# Reading As Active Learning: Exploring pedagogical practices in a dual-classroom model 

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#### Abstract

Reading academic material is required in virtually all university classrooms. As such, reading can present a challenge not only for reluctant or resistant students, but also for instructors who assume students have completed assigned reading before class, have understood the information, and retained it for subsequent classroom discussion. However, research has shown the majority of students do not complete the assigned reading. Rather than presenting original data, this paper re-frames pedagogical practices in family science courses using a dualclassroom model for students to engage in active learning through assigned reading. Four active reading strategies are outlined to maximize dual-classroom learning environments.


Keywords: instructional strategies, college teaching, textbook use

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## Background

The model for higher education classrooms requires that students engage in academic rigor. Reading is vital to a professor's consortium of teaching tools and student response to assigned reading is a means of assessing learning objectives. However, extant literature reported that only $24.8 \%$ to $46 \%$ of students read the textbook assignment and of those who reported the highest compliance (46\%), only 55\% demonstrated a basic comprehension of the reading (Baier et al., 2011; Hatterberg \& Steffy, 2013; Hoeft, 2012; Weimer, 2010). The majority of university students lacks foundational information for mindful, rigorous learning.

The purpose of this paper is not to present new research, but to explore empirically proven methods within an innovative learning model to transform reading into an active process where students self-regulate their learning (McCombs \& Whisler, 1997). This paper will first address how current practices around assigned reading creates a learning gap between what the teacher expects and what the students actually do. I will ground my proposed practices in the instructive theories of Gardner, Bloom, Piaget, and Bronfenbrenner. Second, this paper will present an original dual-classroom model to encourage a learner-centered engaged reading continuum. Finally, it will apply four reading strategies as active learning.

The following outlines five problems with assigned reading:
I. Students frequently assume that reading is optional, especially if the professor spoonfeeds material from the textbook during class time. Baier et al. (2011) reported that nearly $90 \%$ of students believed they could pass the class with a C or above without reading the textbook. About 31\% percent believed they could earn an A without completing the assigned readings.
II. Students have varying abilities to read academic material, to focus on key points, think critically, apply, and retain information (Weimer, 2013).
III. Reading is generally a passive activity with little change happening to the individual's behavior, attitudes, and core knowledge (Weimer, 2010).
IV. Students wait for the lecture, then go back and memorize key points needed to pass the test. It is generally a backward approach resulting in only short-term, "surface learning" and the inherent attitude of "Just tell me what's on the exam." (Weimer, 2013).
V. Scholarly texts pose a perennial challenge of being boring and not motivating to read due to burdensome writing (Tolman \& Kremling, 2017).

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Instructors design class objectives based on the assumption that required reading will be done outside of class, either before or after the lecture. They assign all students the same text and expect them to read, absorb, understand, and retain information for in-class discussion. Multiple theoretical frameworks would protest this ineffective approach. The following examines relevant learning theories to inform better teaching and learning practices.

## Howard Gardner

Gardner’s (2011) multiple intelligences theory argued that not all students view the world the same, nor process information identically, and each has preferred learning styles. His seminal research guides the underpinnings of educational pedagogy in modern classrooms. Gardner originally proposed seven intelligences (linguistic, logical/mathematical, musical/rhythmic, bodily/kinetic, visual/spatial, intrapersonal, and interpersonal intelligences) and later added naturalistic and existential intelligences (Armstrong, 2009; Gardner, 2011). Multiple approaches to teaching acknowledges more reflective, experiential learning, particularly when responding to text. By definition, reading as "active learning" should include experiences that stimulate mental activity, lead to meaningful, individualized learning, and eliminate the "illusion of understanding" (Svinicki \& McKeachie, 2014). Reading, therefore, should engage different domains of the brain to stimulate mental activity that would lead to active learning.

## Bernard Bloom

Bloom's (1956) taxonomy is a pedagogical framework used extensively in curriculum development. He posited a hierarchy of six cognitive skills from simple to complex that have been revised to include: remember, understand, apply, analyze, evaluate, and create (Anderson \& Krathwohl, 2001). Merely reading a text would fall under the primary skill of "remembering," to recall basic information or memorize a term for a quiz. Albeit not the ideal, or the end goal, the lower-order objectives are meant to scaffold increasingly more sophisticated thinking, such as "evaluate" by critiquing information.

When students only skim, or neglect to complete assigned readings altogether, they fail to reach higher-order skills. In concert with Bloom's hierarchical model, reading outside the class should become an increasingly more active process as students climb the ladder of lower-to-higher-order learning. Teachers should intentionally structure engagement with the simple element of reading text to offer a richer and more complex use of class time that would advance in-depth learning (Waldrop \& Bowdon, 2016).

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## Jean Piaget

Reading as active learning is based on principles espoused by Piaget, namely constructivism, which applies to both learning theory and epistemology. The principles of constructivism argue for the exigency of active, social learning (Wadsworth, 2003). Constructive learning is a student-centered instructional strategy that "shifts from what to teach to a focus on what must be learned by each student" (McCombs \& Whisler, 1997). Reading should be a reflective process where the learner measures new information contextually with prior knowledge. "People learn by using what they know to construct new understandings... [so] all learning involves transfer that is based on previous experiences and prior knowledge" (Bransford et al., 2000, pp. 68, 236).

Regrettably, reading academic material is a passive activity and a dull process for many undergraduates. Piaget would inspire instructors to re-frame the purpose of reading to interact with the text on many points of contact, in and out of the classroom. Students should assimilate new ideas into pre-existing cognitive schemas (prior knowledge) or revise and restructure a new schema to accommodate for new learning.

## Urie Bronfenbrenner

The ecological theory drives a great deal of research in the field of family science. We understand that human development and learning is bi-directionally influenced from environmental systems comprising the microsystem, mesosystem, exosystem, macrosystem and chronosystem (Bronfenbrenner, 1995). Professors disregard the ecological framework when they plan curriculum with little thought for learning settings other than the classroom itself. Indeed, successful stewards of the ecological model seamlessly link the classroom with other influential contexts in their students' lives. The intersections and implications between students' personal experiences, academic reading, classroom discussion, assignments, and activities are what makes this model robust in nature and compelling in implementation.

## Reading as Active Learning Model

A primary aim of this paper is to close the distance between what professors expect their students to achieve through assigned reading and the reality of student response. I offer teachers an innovative, dual-classroom, active, reading model to apply scientific learning theory to course development in the field of family science. The "Reading as Active Learning" model is an original pedagogical strategy that unpacks the aforementioned theories and frameworks and proposes a "dual classroom" approach. The dual-classroom model is not merely about students getting the assigned reading done but about interacting with the material itself in an active learning process. To that end, it involves two steps: Classroom 1 and Classroom 2.

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If the antecedent to a classroom experience is reading a common text, that setting should be its own classroom experience, or "Classroom 1" (see Figure 1).


Figure 1. Dual-classroom Active Reading Model: Stage One

Wherever the student will have initial contact with the assigned reading becomes the genesis of learning. It may be the home or any other environment outside the classroom. Three expectations undergird Classroom 1: (a) assigned reading is completed in this setting, (b) the student/learner prepares to become the teacher in a future setting (e.g. the classroom or online discussion board), and (c) active learning is initiated using multiple intelligences, principles of constructivism, and deepening reflection skills.

Embedded in this model is the implication that students naturally have as much autonomy, control, and creativity as possible to be motivated to gain learning on their own terms and within their environmental systems. There is no time limit compared to a 50- or 75-minute class period.

With the dual-model method, teachers plan their curriculum with multiple environments in mind, particularly the pre-classroom environment. They reflect on these questions: What do I want to have happen between the student and text during the first contact? What multiple intelligences am I addressing in my curriculum in regard to reading? How can students take responsibility for self-engagement? How can I plan for greater classroom preparedness through active reading? How can I structure the bridge between home and school to achieve a learning continuum? How does my pedagogy prepare my students to apply the content and become lifelong learners?

I suggest that curricula design often persists for students in this sequence: (1) read material, (2) attend class (with a low compliance of assigned reading), then (3) complete an assignment later. This pattern of expectation encourages lazy learners who are not held accountable for engagement with assigned reading before, during, and after class. To address the previous questions, university instructors might restructure their curricula to address how the student's world contributes to their understanding of the text. Rather than tolerating the student who waits to skim the text after class when the assignment or test is due, active learning teachers assign the engagement before class (in Classroom 1) to prepare and empower students. Thus, at least the initial execution of an activity is synced to the reading and is due before class rather than after.

In Figure 2, the preparation and competencies gained in Classroom 1 naturally flow into the formal setting, or Classroom 2, which represents the typical face-to-face or online class.


Figure 2. Dual-classroom Active Reading Model: Stage Two

Hybrid and blended courses contain the same key elements of this model wherein initial study and independent learning occurs in Classroom 1. When students attend the face-to-face portion of the class, they bridge the two environments by reviewing, clarifying, and expanding the learning gained earlier that week in Classroom 1. The dual model also has a similar premise to a "flipped" classroom insofar as the student is held accountable to prepare for class by reading articles or textbook chapters to maximize classroom learning (Waldrop \& Bowen, 2016).

Reading as active learning addresses these problems and assumes:
I. Reading is an interactive process that engages more of Gardner's Multiple Intelligences (Gardner, 2006).
II. Class time supplements rather than supplants reading. The majority of class time (Classroom 2) is not used to "cover" the chapter or readings, but to build on what happened in Classroom 1. Class time is used better for analysis, summaries, comparison, and application (Svinicki \& McKeachie, 2014).
III. Students become learners and teachers with activities such as "Reciprocal Peer Teaching" (Major, et al., 2016). If teaching and reviewing material is involved in the learning process, the student's participation and personal investment increases their motivation and long-term retention.
IV. Teachers acknowledge the compelling influence of each student's diverse world that largely contributes to their body of knowledge and meaningful, individual learning. They link classroom and home as part of the ecological framework (Bransford, et al., 2000).
V. Students become mindful learners, critical thinkers, and deep processors for life (Svinicki \& McKeachie, 2014).

## Four Strategies for Reading as Active Learning

There are myriad of teaching strategies effectively used in higher education classrooms. However, they are usually limited to formal settings and constrained by varying degree of individual engagement and time limits for processing, practicing, and assimilating personal application. I offer four learning strategies that can be adapted and assigned to Classroom 1 to significantly improve individual scholarship: Graphic (Advance) Organizers, Peer Reciprocal Teaching, SQ3R, and Left Brain/Right Brain.

## 1. Graphic (Advance) Organizers

Graphic organizers are visual tools for working within a constructivist framework. Advance organizers are relevant introductory materials presented in advance in any format of text, graphics, or hypermedia (Ausubel, 1968). Concept maps are a type of organizer or pictorial display familiar to those in family studies to illustrate concepts, theories, and processes. Theoretical concepts and other abstract ideas may not be intuitive to students; therefore, visuals provide clarification and a more concrete conceptualization. Bronfenbrenner's ecological model and genograms are exemplary of concept maps. My students use both these organizers as reading assignments. For example, after reading the description and studying the ecological model in our textbook, they diagram themselves within the micro/individual center. Next, they label all other systemic influences in their lives and bring that diagram to class for group discussion.

Educational organizers include Venn Diagrams, T-Charts, Mind/Concept Maps, and K-W-L Charts. Rather than reserving these for only Classroom 2 or for print material, professors can teach the properties and values of different organizers and how students can construct them

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using text content. Once students become competent, they create their own graphic organizers in Classroom 1 as they engage with the text (Weimer, 2010). This strategy is especially useful for the visual/spatial learner, one of the intelligences identified by Gardner (2011) and climbs students toward Bloom's higher-order skills.

Advanced guided notes is another type of organizer that is completed before class. It serves as an umbrella to help students anticipate and store progressively differentiated details to follow. Learning is not so much a process of acquiring new knowledge, but of reconstructing existing cognitive schemas. According to Piagetian learning, every schema is coordinated with other schemata. New information is integrated and interrelated with the knowledge structure that already exists in the mind of the student. Using this strategy, the instructor gives students a worksheet or power point slide(s) with an outline of a section of study. Students read the material and fill in blanks. Once completed, guided notes can also be helpful for class and group discussion. Aagaard and Skidmore (2014) reported that students preferred reading when a structured activity followed such as class discussion of the text, a quiz, or prepared organizer.

## 2. Peer Reciprocal Teaching

Educators like Major and associates (2016) affirm that learning improves with peer-topeer, or peer reciprocal teaching. Group-based collaboration supports active processing because "a learner really hasn't stored new information in long term memory until he or she does something with that information" (Svinicki \& McKeachie, 2014, p. 191). University instructors can capitalize on this active reading strategy by assigning the following activities to Classrooms 1 and 2.

Student-produced Quizzes. Teacher-produced quizzes are commonly used as the assessment of whether students have completed the reading and understood the content. They are often administered at the start of class when the reading was due. It reflects the reality of the "Guess what's Inside the Teacher's Head" approach, which can be laden with intimidation given the inequality of power inherent in the student-teacher relationship.

Teacher-delivered quizzes can be somewhat operative in motivating students through fear and anxiety to memorize and retain content just long enough to pass the quiz (Hoeft, 2012; Weimer, 2013). Nevertheless, it tends to negatively impact student achievement and artificially induce scholarship (Weimer, 2010). Students who are already conscientious learners become hyper-vigilant readers and those who are non-readers tend to pick out only key terms. It functions as a short-term exercise for bulimic rather than deep learning (Bain, 2004).

A student-produced quiz is a different approach that empowers students toward selfengagement. Learner-centered strategies such as this change the balance of power. According to Weimer (2013), "Power sharing creates a more positive and constructive classroom environment. There is a stronger sense of community...that they, too, are responsible for what happens in class" (p. 97). Furthermore, sharing control with students supports the researched-based theory of

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constructivism (McCombs \& Whisler, 1997). Using this method, students create their own quizzes based on what they analyzed from the reading. Through the exercise of generating a quiz (Bloom's highest skill level), students are masters of their fate and creators of their learning.

In my Contemporary Families class, students come prepared when a chapter reading is due with a five-question quiz: one true/false, one multiple choice, one matching, one fill in the blank, and one short essay; each question is one of five "big ideas" from the reading. They write the answers on the back of the paper. It is remarkable to see not only the variety of original test questions, but also the breadth of concepts and terms students identified as important. To take the quiz, they either switch quizzes with a peer or I choose to read one aloud that the class takes together. After they have completed the quiz, checked the answers, and marked their score, they discuss the answers in pairs, or we discuss each question as a class and the justification for the answers.

The quiz content improves with student practice, and I have found that anxiety and fear are significantly reduced when peer reciprocal teaching informs the quiz-taking process. When I ask my students to rate their stress from 1-10 taking teacher-prepared quizzes, they all raise two hands with eight to ten fingers showing. Often a student will quip, "I wish I had 11 fingers." I follow with rating their stress using student-prepared quizzes, and nearly all students raise only one hand, with three or four fingers showing. The degree of difficulty has not changed; rather, the students are transformed when they go through the process of preparation and selfdetermination.

Jigsaw Groups. The Jigsaw method is credited to Aronson (1978) and has its origins in Classroom 1. Students are assigned a number from one up to six that corresponds to one of the same number of key terms or concepts in the upcoming reading assignment. They are to read and take notes so thoroughly on that concept, that when they come to class, they are an "expert." Those who were assigned the same concept meet together first to exchange what they learned. Next, those "jigsaw" pieces move to form groups with one "expert" from the other concepts. Every member shares a part of the whole.

For example, in my parenting class, I number students 1-4 before the chapter on parenting styles, each student thoroughly studying at home one of the four main styles. When we return to class, the four styles end up forming the jigsaw groups and each member contributes to the whole body of knowledge on that subject. Most notably, individuals are accountable for serious preparation. Even reluctant participants tend to step up to the responsibility of collaborating in small groups when they alone are the missing piece.

Speed Dating. University students find an intersection of ecological systems with this activity. Speed dating is a familiar social activity that is easily understood and appreciated in a university setting. I use this successfully in a class where I have freshman who are new to absorbing and following policies outlined on my class syllabus. I assign that the syllabus be read, highlighted, and annotated before the second class. Once there, several rows of students stand in

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a line, each person facing a student who is sitting in front of them. I ring a bell or flip the light switch and the pairs introduce themselves briefly and begin asking questions about the syllabus to each other. When I ring the bell after 30 seconds, those that are standing shift one person to the left, and the ones on the end of each row move to the beginning of their row. They start the process again, and we continue until they have rehearsed the main policies using peer reciprocal teaching. They hand in their annotated syllabus at the end of class for points.

Interview a Professional. Students motivation to read grows exponentially when the real world is invited as commentary. University students read more deliberately when they linked the text to careers (Marchant, 2002). It would be impractical if not improbable to invite family science professionals to share their expertise in every class. Therefore, a relevant reading assignment involves students researching and interviewing a professional regarding the topic of study. When students ask an expert about a topic they are reading, the class benefits as each student relays what one or more professionals would have reported to the class.

The Great Debate. This peer-to-peer teaching strategy may already be familiar, but it merits mentioning. Professors can challenge students to consider both sides of a controversial issue as they read in Classroom 1 and prepare notes to argue for or against. In a subsequent class (or posting on a discussion board), the professor assigns students a side to defend. Regardless of the side they argue, they are better prepared to understand the complexities of both sides and respectfully hear from their peers. This is a critical skill for family science students to increase their awareness, understanding, and ability to work competently with those of differing backgrounds and opinions and to navigate an array of social issues.

## 3. SQ3R

SQ3R is an abbreviation for "Survey, Question, Read, Recite, Review" that was developed by Robinson (1961) and recently outlined by Svinicki and McKeachie (2014) among others. This is another widely known and evidence-based method of studying.

A common pitfall while reading is to get to the end of a page and ask, "What did I just read?" Metacognition, or thinking about our thinking, finds its way into SQ3R. The goal is to maintain conscious attention in mindful reading rather than mindless reading. In brief, it represents these steps to active reading:

Survey: Skim over chapter, noting headings, tables, general information.
Question: Students ask "What?" "Why?" "How?" about what they will be reading, or the teacher can supply pre-questions as prompts.

Read, Recite, Review (3R): Read is to go through the process of reading, recite is when the reader attempts to answer the questions posed at the beginning, and review is to compare the student's own answers to the correct answers.

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To implement SQ3R principles in my classroom, I have found the subsequent activities to be highly correlated to active reading.

Thinking Critically. At the end of every chapter section, or after every main point, I create "Thinking Critically" thought-provoking questions. They are "stop points" that are reviewed after each section in a reflective journal writing exercise. Major et al. (2016) reported that writing-to-learn exercises help students "translate information and experience into their own words... and build their learning of content knowledge" (p. 206). Answers can be submitted before class to the teacher who selects a few as class discussion for that day, or all students can review their answers in groups, or post them on a discussion board with threaded replies throughout the chapter under review. In a large sample study by Hattenberg and Steffy (2013), students reported that announced quizzes, required reading questions, and mandatory writing assignments had the most utility for reading compliance.

True/False Low Stakes Assessments. Tolman and Kremling (2017) described a pre-class quiz for active reading and greater student involvement. Individual students completed a "readiness" quiz at home based on the assigned reading. At the start of the next class, the students took the same quiz in teams. Students were highly engaged, "arguing for their positions using the readings and writing team appeals for missed questions" (p. 47).

In a Human Development class, I post 10 true/false questions at the beginning of every chapter regarding content they will read. Before reading, they respond to the T/F questions in a personal pre-assessment. I reinforce that this is a low-stakes assessment because students get full points just for answering to the best of their knowledge. Next, they read the chapter, recite the questions constructed at the beginning, find the answers, and review whether they got them right or wrong. They add a few sentences to each true/false answer, verifying why they knew what they knew (assimilation) or why they were wrong and how they incorporated a new idea (accommodation). It is a self-correction exercise involving deep cognitive processing that demands higher-order skills.

Discussion Boards. Discussion boards offered on university learning management systems are a prime example of a platform for students to think aloud and share in the process of content absorption, analysis, and application. They are indispensable for online classes and have great potential for SQ3R exercises in face-to-face classrooms. Students view the questions posted before the reading module, recite them as they work through the reading material, and review what they and others have written.

## 4. Left Brain/Right Brain

The final strategy is closely aligned with the theoretical background that informs principles of reading as active learning. It attempts to stimulate multiple cognitive domains, recognize student preferences and strengths in learning styles, offer choices for self-

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determination and diversity, and include interdisciplinary contexts and multiple influential systems. Only a few activities are used as illustration.

Media Journaling. Journaling is a standard, one-dimensional exercise that teachers have commonly used to encourage a student's thoughtful reflection and response to reading. Some instructors overlook technology-savvy students who may be more eager to create content using their devices. The possibilities should be open ended: analyzing song lyrics that correlate to a family theory, finding clips from film or TV that illustrate family processes, creating their own rap, doodle board, comic strip or music video, re-enacting a dramatic scene, "A Day in the Life of..." selfies, a storyboard that demonstrates a current family studies topic, or a vlog that offers a platform to express reflections about the reading content. I would advise that teachers offer a buffet of options so students can select which activity is most palatable. All Gardner's seven intelligences should be available for student selection as they couple their reading with some form of immediate response activity.

Games and Simulations. There is a growing body of research that suggests games support constructivist learning. Games and simulations are often kinesthetic; they require students to physically move, interact, and think, which stimulates both sides of the brain. Gamification of class content becomes a conduit for application and model for the real world (Kapp, 2012). For example, in a role-immersion game, students prepare in Classroom 1 to deliver a speech in Classroom 2 that represents a person of interest the class is studying (Lang, 2016).

My students continue to amaze me with their diverse interests and creative talents when designing review games or simulations or a game-like element through polling and questionnaires. Students have successfully used game apps on devices, polling or familiar game templates on internet sites, or "Plickers" for in-class surveys based on what they read.

## Conclusion

The practical teaching strategies outlined in this paper are designed to stimulate family science instructors to adapt and integrate these and other meaningful activities under the dualclassroom model. They should not only inspire more active reading and class preparation but leverage the quality of limited class time. I have organized a summary of the four strategies in Table 1. Many can be adapted to an online forum and all are suitable to any class size. They are especially useful for large classes where personalized teaching may be lost or difficult to transfer from teacher to student.

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Table 1. Reading As Active Learning Strategies Table

| Reading As Active Learning Strategies |  |  |
| :---: | :---: | :---: |
| Strategy | Description | Examples |
| Graphic (Advance) Organizers | A type of visual or pictorial display to illustrate or organize concepts, theories, and processes | Genograms, Venn Diagrams, TCharts, Mind/Concept Maps, K-W-L Charts, Advanced Guided Notes |
| Peer Reciprocal Teaching | Group-based collaboration and peer-topeer teaching | Student-produced Quizzes, Jigsaw Groups, Speed Dating, Interview a Professional, The Great Debate |
| SQ3R | Metacognitive, mindful thinking exercises used while reading | Thinking Critically, True/False Low Stakes Assessments, Discussion Boards |
| Left <br> Brain/Right <br> Brain | Reading responses that stimulate multiple cognitive domains, interdisciplinary contexts, and multiple influential systems | Media Journaling, Games and Simulations |

Based on my experience, I offer these points for greatest efficacy:

1. It is incumbent to target a few activities rather than overwhelm students with too many. Do less well rather than more poorly.
II. Whenever possible, offer a menu of active reading activities to honor student learning preferences and diversity.
III. Take a developmental approach by systematically teaching the procedures and reviewing in class for student feedback (Weimer, 2013). Change or adapt depending on outcomes.
IV. Select activities that suit the subject you are teaching, the learning objectives, as well as your own pedagogical preferences.

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V. Finally, try an activity at least twice. If it failed to achieve the desired outcomes, take this opportunity to reflect why it was not effective. I have found that lack of preparation, scaffolding, and practice are the most common reasons an activity is less than successful. If I carve out more time to prepare the students, show examples, rehearse in class, and give them resources to use at home, the pedagogical dividends are highly rewarding.

There is another implied classroom that is integral to the dual-classroom model: the setting that follows Classroom 2. Any pre-class strategies students complete in tandem with the reading have the advantage of expansion and reflection within the class and fruition in a later setting. Although this paper explores a meaningful development of the pre- and in-class active reading environments, there certainly are post-class activities and assignments that represent a capstone to the foundation laid in Classroom 1.

As noted, this model represents part of a learning continuum. The purpose of the university class should not merely be about the reading accomplished or the grades earned. Caring professors aspire to develop a relationship with students, support class learning communities, and combine teaching strategies with student resources to inspire lifelong learners, all which are not limited to a particular setting. Therefore, the dual-classroom model recommends that professors think outside the box, or the classroom, to create more learnercentered environments through active reading.

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