

CT2.0: A Collaborative Database of Examples for Teaching Informal Logic

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Abstract. I propose to create a system of collaborative textbook authorship, review and delivery that would allow for multimedia interactive content and real-life contemporary examples that can take advantage of social networking and other 'web2.0' technologies. The potential for my system is great: the interactivity supported by social-networking frameworks will increase student engagement, the scalable model allows for embedded CT instruction in various disciplines, and the approach allows for a revolutionary model of textbook customization, pricing and distribution.

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1 Introduction

Most direct, sustained instruction in informal logic or Critical Thinking (hereafter 'CT') courses occurs in stand-alone classes run by Philosophy departments. While these can be very effective if taught well, they can be tedious and boring. In an effort to maintain the interest of their students, we professors frequently supplement the static prose of standard textbooks with dynamic, current, and often local examples of informal reasoning culled from editorial pages, punditry talk shows and even late night comedy, all in an effort to make direct instruction in reasoning relevant to students' interests. The irony, of course, is that the students are spending most of their time in courses that are already directly related to their interests—courses in their major. And those courses often include ample examples suitable for critical thinking instruction.

By studying student performance over a 15 year period, D. Hatcher showed that students who had small amounts of direct instruction in reasoning in the context of their regular course work performed better than students who had taken a stand-alone course in CT[1]. Contemporary CT theorists like McPeck[2] and Ennis[3] and have debated whether there is anything generalizable about CT. McPeck famously held that all CT is domain-specific, and hence cannot be taught outside of the disciplines where it is required[2]. While I disagree

with McPeck and hold, as Ennis argued[5]¹, that there are generalizable CT skills such as contradiction avoidance and evidentiary relations that transcend academic domain, I also hold that CT instruction is most successful when it is integrated into discipline-specific courses.

One of the most obvious reasons why direct instruction in CT is not integrated into discipline-specific courses is the lack of supporting texts. Anthony Weston's classic *A Rulebook for Arguments*[9], which sells (currently) for \$7.95 was first published in 1986. This is a great book, which can be (and is) added to many courses as a supplement. But it is limited. It does not cover scientific reasoning in any depth, and it wholly dismisses appeals to emotion and character as fallacious, rather than attempting to understand and evaluate them as attempts at persuasion.

Most importantly, however, publishers are no longer interested in small, cheap supplements. The current crop of CT and Logic books on the market blur the line between the fields. Every textbook now tries to be everything to everyone, which entails that students are paying for a great deal of content their courses will not, in fact, cover. In response, some textbook publishers are allowing for print-on-demand selections of well-known textbooks. For example, Patrick Hurley's *A Concise Introduction to Logic*[10] is now available this way. But these options still assume a stand-alone CT or Logic course.

To integrate direct instruction in reasoning into existing discipline-specific courses, professors need thin, adaptable texts. What's more, we need texts that can provide examples with commentary, hyperlinks, video, audio and interactivity. All of that is available in the medium of the internet. Internet-based texts would be even 'thinner' and more adaptable than Weston's book. They would be infinitely malleable to curricular needs. Moreover, a correctly designed system could simultaneously produce printed versions for sale as course packets.

2 Teaching from Example

CT instruction has long been based on an example-centric model. The trend started by Max Black's seminal textbook[11] is in evidence in all major textbooks used today. Most CT professors have supplemented the texts by amassing large collections of examples, many of which are withering away in file cabinets.

There are many problems with this system, but I will reflect on four:

(1) The examples become superannuated. For example, one of the best small textbooks that I have already mentioned, Anthony Weston's *A Rulebook for Arguments*, contains an example from Joseph McCarthy (pg. 85). It is a good example—a classic, in fact—but it is not cited and cannot be said to be current. One of the best recent books, Louis Vaughn's *The Power of Critical Thinking: Effective Reasoning About Ordinary and Extraordinary Claims*[12], takes the opposite approach by including examples that are meant to be contemporary. The first chapter, on the "Power of Critical Thinking," which includes a section on "Why It Matters," cites the 1994 movie *Dumb and Dumber* (pg. 5) and the

¹ For more on the issue, see McPeck's response to Ennis[6] as well as [7] and [8].

1998 movie *The Truman Show* (pg. 6). Vaughn's idea of making the content relevant to popular culture is admirable, but it falls short. First year students entering this fall were only 3 years old when *Dumb and Dumber* came out, and 7 when *The Truman Show* opened.

While making the content relevant to the students' pop culture or subculture lives is one potential path of engagement with informal reasoning, there is another obvious path staring us in the face: most students are in courses in their chosen major because they are interested in the topic. Direct instruction in reasoning can be no more relevant than when it is attached to the topic they are volunteering to study. Hence, integrated instruction will always be more engaging than stand-alone instruction.

(2) The examples are usually presented in static, printed documents. Again, Vaughn's book serves as an example of the contrived attempts of getting popular culture into textbooks. He cites Monty Python's famous 'argument clinic' sketch in a call-out-box on page 13. This example has been used in CT courses for years to present the formal notion of 'argument' as distinct from 'mere contradiction.' In Vaughn's book, it is presented as a static dialogue. If students have seen the video, they will respond better to the video than to a static transcript. A recent YouTube search found 171 versions of the sketch, most of which are reenacted by drama students, Lego men, transformers, etc. But there are at least five versions of the original.

While there is virtue in grappling with actual printed text, much of the information consumed by modern students is dynamic and interactive. The NY Times, Washington Post and BBC all allow instantaneous discussion by readers of all their content. Wikipedia and YouTube, which consist entirely of user-generated content, dominates the information life of the contemporary undergraduate. They are wholly comfortable getting their news from Jon Stewart, and sharing links, videos and commentary on social networking sites. We need to engage these skills in the direct instruction of reasoning, not avoid them.

(3) The textbook cannot incorporate student feedback. A student who comes across a questionable example cannot check to see if other students have the same question. Consider another famous example used by Robert Ennis. The Cornell Critical Thinking test X asks students to imagine that they are exploring a newly discovered planet. The question is:

Which is more believable?

(A) The health officer investigates further and says "This water is safe to drink"

(B) Several others are soldiers. One of them says "This water supply is not safe."

(C) A and B are equally reasonable.

The keyed answer is (A). As Ennis himself points out, this question is open to profound cultural influence. For example, the health department in Puerto Rico is widely known to be corrupt, but the army is trusted. When faced with this question, Puerto Ricans must make a secondary judgment such as 'what would

the authors of this test think is the most credible source?’ before answering the question with the key.

If the question were presented to a student with a forum that allowed for discussion of the question itself (as all major newspapers do with their stories), those few students who recognize that their instinctive answer is not the desired one could express their reservations about the question. Not only would these students feel less marginalized by the text, but it would help us, as authors, revise the questions for future courses.

It is impossible for the author of a book to understand all the complexities of students’ cultural biases. Books should be open to revision when such biases are brought to our attention. Additionally, this constant feedback will help us judge the oh-so-important line between resonant and irrelevant and replace examples before they become outdated. The web 2.0 technologies that drive the instantaneous feedback systems for newspapers, social networking tools of Facebook and the rating systems of YouTube are not proprietary. They are publicly available freeware. And employing them for instructional content will enable us to develop better content.

Finally, a great example will always become the subject of discussion. Our students discuss, share, and interact online. They consume information online. They should be able to reflect critically as a group online. We have the technology to allow it: Facebook has opened its platform for third-party applications development, and Google has launched ‘OpenSocial,’ which will allow third-party applications to run on multiple social networking sites.

(4) The examples used in class are not subjected to peer-review. The best examples, specifically those that appear in textbooks and journals, are subjected to peer review. But the examples that connect with the students lives are often those that appear out of the blue. They are teachable moments that occur during the course of the semester and serve to drive the point home. Those examples are not currently peer-reviewed, shared, or archived. These examples have an extraordinary power when used effectively and should be made available for future use.

We need a system to collect, share and review examples of argumentation regardless of medium. That system should embed the examples that drive instruction in the standard introductory prose found in most textbooks, while taking advantage of the social-networking and web 2.0 functionality with which our students are so familiar.

3 My Solution: CT2.0

Contemporary social networking sites and ‘web 2.0’ technologies present us with an opportunity to coordinate in one reusable project the efforts of large numbers of solitary CT professors. Moreover, the collaborative nature of the project allows us to foster a liberal arts community around Critical Thinking instruction, and eventually develop a repository of peer-reviewed discipline-specific examples.

The potential for this project, hereafter ‘CT2.0,’ is vast. First, by creating a system of peer-review, traditional standards of academic rigor can be enforced and as a result individual professors will have a reliable resource for contemporary supplementary examples. Second, by supporting all digital media, the examples can be continually refreshed in order to maintain that all-important relevancy that underlies engagement. Third, by adapting the content to take advantage of social-networking functionality, the system will engage students ‘where they live’ and pioneer an entirely new way of thinking about the information delivered by textbooks. Finally, by producing the examples in a variety of digital and print forms, the project can revolutionize the economics of textbook delivery.

The project takes the form of an interactive website built on a database of examples ‘wrapped’ in expository prose. These examples, which when wrapped become ‘modules,’ will be classified according to multiple browsable and searchable taxonomic schema: at least one will correspond to the standard taxonomies of reasoning, and the second according to disciplinary divisions. Further taxonomic schema may be developed. The modules along with the classification schema will be subjected to peer-review. The site allows for ratings and comments by students and instructors. The modules can then be selected and arranged by individual instructors, and delivered via the website itself, embedded into a social networking site such as Facebook, downloaded as a PDF file, or even printed via the typesetting system LaTeX.

By adapting the existing system of editorship and peer-review into a wiki-based interface, editing and text maintenance is streamlined. Updates and revisions are instantaneous, rather than annual. The content can adapt to curricular needs and individual student responses. It can support upper-level as well as lower-level courses.

This model surpasses the traditional textbook model in a number of ways. Demand from the consumer, not the producer, dictates the method of delivery. Editions become a thing of the past. A static (i.e. printed) version of the content is merely a snapshot of a textbook undergoing constant revision. The content engages the student through embedded multimedia and interactive examples. The pricing is scalable—in one extreme, it can be folded into tuition; on another, can cost pennies per module. The delivery system is optimized for the student’s world, engaging them on their own terms, and allowing them to interact with the content itself, not just the ‘end-of-chapter’ review questions. With a well-designed interface, the content is searchable and browsable, rather than just linearly readable.

As an instructor, I select the modules I want to include in my course. This both reduces waste and focuses the class. It allows for discipline-specific examples, ready for integration into different courses. I can specify exactly what version of those modules my class accesses—so if updates are approved during my course, the content to which the students have access will not change until I have approved that change. Finally, given that I am still more comfortable reviewing texts on paper rather than on the screen, I can get the exact content—the up to the

minute version—in instantaneously generated PDF files that I can review in hard copy.

As with any academic endeavor, the success of this project will depend on the people that become involved. Tools for Teaching Logic provides a superb opportunity to develop the network of contributors and editors necessary for a truly international resource.

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