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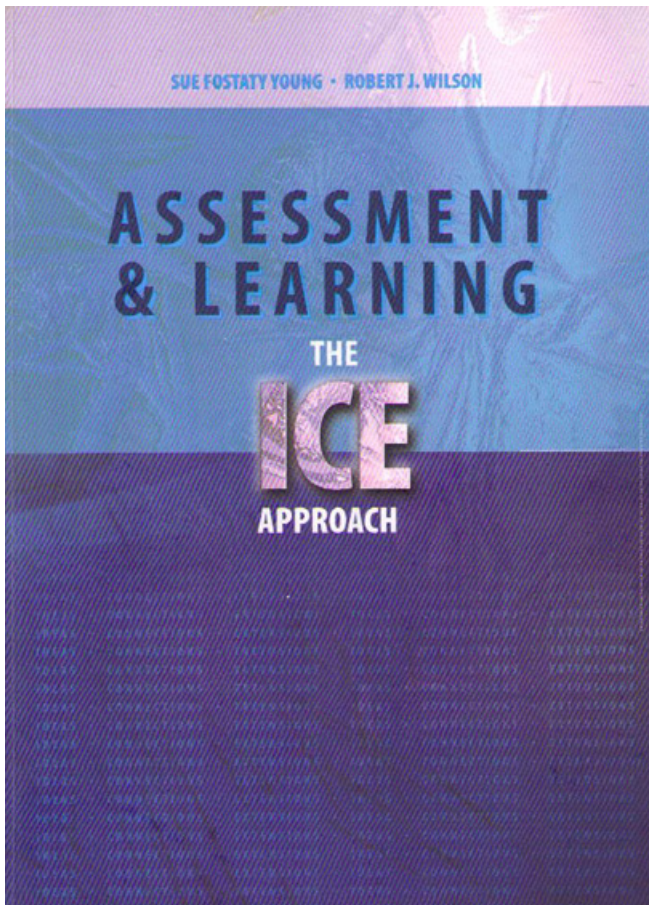
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# The ICE Approach: Saving the World One Broken Toaster at a Time

By Grahame Renyk and Jenn Stephenson

Developed by Sue Fostaty-Young and Robert J. Wilson, ICE is a tool for assessing student learning. The basic principles are outlined in their co-authored book, *Assessment and Learning: The ICE Approach*. Standing for Ideas, Connections, and Extensions, the ICE model maps the process of skill acquisition as learners move from a first encounter with a new problem to competence and expertise. *Ideas* (I) are the fundamental concepts—vocabulary, definitions, facts. They may be presented as lists, descriptions, or “just information.” Once in hand, these basic building blocks are put together by learners into *Connections* (C). Connections involve identifying patterns and relationships between the basic ideas. They may link pieces of information together or they might also link what is newly learned to something the student already knows. Finally, when a learner becomes adept, they might demonstrate *Extensions* (E). Extensions arise when students synthesize what they have learned through the process of making connections to generate new knowledge. Extensions answer questions like “What does this mean?”; “How does this change my view of the world?”; and, as we are now famous for bluntly saying in the classroom: “And so what?”

In its primary form, ICE is intended as a means of measuring student learning, and of determining at what level students are working. However, because ICE sets out a progressive route from Ideas through Connections to the ultimate goal of Extensions, ICE is not just descriptive of an individual’s achievement at a particular point in time. It is prescriptive, pressing students to think outside the assignment, outside the course, and outside the academy to ask, “Why does this matter?” In this way, ICE is essentially activist in its philosophical bent.



Book cover from *Assessment and Learning: The ICE Approach* by Sue Fostaty-Young and Robert J. Wilson.

In the drama department at Queen's, we have been team-teaching the first year introductory course DRAM100 in a closely collaborative fashion since September 2007. With an enrollment of 225, DRAM100 draws a diverse group of students from across the university. For some students this is a foundation course for a concentration in Drama; for others this is a first-year elective. The course is certainly introductory, but rather than focus on foundational facts, we have elected to introduce students to the key questions in the field asked by drama scholars and practitioners at all levels. The ICE model has provided the core structure for asking these questions. Working backwards from this ultimate goal in using ICE as a model for thinking about theatre, we incorporate ICE into both assessment and assignment design as we scaffold this process for students, yoking this critical thinking pattern to specific learning tasks.

When teaching students about ICE, we regularly tell a story about a broken toaster. This is what we say (the plot has been frankly stolen from Wilson and Fostaty-Young's book [54]):

Imagine here there is a broken toaster. The first group examines the broken toaster, they point to one particular part that is broken. They say see this bit here is broken. A second group examines the broken toaster. This group sees the broken part and they also note that the reason that the toaster is broken is because the part that is broken is no longer working with another part of the toaster mechanism. They say they know why the toaster is broken. A third group examines the toaster and putting together information from the previous two groups, they see which part is broken, they see how it works together with the rest of the mechanism and ... they fix the broken toaster!

Working at an Ideas level, one can identify the elements that contribute to the malfunction and one can conclude: "Yup, the toaster's broken." Moving to a Connections level, one identifies the relationship between the elements, determining patterns such as cause-and-effect. Here one can say: "Yes, the toaster's broken and here's why." Finally, looking at the broken toaster with an eye for Extensions, one can extrapolate from the relationships already noted and use this information in a new way. Then one may say: "The toaster's broken, here is why, and I know how to fix it." The first time we tell this story at the beginning of our course, the goal is simply to introduce students to the ICE terminology and to give them a concrete example of how this approach works. We tell the story again a second time on the last day of class as a kind of valedictory address. In this version, we conclude by challenging the students, saying "I want you to be the kind of people who go out into the world and fix broken toasters!"

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But what does it mean to fix broken toasters in the context of the activist classroom? Perhaps the best way to explain how ICE leads to a more activist approach to learning is to discuss how we have started to apply the ICE progression to assignment design in DRAM100.

The simplest assignments are those geared primarily towards assessing Ideas-based learning, but convergent assignments that are looking for "right" answers can only go so far. In a post-secondary theatre-as-a-liberal-art classroom, where students may go on to become professional theatre practitioners, or to postgraduate work in the theatre and performance studies, or to a myriad of other career paths where their main contact with theatre will be as audience members,

### ICE Assessment Rubric for Production Critique

	Ideas	Connections	Extensions
<b>Critical Thinking</b>	<ul style="list-style-type: none"> <li>Proposes a general topic for discussion</li> <li>Accurately describes content of the production</li> <li>Identifies elements for analysis or contrast</li> <li>Sequences observations</li> </ul>	<ul style="list-style-type: none"> <li>Proposes a relationship between production elements to be evaluated and a theme or attitude</li> <li>Illustrates patterns and connections</li> <li>Formulates generalizations based on evidence</li> </ul>	<ul style="list-style-type: none"> <li>Suggests significance or purpose for an identified relationship</li> <li>Extrapolates from comparisons or applications to create new knowledge or awareness</li> <li>Extends thinking beyond the confines of the specific production</li> </ul>
<b>Reasoning</b>	<ul style="list-style-type: none"> <li>Assembles evidence relevant to general topic</li> </ul>	<ul style="list-style-type: none"> <li>Evidence is linked directly to claims</li> <li>Connections between claims, evidence and conclusions are logically sound</li> </ul>	<ul style="list-style-type: none"> <li>Evaluates alternative or opposing viewpoints</li> <li>Validates conclusions</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>Uses clear, direct, and conventional language</li> <li>Uses paragraphs to sequence distinct ideas</li> <li>Uses words in accordance with their correct meaning</li> <li>Errors of grammar or spelling do not detract from readability</li> </ul>	<ul style="list-style-type: none"> <li>Uses language to build bridges between concepts</li> <li>Use of language contributes to the interest of the reader and enhances the presentation of ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Modifies language and structure to reflect the structure of the argument</li> <li>Uses language to communicate personal relevance</li> </ul>

Source of assessment model format: Fostaty-Young, Sue and Robert J. Wilson, *Assessment and Learning: The ICE Approach*. Winnipeg: Portage and Main P, 2000.

An example of an ICE rubric distributed to students for a production analysis assignment.

students are (hopefully) being encouraged to contribute a new and deeper understanding of their field and indeed the world. The goal for the activist classroom is to propel students towards precisely this sort of divergent Extensions-level thought. In our experience, ICE has provided a valuable roadmap for designing assignments that facilitate this sort of creative critical engagement.

In DRAM100, we use ICE-based rubrics to design and evaluate assignments, assessing skills according to where they fall along the progression from Ideas to Extensions. However, we also use discussions of the ICE model itself to encourage a meta-cognitive understanding of the learning process in our students. The simplicity of ICE’s three-part framework has been invaluable in helping students to, basically, learn how they learn. Indeed, in modeling the thought process as a simple progression from Ideas, through Connections, to Extensions, Fostaty-Young and Wilson have provided a potent conceptual metaphor for discussing the learning process with students, and an excellent starting point for concretely ex-

plaining to them how they can more readily arrive at complex Extensions-level critical thought in their work.

ICE was created partly in response to the limitations of some of the more well-worn behaviourist models of learning that arose out of the 1950s and 1960s, perhaps best represented by Bloom’s Taxonomy. Such taxonomies, note Fostaty-Young and Wilson, “emphasized the products of learning ... in the behaviourist model, it was not important what the learner was doing during the process, only what the outcomes looked like” (6). They go on to note that:

in the almost half century since the publication of this and like taxonomies, cognitive psychologists have come a long way in understanding the mechanisms people use to move from little knowledge to a lot. Some learners, for example, habitually use “surface” approaches to learning, content with attempting to match their learning to the specific demands of the task. Often, schools unintentionally support such learning approaches by a too-heavy reliance on multiple choice and completion-type assessments. (6)



An office talisman: the quintessential broken toaster.  
Photo by Jenn Stephenson

The activist classroom seeks to develop students beyond a task-oriented, “surface” approach to learning. The point is not only to gather knowledge, but also to process and challenge it. Similarly, ICE seeks to promote a pedagogical approach that “emphasizes depth of learning more than coverage” (6), making it ideally suited to a Humanities classroom.

Core to the ICE approach is the notion that learning is a cognitive process occurring in each individual student. Conceptually, this invites a shift in how we think about learning, especially in terms of *where* that learning happens. Teaching comes from the instructor, but learning comes from the student. By describing learning as coming from the student, we are not talking simply about student effort and attention; rather, we are talking about the actual cognitive work of transforming information into knowledge. For information to become knowledge, it needs to be cognitively processed and incorporated into the context of prior knowledge by the learner. That process can only occur within the student.

Because it is modelled specifically as a *progression*, ICE has proven particularly helpful in designing assignments that locate learning in the student. Inherent in the model is the notion that critical engagement and deep learning (i.e. Extensions-level thinking) arise out of Connections. In DRAM100, we have been experimenting with several assignments designed to encourage Extensions-level engagement according to this progression. One of the most successful is a simple Connections-based assignment that invites students towards Extensions by asking them to establish and describe a specific connection between a concept covered in class and some aspect of their own prior knowledge. In its design, this assignment cuts to the very core of the ICE approach to learning. The assignment appears as follows:

#### CONNECTIONS RESPONSE ASSIGNMENT:

Choose either *A Doll’s House*, *Mother Courage*, or *Krapp’s Last Tape* and complete the following:

Find a “piece of storytelling” from outside of what we’ve studied in DRAM100 that you feel is working in a similar artistic tradition as your chosen play. This “piece of storytelling” can be a movie, a television show, a theatrical work, a novel, or a short story.

Start with a brief description of your example. Then convince me that your example is working in a similar artistic tradition as your chosen play by making specific links between the two. (Hint: you can look for links in terms of style, the way that the story is being told, and/or the world-view that might be behind the storytelling).

**500 word maximum**

Here, a connection is proposed between a play studied in the course and a “piece of storytelling” from the student’s prior experience. The assignment design provides the student with a structural template for the response while leaving the choice of discussion material somewhat open. The firm structure helps abate the anxiety created by a blank slate assignment. It offers a clear starting point, and it initiates thought and analysis by forcing students to juxtapose two ideas, thus jump-starting the cognitive exploration of each concept. However, while the students are forced to make the connection itself, they are given some freedom as to what to connect. This allows them to bring their own prior knowledge into the discussion and to process course materials on their “home turf,” thus locating the learning process in their own individual cognitive frameworks.

An important caveat to this assignment is that students must be encouraged to go beyond simply making a superficial connection between two concepts. While the initial connection is important, it is in the exploration of the specific and varied links between concepts that the extended learning usually occurs. Take one student’s response to the Connections Assignment described above:

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Bertolt Brecht's play *Mother Courage and Her Children* effectively parallels the modern TLC reality show *Jon and Kate Plus Eight* ... [e]ssentially, both stories discuss how societal structures, specifically capitalism, persuade people to behave in ways that are contrary to their inherent nature. *Jon and Kate Plus Eight* documents the life of the Gosselin family, including parents Jon and Kate, along with their eight children, a pair of twins and sextuplets. Originally the series allowed viewers to observe the struggles associated with raising eight young children, all around the same age on a modest income. However, as the popularity of the show rapidly increased, the focus shifted to filming the Gosselins' acquired material wealth resulting in the demise of Jon and Kate's seemingly stable marriage.

... the characters in *Mother Courage* and *Jon and Kate* fall victim to the capitalist environment that surrounds them. *Mother Courage* and Kate Gosselin attempt to financially and emotionally provide the best life for their families in the confines of their society. Both mothers are extremely resilient, yet ultimately they fall victim to this ingrained societal value, which results in their demise. These women must go against their inherent instinct to protect their family from outside forces in order to satisfy the financial obligation to their family. *Mother Courage*, for example, denies aiding her son in order to help the remaining family survive. Kate Gosselin compromises her children's health and happiness by alienating them from a life without television cameras. There is a social convention that dictates that families must produce a sufficient income to feel secure. Profit factors into each decision these women make and subsequently, is the main reason for conflict. In the case of Kate Gosselin, her seemingly happy family is subsequently torn apart by a nasty divorce, a byproduct of her decision to do a reality show. *Mother Courage*'s children each die while she is haggling; ironically, a decision she feels is necessary to provide for them ... exploitation is a common element between both stories. *Mother Courage* and the Gosselins willingly use their children for economic gain.

*Reprinted with kind permission of Grace Johnson.*

Admittedly, at first glance the connection between *Courage* and Gosselin seems specious. The temptation for the instructor is to read on with a roll of the eyes and the usual "kids-these-days" lament about the oversaturation of trash culture. However, a closer look reveals that the student has begun to cut to the heart of *Mother Courage*. In drawing specific links to *Courage*, the student begins to see Kate Gosselin in the context of the economic and political forces that create and subsume her. The student is beginning to make sense of Brecht's



A still from the archival video of DRAM100 Lab H's 2009 mash-up of *A Dream Play* by August Strindberg and *Love and Human Remains* by Brad Fraser.

*Video by Grahame Renyk*

play by using a contemporary pop culture reference; however, she is also making sense of contemporary pop culture by referring back to Brecht. For the student, and indeed, for everyone in the course (since we discussed this response in class), new understandings of both Brecht and the contemporary world arose out of this tiny little assignment—something that would certainly delight Mr. B. Is it a sophisticated Marxist reading of Kate Gosselin? Not as of yet. However, the student is now ready to encounter Marx in a whole new way since, before being told about his ideas, she has discovered some of them for herself.

What is most important is the fact that the realizations arrived at in this response arose from within the student, and did not come directly from the instructors. We may have facilitated the realization, but we did not create it. This is what opens the potential for the activist classroom. The student has generated her own understanding; she has begun to

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A still from the archival video of DRAM100 Lab C's 2009 mash-up of Timothy Findley's *Elizabeth Rex* and Sophocles' *Antigone*.  
Video by Grahame Renyk



A still from the archival video of DRAM100 Lab H's 2009 mash-up of *A Dream Play* by August Strindberg and *Love and Human Remains* by Brad Fraser.  
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engage critically and creatively with the world of her own accord. Indeed, we believe that this is the goal of the twenty-first century activist classroom—not to deliver information, nor to indoctrinate students into a single mode of thinking, but rather to prepare students to be critical questioners as they engage with a complex, information-saturated world.

In another DRAM100 assignment, students, working in lab groups of twelve to fifteen members, are asked to take two scripts from our course anthology and “mash” them together to create a new devised performance piece. As with the Connections assignment discussed above, an initial structural framework is forced upon the students, and they are driven to respond by finding connections and relationships between the distinct plays. The structure helps foster learning by providing students with something to push against. As they make connections between the plays, our hope is that new ideas and approaches will shake loose.

One recent mash-up combined Sophocles' *Antigone* with *Elizabeth Rex* by Timothy Findley. In performance, the group in charge set up two parallel worlds: *Antigone* costumed in greens and *Elizabeth Rex* in reds. With a single female figure shuttling between the two worlds, the group staged short alternating fragments from each with a shared motif or repeated word triggering the transition from one to the other. The connections generated across the two play worlds were especially rich, linking Antigone to Elizabeth, of course, but also linking the rulers Creon and Elizabeth, the executed Antigone to Essex, and—amusingly—Tardy, the near-blind seamstress, to Tiresias. The new play drew on key themes from the seed texts to reconfigure core questions about the burdens of leadership and the performance of self. Ultimately, the two worlds collapsed into self-reflexivity as Elizabeth/Antigone rejected being written by Shakespeare/the mechanism of tragedy and instead decided to write her own self.

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Another group's mash-up introduced Indra's Daughter from Strindberg's *A Dream Play* into the central action of *Love and Human Remains* by Brad Fraser. One of the restrictions of the assignment is that the scenes can only use original language from the two seed plays. Here the chanted threnody “Skin. Blood. Breasts. Feet. Hands.” from Fraser's play beautifully depicted bodily transformation as the deity figure of Indra's Daughter became corporeal. The new understanding developed by the lab group for the mash-up argued that it is impossible to remain innocent in a world that is not. So, to support that perspective, instead of simply being disappointed at the suffering of humans, this Daughter, in the end, suffers a “mental break” and in a violent rampage kills everyone.

These two projects are typical of the best work that emerges from this challenging assignment. With such an

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Stills from the archival video of DRAM100 Lab C's 2009 mash-up of Timothy Findley's *Elizabeth Rex* and Sophocles' *Antigone*.  
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open-ended task the results are wide-ranging and wonderfully unexpected. Beyond the dramaturgical and scenographic choices made by the groups in support of their core understandings, we try to further encourage students to extend their thinking into the world around them by asking them to explain how their mash-up will be relevant to their current social and historical context. We ask them to answer the questions: “Why Here? Why Now?” with their pre-

sentation. As with the Connections Response, we strongly encourage students to move beyond pat answers and superficial connections towards drawing specific links between what they have created and where they are situated as spectators and creative artists.

In our experience, the use of ICE in both assessment and assignment design promotes a learning-based, rather than teaching-based, approach to pedagogy. Ultimately, it responds to the question: Are we teaching, or are we fostering learning? The simple formulation of Ideas-Connections-Extensions, when put into practice, helps remind the instructor that the learning process ultimately needs to be located inside the student. Information can be thrown at the student, but until that student chooses to actively internalize and process that information, there is no learning happening. ICE provides a useful tool for engaging the twenty-first century learner, and for preventing his or her learning from being lost amid all the other noise our contemporary culture produces.

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## Works Cited

Fostaty-Young, Sue and Robert J. Wilson. *Assessment and Learning: The ICE Approach*. Winnipeg: Portage and Main, 2000. Print.

Grahame Renyk and Jenn Stephenson teach in the drama department at Queen's University. Renyk is the recipient of the 2010 Frank Knox Teaching Award presented by Queen's University's Alma Mater Society. Stephenson is a two-time recipient of the Drama Department's Teaching Excellence Award (2005 and 2009). Both are infamous for their obsession with ICE.