

Ep. 045: Critical Thinking - Beyond the Buzzwords

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We take a deep dive into the concepts surrounding critical thinking. What is it and how do you know it when you see it? And just how do you get your students to do it? [Jeff Rients](#), Senior Teaching and Learning Specialist at Temple University (and former CTLT graduate assistant) helps us explore critical thinking from a basic definition to advanced ways to assess it as a course-level goal. We also discuss how to incorporate it into your class without reinventing the proverbial wheel.

Transcript

- JIM: Hi there. I'm Jim.
- JEFF: And I'm Jeff.
- JIM: Let's Talk Teaching Welcome to Let's Talk Teaching a podcast from the Center for Teaching, Learning, and Technology here at Illinois State University. I'm Jim Gee joining me today is Jeff Rients. He's been a longtime graduate assistant here at the Center for Teaching, Learning, and Technology. And he's been very involved in the topic that we want to talk about today. Jeff, welcome to the show.
- JEFF: Thank you very much for having me here today, Jim.
- JIM: Well, one reason why we're having you here today is because your days are numbered. And I mean, a good way. Tell us about where you're going.
- JEFF: So, I'm starting next month at Temple University's Center for the Advancement of Teaching where I'll be assuming the position of senior teaching and learning specialist.
- JIM: Great title.
- JEFF: Yeah,
- JIM: I like that. Well, congratulations, you know, and we're all proud of you, and whatnot here at CTLT. You've done a lot, working with not only faculty, but also graduate assistants, graduate teaching assistants who come through CTLT.
- JEFF: Yes.
- JIM: And you also worked a lot with the English 101 program on campus. Tell us about that.
- JEFF: Yes. So, I worked for a couple of years as English 101 coordinator, my primary duty was introducing new PhD students to the pedagogy as practice at ISU's award winning writing program. And that involves sort of a summer Boot Camp, where we would welcome people about a week out from the start of the semester and say, welcome aboard, you're going to be teaching totally new things, and you have a week to develop a syllabus. And then once we got through that terrifying period, then I would spend a semester or two mentoring them through the process.

- JIM: Right, right. And of course, I taught when I came back as a master's level graduate student in communication, I taught the companion course, which is Com, 110.
- JEFF: Right.
- JIM: Both of those courses emphasize, to some extent, this concept that we want to talk about today, which is critical thinking,
- JEFF: Yes.
- JIM: So, when I say critical thinking to you. What's the first thing that comes to your mind?
- JEFF: The first thing that comes to my mind is the wide variety of definitions for this term. It's one of those terms that everybody is on board with, in theory, but it's kind of moved towards buzzword status in a lot of areas. So, so one of the things I really wanted to emphasize today was, if you're going to take seriously teaching critical thinking, you need to have a definition, you need to know exactly what it is you want your students to be doing, thinking about what their behaviors are going to be to show you critical thinking.
- JIM: So, you've dived into the some of the most recent discussions within the literature and whatnot about critical thinking. So, where should we begin when we when we try to come up with a definition for this?
- JEFF: Well, I think when formulating your definition for critical thinking, a good place to start sort of conceptually, is that critical thinking is the basic survival skill for adult life in the modern world. And so thinking about what you need to negotiate not just your disciplinary field, but you know, life in general, and in the world of fake news, as it is. This, this idea that critical thinking is a survival skill I'm actually taking from Stephen Brookfields book, The Skillful Teacher, which I'm quite fond of, okay. And he looks at critical thinking as a route to informed action in his chapter on critical thinking.
- JIM: Okay, a route to informed action. So, in other words, we're not just kind of on cruise control.
- JEFF: Yes, we are actively doing something when we are.
- JIM: Now, so critical thinking, Are we critics of our own thinking, then is that?
- JEFF: Yes, there's a definite metacognitive element to it, in most of the recent literature, that one of the key components to critical thinking is stopping and questioning our own thought processes, looking at our own biases, and deciding whether or not we should go forward with that limited vantage point or seek out additional information. And by the way, the answer there is yes, of course, you should do it.
- JIM: Yes, of course, you should do it, right. But that is, you know, even for the most learned professional in the academy. So you know, sometimes we find ourselves not doing that right.

- JEFF: Right.
- JIM: We we may do that. We may not do that more often than we do in some in some aspects of our life because it's so easy to be kind of on cruise control. And it's so challenging, from a personal standpoint, to challenge our own preconceived notions about things.
- JEFF: Right. I mean, we can easily find from any discipline, the sort of traps we for ourselves, when we work off of assumptions or lack of reflection, you know, I've been working on a literary dissertation, and I'm not a particular fan of Wordsworth, and I really like Byron, and I could see creeping into my dissertation. Maybe Wordsworth has something to say about the issues I'm examining. And I'm not really looking at it closely enough, simply because I always kind of thought he was a jerk. And that's, that's not entirely a fair and critical way to approach his body of work is it?
- JIM: When I talk to students, about this topic of critical thinking. It's the idea that criticism critical is not a is doesn't necessarily have a negative connotation here. It's about more about precision and about perspective than it is about finding fault with things.
- JEFF: Yes. So I personally think of that as the Star Wars problem. So I'm a big Star Wars fan. But the minute you start critiquing Star Wars, for any reason, from any vantage point, some of the fans are going to say, Oh, my God, you're attacking Star Wars. Well, I love Star Wars. That's why I'm attempting to critique it. And this is one of the issues that came up. The City University of Hong Kong did an interesting research project where they were looking at how do we get students to do more critical thinking. And they identified four dimensions of critical thinking, cognitive, ideological, behavioral, and motivational. And that last one, you have to teach your students why we value this skill not just to do it, and to do it to get a grade. But why it has a function out in the world.
- JIM: And of course, we'll link to a lot of these resources, we will put a list on our show page and have sort of a bibliography or reference list for today's episode to help people explore this a little further, we're not going to be able to do an exhaustive review of this concept, this very big, important concept of critical thinking today, but hopefully this will get people kind of started.
- JEFF: Yes.
- JIM: Or, you know, give give people an excuse to kind of rethink how they're talking about critical thinking. Because as you said, it's something that oh, yeah, we're all for that, and teaching but, you know, making sure we know what it looks like when we see it, and making sure that we help students know what it looks like, when they do it, or what, you know, what it could look like, I think is important.
- JEFF: Yes, this goes back to my experience teaching English one on one and helping other people learn how to teach English one on one composition is critical thinking was the name of that course. And the same way that Com 110 in communication is critical thinking, yeah. And I found myself the first couple of times I taught the course it's like, well, I feel like I'm getting the composition angle of that down pretty well. But the

critical thinking is un-theorized in my course, what can I do about that was one of the things I struggled with, initially as to what should Critical Thinking look like in a composition class? And that's really one of the reasons why I think there are so many different definitions. Critical thinking will manifest in different ways in different kinds of courses.

JIM: But give us an example of, of in a composition class, what does Critical Thinking look like? Maybe we can extrapolate a little bit of a picture for our own disciplines from there.

JEFF: I like to send students off on research tasks, and they come back with websites that they've found information on. And so, part of critical thinking in that environment is how do we evaluate which of these are better and worse sources of information, because we can start very simply with, oh, what this is a .edu website, right. So clearly, that's going to be completely unbiased. And we can just take that and run with it. Well, let's dig a little deeper and see who these people are that have this particular web domain, let's figure out who they are. And of course, the classic tested in composition courses at ISU is there was a, I think it's still up there was a Martin Luther King, Jr. informational website that was maintained by the white supremacist group Stormfront until you got two or three pages deep, it wasn't obvious. And so their view of the work of Martin Luther King Jr. was rather different than most of the other websites, but it returned back pretty high up on the Google search results. So it was a trap for researchers to fall into if you didn't know how to evaluate what are the biases of this particular website? Who's producing this data? Who's offering it? And why are they presenting it?

JIM: So have you run it? I forget what the scholarly term is. But in your teaching, have you run into the phenomenon wherever students say, well, all arguments are equal. I mean, yeah, if you make an argument, how do you how do you cope with that?

JEFF: Yeah, so yeah, when teaching poetry and literary classes this is this is the thing that I've run into many, many times what this is my interpretation of the poem, all interpretations are equally valid, I'm entitled to my opinion. You're absolutely entitled to your opinion, of course, you are. I deeply believe that. But different opinions come with different levels of evidence backing up, what they say, is usually my response in the classroom. So you're in, you can hold on to that opinion as long as you want. But if you asserted, in a paper in a public forum, or things like that, you need to have evidence backing it up. And now it's time for us to talk in that the next move in the classroom is, what kinds of evidence are better or worse in supporting this argument. So like in a literature class, we're always super suspicious of the author's statements about what they think their own work is about. So that's not necessarily the best evidence. Whereas if you can find something in the text itself, or it hears evidence that the author read something related to this that supports your argument, or hear something from the historic period, or the author's biography, let's look at all the different kinds of evidence that can support our arguments. And then once you've done that, and talked about what the priorities of those evidence, which ones are good and bad, you can then start doing things like looking at other scholars work and talking about, what's the evidence present here? Do we find it compelling, and examining the

evidence presented in an argument, and deciding whether or not that evidence is good or bad, is a key component in many of the definitions of critical thinking I found in my research.

JIM: So, what you're talking about sounds like a lot of work. And it is it's important work to do. But it does over time, "A" become almost virtual, if you if you can get used to thinking like that, from a student's perspective. And as you said, this actually ties into society, everyday life, being an adult having keys and credit cards and mortgages and all that other stuff. And consuming news, as we've talked about, that, to apply those same methodology is to, you know, I see this post on Facebook, okay, well, what's behind it? How do I dive deep into that? And how do I judge that as a source of information,

JEFF: Right, if you've ever reposted something on Facebook, or shared it with your friends, or did something like that, a news item that got an emotional response out of you, without checking on the validity of the news item. That's, that's a failure of critical thinking. And I know I've certainly done it, and we need to... Yeah, we could all do better with that sort of thing. And it can only help the public discourse, the more people that are doing that kind of work.

JIM: And, and, and the technology, this is, you know, from my discipline, we look at it how the technology has made that so easy to be non critical when you're when you're dealing with these issues and whatnot, we've kind of boxed in what critical thinking is and what it may look like, let's move on to how do you teach students to think critically.

JEFF: So I want to talk just for a minute about some of the research on the kinds of assignments that can help students develop their critical thinking skills? First of all, there's good evidence that suggest asking challenging, open ended questions in writing assignments will help requiring assignments that take abstract principles and apply them in specific cases. So so like a case studies, sort of a scenario.

JIM: Something like.

JEFF: Yes, something like that, right. And then comparison and contrast is really good. Like one of my favorites from the research is a science class that instead of looking entirely at primary research, here's what the scientists publish their results as an instructor who would, at several points during the semester, show what the Science News World picked up from an important studies. So here's, here's three reports from the science news world about the primary research, let's figure out the differences between the three of them, and then look at the original published work to see this is how science is propagating through the world. And we need to be aware that what's happening in the general public can also happen to us in our disciplines, because, you know, we're always sharing information with each other. And sometimes we don't always go back to the primary research, and also the science news approach or the you know, the, the popular press version of something gives an entry point for you know, undergraduates who are still finding their their own place in the discipline in general ed courses, that sort of thing will work really well as well. I think

JIM: those things you listed, I think it's good to keep in mind that there's more than just writing. When it comes to critical thinking, I've worked with faculty in the past, and we talk about some courses are, are more writing friendly. You know, if you're teaching a large lecture course, you may not be doing as much writing, or having your students do as much writing as you would be obviously, in a composition course or communication, a speech course. So it's important to think that there are other ways of triggering that critical thinking, or encouraging that critical thinking beyond having them actually do a big composition. Even though you and I both being in the humanities, we tend to lean maybe towards that, to some extent, yes. So so what else?

JEFF: So, there is some good work done that indicates that asking students to keep a journal where they're looking at their own thought processes and what they're learning, and especially if you offer writing prompts to ask them to question what they have learned in the class, and try to find for themselves, you know, whenever we teach something, there's going to be borders that, you know, in order to fit into 16 weeks, what we're doing, so ask them to try and find through journaling, where are the places the instructors not taking us, so they can see for themselves how the course content fits in the rest of their learning. And that kind of journaling work. Obviously, assigning it, the students doing it, the instructor looking over it adds to the workload in the course. But there's good research to suggest the students who do that kind of metacognitive journaling will have better test results at the end of the class. Another thing that some courses do is a portfolio assignment at the end of the semester, where in addition to here's a bunch of the work that I've selected as my best work from the semester, accompany that with usually a pretty short essay explaining, here's how these pieces document my growth over the semester. So while it may seem weird, for example, in a mathematics course, to ask a student to write a page or two of text, I know I get raised eyebrows when I suggest that sort of thing with STEM instructors. And I understand that, asking them to do the work of thinking through, here's how this homework I've gathered over the semester shows my thinking skills growing, can be very helpful in developing critical thinking. Because, you know, the key component of critical thinking is stopping and thinking about your own thought process in the moment, trying to see if it's limited, if it needs to be expanded, or if there are other strategies you need to employ. So that sort of that sort of metacognitive work is is very adjacent, if not directly critical theory.

JIM: And there are other things that I know some instructors have done, that don't necessarily involve writing, per se, but in something analogous to it. So, doing a record an audio recording, that sort of thing, you know, doing some other sort of presentation with, you know, specific criteria so that you can make sure that that the same sort of thing that you would have in a prompt for a written assignment would manifest in some other media.

JEFF: Yeah. And that's great. Because one, one sort of school of thought with critical thinking is a key component of it is the ability to extract information from multiple modes of presentation. So so being able to do that yourself is also useful as well, there is a danger in asking students to write about their thinking, or at least a pitfall for the instructor, but not dangerous too much in that it's an easy trap to fall into that. You start to assess the students writing and you're not assessing the critical thinking,

JIM: Yes, yes. And you spend too much. And Claire and I have talked about this in past episodes, too, we tend to... this is first of all, one reason why you want to have a rubric. Yes, if you're going to grade something like that, because we tend to go back to either what is easiest to grade, or what we're more comfortable grading or whatever. I have found myself. When I assess students writing, or students written assignments, I should say, because I have like essay exams and stuff like that still on my course. But I find myself having to set aside comma usage to an extent, you know, I give them you know, was this college level writing or not? You know, I'll assess it there. But otherwise, yeah, it takes it took a rubric for me to actually focus on how they're presenting their ideas and the arguments that you're making. And...

JEFF: There's there's one research group that actually used a two rubric approach where one rubric was specifically about writing and one rubric was specifically about critical thinking. And they were each worth a portion of the assignment, right? And they found that by physically separating those two rubrics, the students were able to better pay attention to the critical thinking that's it And that was, I think, partially inspired by some research that shows, if you have a rubric that has one or more grammatical elements on the writing assignment, students will zero in on those, because those are the easiest rules to follow.

JIM: Yeah.

JEFF: And so So yeah, I've done a lot of writing assignments in a composition course, where the mechanics of writing had little or even no points on the rubric, because we were focusing on other things in that particular assignment. And so that's just a matter of like, coherent assignment and assessment design, right? As you know, you do you if you're going to be looking at critical thinking as your learning outcome, you don't want to assess periods and commas, as you mentioned, as the main way they get a grade out of it. Right.

JIM: So what else in terms of assessing critical thinking do we need to talk about?

JEFF: I think that alignment with your learning outcome, and what your assessment is assessing is, is always important. And I think having that sound definition of what critical thinking looks like in your class. And also thinking about what's discipline specific here. And what's applicable, in general can be very useful. Some of the assessments that you can buy from people like Pearson and stuff like that are now moving towards a more disciplinary based approach. And they're also moving towards teaching faculty members how to do the assessment so that what would happen is your department would have a standardized assessment. And everybody else, all the faculty in the department would have a training in the how to administer and graded. I'm not sure I'm completely sold on some of these assessments, quite a few of them are multiple choice based. And you can't get to the complete heart of critical thinking, I think with just a Scantron sheet. But of course, there's also the logistics involved. As you mentioned earlier in our discussion, if you're teaching a 500 person lecture, you can't necessarily grade 500 essays on critical thinking in a timely manner. And so you have to come up with an alternative. Yeah, so. But I really think you're the best plan for assessment is returning to that idea of compare and contrast work. Here's, here's two

approaches to reporting the same phenomenon. Why are they different, which are more reliable, in which ways and why? And especially if you teach in your classroom that just because you don't like Parts A and C have this particular report? That doesn't mean there isn't something useful in part B, you know, and having a nuanced approach like that. I also think we talked about earlier, that students will sometimes arrive in your classroom with ideas like all opinions are equally valid. Right. And that's, that's also a developmental issue, you know, from Perry scheme of intellectual development, I think is where it was early identified in that part of your job as the instructor is to move them from there to a more nuanced view of how evidence is assessed. So it's, it's also a matter I think, of being gentle early in the course should be saying.

JIM: Sure. It is something that I think we are increasingly from a cultural standpoint, I think we encounter this increasingly that people think an argument is a bad thing. Certainly, if you were to use the R word rhetoric is great, you know, that would be Oh, that's just render that people don't see arguments as being, they can be civil. They don't have to be uncivil. They can be arguments are good arguments are civil, and they are fact based and everyone you know, has a say, or gets a chance to make an argument, you know, people aren't shut out. So I think there's a lot of, there's a lot of cultural stuff that we find that we have to overcome in terms of our classes and stuff like that, too.

JEFF: Yeah, I think if I'm, if I may jump in here. Sure. One method that I've seen in a couple of places is what's called in the political world oppositional research. This is a slightly tricky thing to pull off with your students. I mean, you're slightly tricking them by that, where you ask them to identify here's what I'm going to be writing about. Here's the topic. Here's the argument I'm going to be making via proposal, and then you returned with them. Okay, but your first assignment is a brief from the opposite point of view.

JIM: To do the counter argue, And we and we actually talked with Bill Anderson in one of our recent podcasts as a faculty member over in Family, Consumer Sciences and University Teaching Award winner last year. And he talks about interrupted case studies. But we also talked about having those. And he actually found some resources specific to his discipline from a publisher where they present two very polarized takes on a given topic. And students have to appreciate both in order to talk about it and discuss it and, and suss it out and stuff like that. And it becomes more of a less of a right, I think there's writing component involved. But it's also discussion, classroom discussion based sort of thing. So as we get towards the end of our show here today, and we talk about critical thinking. One thing that strikes me as we've gone along here is that from a workload standpoint, just from a selfish standpoint, from an instructor, I can see where I would be hesitant because there is going to be part of this teaching critical thinking that's going to be extra, because you're probably going to have to do some more for the instructor labor intensive preparation and labor intensive assessments every semester. Having said that, though, I think the real key to making critical as you said, it has to be part of your learning outcomes. And you have to find that way to tie it into the discipline. So you're not adding stuff necessarily, you can modify what you're currently teaching, to also achieve that learning outcome of critical thinking that you don't have to add another, you know, the equivalent of another 16 weeks where the work and cram it all into that original 16 weeks that

there, there are ways to, to take a look at what you're teaching now. And to add more of that critical thinking component to it.

JEFF: There you go. Yes, absolutely. And one of the ways I tried to sell people on adding it to your course level learning outcomes is instead of maybe phrasing it as critical thinking phrase it as, by the end of the semester, I want my students to be able to think like a blank scholar, right. And because we all do critical thinking in various different ways in all of our disciplines, we wouldn't be able to function as scholars without it, right? So if you try to imagine rather than here's the content, I'm going to pour in my students head this semester. Rather, here are the kind of intellectual moves I want them to be able to make. You're going to find yourself moving towards critical thinking.

JIM: Jeff, thank you so much.

JEFF: Oh, thank you for having me.

JIM: And that's all the time we have on this week's episode of Let's Talk Teaching. Find out more about our podcast and we'll link to a lot of the resources Jeff talked about today. Go to CTLT.IllinoisState.edu. Click on the podcast link in the upper right page for Jeff Rients and for all of my colleagues here at the Center for Teaching, Learning, and Technology. Until we talk again, happy teaching.