

**Seeking Insight: Critical Incidents,
Collaboration, and Cyber-Reflection in Higher Education**

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Abstract

Education is about insight—both giving and gaining. While higher education typically affords students a great deal of access to faculty insight, it less reliably provides faculty with similar access. Faculty committed to developing student insight have long sought resources to do so within the context of course topics and pedagogies. This study invited undergraduate students to participate in a wiki-based Critical Incident Questionnaire (Brookfield, 1995) to exchange insights on learning with instructors and classmates. Findings suggest the importance of cultivating a golden mean of supported dissonance and hospitable complexity within higher education curriculum. This includes structure and spontaneity; generalizable patterns and generative exchange. Cultivating the golden mean demands that faculty concurrently serve as content experts and as scholars of teaching and learning—in order to construct collaborative insight.

Seeking Insight

Insight: every professor has some degree of it. Typically, students have ample opportunity to access professorial insight by actively engaging in course readings and class meetings. Developing and communicating insight—whether bliss inducing, equivocal, or poignant—may be among the most valuable and memorable outcomes that higher education affords, as insights contain the potential to inform, negotiate, and even transform attitudes, beliefs, and behavior (Mezirow, 2000).

Insight, though, is of course not only present within professors. Students, too, possess insights that may both challenge and edify faculty perspectives. Student insights contain the potential to inform, negotiate, and even transform professorial assumptions, habits of mind, frames of reference, and pedagogical practices (Cranton, 2006). Oddly, professors have comparatively limited access to student insights—due to the expert-centered paradigms and pedagogies that tend to prevail in higher education. These paradigms generally situate professors in the role of speaker and students in the role of listener. Whether communicating as sages on stages or as guides on sides of classrooms, professors more often than not are those pontificating insights in higher education classrooms. In contrast, student communication of insights is generally limited to that which is specifically solicited in content-centered curricular assessments.

And still, according to Williams (2003), etymologically, assessment means to “sit beside” a learner, in order to listen, observe, measure, and evaluate the degree to which the learner communicates understanding.

So, if students gain access to professorial insights by regularly sitting in the presence of professors, how regularly do professors have the opportunity to practice such authentic assessment with students?

While some professors enjoy student-to-faculty ratios and campus climates that facilitate such regular exchanges of insight, many do not. While myriad mundane exchanges of information regularly occur, traditional course structures seldom support the authentic exchange of insights between students and faculty. Closer to the truth is that professors are exposed to a good deal of informal student feedback, but much of this falls under suspicion of obsequiousness or is characterized by disgruntled venting of academic frustration.

In some cases, formal course evaluations provide opportunity for students to share insights beyond Likert scale responses. But even these narrative insights arrive too late to be contextually

directive, as students are protected in their speech to the extent that faculty receive candid student feedback only when the semester is finished and students have moved on.

In light of these observations, it would seem that something is missing from higher education's repertoire. That something is a process for discovering student insights—including metacognitive and epistemic feedback—whereby faculty learn from and about the learning experiences of students.

Literature Review

Developmental Rationale

According to Daloz (2000), students in late adolescence are beginning to metacognate—or to critically reflect on the extent and limitations of their own knowledge. Piaget (1970) suggested that in this formal operations stage, students can synthesize a variety of concrete experiences in order to abstractly reason about their own larger epistemological perspectives. Kegan (2000) added that transformation away from less sophisticated forms of thought toward more accurate and dependable forms of thought “ordinarily takes the first two decades of living” (p. 61).

The arrival on college campuses of students who are developmentally prepared to engage reflective and insightful practice provides a critical intersection of the learner and potential for deep and meaningful learning. The *Chronicle of Higher Education* (2000) identified that students in their late teens constitute the most common demographic in higher education. They are primed to develop and communicate insights related to what Wiggins and McTighe (1998) refer to as perspective and self knowledge, through exercises in articulating what they know, how they know it, what they do not yet know well, and why this may be the case.

This self-knowledge and insight is, in part, constructed from considering ideas, experiences, and learning relationships from multiple perspectives with transformative learning aims—which Daloz (1990) describes as enabling proactive thinking, incorporating multiple perspectives, and encouraging dialogue and construction of knowledge.

Curricular Convictions

Faculty committed to fostering student perspective transformation have long sought resources for scaffolding and soliciting student insight and self-knowledge within the context of course topics, pedagogies, and interactions. One such resource, which has been used in higher education for more than a decade, is Brookfield's (1995) Critical Incident Questionnaire (C.I.Q.), which invites student

reflections, perspectives, and insights on what constitutes powerful learning. Brookfield's C.I.Q. invites students to respond to the following questions in relationship to course experiences:

1. At what moment in the class this week did you feel most engaged with what was happening?
2. At what moment in the class this week did you feel most distanced from what was happening?
3. What action that anyone (teacher or student) took in class this week did you find most affirming and helpful?
4. What action that anyone (teacher or student) took in class this week did you find most puzzling or confusing?
5. What about the class this week surprised you the most? (This could be something about your own reactions to what went on, or something that someone did, or anything else that occurs to you.) (Brookfield, 1995, p. 115.).

Core Relationships

The C.I.Q. is a tool designed to stimulate and exchange student insights relating to what Elmore (2007) calls the "instructional core" of learning. The instructional core, according to Elmore, consists of relationships between teachers and students in the presence of content (p. 221).

Utilizing the C.I.Q. within the context of a course of academic study provides students with structured opportunities for introspection through which to reflect on what has constituted powerful learning in relationship to teachers and students in the presence of content. The C.I.Q. probes content-specific, pedagogical, environmental, and relational sources of engagement, disengagement, excitement, and anxiety. In essence, the C.I.Q. supports what Brookfield (1995) calls "critical conversation" among students, for the purpose of becoming increasingly aware of choices that foster and impede democratic processes in the classroom (p. 111). Brookfield further explains that administering the C.I.Q. regularly throughout a course of study can assist students in exploring and sharing insights that expose thematic clusters of understanding and confusion, empowerment and disorientation (1995). Because these reflections are wiki based (or based on collaborative, ubiquitous, and archived knowledge construction technology), they can serve as sources of longitudinal student introspection as well as sources of faculty insight into student learning.

Technological Opportunities

While perhaps the most visible wiki is Wikipedia—nefarious in the minds of some due to its function as an encyclopedia that may be freely edited by any registered user—myriad less popularized wikis may serve reflective C.I.Q. purposes better, as they allow a site administrator to design knowledge-construction activities in an environment of increased accountability and restricted access by means of invited user authentication.

Method

In Fall of 2007 and Spring of 2008, a total of 104 preservice teachers who enrolled in an education psychology course at a public university of 10,000 students were invited to respond to Brookfield's (1995) Critical Incident Questionnaire through wiki-based technology. Of the 104 students invited, 54 elected to participate in this wiki-based C.I.Q. A wiki within the free Modular, Object-Oriented, Dynamic Learning Environment (Moodle) course management system was chosen—due to its ability to host collaborative, archivable knowledge construction within the relative security of an authentication-based online environment.

The aim was to better understand students' perspectives on the educational value of the pedagogies, interactions, and course activities within an undergraduate education psychology course. The purpose of this line of inquiry was to support collaborative metacognition—in order to develop and communicate insights that could enrich student and faculty understanding.

Research Questions:

1. Which pedagogies, exchanges, and learning scenarios were *most effective* in helping teacher candidates understand how to effectively use learning theory in support of meaningful student learning?
2. Which pedagogies, exchanges, and learning scenarios were *least effective* in helping teacher candidates understand how to effectively use learning theory in support of meaningful student learning?

Survey Instrument:

Brookfield's (1995) C.I.Q. served as the basis for soliciting student insights. In order to better understand students' perceptions of the larger effect of multiple weeks of class experiences, Brookfield's C.I.Q. was modified by framing the following questions in terms learning events from the first half of the semester rather than from a particular week.

Critical Incident Questions:

1. At what moment in the class this semester did you feel most engaged with what was happening?
2. At what moment in the class this semester did you feel most distanced from what was happening?
3. What action that anyone (teacher or student) took in class this semester did you find most affirming and helpful?
4. What action that anyone (teacher or student) took in class this semester did you find most puzzling or confusing?
5. What about the class this semester surprised you the most? (This could be something about your own reactions to what went on, or something that someone did, or anything else that occurs to you.) (Brookfield, 1995, p. 115.).

After student responses were collected through a secure, Moodle-based wiki, these responses were analyzed through phenomenological thematic clustering, in search of the essence of the learning experience (Moustakas, 1994). This qualitative approach was designed in order to gather and analyze critical incident insights, for the purpose of informing pedagogies and andragogies that foster transformative learning.

Findings

Fifty four undergraduate education psychology students elected to participate in this wiki-based C.I.Q. As participating students were assured a degree of anonymity, it was not feasible to match responses (or “edits” in wiki terminology) with respondents. For this reason, the unit of analysis was individual responses rather than individual respondents as wiki participants. Participants posted a total of 321 wiki responses across five C.I.Q. questions over two semesters. For example, 54 participants posted 81 responses to question one; thus, these 81 responses were the object of analysis. Responses were coded looking for commonalities and anomalies with and across responses. These commonalities in individual responses were developed into more substantive descriptions, or themes. Pattern analysis of these 321 wiki C.I.Q. responses suggested the following emergent themes, which are displayed in Tables 1 through 5 to correspond with the above C.I.Q. questions.

Table 1 identifies patterns in students' perceptions of engaging class experiences.

Table 1. Patterns of Frequency for Engaging Class Experiences

Question 1: At what moment in this class this semester
did you feel most engaged with what was happening? (80 responses)

Pattern	Frequency	Percentage	Emergent Theme
Major Pattern	37	46	Students reported feeling most engaged when being challenged to explain the theoretical bases for professional decisions when questions were clearly communicated in a context of ample wait time, pedagogical structure, and classroom rapport.
Secondary Pattern	27	34	Students reported feeling engaged when experiencing scenarios, role plays, and demonstrations.
Other Responses	16	20	Range of varying responses.

As identified in Table 1, students reported feeling most engaged when being challenged to explain the theoretical bases for professional decisions when questions were clearly communicated in a context of ample wait time, pedagogical structure, and classroom rapport.

Table 2 identifies patterns in students' perceptions of distancing class experiences.

Table 2. Patterns of Frequency for Distancing Class Experiences

Question 2: At what moment in this class this semester
did you feel most distanced from what was happening? (66 responses)

Pattern	Frequency	Percentage	Emergent Theme
Major Pattern	44	67	Students reported feeling most distanced when they perceived themselves to be put on the spot in the absence of sufficient metacognitive space, time, and classroom rapport.
Secondary Pattern	7	10	Students reported feeling distanced by a lack of apparent connection between course topics and individual professional aims.
Other Responses	15	23	Range of various responses.

As identified in Table 2, students reported feeling most distanced when they perceived themselves to be put on the spot in the absence of sufficient metacognitive space, time, and classroom rapport.

Table 3 identifies students' perceptions of actions that were most affirming and helpful.

Table 3. Patterns of Frequency for Affirming and Helpful Actions in Class

Question 3: What action that anyone (teacher or student) took
in this class this semester did you find most affirming and helpful? (61 responses)

Pattern	Frequency	Percentage	Emergent Theme
Major Pattern	33	54	Students found most affirming and helpful receiving instructor and peer feedback on how they're performing as critical thinkers.
Secondary Pattern	13	21	Students found affirming and helpful a learning environment that established respectful rapport.
Other Responses	15	25	Range of various responses.

As identified in Table 3, students found most affirming and helpful receiving instructor and peer feedback on how they're performing as critical thinkers.

Table 4 identifies students' perceptions of actions that were most puzzling or confusing.

Table 4. Patterns of Frequency for Puzzling or Confusing Actions in Class

Question 4: What action that anyone (teacher or student) took
in this class this semester did you find most puzzling or confusing? (58 responses)

Pattern	Frequency	Percentage	Emergent Theme
Major Pattern	29	50	Students found most puzzling or confusing the feeling that the instructor demonstrated insufficient empathy for their struggles as new professionals attempting to engage in the intimidating process of critical reflection.
Secondary Pattern	7	12	Students found puzzling or confusing the feeling that they would not leave class with all the answers to be model professionals.
Other Responses	22	38	Range of various responses.

As identified in Table 4, students found most puzzling or confusing the feeling that the instructor demonstrated insufficient empathy for their struggles as new professionals attempting to engage in the intimidating process of critical reflection.

Table 5 identifies students' perceptions of the most surprising aspects of class.

Table 5. Patterns of Frequency Of Most Surprising Aspects of Class

Question 5: What about this class this semester surprised you the most?
(This could be something about your own reactions to what went on,
or something that someone did, or anything else that occurs to you.) (56 responses)

Pattern	Frequency	Percentage	Emergent Theme
Major Pattern	34	60	Students found most surprising the appeal and sense of empowerment that they discovered when critically reflecting on the working assumptions that have often tacitly shaped their thinking about their education profession.
Secondary Pattern	7	13	Students found most surprising the degree to which effective professional practice is supported by strong theoretical and professional insight.
Other Responses	15	27	Range of various responses.

As identified in Table 5, students found most surprising the appeal and sense of empowerment that they discovered when critically reflecting on the working assumptions that have often tacitly shaped their thinking about their education profession.

Discussion

Student Insights

Students felt drawn in to scrutinize professional assumptions when sufficient time was allotted and care was demonstrated in creating a learning environment that explicitly established and

verbalized mutual respect. Students felt most engaged when they were informed in advance with critical thinking questions, or when course pedagogies provided space and time for students to reflect on their emerging understandings, in order to be able to share their developing insights.

These findings suggest the need for faculty to further develop and sustain learning environments that students perceive to be hospitable to risk taking. These findings also challenge faculty to make increasingly overt the processes that Newmann & Wehlage (1995) call discipline-based inquiry—or “substantive conversations” inquiring into the “deep knowledge” central to the “complex understandings” associated with one’s profession (p.17). The challenge, of course, is to do so in the context of organic yet scientific inquiry. This is likely to be no small challenge—demanding both structure and spontaneity; generalizable patterns and generative exchange.

Conversely, students felt distanced or less engaged in complex course concepts when pedagogies failed to bridge the gap between less reliable frames of reference and more reliable frames of reference, so that students could develop and articulate emerging understandings and course-related insights.

This finding suggests the importance of selecting pedagogies and developing classroom interactions that structure metacognition in the context of interpersonal engagement. Doing so not only leverages Bruner’s (1978) concept of scaffolding—or constructing supportive learning frameworks—but also models depth of thought developed through interactions with experienced others.

Vygotsky (1978) suggested that this sort of capacity building requires scaffolding strong enough to support learners’ readiness as well as the difficulty of their learning task. Kegan (2000) further suggested that such learning is, “a gradual traversing of a succession of more elaborate bridges” (p. 61). These developmental perspectives point to the need for faculty to design cognitive and affective interactions sufficient to foster multi-domain learner development. This too will likely demand that faculty reconceive of themselves as not only content experts, but also as students of the scholarship of teaching and learning.

Moreover, as do professors (and other folks as well), students value feeling valued. Students communicated that it is important to them to hear and feel process affirmation, in order to continue to take the academic risks associated with constructing understanding and hazarding insights. These findings reflect the human needs analysis offered by Maslow (1954). Belonging and esteem are

important, in students' perspectives, if they are to devote time and energy into critical analysis of the presence and limitations of their knowledge and insights as emerging professional decision makers. Concretely, then, when students report not feeling affirmed or valued in language or expression that fits their schema of what affirmation typically sounds or feels like, they may become puzzled or confused about the validity of their perspectives—thereby undermining their foundational deficiency needs and compromising their development as individuals who engage in critical discourse and actualization of being needs.

Finally, students admitted feeling oddly engaged when applying their emerging academic understandings to the complex world of professional decision making. The risky yet rewarding cognitive, affective, and psychomotor work of interpreting, characterizing, and articulating their new professional insights brought expressions of feeling increasingly empowered to respond to the complex demands of skillful professionalism in postmodern educational environments. These expressions of odd satisfaction may be signs of perspective transformation that frees students from continued subservience to unsubstantiated notions, norms, and assumptions in favor of consciousness building, perspective, and self-knowledge.

Central to consciousness building is critical reflection on one's own personal and societal assumptions. Sorting through assumptions requires an individual to reflect upon the discrepancy between justifiable and unjustifiable worldviews. Sorting through discrepancies is an element of Jung's (1971) notion of being at variance with one's self. Being at variance with one's self suggests a constructive and potentially transformative internal dissonance that stirs the cognitive and affective processes within an individual—in order to more authentically self-author one's way of being in the world—a process of emancipation from uncritically assumed frames of reference.

Scholarly Opportunities

While these findings are unlikely to surprise professional educator-scholars, they may serve to remind those who teach with transformative intention that student perceptions and professor perceptions of what constitutes supportive environments, instructive feedback, and sufficient scaffolding for critical analysis likely differ. The above may also serve as an opportunity to problematize by whom, how, and why such perceived needs might be addressed in classrooms that do not so much seek to transfer knowledge and power but instead to create conditions in which knowledge and power may be developed and used as tools of epistemological and perspective

transformation. Moreover, these findings may serve to advance data-driven pedagogical decision making—informed by student perspectives and insights. Regarding such multidirectional exchanges of insight and consciousness building in higher education, Rogers (1994) concluded, “We have been asking for something less, and we have been getting something less” (p. 21).

How, then, can faculty nurture student C.I.Q. insights within the constraints of busy teaching, service, and research commitments? Surely, it would seem that already overextended faculty simply cannot continue to invest more time and energy into their teaching responsibilities without compromising additional professional commitments to the other demands of advising, service, research, and publication.

Clearly, when considered in isolation, each of these dimensions of effective professionalism demands the better part of faculty attention. Yet, in isolation, as Yeats (1919) warned, “Things fall apart; the centre cannot hold” (p. 276). Even the most well-intentioned faculty simply cannot excel in each of these categories separately in a sustainable manner. Attempting to do so is at least unwieldy and perhaps untenable. But most importantly, it is unnecessary and even unproductive to separate these commitments to teaching, learning, and scholarship from each other.

Considered collectively, the relationship between scholarship, teaching, and learning reveals symbiosis. Important scholarship is educative; meaningful education is instructive; valuable instruction feeds learning; and authentic learning is connected to disciplined, scholarly inquiry. As observed by Elmore (2007) it is imprudent to expect meaningful accretions to the instructional core of teaching and learning without enriching insights and understanding of scholarly best practice.

Further Scholarship

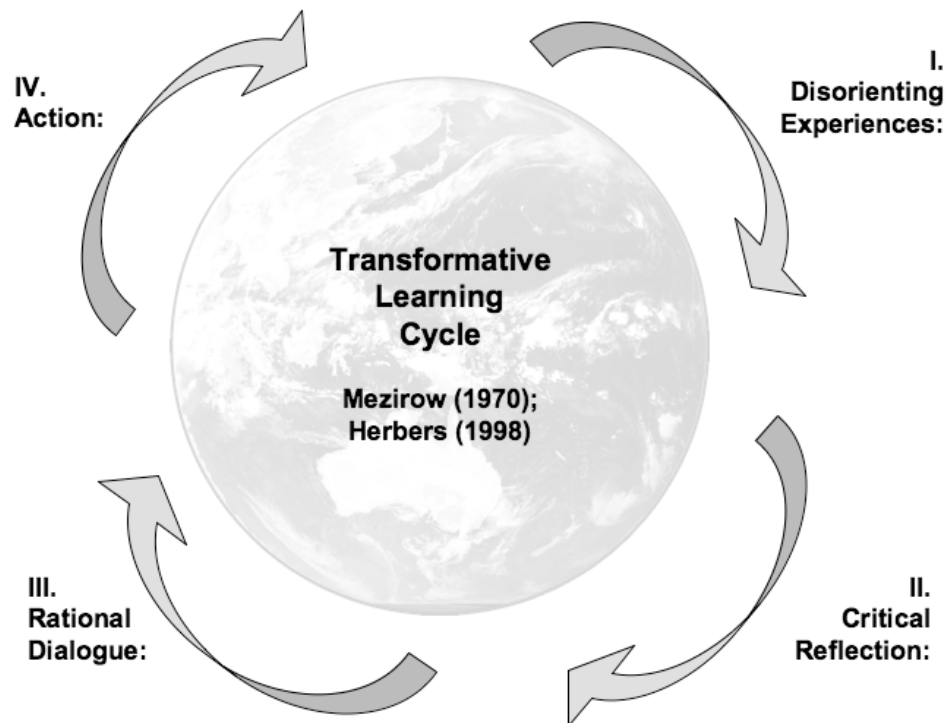
While the above findings provide student insights into critical learning incidents, some important questions remain unanswered for those who teach with transformative intentions.

In order to better understand the degree to which transformative learning is taking place within the curriculum of this education psychology course, in Fall 2008, 50 education psychology students will pilot a modified wiki-base questionnaire, born from Brookfield's (1995) C.I.Q. The prototype will probe what Elmore (2007) calls “blank spaces in critical places” (p. 190). These blank spaces are associated with students' experiences with the major elements of Mezirow's (1970) transformative learning theory, which Herbers (1998) distilled into four quadrants as listed below (Also see figure 1):

- I. Cognitive dissonance of disorienting experiences

- II. Critical reflection on assumptions that contribute to dissonance
- III. Rational dialogue on alternative perspectives
- IV. Directed action consonant with new understandings

Figure 1: Four quadrants of transformative learning experiences



The questions that remain unanswered are partially methodological and partially epistemological. They include:

1. What event(s) associated with this course have troubled your thinking or caused you cognitive dissonance?
2. What assumptions, beliefs, or perspectives about learning have you or others held that have contributed to this dissonance?
3. What other assumptions, beliefs, or perspectives about learning may suggest value in proceeding otherwise?
4. In what ways does what you think now affect and inform your choices and behavior?

While the modified iteration of this instrument is informed by study and application of Brookfield's (1995) model, this modification is piloted with the conviction that further experience,

research, dialogue, and greater understanding of transformative methodology will enrich, revise, or redirect its design, language, structure, and use.

With the worthy aim of better understanding student insights into core teaching and learning relationships, such continued investment suggests the possibility of informing, negotiating, and even transforming faculty and student insights through the symbiosis of scholarship, teaching, and learning.

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Author's Note:

Thanks to the students of EdSe 4501 for their participation in this project. Thanks also to Jill Torres, Gerry Nierengarten, Lynn Brice, and the Archibald Bush Foundation for support and guidance on this project.