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Increasing Student Engagement in Large Classes: The ARC Model of Application, Response, and Collaboration

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What is This?

Increasing Student Engagement in Large Classes: The ARC Model of Application, Response, and Collaboration

Kristen Lee Hourigan[1]

Abstract

This article introduces a simple, flexible approach to engaging students within large classes, known as ARC (application, response, collaboration). ARC encourages each student's presence and engagement in class; creates a sense of excitement and anticipation; breaks down passivity and anonymity; effectively gains, maintains, and utilizes students' attention; fosters a nonthreatening learning environment; raises students' awareness of personal perspectives and biases; and encourages integration of ideas and critical thinking. ARC can also be used for meaningful assessment between formal evaluations as well as to reward each student's preparation and reading of the class material. The principles, practice, benefits, and measures of success of ARC as an effective pedagogical approach in a large survey course are outlined.

Keywords

student engagement, active learning, classroom participation, introduction to sociology, classroom-based exercises

THE DEVELOPMENT OF ARC

In spring of 2011, I was informed that I would be teaching Introduction to Sociology. At SUNY Albany, a large research university, such classes hover near 120 students, meeting the benchmark for classification as a large class as described by Heppner (2007:2): "having a number of students greater than the number whose names you can reasonably learn by semester's end [and] taught in a lecture hall with fixed seats." Having heard of colleagues' experiences in such classes, I worried about low rates of attendance, participation, and preparedness. I was also concerned about students meeting learning goals. An introductory course such as this "sets the stage for the sociology major and . . . exposes most students to their only experience with sociology" (Wagenaar 2004:3). Therefore, I did not want the class size to limit my

students' experience of the discipline. I believed success would come when students were engaged: present in more than the physical sense of occupying the seat, but in the sense that they were present with an idea, attending intellectually, with a willingness to consider new concepts and perspectives, reconsider old ideas, and actively integrate real-world experience and prior knowledge.

The process I designed is now called ARC: application, response, and collaboration. I wanted this model to be perceived by students as positive, a reward rather than a punishment or a requirement

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that needed to be met to some minimal standard. Like Dandaneau (2009), I wanted students to come to realize and accept that they are important as individuals and that their ideas are valuable within and beyond our classroom. After exploring literature on effective pedagogy practices, I constructed my syllabus in such a way that students would receive small amounts of credit for active engagement with varied tasks. In total, points for activities would account for a substantial portion of each student's grade, encouraging attendance, participation, and a lively learning environment, without taxing me with unreasonable amounts of grading.

ACTIVE ENGAGEMENT

Researchers note a growing awareness within the discipline that instructors need to engage students in active learning experiences (McKinney et al. 2004; Persell, Pferffer, and Syed 2008). Allen (2008) notes three components necessary to establish a "warm climate" in the classroom, shown to enhance teaching and have a long-term, positive effect on student learning: praise, enthusiasm for (and use of) student ideas, and teacher-student interaction. When instructors show that they value students' ideas and perspectives, all students within the classroom are more attentive and cooperative (Allen 2008). And when students feel valued in the learning community their motivation to learn increases (Davis 1993).

The ARC approach sets up the occasion for such positive interactions while avoiding anonymity and passivity. ARC moves students away from a passive listening experience toward a more active role in the classroom in which they are seen and heard by both the instructor and peers. This is critical for successful instruction in large classes, as student anonymity and passivity are "the two biggest problems from a learning perspective" (Michaelsen, Knight, and Fink 2002:22). "Passivity dampens students' motivation and curiosity" (Davis 1993:194).

PRINCIPLES OF ARC
Application

Sociology undergraduate students note that their learning is enhanced by having the opportunity to make connections between related ideas and

between their personal lives and the larger world (McKinney 2007). Research shows that learning is also enhanced if students are able to connect new information to previous knowledge (Rusche and Jason 2011). Such connections are made through active tasks and applications (McKinney 2007). The ARC method allows for this type of experience. As one student noted, "I feel like [ARC] helped us reflect on the things that we learned in class and apply it to other situations."

Response (Reaction and Reflection)

Response can take on many forms, including reaction (capturing initial thoughts and ideas), structured reflection (a thoughtful, slower process of consideration utilizing synthesis of ideas), or less structured free reflection (see Rusche and Jason 2011). Short reflective writing assignments have been shown to improve understanding (Drabick et al. 2007) and enhance critical thinking (Rusche and Jason 2011). Reflection allows students to make connections between new material and old or between concepts within the class and beyond. Making such connections requires higher-order thinking (see Bloom 1956) and demonstrates various levels of learning (see Heppner 2007). Reflective writing after reading solidifies absorption, retention, and comprehension (Rusche and Jason 2011).

Critical self-reflection also allows for development of self-awareness (Schwalbe 2008). Such reflection is paramount in developing a sociological imagination and beginning to recognize connections between the individual and society. "Students will develop a firmer grasp of sociology if they recognize themselves as actors in social life and not merely passive students learning these concepts in the abstract" (Rusche and Jason 2011:339). Finally, reflection allows students a space to work through any frustrations or questions that arose as they struggled with material, and it offers students the "opportunity to discover their power as creators of knowledge and actors in the world around them" (Rusche and Jason 2011:338).

Collaboration

Leaders in the field of sociology note that complex and critical thinking is among the top skills that

students of sociology should be taught, including becoming aware of multiple perspectives (Persell et al. 2008). ARC allows for just such an opportunity through collaboration. Recent research concluded that teaching approaches incorporating collaborative activities led to greater student understanding, increased engagement, and enhanced enjoyment of the learning process (McDuff 2012). Collaborative opportunities allow students to examine the strengths and weaknesses of their views and break down perceived anonymity by bringing students into each other's realm of social awareness. When class size inhibits the instructor's ability to learn every student's name and face, collaborative activities lessen the likelihood that students will feel unseen within a faceless crowd, as each becomes distinctive to those students with whom he or she collaborates. Collaboration also allows students who may be hesitant to speak in class the chance to discuss issues with a few peers in a way that is less threatening (Davis 1993).

ARC IN PRACTICE

As its name implies, ARC is a process of weaving into the semester opportunities for application, response, and collaboration. Rather than attempting to grade individual participation in a meaningful way with such a large headcount, engagement with the material is demonstrated using classroom activities. By focusing on true engagement, demonstrated in a variety of forms, ARC allows instructors to engage large numbers of students with thought-provoking tasks that capture attention without requiring each student to speak during class in order to be recognized for a willingness to think and share ideas. While such tasks are effective at enlivening and engaging classes of all sizes, the feelings of disconnect and depersonalization common in large classes can be minimized through use of the ARC method. These activities allow the instructor to engage large numbers of students in each class session without needing to communicate directly with each student individually.

Each ARC activity involves application, response, collaboration, or a combination of these. Tasks may include short quizzes, movie memos, small group discussions, in-class debates, reading responses, minute papers (Angelo and Cross

1993), or free writing (Singh and Unnithan 1989). Actual exam questions can be incorporated or instructors can task students with constructing lists of examples of key concepts or authoring definitions of critical ideas either as a naïve task or after focused listening (Angelo and Cross 1993). Instructors can assess whether students are grasping material by assigning a one-sentence summary or a minute paper (Angelo and Cross 1993). Similarly, at the start of class, students can be tasked with noting the most important points covered during the previous class session or recent reading.

One of the unique qualities of this method, making it distinct from many other low-stakes grading schemes or active learning environments, is that each ARC experience is different, forging various types of connections among diverse aspects of the social world and reinforcing the notion of the interconnection of all things social. Unlike the structured routine of teaching systems like team-based learning (Michaelsen et al. 2002) and just-in-time teaching (Simkins and Maier 2010), the flexibility of ARC creates a sense of excitement and openness to the unexpected. Instructors can plan elaborate activities in advance or recapture students' waning attention with a simple spontaneous task. Most activities are unannounced and woven into the semester on different days of the week and at different points in the class period, keeping students "on their toes" and allowing for instructors to remain mindful of the limitations of students' attention spans (as discussed by Heppner 2007). While students know that an ARC activity is likely during each class session, they cannot anticipate when it will occur or what it will entail, creating an ever-present air of suspense and curiosity. And, since many ARC activities are engagement-focused or naïve tasks, this suspense is nonthreatening. Students understand that they will be rewarded for a willingness to engage with ideas rather than judged on the "correctness" of their responses. Naïve tasks also help students become well acquainted with their own perspectives and understandings, after which they are better prepared to explore the perspectives and ideas of others as well as to reconsider their personal views.

Grading for ARC can be quick and simple with the use of Blackboard or Excel. Each ARC activity

is worth a small number of points, but in total, ARC points account for a substantial portion of final grades. Students who are absent or unprepared receive zero points for that activity. Each student is allowed to miss a set number of ARC activities. This encourages and rewards regular attendance while allowing for a reasonable number of unexcused absences without penalty.

What follows are detailed descriptions of ARC activities proven successful in the undergraduate course, Introduction to Sociology, a class of 119 students, the majority of whom were first-year students, taught in 55-minute sessions during the fall of 2011. The goals for this course were (1) to gain a working knowledge of many of the key terms, concepts, theories, and leading figures in sociology as well as form an appreciation for the field of sociology, the range of topics relevant to it, and the scope of influence of one's social experiences; (2) to develop a sociological imagination, to attempt to view the world from the perspective of others, and to recognize biases in self and others and the inherent limitations and impact of one's perspective; and (3) to think critically, synthesizing and applying knowledge and understanding. Use of the ARC approach advanced our progress toward these goals, in particular as related to critical thinking, awareness of one's own perspective, and widening one's lens when considering the social world.

Application (and Collaboration): "Uncovering Theory ARC"

This application focused on the steps of labeling theory. Instead of lecturing, the students had an opportunity to think through the theory individually, then in small group collaboration, and finally as a class (think-pair-share collaborative model as described by Kagan [1994]). They were first asked to put the steps of the theory in sequence. This naïve task had no obvious answer, and there were several ways the steps could have been ordered meaningfully. Once the students worked individually, they formed small groups with students seated nearby and worked in collaboration, coming to consensus as to the best sequencing. Several disputes emerged, necessitating rationalization and clear communication. We then discussed the theorists' sequencing as a class and worked through an exemplary application from the reading.

Students were next tasked with applying the theory, individually and in collaboration, by connecting steps to real-world examples. Several groups of students then shared answers and justifications with the class, leading to debate and discussion of various perspectives. Finally, I asked the class a question that required tying the ideas back to the general concept of the larger unit. Several students offered ideas, building on one another's thoughts. This process allowed all students to contribute, discuss ideas verbally, and receive feedback without necessitating instructor comments on an individual basis. All present students received credit for handing in their initial group work, while keeping the ordering of the steps and applications for later reference. As with many ARCs, this activity was designed to build skills later assessed in exams. Students reported that having worked through illustrative applications in groups helped them to build the skills necessary to succeed on larger assessments.

Response (and Application): "Responding to Cultural Artifacts ARC"

One can engage students with a multitude of stimuli. In this course, I asked students to react to, and reflect upon, a 60-second audio clip of Maya Angelou reading a passage from her book *Letter to My Daughter*, after which the class wrote a five-minute free reflection (see Rusche and Jason 2011), offering initial reactions and connections to class concepts. Writings were collected and used to assess understanding. As the following quotes illustrate, students demonstrated engagement with this clip through integration of class concepts and the world beyond our classroom.

Students made connections to current class material, discussing the contextual and culturally defined meaning of objects: "The raisins were an example of different groups assigning different meanings to the same object. To her, raisins are to eat. To them, a sign of honor." Other students incorporated concepts of culture, socialization, or norms: "She is wearing a short skirt and high heels and she realizes that it is not appropriate for a

woman there [in Morocco]. Also she remembers how her mom told her not to sit taller than a man. The people around her have shaped how she acts." Other students noted connections to personal, real-world experiences. One student drew parallels between her experience and the speaker's discomfort when breaking norms of dress in an unfamiliar culture: "My cousin [is] Muslim and recently her grandmother passed away. . . . Myself a Hindu, I'd never experienced Muslim traditions but I recall vividly going out to find a black dress that didn't show much [for the funeral]. Sitting in the church I couldn't help but feel as though all the people were staring at me with disgust [because] my legs were out."

Collaboration (and Application): "Why Definitions Matter ARC"

When teaching a unit on the family, I incorporated a spontaneous, naïve task, asking the question, "How would you define the word *family*?" There was no wrong answer, as the correct response was each student's personal definition. Students wrote as individuals, then formed small discussion groups, constructing a synthesized response (think-pair-share model, see Kagan 1994). Often collaboration led students to realize they had forgotten a crucial element of family membership, like biology or legality. For example, one individual student wrote, "A group of people who love one another and are willing to do anything for each other." He then worked in collaboration with two students who had written "A group of people biologically related" and "A group of people related by blood or legally connected." Together these students formed the following synthesized definition: "A group of people that are biologically related, legally bound, and/or love each other and would do anything for each other." Collaboration led these students to recognize weaknesses in their individual definitions and to form a group construct that each felt was more useful than their original, individual ideas. We then shared ideas as a class, leading into a discussion of how *family* is defined by the census and leading sociologists. Having been meaningfully engaged with the construct, students were prepared to think critically about the limitations of definitions.

BENEFITS OF ARC IN THE LARGE CLASSROOM

There are a number of positive outcomes that result from use of the application, response, and collaboration method in large classes. ARC encourages students' presence and intellectual engagement. It is especially effective at gaining, maintaining, and utilizing students' attention and ensuring students come to class fully prepared. It can be used to measure students' level of understanding between formal assessments and to sharpen critical thinking skills. ARC allows instructors to be mindful of the natural limits of students' attention spans by breaking up long class sessions with active classroom experiences.

Expanding the variety of material students come into contact with can be a daunting task, especially in a survey course covering a wide range of topics at a superficial level. The flexibility of the ARC approach affords instructors the unique opportunity to pique continually students' interest by offering experiences beyond reading and lecture in which they can engage with the three-dimensional and tactile world and make connections between it and class concepts. Instructors can weave in bits of knowledge in various forms (statistics, diagrams, historical narratives, popular media, images, objects, etc.) to which students may not otherwise be exposed. Incorporating such material is "essential for the formation of sociological self-consciousness" (Dandaneau 2009:18). In a large class, it is likely that every learning style (visual, auditory, and kinesthetic) will be represented in the class roster (Heppner 2007). When an instructor relies heavily upon one style, ARC allows for supplemental activities that instructors may be less likely to use on a regular basis. As McKinney (2007) notes, students' varied learning styles can be best supported by incorporating a range of activities using diverse pedagogies. In this way, ARC allows instructors to experiment with pedagogy. This is one of the key factors of successful teaching, especially in regard to revealing the sociological imagination (Dandaneau 2009).

Student engagement is fostered by having students think about a subject prior to considering the ideas of others or absorbing information from text or lecture (Reid 2008). With many ARC activities,

students have the opportunity to construct and organize their ideas before sharing. This promotes a nonthreatening learning environment. Since the majority of ARC activities have no "wrong" answer, students can express themselves and "play" with ideas without feeling judged, receiving credit for engagement rather than a correct response. Providing such occasions for individual expression prevents uniform regurgitations of preformed ideas, allowing instead for critical thinking. Also, by asking students questions that have multiple correct answers we can engage more than a single student with each question. As Rusche and Jason (2011:350) note, "we do not want our students to feel that everything . . . must be 'right' in order to get credit. We want them to . . . express themselves and examine the material comfortably." By allowing for such experiences, the ARC process fosters a learning environment that is safe, honest, and trusting, factors that are often difficult to cultivate in institutions of higher education (Dandaneau 2009).

MEASURES OF SUCCESS

There have been a number of indicators of the effectiveness of the application, response, and collaboration method of instruction, including high levels of participation and attendance (94 percent average attendance). While official comparison data are not available at my institution, colleagues note that such daily attendance is remarkable in an introductory class of over 100 students. Formal standardized evaluations also indicated relevant measures. In this class, 94 percent of students indicated that course content was "almost always" communicated in a way they understood, while in other large, lower-division courses taught in this semester within the sociology department only 62 percent of students indicated "almost always" to this measure. Likewise, 98 percent of students in this class indicated that their interest in the course material was "almost always" or "often" stimulated, while the same measure indicated only 72 percent of students felt this way about similar courses. While 94 percent of students felt that I was "almost always" receptive to students' ideas or views, only 64 percent of students reported this of instructors in other similar courses. In overall

indicators, this course also stood out as exceptional. The course was rated as "excellent" or "good" by 98 percent of respondents (72 percent of students in similar courses rated this measure "excellent" or "good"). Overall, I was rated as "excellent" by 90 percent of respondents while instructors in comparable courses were rated "excellent" by 49 percent of students. Written feedback from students indicated that the differences noted in each of these measures are directly associated with use of the ARC method.

Numerous students mentioned in evaluations and unsolicited e-mails that ARC was their favorite aspect of class and that it helped the concepts to become "real" for them. They indicated high levels of retention, enjoyment, connection to fellow students, and comfort in this class, as compared to others classes, and they attributed these experiences to the ARC process. As one student wrote in formal evaluations, "[These] lessons are exciting and they always challenge us to think, after every class I walk out with tons of new ideas and knowledge that I know will help me in life." I was surprised to hear from several active students in this class that they do not regularly participate in other classes. Self-identified as students who are afraid to raise their hands, ask questions, or offer ideas, they stated that ARC established an environment in which they were comfortable being seen and heard. One student wrote, "[This process] has made me more comfortable and confident sharing my views and opinions." Students often reported that they felt like they "mattered" in our classroom, like their ideas and perspectives were valued. As one student said during our final class session, "In this class I felt like I could express my ideas in ways that I felt comfortable. I could use examples in ARC activities that made sense to me."

CONCLUSION

The application, response, and collaboration approach is flexible by design, can be simple to implement, is powerful in its results, and can be tailored to achieve various learning goals within the limiting structures of large classrooms. It is especially effective at overcoming many of the challenges in large classes, including increasing

regular attendance, rewarding preparedness, dissuading passivity, breaking down anonymity, and creating a comfortable learning environment in which students feel seen and heard. It enables instructors to incorporate a variety of learning experiences, creating a sense of excitement and anticipation in the classroom. Above all, it encourages presence in the intellectual sense, attracting and maintaining students' attention and provoking true engagement with ideas.

NOTE

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