

Liberal Education Articles

Colour Code: **Scholarly Article**

Online Article

Resource

Essays/Papers

Qotes- articles with an orange Q have a matching quote down below

Bolded are favorites

Critical Thinking

Alwehaibi, H. U. (2012). **Novel Program to Promote Critical Thinking among Higher Education Students: Empirical Study from Saudi Arabia.** *Asian Social Science*, 8(11), 193-204.
<http://www.ccsenet.org/journal/index.php/ass/article/view/20162/13323>

Alwehaibi explores the significance of critical thinking. She does so through studying a five-week intervention program aimed at enhancing second year female college students' critical thinking skills at Princess Noura Bint Abdulrahman University in Saudi Arabia. Her study shows that the program had a significantly positive effect on developing critical thinking skills, as well as unintended argument skills. She concludes by stating that well-structured programs like this aimed at critical thinking are effective tools for developing critical thinking skills and should be embraced.

Blakey, E., & Spence, S. (1990). **Developing Metacognition.** *Educational Response Information Center (ERIC) Digest*. 1-4. Retrieved from <https://eric.ed.gov/?id=ED327218>.

Blakey and Spence provide background and strategies for developing metacognitive behaviours in the classroom. These strategies include identification of what is known, talking about thinking, keeping a thinking journal, planning and self-regulation, debriefing the thinking process, and self-evaluation. They conclude by describing how teachers can create metacognitive environments in their classroom to foster good thinkers, problem-solvers, and lifelong learners.

Chappell, K. (2018, January 29). **Helping Students Develop Critical Information Processing Skills.** *Faculty Focus*. Retrieved May 9, 2018 from
<https://www.facultyfocus.com/articles/course-design-ideas/helping-students-develop-information-processing-skills/>

Chappell identifies the importance of incorporating information processing skills into the classroom, as the assumption that many students arrive possessing these skills is often false. She outlines an activity that instructors can use to facilitate the development of these skills and gives

tips for other critical information processing activities. She concludes by re-emphasizing the importance of adding a few targeted information processing activities into the classroom, which could end up having a long-term impact.


Cottrell, Stella. **Critical and Analytical Thinking Skills**. Palgrave Study Skills.

<https://www.macmillanihe.com/studentstudyskills/page/critical-and-analytical-thinking-skills/>

This resource first defines critical and analytical thinking and then identifies techniques students can utilize in order to develop their critical and analytical thinking skills. It includes identifying the main line of reasoning in what you read or write, identifying hidden agendas in your sources and in your own writing, evaluating evidence in the text, looking for bias, identifying the writer's conclusions, and critical skills in writing.

Creet, J. (2018, February 8) **Believe nothing: the hoax of the Shed at Dulwich**. *The Conversation*. Retrieved May 9, 2018 from <https://theconversation.com/believe-nothing-the-hoax-of-the-shed-at-dulwich-91211>

Creet analyses the hoax of the Shed at Dulwich, a fake restaurant that used TripAdvisor to become the number one restaurant in London. Creet details the stunt, embedding the video documentary by Oobah Butler, the prankster, in the article. However, she also discusses the implication this has for the truth, as the line between fake news and satire becomes increasingly blurred.

Evans, W. (2009). **Iris Murdoch, Liberal Education and Human Flourishing**. *Journal of Philosophy of Education*, 43(1), 75-84. <https://doi-org.ezproxy.uleth.ca/10.1111/j.1467-9752.2009.00666.x> 

“Articulating the good of liberal education—what we should teach and why we should teach it—is necessary to resist the subversion of liberal education to economic or political ends and the mania for measurable skills.” - William Evans

Evans utilizes Iris Murdoch's philosophical writings to address the issues of 'the relationship between flourishing as the end of education and initiation into the various practices as the media through which this is accomplished' and 'the nature of this initiation itself with respect to what it demands of those entrusted to carry it out'. Murdoch addresses this through her conception of human nature as requiring liberal education to flourish. Evans then outlines Murdoch's theory of *techne* and how Murdoch's Platonism resists threats to liberal education to provide the answers to these questions. He concludes that Murdoch would state that the end of liberal education for

students is not merely to get jobs, but to understand themselves, and that teachers should embrace metaphysics to nurture ideas and intuition.

Felder, R. M. (1995). **We never said it would be easy.** *Chemical Engineering Education*, 29, 32-33. <http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Columns/Noteasy.html>

Felder details the difficulties of beginning to teach critical thinking, including the barriers students face trying to accept critical thinking. He outlines a series of strategies that instructors can use to ease students into the critical thinking process. These strategies include setting the stage, providing coaching on important skills, getting feedback, being patient, going back through references, and accepting that success will not always occur.

Gabennesch. H. (2006, March). **Critical thinking: what is it good for? (In fact, what is it?)** *Skeptical Inquirer*, 30(2). Retrieved May 14, 2018 from https://www.csicop.org/si/show/critical_thinking_what_is_it_good_for_in_fact_what_is_it

Gabennesch argues that the meaning of critical thinking is becoming blurred. He raises a series of issues with excerpts from sociology textbooks and questions whether the books are truly carrying out the critical thinking that they claim to be.

Garnett, R. F. (2009). **Liberal Learning as Freedom: A Capabilities Approach to Undergraduate Education.** *Studies in Philosophy and Education*, 28(5), 437-447. <https://search-proquest-com.ezproxy.uleth.ca/docview/204082667?pq-origsite=summon>

Garnett addresses a central challenge of liberal education, which is the freedom given to students in liberal learning. After providing background on academic freedom in the U.S. he utilizes a Nussbaum-Sen capabilities approach to capture the goals of liberal education. He then re-writes Horowitz's Academic Bill of Rights to outline four academic freedoms for students in undergraduate education. He concludes by arguing for this necessary re-defining of liberal education into capabilities-minded teaching which respects the autonomy of the learner.

Harrold, R.L. **Problem-Solving Skills.** Accessed on May 2, 2018 from https://www.ndsu.edu/fileadmin/accreditation/assessment/Hand_book/Assessment_techniques/ProblemSolvingSkills.pdf.

This teaching resource outlines a number of helpful ways to assess and teach problem solving skills in the classroom. These include problem recognition tasks, 'what's the principle'

questions, documented problem solutions, audio-and-video-taped protocols, and background knowledge probes.

Huber, C. R., & Kuncel, N. R. (2016). **Does College Teach Critical Thinking? A Meta-Analysis.** *Science & Education*, 26(1), 93-105.
<http://journals.sagepub.com.ezproxy.uleth.ca/doi/pdf/10.3102/0034654315605917> 

“If college can promote general skepticism toward questionable claims and ideas, especially ones that mesh with one's worldview, it has surely performed a valuable function.” - Huber and Kuncel

Huber and Kuncel test the assumption that efforts within the curriculum to improve critical thinking will lead to long-term critical thinking gains while also evaluating the changes in student's overall critical thinking in college. They utilize a mixed-effects multivariate meta-analysis while also using evidence from nursing samples with focused critical thinking criteria to test the above assumption. Through their studies they find that colleges produce natural critical thinkers on their own. Furthermore, they argue that time spent towards specializing students in critical thinking could be better spent in other areas of the curriculum working on skills that are not as naturally fostered.

Jones, K. (2017, December 4) **Reliable Sources: Promoting Critical Thinking in the [Mis]information Age.** *Faculty Focus*. Accessed May 9, 2018 from
<https://www.facultyfocus.com/articles/teaching-and-learning/promoting-critical-thinking-misinformation-age/>

Jones identifies a number of problems students are facing in the technological age when trying to do academic research, often involving issues with discerning the credibility of different sources. She outlines three steps that instructors can use to help students become critical thinkers when researching and concludes by advising faculty to take the valuable time to enforce these skills, as they are becoming increasingly important to building a stronger, smarter society.

Krupat, E., Sprague, J. M., Wolpaw, D., Haidet, P., Hatem, D., & O'Brien, B. (2011). **Thinking Critically About Critical Thinking: Ability, Disposition or Both? *Medical Education*, 45(6), 625-635. <https://onlinelibrary-wiley-com.ezproxy.uleth.ca/doi/epdf/10.1111/j.1365-2923.2010.03910.x>**

Krupat, Sprague, Wolpaw, Haidet, Hatem and O'Brien analyzed both definitions of critical thinking that clinician-educators have and the extent to which their practices lined up with these definitions. They utilized qualitative analysis on the respondent's responses to define and describe scenarios of critical thinking. They found that most clinician-educators saw critical

thinking as either a process or ability, while some had a lack of critical thinking materialize in scenarios due to heuristic thinking, or a lack of intellectual effort rather than an ability to synthesize or analyze information. This showed a disconnect between the descriptions and the practice, leading the authors to conclude that current definitions are lacking and must be remedied.

Lai, E. R. (2011). *Metacognition: A Literature Review*. Accessed May 2, 2018 from https://images.pearsonassessments.com/images/tmrs/Metacognition_Literature_Review_Final.pdf

Lai seeks to explore four aspects through her literature review. First, the way metacognition has been defined by researchers. Second, to investigate its development in young children. Third, to learn how teacher can help develop metacognitive skills in children. Fourth, to review the most useful ways to assess metacognition and to make recommendations.

Livingston, J. A. (1997). *Metacognition: An Overview*. Accessed May 2, 2018 from <http://gseweb.gse.buffalo.edu/fas/shuell/cep564/metacog.htm>

Livingston defines and introduces the concept of metacognition. She overviews both metacognitive knowledge and regulation while connecting and defining metacognition in comparison to cognitive strategies and intelligence.

Mulnix, J. W. (2012). *Thinking Critically About Critical Thinking*, *Educational Philosophy and Theory*, 44(5), 464-479. <https://doi.org/10.1111/j.1469-5812.2010.00673.x>

Mulnix seeks to define critical thinking, beginning by looking at several different interpretations of critical thinking and reflecting on them. She then provides her definition of critical thinking as the ability to grasp inferential connections. She concludes by advocating for the teaching of critical thinking in the classroom and providing some pedagogical tools for instructors to use.

Pintrich, P. R. (2002). *The Role of Metacognitive Knowledge in Learning, Teaching, and Assessing*. *Theory Into Practice*, 41(4), 219-225. <https://www-jstor-org.ezproxy.uleth.ca/stable/pdf/1477406.pdf?refreqid=excelsior%3A6c611981fface0307330e046077ba7dc>

Pintrich discusses metacognitive knowledge and its implications for the classroom. He highlights three types of metacognitive knowledge, discussing each in depth. These types of metacognitive knowledge are strategic knowledge, knowledge about cognitive tasks, and self-knowledge. He then concludes by discussing the implications metacognitive knowledge has for learning,

teaching and assessing, and placing particular emphasis on the explicit teaching of metacognitive knowledge in order to promote development.

PP, N. (2008). *Cognitions about Cognitions: The Theory of Metacognition*. Retrieved on May 2, 2018 from <https://files.eric.ed.gov/fulltext/ED502151.pdf>.


PP sought to define metacognition from its beginning in John Flavell. From there they followed the evolution and development of metacognition across thinkers, each with their own interpretation. They then utilized these scholars in combination with their own knowledge to discuss the differentiation between cognition and metacognition, the components of metacognition, and the functions of metacognition. They concluded by stating that metacognition is becoming increasingly important, both inside and outside the classroom.

Rusbult, C. (2001). *Critical Thinking Skills in Education and Life*. Accessed on May 2, 2018 from <https://www.asa3.org/ASA/education/think/critical.htm>.

Rusbult provides a variety of resources for providing information on critical thinking both inside and outside of his article. He covers topics such as: what is critical thinking, why teach critical thinking, critical thinking in schools, and the ethics of critical thinking.

Rusbult, C. (2005). *Thinking Skills in Education. Analytical Comparison of Four Frameworks: Integrated Design Method, Dimensions of Thinking, Infusion of Thinking Skills, Four Frames of Knowledge*. Accessed on May 2, 2018 from <https://www.asa3.org/ASA/education/think/skills.htm>.

Rusbult provides some framework to analyze thinking through: for thinking, for curriculums & institutions, and for instruction. He concludes by outlining four frames of knowledge. Each section has a variety of links and resources to access for further explanation.

Timmer, J. (2017, March 27). *Critical thinking is one for the history books: A critical analysis leads to rejection of astrology, conspiracies, etc.* *Ars Technica*. Retrieved from <https://arstechnica.com/science/2017/03/history-beats-science-for-getting-students-to-think-critically/>. 

Referencing: McLaughlin, A. C., & McGill, A. E. (2017). *Explicitly teaching critical thinking skills in a history course*. *Science and Education*, 26(1), 93-105. <https://link-springer-com.ezproxy.uleth.ca/content/pdf/10.1007%2Fs11191-017-9878-2.pdf>

“Rejection of epistemically unwarranted ideas (ancient aliens, astrology, conspiracy theories) doesn't correlate with scientific knowledge, and college students tend to have as much trouble coming to grips with reality as anyone else.” – Timmer

John Timmer reports on McLauchlin & McGill's article based around an experiment in which students took a history/archaeology class on critical analysis of pseudosciences and conspiracy theories. The students had plenty of opportunities to think critically, examine myths and legends, use credible sources, and reasoning and analysis based on evidence. The students in the class under study were more likely to refute unwarranted beliefs than those in the control course, a research methods class.