



Prompt and Response: Creating Cognitive Links Strengthens Learning

In the ideal learning environment, outcomes, assigned readings, classroom experiences, and the assessment of student performance connect seamlessly in ways that are interdependent and interactive. Yet, in reality, the classroom is not ideal, and faculty may struggle to help students make these connections. For example, instructors make outside reading assignments to help students connect with the material, engage actively in the classroom, and achieve identified outcomes; however, they generally are (often realistically) suspicious about whether students actually read their assigned texts (Clump, Bauer, & Bradley, 2004; Lei, Bartlett, Gorney, & Herschbach, 2010). How can faculty create assignments that prompt and encourage students to engage in the preparatory reading and exploration that facilitates more active and informed participation in the classroom?

To motivate students to read their assignments and interact with instructional content, as well as strengthen this part of the learning process, the principle of cognitive affordances can be useful. Norman (2002) defines cognitive affordances as

those fundamental properties that . . . provide strong clues to the operations of things. Knobs are for turning. Slots are for inserting things into. Balls are for throwing or bouncing. When affordances are taken advantage of, the user knows what to do just by looking. (p. 423)

In the cited examples, each of the physical objects (i.e., knobs, slots, balls) prompts specific actions. Responses to these affordances are learned over time as the appropriate action (i.e., turning, inserting, throwing) consistently provides the desired result. Just as these physical objects trigger specific responses, faculty, likewise, can craft clear, concrete instructions and prompts that engage students in active learning by having them think, write, or interact with what they have read or researched. Hartson (2003) describes this perspective on cognitive affordances to include “a design feature that helps, aids, supports, facilitates, or enables thinking and/or knowing about something” (p. 319).

When faculty use the concept of cognitive affordances effectively, they create a link between content and some form of response that can significantly impact the ways students engage with assigned readings and other learning experiences. For example, students are

- assigned to read a body of instructional content and then directed to respond by collaborating with classmates in constructing a wiki,
- instructed to seek out and read articles and web-based resources that present points of view diametrically opposed to the position taken by the author of an assigned reading and then summarize arguments on both sides of the issue,



“The more you read, the more things you will know. The more that you learn, the more places you’ll go.”

—Dr. Seuss,
I Can Read With My Eyes Shut!

- asked to gather information through on-the-street (or on-campus) interviews and then summarize their findings, or
- given the task reading a newspaper editorial on a timely topic and respond by drafting a letter to the editor.

In each of these examples, the information-gathering phase (e.g., reading, listening) prompts a response (e.g., constructing a wiki, drafting a letter). The faculty member's direction to gather information is linked directly, and serves as an affordance, to the creation of a specific type of response (e.g., written product, presentation).

Consider and compare the following descriptions of the same reading assignment:

Assignment #1

Read chapter 7 in your textbook. You will be responsible for the material related to emotional intelligence. This content will be included on the final examination.

Assignment #2

Based upon this week's reading related to emotional intelligence and information from the in-class survey, please post a profile of your strengths and weaknesses in this area. Also, respond to the postings of two classmates.

In Assignment #1, the instructor asks students simply to read a portion of their textbook with the promise (or threat) that some material from this chapter may reappear as a test question on the final examination. This assignment is a relatively weak and imprecise cognitive affordance; the link between the assignment and demonstrated learning is not defined clearly and does not prompt students to take any specific action other than read the assigned text. In Assignment #2, however, the instructor provides students direct, immediate instruction on how to apply what they are learning from reading the text, participating in class, and interacting with their peers (i.e., process content from the reading and survey, respond to the content, and critique the work of their classmates). This cognitive affordance offers the learner clear cues about the assignment and the desired outcomes.

These strategies can help students immediately process, apply, evaluate, and synthesize the media (e.g., books, articles, interviews, and video and audio clips) they have been absorbing. Cognitive affordances—prompts and responses—prepare students for myriad levels of examination as part of the upcoming classroom engagement.

Help your students make the connections to course content!

References

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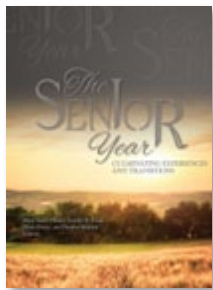
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Peer Leadership Experiences and Outcomes: Key Partners in Student Success. Keynote Address by Jennifer R. Keup, Director, National Resource Center for The First-Year Experience and Students in Transition, at the University of Minnesota First-Year Experience Conference, Wednesday, February 13, 2013, at Coffman Memorial Union on the University of Minnesota-Twin Cities campus.

Leveraging Programmatic Decision Points for First-Year Seminar Success. Presentation by Jennifer R. Keup, Director, National Resource Center for The First-Year Experience and Students in Transition, at the 2013 ACPA, College Student Educators International Convention, 10:30 a.m., Tuesday, March 5, 2013, Planet Hollywood, Celebrity Ballroom 2.

Using Emerging Evidence and Recommendations to Support Senior-Year Students' Experiences. Roundtable session by Dallin George Young, Assistant Director for Research, Grants, and Assessment, and Jennifer R. Keup, Director, National Resource Center, at the 2013 ACPA Annual Convention in Las Vegas, Nevada, 7:30–8:30 a.m., Wednesday, March 6, 2013, Bally's Las Vegas, Skyview 6, Table 35.

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The Toolbox

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The Toolbox is an online professional development newsletter offering innovative learner-centered strategies for empowering college students to achieve greater success. The newsletter is published six times a year by the National Resource Center for The First-Year Experience and Students in Transition at the University of South Carolina, Columbia, SC.

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