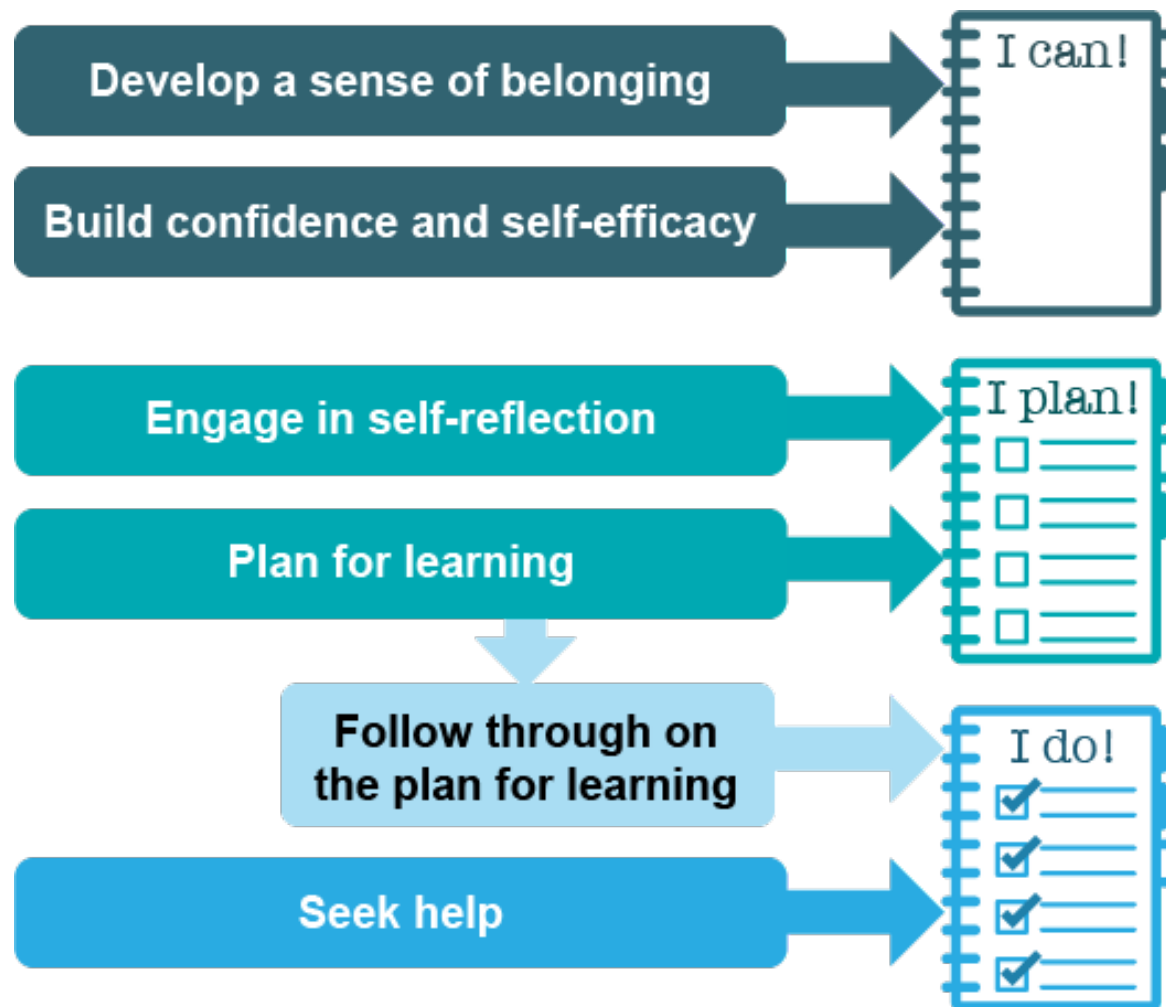


Assign **SDL videos** to support sense of belonging, planning for learning, confidence, and self-efficacy through a growth mindset

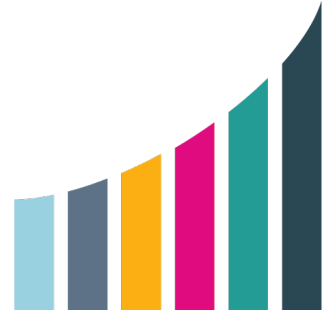


Set up **SDL prompts** focused on help-seeking, task-planning, and reflection

Targets five student skills



Learning theories underpinning the SDL strategies



Microlearning

- Short learning activities with quick feedback
- Often offered on digital platforms



Primes and reminds students to apply skills within the course

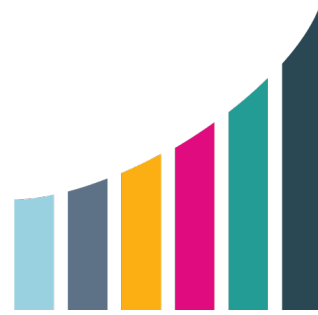
Adult learning

- Views learning as self-directed, experience-based, goal-oriented, relevant, and practical
- Collegial, collaborative relationship between student and instructor



Students are offered support to (a) build own learning management capacity and (b) develop confidence and knowledge to direct own learning — especially important when learning online

An Instructional Model created in partnership



Faculty, staff, researchers, and experts across our partner institutions, advisor groups, and partner organizations:



Informed development and evaluation plans



Participated in formative pilot evaluations

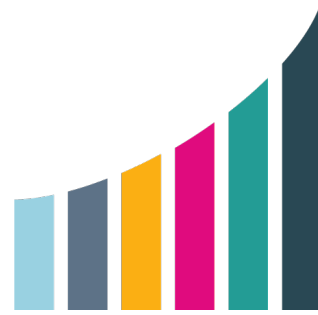


Co-designed strategies and supplemental materials



Offered feedback throughout design and evaluation process

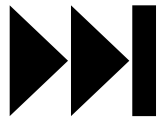
Research activities



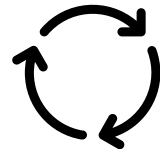
Multiple rounds of research, refinement, and testing, including:



Foundational literature review and qualitative interviews to gather information about institutional practices and policies



Multiple rounds of rapid studies of SDL strategies in online courses



Feasibility study of all three SDL strategies together



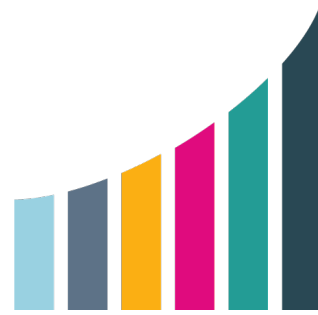
Pilot study of effects of the full SDL Instructional Model

Research study findings



- Students found the strategies useful and changed their learning strategies.
- Faculty found the strategies easy to integrate and gained helpful insights into students' learning needs.
- We found positive, statistically significant impacts on applied learning and metacognitive outcomes.
- Analyses indicate a 78% probability that the strategies had a positive effect on grades.

SDL Instructional Model Guides



Self-Directed Learning Instructional Model Course Implementation Guide



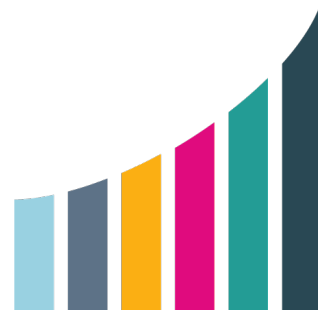
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Self-Directed Learning Instructional Model Campus Resource Guide



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Faculty perspective: SDL strategies



Meghan McIntyre, Math Professor, Wake Technical Community College



Course Implementation Guide: How to implement the strategies in a course

Self-Directed Learning
Instructional Model
Course Implementation Guide



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Pacing guide



Activity	SDL Strategy	Course Pacing	Estimated Time for Students
Introductory Questionnaire	SPIN	First week	10 mins
Sense of Belonging	Videos	First week	20–30 mins
Time Management	Videos	Within first 2 weeks	20–30 mins
Pre-Assessment	Prompts	One week before first major assessment/assignment	10–20 mins
Growth Mindset	Videos	After first major assessment/assignment	20–30 mins
Post-Assessment	Prompts	After first major assessment/assignment has been returned	10–20 mins
Reflective Prompts	Prompts	Flexible: At least twice during the course	10–20 mins
Collaborative Activity	SPIN	Flexible: At least twice during the course	Varies
Message to a Future Student	Prompts	Final weeks of the course	20–30 mins

3 strategies



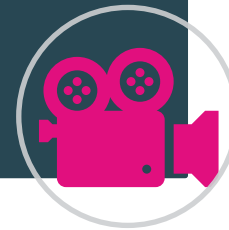
- Build students' sense of belonging in the course
- Promote help-seeking

SPIN



- Develop a sense of belonging
- Build confidence and self-efficacy
- Encourage planning for learning

SDL
Videos



- Encourage planning for learning
- Engage in regular self-reflection
- Promote help-seeking

SDL
Prompts



SPIN Activities



Introductory questionnaire

- Give students a non-content questionnaire about themselves
- Share aggregated results with the class

Collaborative Activities

- Assign two collaborative activities
- Share a collaboration reflection tool
- Provide a summative review of the peer-work experiences or group activities

Online Collaboration Challenges: Best Practices



- Incentivize participation
- Group students intentionally
- Explain the purpose of working in groups
- Support relationship-building
- Assign effective collaborative activities, with clear roles for each student
- Share best practices for team meetings
- Provide ongoing support

SDL video series topics



Sense of belonging



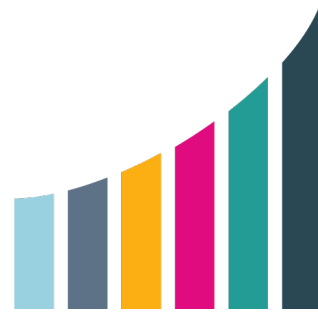
Managing your learning time



Growth mindset

Ready-to-use SDL videos, discussion questions, and transcripts. Each video has a consistent format and provides reflection questions.

SDL prompts



SDL prompts	Timing
<p>Reflective prompts consist of a set of three questions that can be assigned at any time during the course.</p> <p><i>Excerpt: What assignments and other coursework do you need to complete this week for this class? Which concepts from this class do you feel you mastered this week?</i></p>	Twice during course
<p>The assessment wrapper consists of a two-part activity that should be assigned a week before a major assignment (pre-assessment) and after the student has received their grade (post-assessment).</p> <p><i>Excerpt: (Pre) What challenges or barriers do you anticipate you might encounter preparing for this assessment and how might you overcome them? (Post) Did you stick to the plan you made for yourself?</i></p>	Once before and after an assignment

SDL prompts (continued)



SDL prompts

Timing

The **message to a future student** invites students to reflect on their course performance and can be assigned as a written reflection or a video recording.

Once at end of course

Excerpt: What did you wish you knew going into the course? What did you learn about yourself as a learner?

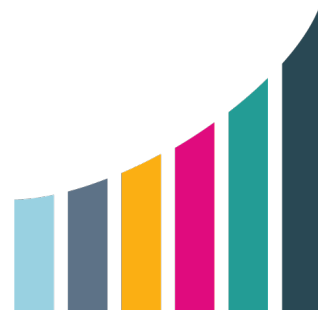
Campus Resource Guide: How to support implementation of the SDL Instructional Model

Self-Directed Learning
Instructional Model
Campus Resource Guide



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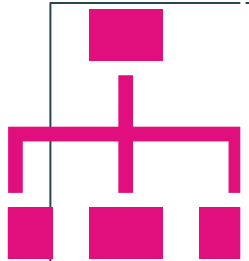
Information for Leaders: Adopting the SDL Instructional Model



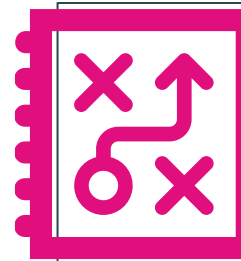
Connect the relevance of the Instructional Model to other institutional initiatives



Identify champions of the Instructional Model to support its adoption

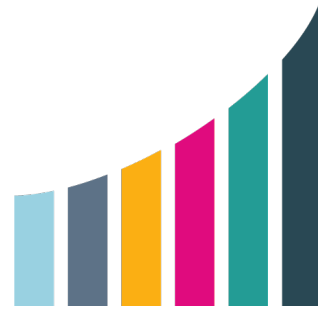


Integrate the Instructional Model into existing professional development and deploy faculty support resources

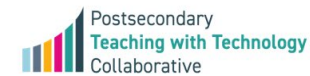


Support strategic planning around how the Instructional Model can be implemented across disciplines and courses.

Getting Started: A Getting Started Workshop



- A slide deck with content and detailed slide notes for either leading a Getting Started workshop or for self-instruction
- Additional resources:
 - Annotated agenda for the workshop
 - SDL Activity Implementation Plan



Self-Directed Learning Instructional Model: Getting Started with SDL Strategies

*Created by the
Postsecondary Teaching with
Technology Collaborative*



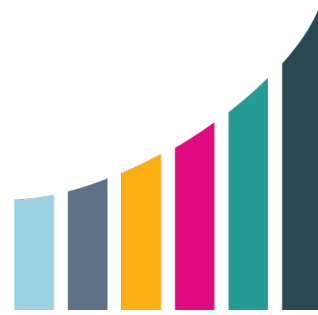
Going Deeper: Faculty Learning Community



- Series of meetings with a cohort of faculty implementing the Model
- Proposed schedule for 4, 90-minute meetings
 - Meeting 1: Digging Deeper into the Value of Self-Directed Learning
 - Meeting 2: Mapping Strategies to Course Content
 - Meeting 3: Designing High-Quality Collaborative Work in Online Courses
 - Meeting 4: Learning from Students and Refining Approaches



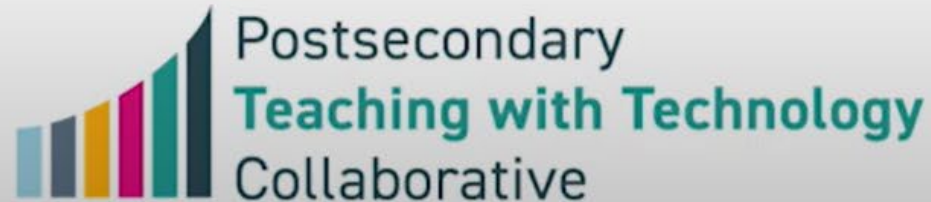
Staying in Touch: Additional touchpoints



- Optional way to connect with faculty to check-in on implementation at recommended intervals throughout the course
- Topics include:
 - Asking if they need additional support to implement the SDL Instructional Model
 - Reminders on how and when to implement the strategies in alignment with the Pacing Guide
 - Links to additional resources



How Students Experience **Self-Directed Learning Strategies in Online Courses**



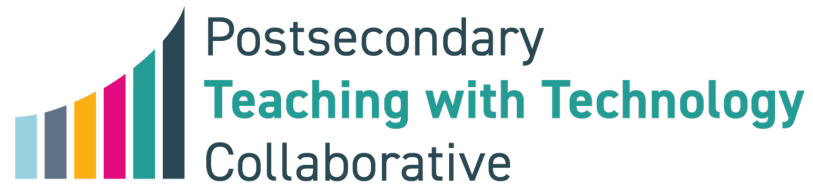
Thank you

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