

Title of Session: Targeting Librarians! Think about it

Moderator: Lesley Farmer

Title of File: 20041215targlibTHINK

Date: December 14, 2004

Room: Hot Tub Conference Room

LesleyF: Greetings, folks!

CynthiaSA: hello

KathyBu: Greetings, Lesley!

LesleyF: today we're talking about critical thinking -- how to get kids to think. Thoughts about that?

BJB2 notices the silence

KathyBu: Yes, what about having them talk more and we listen.

BJB2: learning to ask open ended questions?

LesleyF: that makes sense -- both of those items

LesleyF: We want to make sure they're connecting with the topic at hand, not just talking for talking's sake

KathyBu: Actually having them talk about their experiences and reflecting on themselves as students.

LesleyF: it's a two-way street too -- we need to connect with students' interests, and we need to help them connect their own experiences to the academic arena

LesleyF: you must be reading my mind, Kathy

KathyBu: Yes, that's a challenge, but one we need to address.

GloriaLo joined the room.

LesleyF: Critical thinking is a required course at my university. But information literacy isn't. What do you think is the overlap between those two areas...

LesleyF: Hi, Gloria

BJB2: Hi, Gloria. Welcome

LesleyF: we're thinking about thinking

CynthiaSA: Information literacy requires critical thinking about information resources.

GloriaLo: Hi, I will need to catch up on the topic.

KathyBu: Evaluating information is a key component of both.

LesleyF: we're just starting

BJB2: . o O (and both build on prior knowledge)

LesleyF: yes, in both cases students need to look carefully at the material at hand.

KathyBu: I don't think we give enough time to valuing students' prior knowledge.

LesleyF: So what is involved in such evaluation?

KathyBu: Especially when they come from a different cultural setting.

LesleyF: I agree, Kathy. Students need to draw upon their prior knowledge in order to evaluate/critique because otherwise they can't discern what is accurate or not.

BJB2: a T chart or KWL chart would be helpful

GloriaLo: What the students offer to share often tells a great deal about them and their culture.

LesleyF: good, BJ. In fact, graphic organizers in general are a good way to start. Besides the program Inspiration, do you know sites to find graphic organizers?

CynthiaSA: Yes. My students come mostly from the Middle East and they have surprising knowledge gaps as well as surprising resources in certain areas.

LesleyF: Yes, Gloria, which is a good reason for students to work together so they can draw on EACH OTHER's experiences.

KathyBu: Why don't we set up school so students talk a lot more and then we help them make connections to the academics?

GloriaLo: Making the connection is important. If you know their strengths and weaknesses you can do that.

LesleyF: so doing email/epals would foster such knowledge building, right?

GloriaLo: Only if they have access and understand how to use it.

BJB2 . o O (or using the discussion boards in the student campus in TI)

KathyBu: Yes, if our district allowed email for students!

LesleyF: you can act as an intervener/middle person, Kathy

GloriaLo: that's another problem - district security on the computers. Very restricting

JeffC: Outlawing email is atavistic at best, completely paranoid and counterproductive at worst. Check out <http://www.epals.com> and/or <http://www.gaggle.net>. Both offer safe and secure email for students.

BJB2: are you able to log in to Tapped In?

CynthiaSA: I had to show my district other Tapped In projects to get it unblocked.

GloriaLo: When do you think students start learning critical thinking techniques?

KathyBu: Not without getting my district to open a portal for it.

KathyBu: Which they will but on a case by case basis.

CynthiaSA: they begin very young.

CynthiaSA: Even 5 year olds can do some sorts of critical thinking.

BJB2 agrees with Cynthia. My 3 year old grandson does critical thinking

GloriaLo: I know they can do it - but I don't know if the skills are being taught that young.

CynthiaSA: they need to see it modeled and get practice.

CynthiaSA: My district is beginning to address it at that level now.

KathyBu: Very young children learn to evaluate when parents are most receptive to what they want.

LesleyF: exactly, BJ. Kids can figure out cause and effect at 2 months!

GloriaLo: I agree Cynthia, some students aren't very good at critical thinking skills and it is probably because they never had it modeled. My granddaughter is 2 and demonstrates critical thinking but she has a lot of interaction

SusanR: Can you give some concrete examples of critical thinking at that age

BJB2: I think that the opportunity to make choices is important in developing critical thinking skills

LesleyF: So what's involved in evaluating materials?

CynthiaSA: Evaluating things, like what to wear for a certain occasion.

LesleyF: Early critical thinking example: seeing how one's body movement impacts the motion of another object.

CynthiaSA: Choosing which object is more likely to float in the water table.

GloriaLo: On the target BJB! I was just thinking about how giving children choices is an important part of learning critical thinking.

LesleyF: so what would be involved in that decision-making, Cynthia?

LesleyF: yes, choice is critical because we have to choose what features to examine and what to ignore.

CynthiaSA: Deciding what characteristics are important for the situation

LesleyF: choice is central to problem-solving, which is also part of critical thinking

CynthiaSA: Noticing which clothing or object had those things.

SusanR: don't they do a lot of trial and error at that age

LesleyF: so the idea of selection is part of evaluation and critical thinking in general

LesleyF: Yes, Susan trial and error is also key.

LesleyF: One reason for schooling is to make sure trial and error is purposeful/effective/efficiently done.

KathyBu: So the process of rejecting something to eat may be critical thinking versus acting out!

LesleyF: Think of the apprentice model...

LesleyF: yes, Kathy. And throwing food is usually a trial and error experiment to test what happens when you release an item from your hand

LesleyF: in fact, picking up, holding, and releasing are three different skills and different uses of muscles

GloriaLo: It may be that when children are accused of terrible 2s they are really honing their critical thinking skills.

LesleyF: That trial and error method is also an example of inductive reasoning.

LesleyF: that's right, Gloria.

LesleyF: it's just terrible for us, not for them

KathyBu: Then take that analogy to an older age and ask why school is set up to stifle not foster critical thinking?

GloriaLo: So, instead of dreading this stage we should be happy about it. Just suffer for a little while.

GloriaLo: Why is school stifling critical thinking, Kathy?

LesleyF: to synthesize, problem solving is a central component of critical thinking, and problem solving involves considering all factors and choosing some to examine, finding pros and cons and interesting facts about the factors, looking at cause and effect/consequences, and evaluating/choosing from alternatives.

LesleyF: Possibly, schools would like less trial and error and more efficient uses of thinking. That's the positive spin. Personally, I think it's a matter of socialization...

LesleyF: by 4th grade students are supposed to get serious about their learning.

KathyBu: But if their basic needs haven't been met, they aren't ready.

LesleyF: People forget that imagination and creativity spur learning and keep students engaged. So the results are just the opposite of what is intended. But you'd think... that administrators/teachers would see that result from their years of trial and error teaching... hmmmmm

CynthiaSA: Some of them just don't think critically.

LesleyF: is that some of them referring to the teacher or the student, Cynthia?

GloriaLo: I see many 4th and 5th graders who aren't doing any critical thinking. Just taking up space, but not involved. They seem to need more of that imagination and creativity in school.

CynthiaSA: both, but mostly teachers

KathyBu: I would say this is a paradigm shift that is needed.

LesleyF: yes, brainstorming is a good way to be creative AND be a critical thinker.

LesleyF: Also look at this URL to see how kids can be creative and organized... OK?

CynthiaSA: Yes. We need to allow students to think out side the box and the teacher's manual

LesleyF: it's <http://www.graphic.org/>

LesleyF: Take a look at this site (click on the URL) for a few minutes, OK?

GloriaLo: okay

SusanR: The new school textbooks that I see are building in quite a few critical thinking skills, Lesley.

GloriaLo: Thanks Lesley. This will definitely be useful for getting kids more involved and thinking on their own.

GloriaLo: Students seem to rely too much on their teachers for making their decisions.

LesleyF: Let me show you an interesting web site: it's a critical thinking rubric. Want to see?

GloriaLo: Yes.

SusanR: yes, please

LesleyF: it's <http://wsuctproject.cltt.wsu.edu/ctr.htm>

LesleyF: you can also go to a search engine and type in Critical Thinking Project

KathyBu: If we externalize the thought process, "Oh, Larry, i see your conjecture was that you could bounce the ball in the library without me noticing? Did that conjecture prove correct or incorrect? It seems like we would relate to students in a way that engenders the thinking we want instead of only talking about it in a textbook way.

SusanR: Lesley, in one class I was in I noticed students making a mini paper and pencil mind maps before starting their creative writing

LesleyF: hmm, using authentic language -- and then tying it to academic domains could be useful -- a different way to get at vocabulary

CynthiaSA: I do a lot of "think aloud" when I model writing or really any new skill.

LesleyF: Glad you saw students mind mapping, Susan. If they did it on their own, then they really internalized that critical thinking skill -- huzzah!

GloriaLo: You're right Kathy. We have a few teachers who do that and it works well. the students think about things more in depth and in a way they wouldn't without the verbal prompt.

LesleyF: yes, thinking out loud is another good process. Can you think of a way for students to do that without bothering each other?

LesleyF: As librarians, we should talk aloud about finding resources and locating ideas within resources

CynthiaSA: We also encourage students to use drawings and arrows and such when planning projects and writing.

GloriaLo: That's true Lesley. If they all think out loud it would be pandemonium

LesleyF: the more senses we engage, the more powerful the learning and the concentration

CynthiaSA: We just teach them to think in soft voices.

LesleyF: library voices?

CynthiaSA: Some kids really need to hear themselves to process.

GloriaLo: Resources and ideas. Hopefully we all talk to students about that.

SusanR: We encourage students to explain their thoughts with pictures, words and numbers at an early age

LesleyF: Absolutely, Susan, which brings up an important point /difference between critical thinking and information literacy.

CynthiaSA: One teacher even gives them little "c" shaped pipes so they can listen to themselves without disturbing others.

YazidRa: That's true

YazidRa: Kids nowadays need practical activities for thinking skills

LesleyF: Critical thinking usually focuses on dealing with available information/data. But it seldom considers how to GATHER data...

LesleyF: locating information seems to be more in the arena of info lit. Of course, I think that critical thinking should involve this step too, but my ed psych colleagues disagree with me on that...

GloriaLo: Especially with children. No matter what skills you try to give them, gathering data doesn't seem to come easily.

LesleyF: tying in theory/concepts and practice is another key part of critical thinking: inductive and deductive thinking

YazidRa: What do you think about the impact of a foreign language learning into thinking?

CynthiaSA: In real life problem solving gathering data is an essential part of most critical thinking.

CynthiaSA: More languages give you more paradigms in which to engage the problem.

LesleyF: well, since language formation starts so early and actually helps shape the brain neurons, learning another language early helps critical thinking and creativity and....

LesleyF: exactly, Cynthia

YazidRa: I have always had an impression that learning a second language helps understand better the structure of the mother language

LesleyF: yes, indeed, Yazid

CynthiaSA: yes, because you have more ways to think about language structure.

CynthiaSA: something to compare and contrast.

LesleyF: at the other end of the age spectrum, apparently there comes a time when the brain is not elastic enough to learn another language. The window of opportunity closes.

YazidRa: That's true and you have to use your imagination most of the time to grasp the general idea

GloriaLo: What age is too late to learn another language?

LesleyF: so want to see a site that looks at strategies for designing critical thinking tasks?

GloriaLo: Yes

JaneGu: Sure

KathyBu: Yes

LesleyF: It depends, Gloria, but I think it's in one's 50s or 60s... that that capacity dwindles.

GloriaLo: I was just curious.

LesleyF: ok, here's the site. <http://www.as.wvu.edu/~lbrady/workshop3b3.html>

YazidRa: yes give us that site

GloriaLo: Lots of great examples. I love all of these resources.

LesleyF: here's the granddaddy of websites on critical thinking. Ready?

GloriaLo: Ready

CynthiaSA: sure.

LesleyF: <http://www.criticalthinking.org/>

GloriaLo: I like the Defining Critical Thinking page.

LesleyF: If you want to really see definitions, here's the site to see:
<http://www2.sjsu.edu/depts/itl/graphics/main.html>

JaneGu: I really like the Impromptu task for our site..5 minutes will be perfect. I've used that with another group of at-risk kids and it works so well.

KathyBu: Lesley, do you know of a site like this which could be used to encourage critical thinking with elementary students?

LesleyF: the more that we can be prepared for impromptus, the better

LesleyF: Let me check, Kathy...

GloriaLo: I'm going to be busy reading all of these and designing ways to use them

LesleyF: here's one possibility: <http://www.ithaca.edu/library/Training/hott.html>

GloriaLo: Good question, Kathy. simpler would be better for them

JaneGu: I like all the opportunities for sequel activities from the Impromptu stuff..

GloriaLo: This site is great for the elementary students.

LesleyF: another site looks at nature in terms of critical thinking -- it's not very pretty but has good ideas. <http://www.nccc.org/Curriculum/envir.todo.html>

LesleyF: And here's one that links your ideas about the world and problem solving and children and making a difference: <http://www.tolovechildren.org/children/children.htm>

KathyBu: Lesley, is anybody that you are aware of trying to do a community of practice with critical thinking for younger students? Look at all the ideas we have for pre-school today in our discussion.

GloriaLo: This site is a great way to connect children with different cultures. thank you.

JaneGu: That is a GREAT site...tolove, etc

KathyBu: Any knowledge management going on for critical thinking? This forum is the first time I've ever heard some of this tacit knowledge become explicit and I want to know more.

LesleyF: hmm, KM and critical thinking. KM is usually for adults

LesleyF: we've been focusing on the kids. HOWEVER, systems thinking is a core critical thinking component.

KathyBu: I mean KM for us to benefit from what each other has tried.

LesleyF: kids DO have tacit knowledge that they could make explicit -- think about game rules and ways to play

LesleyF: that kind of KM is BTSA, communities of practice, collaboration.

KathyBu: So we aren't reinventing the wheel or never finding the wheel at all.

LesleyF: KM tries to systematize these efforts and make them more persistent.

CynthiaSA: what's BTSA?

LesleyF: beginning teacher support a....

KathyBu: Yes, but I'm asking about KM in the area of teaching thinking, especially critical thinking.

LesleyF: making the wheel, using the wheel, missing a wheel, what's a wheel?

LesleyF: ooh, I like your idea, Kathy!

KathyBu: I want to follow up on this further. how do I do that?

KathyBu: Could next month continue to focus on this and we come back with things we've tried?

LesleyF: Try the critical thinking organization (see above). also think about contacting the curriculum committee of CSLA and have them deal with it. And then there's a possibility of thinking of grants. The national science foundation would probably underwrite something like that.

LesleyF: that's a good idea, too, Kathy, about follow-up from this conversation. Maybe the official topic can be knowledge management.

BJB2 . o O (January 19)

JaneGu: That's good, as I need to know more about KM

LesleyF: before I forget, though, a very easy way to introduce critical thinking AND creativity, is media literacy (such as Cable in the Classroom activities).

LesleyF: perfect, BJ.

KathyBu: Excellent! I just think we've only begun to discuss the teaching of thinking.

KathyBu: Could you please have a course on this, Lesley?

LesleyF: well, it's a big topic and actually a relatively new academic area. Says something about teaching, doesn't it?

KathyBu: Yeah, we're surfers! We're on the edge!

LesleyF: Well, I've actually been asked to teach the critical thinking course for computer and engineering science here on campus; I helped design the course.

JaneGu: Also this ties in with the SEL stuff you discussed, Lesley...as we can't think well when the SEL isn't also addressed.

CynthiaSA: Wayne State in Detroit has a multidisciplinary grant project about thinking skills beginning.

KathyBu: What's SEL?

LesleyF: ooo, that sounds interesting, Cynthia.

LesleyF: Jane, share...

JaneGu: Social Emotional and also to look at the work of Harvey Jackins who shared about how the brain shuts down its thinking process during emotional distress, etc.

LesleyF: that's right. And critical thinking sometimes forgets that element, sadly.

KathyBu: Oh, social emotional learning!

CynthiaSA: yes, in linguistics we call it the affective filter.

LesleyF: Assumptions in thinking are often related to SEL.

JaneGu: So a prerequisite for critical thinking is that environment that addresses the sel, i.e. affective

LesleyF: or corequisite...

LesleyF: yin yang of learning

JaneGu: Yes, co requisite...

LesleyF: as fully human beings we constantly think and feel

JaneGu: I like that best, the yin yang...and is so esp. visible with adults who have difficulty with critical thinking skills

LesleyF: I'm not convinced that thinking and feeling are really dichotomous.

LesleyF: and I think it's more than emotional intelligence

JaneGu: Also I believe that we will ultimately address the chemical part of thinking and feeling as it relates to education, to learning...

CynthiaSA: the Wayne State project is looking at that.

LesleyF: better living through chemistry -- I think you're on the right track, Jane.

JaneGu: There is a physiology of emotion and also one of thinking! and of learning

KathyBu: Are you discussing this out of Lesley's study?

LesleyF: well, there is a connection, true

LesleyF: see how critical thinking works with lateral thinking?

KathyBu: Or is it from class? You guys have a shorthand going here. I'm a bit confused.

JaneGu: No, from the work of Dr. Bernie Siegel an oncologist who discusses the chemistry of illness and of Dr. Candice Pert a molecular biologist who addresses the chemistry of thought and emotions

KathyBu: Oh, yeah. I've read his first book.

JaneGu: Sorry for the confusion, Kathy

LesleyF: I also did a study, Jane, in terms of the correlation between students' social/emotional maturity and their ability to be information literate and do research.

JaneGu: I would love to see that one..

BJB2: is the study available for us to read, Lesley?

BJB2 . o O (Jane and I have similar students.)

LesleyF: it's not published, but I can email it to folks who are interested. Just request from lfarmer@csulb.edu

JaneGu: Okay, will do

LesleyF: so what have you come away with today, folks?

BJB2 . o O (my head hurts from too much thinking!)

KathyBu: Some new eyes. I'm seeing the world in a new way from 2 hours ago!

SusanR . o O (social/emotional intelligence is the key to critical thinking)

JaneGu: Just so much to think about, and also to say that the time will come when we, as teachers, will understand the link between how our students feel and what we can do as educators to establish creative and caring spaces in which the highest level of thinking will be possible for our students.

LesleyF: BTW, although it's not mentioned much, I think part of critical thinking is metacognition -- reflecting on what you've experienced.

KathyBu: This is opening a dialogue inside with all the work I've been doing on the 40 assets and resiliency.

LesleyF: we often do lots of DOing, but we don't take the time to THINK about what we DO.

LesleyF: yes, that's a good connection, Kathy.

CynthiaSA: modeling the metacognition thing in think aloud can be good, too.

LesleyF: well, at least SEL should be part of critical thinking, Susan.

JaneGu: Reflecting really helps us integrate anything that is learned even tho' we can learn without reflecting...but at such a diff. level.

KathyBu: Reflecting helps build resiliency in individuals.

LesleyF: our brain does that reflection while we're sleeping -- see the latest Time magazine issue on that.

JaneGu: So we wake up SMART!

LesleyF: it's just that explicit reflection can be more powerful -- especially when we share our reflections with others.

LesleyF: That's right, Jane.

LesleyF: you folks are great critical thinkers -- so you can be great models for your students

JaneGu: Also, sharing the reflection creates such a cohesive learning space...kind of a way to honor the learning process itself and let others walk away feeling strong and wise.

SusanR: Students are keeping reflective journals in select subject areas...

LesleyF: empowering everyone -- the Force is with us

LesleyF: the internal dialogue, right, Susan?

SusanR: Right

KathyBu: Thank you all for a fascinating discussion! Good to hear you, Jane! Great as always BJ and Lesley. Cynthia say hi to Lansing for me! Bye!

LesleyF: thanks for everyone's good thoughts today

SusanR: Does Bloom's Taxonomy fit into this picture?

LesleyF: oh, yes...

LesleyF: synthesis, comparing, etc.

JaneGu: Happy holidays everyone,, and so glad to spend this time with you all.

LesleyF: see you all next year

SusanR: Thanks..lots to reflect upon

CynthiaSA: Thanks for the thought provoking discussion. Bye.