# A RESEARCH-BASED JUSTIFICATION FOR DEBATE ACROSS THE CURRICULUM

*Argumentation & Advocacy*, Winter 2000, Vol. 36 Issue 3, p161-175.
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One of the most notable recent developments in the forensics community is a desire to move the activity beyond its traditional boundaries. One manifestation of this trend is the rise of activist and outreach programs sponsored by college debate programs. These efforts are often aimed at bringing more (and more diverse) people into the world of competitive debate, and several such programs are experiencing dramatic success. This desire to expand debate is not limited to bringing others in, however. Increasingly, former debaters in the academic community initiate efforts to move debate outward, encouraging their colleagues to incorporate the skills and practice of debate in a broader range of classroom settings. Ultimately, those of us who have witnessed the power of debate to enhance learning and motivate students are becoming advocates of instituting debate across the entire college curriculum.

Of course, advocates of debate across the curriculum must produce strong evidence demonstrating pedagogical benefits if such initiatives are to succeed. Fortunately, the idea of distributing certain kinds of instructional practices across the college curriculum is no longer considered revolutionary. The effort to incorporate writing into many different subjects has been underway for decades and is now supported by hundreds of studies. As even a cursory search of academic periodicals will demonstrate, many different disciplines have begun to suggest that their practices should exist across the curriculum. Unfortunately, and in part because so few institution-wide debate across the curriculum programs exist, relatively little specific research concerning the benefits of debate across the curriculum has been published. As a new generation of scholars focuses on debate as an appropriate subject for research-and as more debate across the curriculum programs are created--more resources may be devoted to debate assessment.

It would be a mistake, however, to assume that the dearth of direct research on debate across the curriculum renders us incapable of meeting our evidentiary obligation in advocating such initiatives. A considerable tradition of scholarship exists verifying the benefits of engaging in forensics. Furthermore, research conducted by educational psychologists is demonstrating the substantial cognitive gains by students involved in participatory learning activities like debate. My purpose is to review the findings of several scholarly communities and in the process make the case for debate across the curriculum a more compelling one.

## COGNITIVE RESEARCH AND COMMUNICATION ACROSS THE CURRICULUM

The most prominent of the various efforts to institute specific teaching practices across the curriculum is undoubtedly writing across the curriculum (WAC). Developed and popularized in the early 1970s, WAC programs began as a sort of grassroots response to highly publicized research condemning college students' ability to write effectively. WAC programs became increasingly common during the 1980s, and the ubiquity of these initiatives was matched by the publication of numerous studies advocating specific pedagogical practices in the WAC context. As Walvoord (1996) documents, however, the WAC movement did not produce the kind of outcome-oriented evidence of success that the public increasingly demanded. Instead, WAC advocates focused on how to implement their programs. Walvoord also notes that the WAC movement has not successfully reached out to important forces in national educational reform. Recently, some institutions have pursued a broader approach to improving communication skills in the form of communication across the curriculum (CAC) initiatives.

For now, CAC programs greatly outnumber debate-oriented projects. Indeed, Cronin & Glenn (1991) cite approximately 20 existing college or university communication-intensive programs, and by now the number is considerably larger.

Fundamentally, debate across the curriculum (DAC) is a specific type of communication across the curriculum program. As a result, CAC research will contain a great deal of relevant information for those seeking to establish DAC. Even so, not every piece of research advocating CAC automatically warrants DAC. For example, we might discover that the most effective type of communication-intensive programs derive their benefits from immersion in conversational activities.

To make the case for DAC, I follow a three-step process. First, I attempt to identify the strongest arguments in favor of CAC in general. Second, I outline the research concerning the benefits of participation in competitive debate, a literature familiar to readers of this journal. Third, I draw on existing research in educational psychology to explain how the first two conclusions can be merged into a strong argument in favor of DAC.

That colleges and universities are generally doing a poor job of equipping their graduates with strong oral communication skills is a claim almost universally accepted by both the academic and business communities. Even those who are supportive of status quo pedagogy admit that much more could be done to improve college students' communication skills. Donofrio (1997) cites a long list of reports, studies, and informed commentary indicting the end result of existing communication-oriented instruction (or, perhaps, reflecting its absence). It is not surprising that most college students have not achieved communicative competence upon graduation, since such a small percentage of their required coursework involves communication skills. As Cronin and Glenn note:

Except for students majoring in communication, most undergraduates take at most one course emphasizing oral communication skills; therefore, most non-speech majors have little or no opportunity for structured practice with competent evaluation to refine and reinforce their oral communication skills (356).

Not only are college students afforded little opportunity to develop oral communication competency, they receive relatively fewer such opportunities than younger students. Corson has identified an overall tendency for schools to provide less and less curricular time for oral communication after students reach age 14. Many institutions seem to assume that students have already gained the necessary literacy and knowledge development skills they need from spoken language practice once they reach high school. As we will see, this assumption is soundly refuted by existing research.

When undergraduates are presented with more opportunities for communication-intensive activities, their schools usually stress writing skills. As Steinfatt (1986) explains, most calls "for increased competence in communication" result in the "specification of 'English' courses in curricular reform documents" (461). "Writing across the curriculum" has tended to supersede "communication across the curriculum." Obviously, students need to learn to write well, and the research supporting CAC can be read as complementing existing writing-intensive programs. However, a number of scholars have produced findings indicating that we cannot afford to ignore the oral aspect of communication. As a result of research funded by the Center on Organization and Restructuring of Schools, Newmann & Wehlage (1995) conclude that academic achievement can be judged satisfactory only if students are required to "express the results of [their] disciplined inquiry in written, symbolic, and oral discourse by making things, ...and in performances for audiences" (8). Students who are not required to produce "expressions" that are meaningful outside of the classroom are generally not involved in "constructing or producing meaning or knowledge" (8). To understand the implications of this statement, it is helpful to reflect for a moment on some of the basic contentions of modern cognitive research.

In the past fifteen years, many cognitive researchers have turned their attention to learning and educational practices. Their work has yielded strikingly similar results, to the extent that such research is now commonly grouped under the rubric of "constructivism." Bransford & Vye (1989) provide a serviceable overall description of constructivism's primary tenet:

[R]esearch on cognition suggests that learning involves the active construction of knowledge. Teachers and texts can provide information that is

useful for constructing new knowledge, but the mere memorization of this information does not constitute effective learning. Studies show that information that is merely memorized will remain inert even though it is relevant in new situations (192).

For teachers and educational administrators, this finding has profound implications. First, students, not teachers or texts, are necessarily at the center of the learning process. Because knowledge is constructed by students, schools cannot legislate the achievement of meaningful goals by altering the content teachers deliver. Improving learning requires both that we change how we teach and that we reconsider the assumptions we bring to our relationships with students. Second, constructivism indicts many standard teaching practices--at least to the extent that they dominate the classroom. Memorization, the hallmark of too many undergraduate courses, has been found to be an inadequate method of inducing learning. In their groundbreaking research on the functioning of the human brain, Caine & Caine (1991) conclude that "teaching devoted to memorization does not facilitate the transfer of learning and probably interferes with the subsequent development of understanding. By ignoring the personal world of the learner, educators actually inhibit the effective functioning of the brain" (86). Finally, constructivists have concluded that, because students learn by actively constructing new meaning based on prior knowledge and understanding, they must be provided classroom opportunities to experiment, examine models, reflect, and decide on functional patterns that satisfy their personal needs (Betts, 1991). This last implication will be very important as we attempt to link the benefits of CAC to the benefits of competitive debate. Even this brief description should make it clear that constructivist research has much to offer those interested in communication-intensive reforms. Cognitive research demonstrates that successful classrooms are interactive--that students learn less when urged into passive roles or practices. Whatever the benefits of writing-intensive programs, they can fall short when they fail to bring students into greater contact with each other. Emphasis on written expression can simply reinforce the quiet, passive, teacher-centered classroom environment that constructivism derides. For students to become more active learners, they must have an opportunity to communicate verbally. "As we talk about a subject or skill in complex and appropriate ways," Caine & Caine (1991) explain, "we actually begin to feel better about the subject and master it. That is why the everyday use of relevant terms and the appropriate use of language should be incorporated in every course from the beginning" (122). Communication-intensive instruction offers students better access to the content of a given course. Other studies reach similar conclusions regarding verbal practice as a generator of analytical skills. In a multinational review of language programs across the curriculum, Corson (1988) describes practice in verbal skills as "a personal contribution that we make to the development of our own 'analytic competence'" (23). When students are encouraged to think aloud--specifically, when they practice critical skills with their peers--they gain experience they may then apply to their own internal reasoning processes. Using oral language thus builds skills having more to do with critical thinking than smooth verbal presentation. Corson concludes that "there is no better way to encourage the learner to take responsibility for formulating explanatory hypotheses and evaluating them" (24).

The need to offer opportunities for verbal expression increases as students mature. As we have seen, undergraduates generally are not provided many chances to perfect their oral skills. Furthermore the structure of the typical high school day is inadequate to the task, as Brooks & Brooks (1993) note:

The fragmentation of the curriculum and the pressures of time have made intellectual inquiry so highly specialized that, by 7th grade, most curriculums are departmentalized and heavily laden with information to be memorized. During their six hours in school each day, students can see seven or eight different teachers, each charged with teaching a different curriculum. Within this structure, students quickly come to perceive knowledge as separate, parallel strands of unrelated information (40-41).

The fragmented high school structure thus tends to produce older students unable to see the relationships between the various areas they study.

This problem is only exacerbated by the increasingly diverse content areas and analytical standards encountered by the average college student. Communication-intensive instruction, if incorporated across the curriculum, can help alleviate this tendency toward disjunction. Constructivist research shows how students arrive at new understandings and new meanings only once the opportunity to use new words and concepts in a realistic context exists. Incorporating oral language skills into instruction offers students this opportunity, allowing them to build links between words and ideas that would otherwise be perceived as separate and as having less meaning. As Corson explains, "the best example of a context for word learning by adolescent children is one that invites their own utterances, employing words in serious dialogue with other children or the teacher" (101).

Research on existing CAC programs supports these contentions. In the most definitive study to date linking communication skills to critical thinking, Allen, et al. (1999) conclude that giving students an opportunity to receive communication-intensive training produces positive results. The results of this meta-analysis of nearly forty studies strongly suggest the substantial benefits that are produced as students practice their verbal skills. The authors argue that their findings "should encourage confidence in our ability to experiment and to evaluate. The challenge is to integrate these experiences as a part of our overall curriculum rather than to view public communication skill training as a separate component" (28). Steinfatt suggests that CAC "can become a real, positive contribution of the discipline of speech communication to the 'can't communicate' problem" (469). The most comprehensive and widely available review of existing CAC programs was produced by Cronin & Glenn, who express dissatisfaction with the research done so far. The authors offer some initial claims:

> The preliminary evaluations reported above, while scant, suggest some general trends: (a) faculty and students alike react positively to C-I [communication-intensive] courses and activities, (b) faculty and independent judges report that students who participate in C-I courses and activities show marked improvement in oral communication skills, (c) most students perceive improvement in their oral communication skills as a result of participation in C-I courses and activities, and (d) self-reports suggest that students perceive greater mastery of course materials through participation in C-I courses and activities (359).

More research needs to be done. Even so, the strikingly positive findings in the existing literature, combined with the powerful relevant research being done by scholars outside the communication discipline, make a strong case for CAC. Given the recent inception of the drive to incorporate communication skills across the curriculum, our ability to make this sort of case is impressive.

## THE BENEFITS OF DEBATE

Competitive debate has a much longer history than the effort to implement CAC. For as long as it is possible to trace the history of democratic societies, testimonial accounts have espoused the benefits of forensic activities for developing an educated and aware citizenry. Although contemporary competitive policy debate achieves its specialized form only in this century, the forensic arts have existed formally at least since ancient Greek civilization. Successive experiments with limited democracy have provided their own examples of forensic importance, ranging from Socrates' advocacy of directed questioning to the traveling debates of Lincoln and Douglas to the arrival of the televised age as evidenced by the Kennedy-Nixon debates. Debate is so fundamentally connected to democratic practice that, for much of our civilization's history, its benefits have been thought nearly self-evident.

As modern scholars began to turn their attention to studying our own society in the middle of this century, however, these assumptions began to be tested by social scientists. Their research has not only confirmed that debate is beneficial for members of democratic societies--it has actually helped explain more effectively how participation in forensic activities improves our lives. Students who participate in competitive debate enjoy a number of positive benefits. The first and most obvious of these is improved communication skills. Where many undergraduates may have, at best, a single classroom experience involving public speaking, debaters spend many hours assembling and practicing hundreds of public speeches on topics of national

importance. The questioning skills developed in cross-examination make debaters more capable of eliciting important information from their peers, thereby sharpening their analytical skills. Semlak and Shields (1997), for example, determined that debaters are "significantly better at employing the three communication skills (analysis, delivery, and organization)" than students who have not had debate experience (194). Such superior communication skills do not go unnoticed. Pollock's (1982) study of legislators concludes that "persons with oral communication skills honed by varied forensic events were also regarded highly by their colleagues in group discussion activity" (17). This sort of study supports Colbert & Biggers' (1985) contention that debate training improves interpersonal communication skills as well as public speaking competence.

While it seems intuitive that an activity involving competitive speaking would improve communication skills, debate also facilitates education in other, more subtle ways. Debate experience induces student involvement in important social issues. Every year, debaters study one prominent social issue, researching policy options from multiple perspectives. The knowledge thus gained often far surpasses the typical educational experience of non-debaters. Robinson (1956) describes debate experience as "an introduction to the social sciences" (62). The sheer breadth of topics a debater is likely to encounter, along with the competitive incentive to understand how the political world operates, virtually ensures that students who debate will be well versed in current events and public decision-making dynamics.

Barfield (1989) found that participation in competitive debate among high school students positively correlates with significant gains in cumulative GPA. The most comprehensive study to date of the effects of participation in debate was conducted by the Open Society Institute in 1999. Melinda Fine, the Institute's independent evaluator, investigated the impact of participation in the Urban Debate League on hundreds of high school students in New York City. She concludes that debate "appears to strengthen students' ability to persevere, remain focused, and work toward challenging goals .... Coaches and students agree that debaters have a heightened capacity to hang in and struggle--often in the face of disappointment and defeat" (62).

Academic debate does more than simply inform students--it teaches them how to evaluate the information they receive on a daily basis. Dauber (1989) asserts the unique emancipatory potential of forensics:

To me, academic debate is primarily valuable in that it is a mechanism for empowerment .... Whatever else academic debate teaches (and I would argue that it teaches a great deal), it empowers our students and ourselves, in that it proves to them they ought not be intimidated by the rhetoric of expertise surrounding questions of policy. They know that they are capable of making and defending informed choices about complex issues outside of their own area of interest because they do so on a daily basis (206).

Indeed, Fine came to much the same conclusion when studying students in New York. She argues that debaters are more likely to speak out because they "feel they have something useful to say, and because they feel more articulate in saying it" (61). These finding closely resemble Corson's conclusion that encouraging students to speak forces them to "confront learners with viewpoints different from their own" and therefore to achieve "an openness to the world and others" (25). Fine also discovered that participating in debate gives student better social skills and causes them to place more value on their social relationships. Debate is thus not only a way to connect students with academic subjects in meaningful ways; it is also a way to re-connect students to public life if they have been overcome by feelings of alienation.

The best documented educational benefit of debating elaborates the connection between forensics and critical thinking. As far back as 1949, Brembeck demonstrated that students with argumentation training "significantly outgained the control students in critical thinking scores" (187). Colbert (1987) reviews the contemporary literature and concludes that both the consensus of the literature and his own experimental findings justify the conclusion that "debaters' critical thinking test scores are significantly higher than those of

nondebaters" (199). Barfield also found significant correlation between debate participation and increased critical thinking skills.

The most definitive research in this area has been conducted by Allen, et al. Their first (1995) study explicitly sought to correct the flaws of previous efforts to quantify the connection between debate and critical thinking. In comparing the effects of both forensic participation and formal communication instruction on critical thinking skills, they concluded that, while "both argumentation classes and forensic participation increased the ability in critical thinking ... participation in competitive forensics demonstrates the largest gain in critical thinking skills" (6). Indeed, their study provides support for preferring debate to formal communication instruction. Their results "demonstrate that the gain [in critical thinking] is larger for a semester of competitive forensic participation than a similar time period spent in an argumentation class (and the argumentation class was superior to public speaking or an introduction to interpersonal communication course)" (6). These findings were largely replicated in their more recent (1999) meta-analysis of studies exploring the link between communication skills and critical thinking.

The positive benefits of debate are not limited to the classroom. In fact, much of the current research establishing the value of debate does account for the time students spend preparing for debate tournaments. Competitive tournaments are preceded by substantial cooperative research, argument development, and practice. Policy debate teams consist of two students, but the competitive success of any particular team is made possible only by the combined efforts of an entire school's roster of debaters and coaches. The contrast of cooperative preparation and competitive performance provides debaters with the unique opportunity to experience all the benefits of what Johnson and Johnson (1979) might call constructive controversy. They conclude that, properly managed, "controversy can arouse conceptual conflict, subjective feelings of uncertainty, and epistemic curiosity; increase accuracy of cognitive perspective-taking; promote transitions from one stage of cognitive and moral reasoning to another; increase the quality of problem solving; and increase creativity" (57). For controversy to be managed properly, however, instructors must also promote cooperative learning and intellectual disagreement. Competitive forensics provides opportunities for both modes of learning, and policy debate specifically teaches students to adopt multiple perspectives--which Johnson and Johnson describe as one of the most important problem-solving skills.

Given the positive benefits of debating, it is not surprising that forensic experience helps debaters succeed in the business world as well. Research demonstrates that certain of the professions are more likely to approve of students if they have debate experience. We have already seen how debate improves one's ability to succeed in governmental service (Pollock). Church (1975)surveyed opinion leaders in the legal field, finding that "both college prelegal advisors and law school deans expressed general approval of forensic participation" (52). These findings are certainly in keeping with the astonishing number of former debaters who now earn their living in the law. Schroeder and Schroeder (1995) similarly surveyed educational administrators, many of whom were former debaters. Their respondents "overwhelmingly indicated that debate was the single most important educational activity they engaged in and attributed many of their administrative skills to forensic participation" (19). Colbert and Biggers summarize debate's attraction for those interested in gainful employment:

In a time when many of our students ask us how educational activities will help them get a job, the answer seems to be unequivocal. Debate experience is highly valued by the business world. The value placed on debate by business is well founded. Former debaters tend to be very successful people (239).

Because debate experience is so effective in helping students achieve positive goals, the preventative value of the activity did not receive a great deal of scholarly attention before the last fifteen years. With the creation of urban debate leagues in Atlanta, New York, Tuscaloosa, and Detroit, the debate community has been flooded with anecdotal reports describing a connection between forensic experience and reduced violence. Many coaches described situations where debate transformed students from gang members and

trouble-makers into successful and cooperative students. Increasingly, scholars are proving that these reports represent an underlying and demonstrable relationship between increased debate skills and decreased physical violence.

In 1976, Boone and Montare hypothesized that language skills are related to aggression. In their study, "high language proficiency was associated with low physical aggressive behavior" in minority populations (856). They concluded that "relatively higher levels of language proficiency may function more effectively and efficiently as inhibitors (or perhaps neutralizers) of overt physical aggressive behavior" (856). This relationship is fairly intuitive: when we feel capable of responding to a situation verbally, we are less likely to feel pressured to respond physically. Infante and Wigley (1986) note that this relationship emphasizes the need for those in the communication discipline to act "because [the communication discipline] is particularly able to remedy argumentative skill deficiencies and therefore could be instrumental in reducing the amount of... violence in society" (62). There is also reason to believe that debate develops the specific argumentation skills needed to prevent violence. Neer (1994) describes "a consensus... among many argument theorists regarding the value of argument within an interpersonal relationship" (17). His recommendation for ideal argumentative style reads like a description of debate practice:

[F]lexible arguers will actively seek alternative points of view on an issue, hold multiple opinions on an issue, and examine viewpoints to which they are either unfamiliar or opposed when arguing the content of an issue (19).

Because competitive debaters must alternately argue both "sides" of the topic in any given tournament, there is a powerful incentive for them to become flexible arguers. In any given debate round, students may be called on to affirm or negate a particular political perspective. Above all, debate teaches students to understand how others think--even those others with whom they strongly disagree.

The key to understanding how debate helps prevent violence involves the distinction between argumentativeness (or assertiveness) and verbal aggression. This distinction was described by Infante and Wigley:

The locus of attack may be used for distinguishing argument from verbal aggression (Infante and Rancer, 1982). Argument involves presenting and defending positions on controversial issues while attacking the positions taken by others on the issues. Verbal aggression, on the other hand, denotes attacking the self-concept of another person instead of, or in addition to, the person's position on a topic of communication (61).

While argumentativeness can have many positive benefits, there is broad agreement among scholars that verbal aggression is inherently damaging. Furthermore, verbal aggression tends to create more verbal aggression and, ultimately, physical violence. Infante, et al (1984) specifically studied the relationship between argumentation skills and verbal aggression among students. Their research provides an excellent description of the communication-violence dynamic:

The individuals in an argument realize that they need to attack and defend positions. After an argument begins, the person who lacks skill in arguing is unable to refute the opponent's position. That person then satisfies the need to attack by attacking verbally the object closest to the opponent's position, the opponent. The need to defend is similarly corrupted. Since the unskillful arguer is unable to defend his or her position but still wishes to, he or she sets up a defense around the closest thing to the position, self. The opponent's attacks on position are then perceived as personal attacks and the individual feels justified responding in kind (76).

Thus, improved argument skills can prevent verbal aggression not only by preventing students from being verbally aggressive, but also by preventing them from responding to verbal aggression in kind--creating a positive feedback loop that can impact the entire school community.

Targeted research demonstrates that debate experience tends to increase beneficial argumentativeness while reducing verbal aggression. Colbert (1993) concludes that policy debate training can enhance argumentativeness without increasing

verbal aggression and that debating values can actually reduce verbal aggression without decreasing argumentativeness. These findings were substantially replicated in 1994, when Colbert concluded a follow-up study by demonstrating that debate increases argumentativeness in participants without an increase in aggression. Furthermore, Colbert (1994) notes that "debating may be an effective method of assertiveness training," especially for women (7). Four separate studies now support the claim that debating increases argumentativeness and reject the claim that it increases verbal aggression. It is also worth noting that the value-oriented debate Colbert (1993) highlights as reducing aggression has been substantially incorporated into competitive debate. Indeed, students are now more likely to purse value-based perspectives on policy issues than ever before.

Fine makes the connection between debate participation and violence reduction explicit. She concludes that debate gives students greater self esteem and that debaters "appear to assign higher value to resolving their conflicts through dialogue rather than force" (64). The students in her study provide extensive descriptions of their new ability to "stand back, reflect on their arguments, frame them more powerfully, and communicate without conveying an aggressive energy that might inhibit productive exchange" (64).

## WHY WE SHOULD CHOOSE DEBATE ACROSS THE CURRICULUM

Establishing the benefits of CAC and of competitive debate raises a final question: does the existing research on these two practices support the implementation of more DAC programs? Actually, the existing research contains a number of different arguments that bridge the gap between current activities and DAC. First, the constructivist literature contains a number of recommendations for altering instructional practice that point toward incorporating debate in the classroom. Cognitive researchers often conclude that more opportunities for oral communication in general are necessary, but many scholars describe specific kinds of verbal skills whose practice best facilitates learning. Newmann & Wehlage argue that knowledge is best constructed if students are asked "to organize information and to consider alternatives" (13). To this end, they advocate "substantive conversation," the kind of talk that "occurs when students are engaged in extended exchanges with a teacher or peers that builds an improved and shared understanding of a topic" (18). Debate meets these requirements, especially when we consider that effective incorporation of debate practice into college classes would involve teacher-facilitated discussions regarding areas of controversy, theory construction, and so on. This is the first of several limitations that could be placed on the claim that research supports DAC: existing scholarly inquiry supports specific kinds of debate-intensive instruction. Unsurprisingly, debate must be taught in accordance with general principles of good teaching for it to be effective. In particular, we should focus on pedagogical approaches that offer substantial cooperative interaction between teachers and students.

Constructivist scholars emphasize that students must be given opportunities to accumulate experiences that contribute to their learning. These experiences are often contrasted to the passive learning style existing in the traditional classroom. Constructivists are usually interested in altering existing teaching practice. As a result, most cognitive studies include descriptions of the kinds of teaching reforms that would best incorporate their findings. There is a great deal of overlap among these lists, and virtually all of them resemble the kind of debate-intensive instruction DAC advocates recommend. Caine & Caine's (1991) list is fairly representative:

1. Teachers need to orchestrate the immersion of the learner in complex, interactive experiences that are both rich and real. A good example is the use of immersion in the teaching of a second language.

2. There must be a personally meaningful challenge. This is the intrinsic motivation that is part of the state of mind that we identify as relaxed alertness.

3. There must be intensive analysis so that the learner gains insight about the problem, about the ways in which it could be approached and about learning generally. We call this the active processing of experience (104-105).

If we expect students to interact with one another, we will have to provide opportunities for them to communicate. However, the interactive elements Caine & Caine (1997) identify as central to effective instruction clearly exclude a number of different teaching practices we might associate with CAC (such as stand-alone presentations and other kinds of discrete speeches). On the other hand, debate-intensive instruction meets all three of the authors' requirements. Debate is a complex, interactive experience that presents students with personally meaningful challenges and encourages intensive analysis. DAC activities can also be favorably compared with similar lists compiled by other cognitive researchers (e.g., Maloy, 1993).

Debate is not merely interactive and analytical; it also requires students to make decisions about what they will say and what they will not say. DAC programs are thus reflective of cognitive findings that highlight the importance of judgment and adaptation. As Resnick and Klopfer (1989) explain, "to be skilled is not just to know how to perform some action but also to know when to perform it and to adapt the performance to varied circumstances" (3-4). Because debaters must answer particular arguments made by their opponents in a given round, debate is one of the few standard communication-intensive practices that builds skills of this kind. It is difficult to imagine another kind of CAC that rewards students for preparing well-researched arguments they may never use in an actual performance.

The impact of DAC programs on classroom teachers should also be considered. Too often, educational reforms are discussed exclusively in terms of how they might benefit students or communities. Students construct their own knowledge, but teachers must facilitate the process. When constructivists argue in favor of student-centered perspectives, they do not mean to exclude teachers; rather, they endorse the idea that teachers are also learners.

In this light, existing research strongly suggests that DAC offers a number of benefits to teachers. First, debate-intensive instruction transforms teachers into coaches, a perspective that encourages more mentoring and less dominating classroom styles. Maiorana (1992) explains how traditional roles prevent teachers from helping students develop communication skills:

Because students are placed in a passive role, they have little hope of individualized in-class help from the teacher. The teacher does most of the talking, questioning, and thinking; hence the teacher-not the students--gets most of the practice in using the English language and using communicative and academic skills (3).

In contrast, students preparing for multiple debates cannot be effectively taught as a single large group. When coaching individual student teams or small groups is the focus, teachers are encouraged to break the active/passive binary of traditional classrooms. Bransford & Vye conclude that teachers must shift to "coached practice" instead of the "solitary practice" normally occurring outside the classroom. They contend that students who experience only solitary practice will not "develop the expertise necessary to function effectively in various domains" (196).

Coaching, which focuses on small group interaction, might seem to require teachers to work much harder than they do in traditional classrooms. However, Adams & Hamm (1990) conclude that "dividing the class into groups means the teacher has five, six, or seven groups instead of 25 to 35 individuals to make good contact with each day" (16). The authors also recommend the creation of a cooperative environment in the classroom--a state that characterizes pre-competition debate instruction. If students are taught to cooperate in their preparation, Adams & Hamm contend they will actually monitor each other. Debate teaches students to construct and evaluate their own arguments, freeing teachers to spend less time considering whether a given argument is "the right one" and more time helping students learn to develop their own judgment. Furthermore, debate-intensive instruction helps students connect preparation to success. Caine & Caine (1997) describe the benefits of this realization:

When students make the connection between behavior and learning, we find that they will spontaneously work beyond school hours. They will go home and roust family members from in front of

the TV to help them build something or figure something out. They will also visit the library, conduct computer and card catalog searches, and at times work through lunch. School and life are not separate (162).

For those who find this a prospect unlikely, I would note that exactly this sort of spontaneous commitment to work after hours was identified by Fine in her study of New York Urban Debate League participants. Maloy also reports on small-group research at the National Research Center on Student Learning which discovered similar results in the classroom when debate-intensive instruction was employed. According to NRCSL research, "just the anticipation of having to defend an opinion in front of others who may disagree strongly motivated students to learn and think about the topic being debated" (8).

DAC also benefits teachers by providing unique opportunities to evaluate students' understanding of course material. Many cognitive researchers have criticized traditional testing as a poor evaluative tool. Indeed, traditional testing is often singled out as part of the problem with existing instruction, since it tends to lock students into a passive role. By contrast, debate requires students to use their knowledge in the context of broader problem-solving; participants relate isolated bits of information. By observing this process, teachers evaluate whether students are achieving the deep (or "disciplined") learning cognitive researchers identify as truly meaningful. Importantly, debate-intensive instruction gives teachers an opportunity to better comprehend students' perspectives. Such viewpoints are "instructional entry point[s] that sit at the gateway of personalized education" (Brooks & Brooks, 60). If teachers are aware of students' perspectives, the authors contend, they can more effectively challenge students in an appropriate context. Furthermore, Brooks & Brooks contend that using participatory activities to evaluate students confers a number of benefits on teachers:

First, learning continues while assessment occurs. Working through complex problems requires students to apply a priori understandings. In the traditional test-teach-test model, the process of learning all but shuts down while assessment occurs. Second, because authentic assessment tasks require students to apply prior knowledge to new situations, the teacher is able to distinguish between what students have memorized and what they have internalized. Third, context-bound assessment makes multiple paths to the same end equally valid (97).

These advantages are routinely attained by debate-intensive instruction, which allows teachers to assess students while they learn to apply knowledge to the domains of public argument.

Finally, the literature linking increased debate participation with decreased violence points toward DAC benefits for teachers. Giving students the opportunity to become competent in argumentation makes them less likely to attack other students' self concepts. In the classroom setting, this dynamic tends to create more numerous and productive interactions between students, even when they are not debating. A central theme in the violence-reduction research is that activities like debate help students learn to resolve conflicts positively. Teachers who are part of a DAC program will find their students more able to deal with intellectual confrontation without resorting to verbal aggression.

Even if we establish that debate in the classroom helps students and teachers, we must still address the "across" part of DAC. Why cross traditional boundaries and incorporate debate-intensive instruction into all the humanities, as well as science, mathematics, and other technical disciplinary fields? The answer lies in the recognition that debate is not fundamentally a content-oriented practice. Rather, it is a process or a mode of learning closely mirroring the recommendations of cognitive researchers, argument scholars, and critical pedagogists alike. Even so, the process of debate is adaptive to various content areas. As an instructional tool, it can easily encompass the varying standards and concerns of virtually any academic discipline. In fact, debate tends to highlight important field-specific assumptions and idiosyncrasies of logic that many disciplines do not make plain. Conducting research for the National Research Center on Student Learning, Maloy explains the importance of argument for learning:

At the heart of every discipline are strict standards for measuring the soundness of evidence concerning the discipline's principles, facts, and conclusions. In

disciplines such as social science the defense of arguments and assertions often rests on informal reasoning as well as on empirical evidence. Because successful knowledge construction so often involves generating and testing arguments and claims, new learners need to grasp and observe the rules for doing so (7-8).

In other words, if students do not get the opportunity to argue--to debate--about important concepts they encounter in class, they will tend not to develop deep or mature understandings of course content.

Many scientists, for example, discuss the importance of learning "the scientific method," but most undergraduates do not get the chance to explore their own understanding of this method's assumptions in an active way. The lab setting often teaches student how, but not why. DAC allows students to enhance their own understanding of scientific practices by requiring them to explain and justify their studies in an interactive and intellectually challenging way. Similarly, DAC offers math students the chance to translate their understanding of abstract formulas and theorems into the ability to resolve real-world problems. Debating about social controversies whose resolution requires precise mathematical calculation not only sharpens math skills, it helps students understand why math competence is so important. Foreign language students would also benefit from DAC. Debate is, after all, a structured and challenging form of oral interaction, requiring students to understand the argumentative patterns of other cultures and to use high-level conversation skills. Maloy decries the general dearth of opportunities for students to learn argumentation skills, since those deprived in this way "lack a form of reasoning that is essential to conceptual understanding in many subject matters" (8). We can expect that the benefits of debate will increase as the activity is incorporated into more and more classrooms. Most of the research on debate involves participation in a competitive, extra-curricular environment. However, Cronin, assessing the impact of an actual DAC program, concludes:

Students appear to enjoy participating in debate in their courses and rate such activities highly. They report that their courses are improved due to the incorporation of debate as a teaching/learning activity and feel that debate should be used again in these courses. Students perceive that debating major course topics helps them learn more and helps improve their oral communication skills (12-13).

One of Fine's only criticisms of the New York Urban Debate League is that it does not incorporate debate into the regular high school curriculum. She recommends "exploring vehicles to better integrate after-school debate activities into the daily work of schools" (9) and "investigating interdisciplinary connections" (75). Indeed, some research suggests that the ubiquity of debate-intensive instruction in DAC programs can remedy the cognitive disjunction that has been created by the diversification of the curriculum. If we do not find a consistent way to teach critical thinking, Maiorana contends, we will "fractionalize the education profession, driving members of the profession apart in diverse quests to have teachers plant critical skills in students, as though the urge to ask questions were not innate in every human mind" (9). As one of the most effective methods of improving critical thinking skills, debate-intensive instruction is thus recommended because it will be incorporated across the curriculum, not in spite of that fact.

A final argument in favor of debate as a cross-curricular practice is that it can remedy some of the problems identified with CAC programs. Cronin & Glenn highlight the potential problems with implementing CAC. The authors debunk each of these contentions, but their work helps us contrast DAC with its more generic communication counterpart. Three possible difficulties are cited: (1) administrators may see CAC as an alternative to basic speech courses, (2) faculty in other disciplines may wrongly assume they already know how to teach speech without need of additional assistance, and (3) communication faculty who are involved in CAC may not receive sufficient reward from the college for their participation. Of course, as the authors point out, none of these difficulties have actually proved insurmountable in colleges and universities with CAC programs. Still, the National Communication Association (NCA) itself has recognized the salience of these potential problems with CAC. In its 1996 policy platform, NCA states that CAC programs "should not be approved as substitutes for basic communication instruction

provided by the discipline" and that "cross-disciplinary efforts must be acknowledged with resources, administrative support and recognition of faculty effort." Even those are who are charged with advocating communication as a discipline may find the prospect of CAC's shortcomings overwhelming.

DAC may avoid these difficulties more effectively than CAC. Debate is not the same as public speaking, and communication departments could make strong arguments distinguishing the skills taught in a basic public speaking course from those developed by DAC. Additionally, debate training is more technically rigorous than public speaking instruction. Even faculty who may have received formal public speaking training are unlikely to believe they are equipped to teach debate without further assistance. Finally, DAC programs can be clearly distinguished as a subset of communication studies. Although the presence of communication faculty in DAC programs will help build the discipline's credibility, the simple rhetorical device of substituting "debate" for "communication" will help members of other departments distinguish between this particular kind of communication and all kinds of communication scholarship. Making this distinction may help communication faculty separate their participation in DAC from their normal scholarly duties, making arguments for separate reward structures more persuasive.

## CONCLUSION

The existing academic literature makes a powerful case for debate across the curriculum. Debate training improves communication competence and critical thinking, and the existing research in educational psychology gives us every reason to expect that these benefits will only increase as debate pedagogy is implemented across the curriculum. Properly formulated, DAC programs incorporate the best aspects of communication across the curriculum and critical thinking across the curriculum. DAC thus answers the challenge that has been issued by regional higher education accreditation agencies, many of whom have asked undergraduate institutions to implement oral guidelines. Debate gives students an opportunity to develop skills they will need in the real world--an opportunity that contributes to their academic success while simultaneously improving their social skills. With the recent national focus on violence in schools, we should work hard to help students find non-violent ways to resolve their conflicts. Debate-intensive instruction has the potential to improve human relationships in the larger community and in the classroom. It is our job to see that potential fulfilled.

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