

Colgate University Libraries

Digital Commons @ Colgate

Library Faculty Scholarship

University Libraries

2019

Insights from Educational Psychology Part 10: Teacher Behaviors

Steve Black

James D. Allen

Follow this and additional works at: https://commons.colgate.edu/lib_facschol



Part of the [Library and Information Science Commons](#)

Insights from Educational Psychology Part 10: Teacher Behaviors

Abstract:

Effective teachers place learners' needs at the center of their efforts and find ways to bridge gaps between learning objectives and students' prior knowledge and interests. Proven techniques to maximize student learning include encouraging questioning, provoking thought, connecting with students' interests, expecting engagement, and communicating trust that students can succeed. Findings are presented from research on one-on-one instruction, making clear explanations, and giving effective feedback. The column concludes with guidelines for self-assessing librarians' teaching effectiveness.

Keywords:

learner-centered teaching, prior knowledge, feedback, self-reflective practice, teacher evaluation

Insights from Educational Psychology Part 10: Teacher Behaviors

In our last column, we described the process of designing effective instruction. In this column, we will build upon good planning practices and describe the teacher behaviors educational psychologists have found to be effective for student learning. In his brief overview of the history of faculty development, Tiberius (2002) describes four perspectives on effective teaching: content mastery, skilled performance, facilitation of learning, and personal engagement. Ideally teachers are competent in all four areas, but in the right context, any one of the four can be sufficient for students to learn at least something. In this column on Insights from Educational Psychology, we will examine how the four perspectives apply to the practice of academic librarianship, with particular emphasis on facilitation of learning and personal engagement.

Learner-centered teaching

For anyone new to teaching, a natural starting point is to ask “What am *I* going to do to convey the material I want students to learn?” It is easy to understand the inclination to begin teaching by focusing on content mastery and skilled performance, because as students that was our main focus. But once the role flips from student to teacher, the essential threshold concept to internalize is to instead ask “What are *my students* going to do to learn the material?” As we discussed in some detail in our last column on instructional design (Black & Allen, 2019) , the enduring challenge is identifying students’ understandings, skills and interests so instruction can be planned to best match where students are coming from. It serves no useful purpose to merely complain about the gaps between what students should be able to do and what they are actually capable of. Good teachers figure out ways to pinpoint and bridge the gaps. “Teachers should pay attention to student understandings, not because they are viable alternatives to well-established

facts, but because the way students think should shape the way they are taught” (Weimer, 2013, p. 23).

It may seem odd to emphasize student actions in a column on teacher behaviors, but a mind frame of focusing on students lies at the core of effective teaching. Much of effective teacher behavior takes place in the planning stages outside of time in the classroom. Learner-centered instructional design includes anticipating students’ affective responses, thinking about what can best facilitate students’ individual interests, and planning to provide appropriate levels of challenge. We have previously addressed these concepts in our introductions to Universal Design for Learning (Center for Applied Special Technology, 2011) and differentiated instruction (Tomlinson, 2005). The overarching goal is for students to genuinely understand what is being taught. “Student-focused strategies see the focus as being on bringing about conceptual change in students’ understanding of the world, and it is what students do to achieve understanding that is important, not what teachers do” (Biggs, 2012, p. 43).

Careful planning around clear goals of student-centered learning is necessary but not sufficient to engender student understanding. How instructors behave with students in class, one on one, or online obviously impacts learning, too. To learn, students must pay attention and be engaged, and teachers can influence (but not entirely control) student engagement. A teacher’s ability to express concern for students and express oneself in language students can relate to increases students’ interest (Rotgans & Schmidt, 2011). Cavanagh (2016) lists these teacher attributes that enhance student attention and engagement:

- enthusiastic
- mindful
- humorous (if relevant to content and free of prejudice or stereotyping)

- supportive
- confident
- consistent
- optimistic
- displays engagement with material and students.

Characteristics of effective teachers

Prior to the 1960s, good teaching in higher education was firmly grounded in content mastery, and exceptional teaching skills were generally assumed to be an innate ability, an art that one either had or not (Tiberius, 2002). Professors were generally not expected to attend to students' motivations and emotions. McKeachie's (1951) *Teaching Tips* represented an exception. The series of substantially revised later editions of McKeachie's guide to good teaching reflect evolving interest in and attitudes towards how to become a better college teacher. WorldCat has no record of the first edition of *Teaching Tips* (McKeachie, 1951). Apparently views on what constitutes good college teaching have evolved so much that no library decided the first edition was worth keeping.

Social changes in the 1960s and a growing body of knowledge in educational psychology spurred efforts to develop college teachers' abilities and promote engagement in the scholarship of teaching and learning. In his foundational work in the field of college student development, *Education and Identity*, Chickering (1969) asserted that competence in teaching was underemphasized in higher education and that professors should take very seriously their positions as role models. But in the first edition he did not prescribe specific actions. By the second edition of *Education and Identity* (Chickering & Reisser, 1993), the authors specifically

asserted that good teaching can and should be learned and provided suggestions for how to achieve higher quality teaching. Working with others to build upon those suggestions, Chickering proposed seven best practices in teaching undergraduates (Chickering & Gamson, 1989):

- Encourage student-faculty contact
- Encourage cooperation among students
- Encourage active learning
- Give prompt feedback
- Emphasize time on task
- Communicate high expectations
- Respect diverse talents and ways of learning

Unfortunately, reducing Chickering's seven best practices to a bulleted list can tempt educators to check off evidence of each practice without holistically weighing the cumulative effect of teacher behaviors on student learning. Bain (2004) took a more qualitative approach to defining good teaching by identifying outstanding teachers and studying the various ways they get exceptional performance from their students. He asserted that great teaching is not a bag of tricks, but rather a nexus of subject expertise with commitment to understand "these particular students at this particular time and their particular sets of aspirations, confusions, misconceptions, and ignorance" (Bain, 2004, p. 174). Since these particulars constantly shift, great teaching is necessarily a dynamic process of growth and learning. Nevertheless, there are a few rather consistent behaviors that promote learning. Among them are:

- create a critical learning environment that promotes and encourages questioning

- capture student attention with provocative statements or questions
- tie content to what students know and care about
- ask students to commit themselves
- coach students in how to think within and apply the methods of the discipline
- trust students' abilities and communicate expectation that they can succeed (Bain, 2004).

While Bain's investigation of excellent teaching can inform our practice as reference and instruction librarians, it can be a challenge to apply good techniques when we do not (usually) own a class. Lepper & Woolverton's (2002) description of the characteristics of highly effective tutors is very helpful in this regard. Like tutors, librarians typically help students with assignments not of our own making. As part of ongoing investigation into the potential of computer-based intelligent tutoring systems, the authors identified highly effective tutors and analyzed their behaviors, noting that "At their best, [tutors] were able to turn initially resistant, alienated, and seemingly helpless students into interested and excited participants in the learning process" (Lepper & Woolverton, 2002, p. 144). While tutors naturally brought individual dispositions and techniques to the tutoring process, the authors found commonalities, which they express in the INSPIRE Model shown in Figure 1.

Figure 1: INSPIRE Model of effective one-on-one instruction

I**ntelligent:** know both subject matter and pedagogy

N**urturing:** establish rapport and show warmth, concern, and empathy

S**ocratic:** pose questions, give hints, let students make errors to learn from

P**rogressive:** build confidence with easier material then move to more complex problems

Indirect: avoid directly negative feedback and overly effusive praise

Reflective: encourage students to reflect upon and articulate what they are learning

Encouraging: bolster confidence and sense of agency, provide optimal challenge, pique curiosity, show relevance of material to student's interests

Clearly, attending to students' emotions is a vital element of good teaching. Moods vary not just among individuals, but also from day to day. Teachers need to be aware of that and try to positively influence the mood (Becker, Goetz, Morger, & Ranellucci, 2014). Teachers who genuinely enjoy their work positively influence student engagement, and student enthusiasm reinforces the teacher's enjoyment (Frenzel, Becker-Kurz, Pekrun, Goetz, & Luedtke, 2018). Since it is generally easier to detect and attend to a student's feelings in one-on-one interactions than it is to attend the diverse emotions in a class, librarians who work with individual students are well positioned to attend to emotions as one means to maximize learning.

Key roles of clear explanation and effective feedback

As important as it is to nurture students' interest and enthusiasm, skilled performance still counts. Vital elements of skilled performance as a teacher are knowing when and how to give clear explanations and provide effective feedback. Educational researchers have provided insights into both skills. Instructional explanations are attempts to answer questions that are explicitly asked or surmised by the teacher to be implicit in students' behaviors. Giving explanations is often contrasted with allowing students to construct their own understandings (Wittwer & Renkl, 2008). Because the constructivist theory of learning is deeply embedded in current educational practice in the United States, a didactic style of teaching based largely on giving explanations may be frowned upon. It need not be so. The trick to effective explanations is teachers' diagnostic knowledge, that is the "ability to assess and diagnose a student's thinking,

capabilities, understanding, and misconceptions” (Wittwer & Renkl, 2008, p. 58). Insofar as that hurdle can be overcome, explanations can support students’ construction of knowledge.

Explanations should follow these guidelines:

- adapt explanation to prior knowledge, using a level of elaboration that is in line with the learner’s particular misunderstanding or lack of understanding,
- focus on concepts and principles, and emphasize practical significance and cause-and-effect relationships,
- make students engage with what is being explained by having them solve a problem or articulate in their own words the reasoning behind the explanation,
- augment, do not replace, students’ meaning-building and active processing of new information (Wittwer & Renkl, 2008).

If these guidelines are followed, explanations can provide a framework, fill gaps, and free up cognitive resources, all of which may enhance learners’ active and engaged construction of knowledge.

Tapping into prior knowledge is especially important for developing understanding. Effective techniques include reciprocal peer questioning (student-generated questions and answers that link newly presented material to prior knowledge), making predictions, and elaborative interrogation to get at why something is true or not (Pressley et al., 1992). Having students guess what is coming next is a particularly effective and easily implemented technique for tapping into prior knowledge (Lang, 2016).

We believe that these insights from educational psychology complement good reference interviewing technique (Coonin & Levine, 2013) and the *Guidelines for Behavioral Performance*

of Reference and Information Service Providers (RUSA, 2008). Shared core principles are to empower individuals to own their learning processes and that librarian's explanations should support individuals' understanding of processes. Careful listening and regular checks for understanding help avoid miscommunication and identify misunderstandings that can be addressed with appropriate explanations (Dewdney & Michell, 1996). Cook & Klipfel (2015) have described how important it is in information literacy instruction to adapt presentations to students' prior knowledge and to focus on concepts and principles.

Feedback is an essential component of tutoring or conducting a reference interview. In his large-scale study of effective practices in education, Hattie (2009) found that formative evaluation and giving feedback have particularly strong positive effects on student learning. Good feedback helps learners answer three questions: Where am I going? How am I going? Where to next? (Hattie & Timperley, 2007). Nicol & Macfarlane-Dick (2006) identified these seven principles of effective feedback:

- Clearly state the goals, criteria, or standards that define good performance. Since the purpose of feedback is to help students narrow the gap between current performance and desired outcomes, what constitutes good performance must be clearly articulated.
- Facilitate self-reflection and accurate self-assessment. Techniques for promoting this include peer evaluation, self-evaluation before work is submitted, and writing reflection papers on one's perceived progress.
- Include specific, detailed, actionable information. High quality information gives students direction for how to troubleshoot and self-correct. It avoids listing too many criteria and is given at the time the students can apply it.

- Engage students in dialogue about the feedback. Discussion helps students understand expectations and standards, and helps teachers identify misconceptions. Peer discussions of feedback can help students see alternate perspectives and promote self-reflection.
- Express confidence that students can grow and learn. Feedback should emphasize that ability increases with effort. Ability is not fixed.
- Give opportunities to close gaps between current and desired performance. Give students time to respond to feedback before the final version of an assignment is due.
- Reflect on the feedback given to students and the feedback students give. This helps teachers understand what is working and where students are likely to have difficulties.

Self-reflection and self-care

Reflecting on the feedback we give students is but one example of using self-reflection to improve our teaching and our reference service. Just like teachers, librarians need to be mindful of what we are doing and willing to critically examine our work. Brookfield (1995) described four types of critical reflection: our autobiographies as learners and teachers, how students perceive us, sharing with colleagues, and reading literature on the scholarship of teaching and learning. An important aspect of self-reflective practice is ongoing growth in our knowledge of our discipline. “Teachers who richly invest themselves in forming complex attachments to their content area and unashamedly share those interests with their students are effective, empowered, and energizing instructors” (Long & Hoy, 2006). In other words, there can be a positive reciprocal interaction between content mastery, facilitation of learning, and personal engagement. Enthusiasm is infectious.

Learner-centered teaching requires self-confidence and a sense of security in one's role as a teacher. Self-assurance is based not only on training and experience, but also on administrative support and the freedom to apply one's knowledge and skills to the craft of teaching. In Part 2 of *Insights from Educational Psychology* we presented research findings on the importance to students of having a growth mindset and becoming self-regulated learners (Black & Allen, 2017). It is equally important for teachers to believe in their abilities improve with effort. Teachers also need to consistently practice forethought, self-control, and self-reflection. Another important concept applicable to good teaching is self-determination theory, which asserts that human motivation is grounded in psychological needs for competence, autonomy, and relatedness (Deci & Ryan, 2000). To teach effectively, librarians need to be competent in content and pedagogy, have the freedom to apply our skills as we see fit, and develop good relationships with professors, colleagues, and students. It should be obvious that these principles of motivation apply to teachers just as much as they apply to students. Therefore education systems should recognize the importance of teachers' self-determination and self-regulation. Stupnisky, BrckaLorenz, Yuhas, & Guay (2018) investigated the relationship between self-determination and best practices in teaching and concluded that "efforts to improve the utilization of teaching best practices should focus on facilitating autonomous motivation for teaching" (p. 23). In their study of the role of professional responsibility and accountability, Lauermaann & Karabenick (2011) concluded that the best indicators of teacher responsibility are critical self-judgment, effort investment, and internal regulation, rather than any checklist of specific behaviors.

Academic librarians can find themselves in a rather ambiguous position regarding autonomy and self-regulation. On one hand, in our role as reference librarians we usually have autonomy with how we conduct reference interviews and interact with those students who ask

for our assistance. But on the other hand, as instruction librarians we usually have little (if any) influence over the content of courses and have relatively brief contact with students. The findings from educational psychology make it clear that despite whatever challenges we face, librarians need to build our competence, autonomy, and relatedness and grow as self-regulated learners of the craft of good instruction. Badia's (2017) application of Brookfield's (1995) self-reflection model to information literacy instruction includes suggestions for how academic librarians can gather useful feedback on one's teaching.

Accountability and assessment

In this column we have summarized significant findings by educational psychologists about what constitutes good teaching. How those principles can be used to fairly and accurately assess the quality of individual teachers is fraught with difficulties. We will not attempt to summarize the vast literature on faculty evaluation here. We will simply briefly address one major point of contention, students' ability to judge the quality of teaching. Enter Dr. Fox. Naftulin, Ware, & Donnelly (1973) had an actor speak to a group of educators and psychologists on a technical topic. The lecture was nonsense, but the speaker was introduced as Dr. Fox, an expert in his field. He used an expressive, engaging speaking style. The listeners completed a teacher evaluation questionnaire and gave the fictitious Dr. Fox generally high marks. The authors concluded that the audience was seduced by style and had an unfounded illusion of learning (Naftulin et al., 1973). In other words, the students rated the teacher on style rather than substance. Not surprisingly, the Dr. Fox experiment has been cited by many as a reason to reject the validity of student evaluations of teaching. However, other researchers have criticized the study's methods and reject its conclusions (Peer & Babad, 2014). For example, Benton, Duchon, & Pallett (2013) concluded that students can validly rate their own learning.

So on one hand, ample evidence shows that focusing on student learning and applying the teacher behaviors described above, including paying attention to student's interests and emotions, positively impacts learning. On the other hand, students may not have adequate experience and training to pass judgment on the quality of teaching. For that reason, most student evaluations of teaching focus on specific teacher behaviors. Evaluation of academic librarians as teachers is particularly difficult. In many cases the time we spend with a class or individual student is too short for anyone to meaningfully assess the impact of our efforts. Gathering student feedback on a librarian's performance in a one-shot instruction session can be especially prone to Dr. Fox-like overemphasis on style over substance.

Ideally we want to accurately measure the impact of our reference services and library instruction on student learning outcomes. But since students' experiences are complex and involve teachers, peers, personal motivation, and support services, it is devilishly difficult to separate our impact from other factors. However, the principles of good teaching we've described above do provide a template for assessing our effectiveness. Since we have research-based evidence that these practices support learning, it is reasonable to observe and critique our behaviors against these principles. In this column's Takeaways for Librarians we highlight findings from educational psychology that can help us self-assess our use of effective teacher behaviors.

In this column we have provided an overview of behaviors and strategies teachers can use to maximize student learning. In our next column, we will present research on strategies students can apply to maximize their learning.

Takeaways for Librarians

Based on the educational psychology research on effective teacher behaviors, librarians can ask themselves these questions to self-assess their teaching--

How well do I –

- strive to understand what my students do and do not know and care about?
- clearly articulate what students should be able to do?
- convey to students that I care about their learning and respect them as individuals?
- balance giving information with letting students discover on their own?
- express enthusiasm for what I am teaching?
- provide clear explanations that fit students' current understandings?
- give feedback that is timely, informative, and supportive?
- explain the relevance to students of what I'm teaching?

Recommended Reading

Ambrose, S. A. (Ed.). (2010). *How learning works: Seven research-based principles for smart teaching* (1st ed). San Francisco, CA: Jossey-Bass.

Susan Ambrose, Michael Bridges, Michele DiPietro, Marsha Lovett and Marie Norman compiled a readable and well organized summary of findings from educational psychology for anyone involved in the education of college students. They highlight the role of students' prior knowledge, how students make connections and organize knowledge, expectancy-value theory of motivation, the development of mastery, the role of practice and feedback, students' cognitive and emotional development, and self-directed learning. It is a particularly accessible overview of relevant research on teaching and learning and deserves its wide reputation as one of the best introductions to educational psychology for college teachers.

Bain, K. (2004). *What the best college teachers do*. Cambridge, Mass: Harvard University Press.

Ken Bain studies the characteristics of truly outstanding teachers and asks six questions: What do they know and understand, how do they prepare to teach, what do they expect of students, what do they do when they teach, how do they treat students, and how do they self-reflect? A main theme is that excellent teachers focus on what and how students learn, are able to adapt to students' needs, and have faith in students' abilities to learn. Great teachers strive to continually improve and are genuinely open to constructive criticism.

Cavanagh, S. R. (2016). *The spark of learning: Energizing the college classroom with the science of emotion* (First edition). Morgantown, West Virginia: West Virginia University Press.

Sarah Cavanaugh applies research on impact of emotions on learning to the practice of teaching in higher education. A theme throughout is that teacher behaviors influence students via affective crossover, aka emotional contagion. Positive emotions towards the teacher and the learning process improve memory and engagement and thus boost academic achievement. Cavanagh includes applications of research findings on curiosity, confusion, anxiety, feedback, and goal setting. The author expertly blends accurate depictions of research findings with personal anecdotes of real life teaching experiences.

Knol, M. H., Dolan, C. V., Mellenbergh, G. J., & van der Maas, H. L. J. (2016). Measuring the quality of university lectures: Development and validation of the Instructional Skills Questionnaire (ISQ). *PLoS ONE*, 11(2). [doi:10.1371/journal.pone.0149163](https://doi.org/10.1371/journal.pone.0149163)

A team of psychologists at the University of Amsterdam in the Netherlands devised the Instructional Skills Questionnaire (ISQ) as a tool to give professors feedback on individual

lectures. Students respond to items addressing seven instructional skills: organization, clear explanations, stimulating delivery, demonstrating relevance, clearly described expectations, openness to questions, and encouraging students to think on their own. The students also report how much they learned, desire to learn more, and recognition of what to study next.

Unsurprisingly, presenting in a well-organized fashion and having a stimulating style were strongly correlated with student learning outcomes.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. [doi:10.3102/003465430298487](https://doi.org/10.3102/003465430298487)

Based on twelve meta-analyses and an extensive review of the literature on feedback in academic settings, John Hattie and Helen Timperley describe a model of effective feedback. The model is based on three major questions: 1) Where am I going? 2) How am I going, 3) Where to next? The purpose of effective feedback is to close the gap between current understandings/performances and the desired goal. Feedback comes in four levels: 1) task or product, 2) process, 3) directing or regulating of actions, 4) personal. Task feedback is most effective when it corrects misunderstandings. Process feedback works well when it provides timely cues for how to proceed. Feedback that supports self-regulation can be effective. Feedback about the self is rarely effective and can undermine future effort.

Lang, J. M. (2016). *Small teaching: everyday lessons from the science of learning* (First edition). San Francisco, CA: Jossey-Bass.

James Lang synthesizes the research on effective teaching practices in a very readable fashion, then recommends how to apply the principles in concrete and doable ways. Examples include asking students to retrieve information or make predictions to help make links to their prior knowledge, spacing work over time, helping students make connections, and using worked

examples. A strength of this book is that many of the techniques are equally applicable to information literacy instruction, including tips that can make one-shot sessions more effective.

Lepper, M. R., & Woolverton, M. (2002). *The wisdom of practice: Lessons learned from the study of highly effective tutors*. In J. Aronson (Ed.), *Improving academic achievement: Impact of psychological factors on education*. (pp. 135–158). San Diego, CA, US: Academic Press. [doi:10.1016/B978-012064455-1/50010-5](https://doi.org/10.1016/B978-012064455-1/50010-5)

Mark Lepper and Maria Woolverton's study of the characteristics of outstanding tutors is directly relevant to the practice of reference librarianship. Based on their studies of highly effective tutors, the authors outline an INSPIRE model of tutoring success: Intelligent, Nurturant, Socratic, Progressive, Indirect, Reflective, and Encouraging. Successful tutors know their disciplines well. They engage students with questions and hints and understand the difference between productive and unproductive mistakes. They find just the right level of challenge for individual students and pace help accordingly. Most importantly, excellent tutors are equally and simultaneously concerned with content learning and student motivation.

McKeachie, W. J., & Svinicki, M. D. (2014). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* (Fourteenth edition). Belmont, CA: Wadsworth, Cengage Learning.

This very well-known book is geared for instructors responsible for a course. It is especially useful for instruction librarians who teach a course for credit, but is also helpful for librarians who play support roles. Succinct and firmly based in decades of research on effective instruction, the guide includes helpful tips on how to start a class, give effective lectures, increase motivation, and incorporate active learning. Each chapter includes recommendations for further reading and the book includes an extensive bibliography.

Weimer, M. (2013). *Learner-centered Teaching: Five Key Changes to Practice* (Second edition). San Francisco: Jossey-Bass.

Maryellen Weimer applies decades of experience as a college professor and director of instructional development to this nuanced explanation of why and how to shift the focus of teaching away from what the instructor does to what students learn. The five keys to this shift are: design instruction around what the students doing and how they are engaged, give students some degree of control over what and how they learn, de-emphasize coverage of content and put more emphasis on skill development, encourage students to be responsible for their own learning, and work to have students focus on mastering material rather than being obsessed with grades.

Wittwer, J., & Renkl, A. (2008). Why instructional explanations often do not work: A framework for understanding the effectiveness of instructional explanations.

Educational Psychologist, 43(1), 49–64. [doi:10.1080/00461520701756420](https://doi.org/10.1080/00461520701756420)

Explanations are used in teaching to present new concepts and correct misperceptions. They work only insofar as they help learners construct meaning. Passively hearing or reading instructions may create an illusion of learning but are ineffective if the receiver does not actively process the information. To be effective, explanations need to be adapted to learners' prior knowledge, focus on concepts and principles, facilitate thoughtful engagement, and supplement (not replace) self-generated information. To give an effective explanation, a teacher must be able to quickly and accurately assess students' knowledge, capabilities, understanding and misconceptions.

References

- Badia, G. (2017). Combining critical reflection and action research to improve pedagogy. *Portal: Libraries and the Academy*, 17(4), 695–720.
- Bain, K. (2004). *What the best college teachers do*. Cambridge, MA, USA: Harvard University Press.
- Becker, E. S., Goetz, T., Morger, V., & Ranellucci, J. (2014). The importance of teachers' emotions and instructional behavior for their students' emotions: An experience sampling analysis. *Teaching and Teacher Education*, 43, 15–26.
<https://doi.org/10.1016/j.tate.2014.05.002>
- Benton, S. L., Duchon, D., & Pallett, W. H. (2013). Validity of student self-reported ratings of learning. *Assessment & Evaluation in Higher Education*, 38(4), 377–388.
<https://doi.org/10.1080/02602938.2011.636799>
- Biggs, J. (2012). What the student does: teaching for enhanced learning. *Higher Education Research & Development*, 31(1), 39–55. <https://doi.org/10.1080/07294360.2012.642839>
- Black, S., & Allen, J. D. (2017). Insights from educational psychology part 2: Goals, mindset, and self-regulation. *The Reference Librarian*, 58(2), 159–173.
<https://doi.org/10.1080/02763877.2016.1221787>
- Black, S., & Allen, J. D. (2019). Insights from Educational Psychology Part 9: Planning Instruction. *The Reference Librarian*, 60(2), 93–108.
<https://doi.org/10.1080/02763877.2019.1571469>
- Brookfield, S. (1995). *Becoming a critically reflective teacher* (1st ed). San Francisco, CA, USA: Jossey-Bass.

Cavanagh, S. R. (2016). *The spark of learning: Energizing the college classroom with the science of emotion* (First edition). Morgantown, WV, USA: West Virginia University Press.

Center for Applied Special Technology. (2011). Universal Design for Learning Guidelines.

Retrieved from

http://www.udlcenter.org/sites/udlcenter.org/files/updateguidelines2_0.pdf

Chickering, A. W. (1969). *Education and identity* (1st ed.). San Francisco, CA, USA: Jossey-Bass.

Chickering, A. W., & Gamson, Z. F. (1989). Seven principles for good practice in undergraduate education. *Biochemical Education*, *17*(3), 140–141. [https://doi.org/10.1016/0307-4412\(89\)90094-0](https://doi.org/10.1016/0307-4412(89)90094-0)

Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed). San Francisco: Jossey-Bass.

Cook, D. B., & Klipfel, K. M. (2015). How do our students learn? *Reference & User Services Quarterly*, *55*(1), 34–41.

Coonin, B., & Levine, C. (2013). Reference interviews: Getting things right. *Reference Librarian*, *54*(1), 73–77. <https://doi.org/10.1080/02763877.2013.735578>

Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268.

https://doi.org/10.1207/S15327965PLI1104_01

Dewdney, P., & Michell, G. (1996). Oranges and peaches: Understanding communication accidents in the reference interview. *RQ*, *35*(4), 520-536.

- Frenzel, A. C., Becker-Kurz, B., Pekrun, R., Goetz, T., & Luedtke, O. (2018). Emotion transmission in the classroom revisited: A reciprocal effects model of teacher and student enjoyment. *Journal of Educational Psychology, 110*(5), 628–639.
<https://doi.org/10.1037/edu0000228>
- Hattie, J. (2009). *Visible learning: a synthesis of over 800 meta-analyses relating to achievement*. New York, NY, USA: Routledge.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112. <https://doi.org/10.3102/003465430298487>
- Lang, J. M. (2016). *Small teaching: everyday lessons from the science of learning* (First edition). San Francisco, CA, USA: Jossey-Bass.
- Lauermann, F., & Karabenick, S. A. (2011). Taking teacher responsibility into account(ability): Explicating its multiple components and theoretical status. *Educational Psychologist, 46*(2), 122–140. <https://doi.org/10.1080/00461520.2011.558818>
- Lepper, M. R., & Woolverton, M. (2002). The wisdom of practice: Lessons learned from the study of highly effective tutors. In J. Aronson (Ed.), *Improving academic achievement: Impact of psychological factors on education*. (pp. 135–158). San Diego, CA, USA: Academic Press. <https://doi.org/10.1016/B978-012064455-1/50010-5>
- Long, J. F., & Hoy, A. W. (2006). Interested instructors: A composite portrait of individual differences and effectiveness. *Teaching and Teacher Education, 22*(3), 303–314.
<https://doi.org/10.1016/j.tate.2005.11.001>
- McKeachie, W. J. (1951). *Teaching tips: A guidebook for the beginning college teacher*. Lexington, MA, USA: D.C. Heath.

- Naftulin, D. H., Ware, J. E., Jr, & Donnelly, F. A. (1973). The Doctor Fox lecture: A paradigm of educational seduction. *Journal of Medical Education*, 48(7), 630–635.
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199–218.
- Peer, E., & Babad, E. (2014). The Doctor Fox research (1973) rerevisited: “Educational seduction” ruled out. *Journal of Educational Psychology*, 106(1), 36–45.
<https://doi.org/10.1037/a0033827>
- Pressley, M., Wood, E., Woloshyn, V. E., Martin, V., King, A., & Menke, D. (1992). Encouraging mindful use of prior knowledge: Attempting to construct explanatory answers facilitates learning. *Educational Psychologist*, 27(1), 91–109.
https://doi.org/10.1207/s15326985ep2701_7
- Rotgans, J. I., & Schmidt, H. G. (2011). The role of teachers in facilitating situational interest in an active-learning classroom. *Teaching and Teacher Education*, 27(1), 37–42.
<https://doi.org/10.1016/j.tate.2010.06.025>
- RUSA. (2008, September 29). Guidelines for Behavioral Performance of Reference and Information Service Providers [Text]. Retrieved June 14, 2018, from <http://www.ala.org/rusa/resources/guidelines/guidelinesbehavioral>
- Stupnisky, R. H., BrckaLorenz, A., Yuhas, B., & Guay, F. (2018). Faculty members’ motivation for teaching and best practices: Testing a model based on self-determination theory across institution types. *Contemporary Educational Psychology*, 53, 15–26.
<https://doi.org/10.1016/j.cedpsych.2018.01.004>

- Tiberius, R. G. (2002). A Brief history of educational development: Implications for teachers and developers. *To Improve the Academy*, 20, 20–37. <https://doi.org/10.1002/j.2334-4822.2002.tb00571.x>
- Tomlinson, C. A. (2005). *The differentiated classroom: responding to the needs of all learners* (Special ed). Upper Saddle River, NJ, USA: Pearson/Merrill Prentice Hall.
- Weimer, M. (2013). *Learner-centered Teaching: Five Key Changes to Practice* (Second edition). San Francisco, CA, USA: Jossey-Bass.
- Wittwer, J., & Renkl, A. (2008). Why instructional explanations often do not work: A framework for understanding the effectiveness of instructional explanations. *Educational Psychologist*, 43(1), 49–64. <https://doi.org/10.1080/00461520701756420>