It’s not about your teaching but about their learning:

Increasing student engagement through the jigsaw classroom

http://teachingcommons.yorku.ca/blog-69/

Prof. Claudia Chaufan, MD PhD

School of Health Policy and Management/Global Health Program

York University

“Student engagement refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education. Generally speaking, the concept of “student engagement” is predicated on the belief that learning improves when students are inquisitive, interested, or inspired, and that learning tends to suffer when students are bored, dispassionate, disaffected, or otherwise “disengaged.” Stronger student engagement or improved student engagement are common instructional objectives expressed by educators.”

[1]
Student engagement is a critical aspect of quality post-secondary education. Generally, faculty members believe, and research confirms, that student engagement helps achieve one key goal of postsecondary education, i.e., the development of critical thinking skills [2]. There is further evidence that student engagement also facilitates learning outcomes, and no less importantly, contributes to students and instructors having a more pleasurable time together.

One active learning technique that appears to contribute to active learning is the “Jigsaw Classroom.” The jigsaw classroom is an approach in which learners are organized into “jigsaw” groups, each member with a different, yet complementary, task. Learners prepare to perform these tasks both individually (at home) and within “expert” groups (in the classroom), and later return to their “home teams” to peer teach to members of their “jigsaw” groups. After the teaching circle within jigsaw teams is completed, students reflect on and assess their collective understanding.

While the actual implementation of this approach may vary from instructor to instructor, in my own case I have found that the technique succeeds best when all activities are guided through carefully designed sets of questions that vary from module to module, and learners are evaluated both for their individual and collective work.

The jigsaw classroom was developed mainly with the goal of fostering cooperation rather than competition among learners [3]. The guiding premise is that the success of each student not only facilitates but is actually critical to the success of all students. Indeed, the technique was developed by a group of social psychologists concerned with understanding the “malaise” pervasive in educational institutions in the United States, malaise which culminated in the 1990s in the tragic Columbine school shooting, continued over other mass shootings, and is most likely still with us. These professionals attributed this malaise to the overtly competitive environment of educational establishments that led to students feeling frustrated, neglected or outright excluded. Instructors within this environment, willingly or not, created “winners” and “losers” — the first to be admired or envied, the losers to be put down or left behind.

While researchers did not doubt that the behaviors displayed by the protagonists at Columbine and elsewhere indicated severe psychological perturbations, they also concluded that signaling individual students as “bad apples”, or medicalizing their malaise as “psychopathology”, failed to acknowledge problems within the educational system and the broader society. The book “Nobody Left to Hate”, by Elliott Aronson, one within this group of researchers, compellingly summarizes the personal and professional journey that led to the development of the jigsaw classroom [4].[i]

Since 2015, the year I spent at York as a Fulbright Visiting Professor, taking a break from a very research intensive position, with minimal teaching responsibilities and no undergraduate teaching, I had the opportunity to put this technique into practice in a new course on the politics of global health policy. While I had already tried it briefly as a novice instructor in sociology in 2005, and experienced its potential, back then I did not have either the number of students or the institutional support to apply it systematically. I did have both as I developed my new course at York, which resulted in a very successful experience: I collected anecdotal evidence, from
students and faculty, that students felt very engaged and in charge of their learning, to a significant degree thanks to jigsaw.

As I returned to York in the fall of 2016 on a teaching intensive position with the Faculty of Health, School of Health Policy and Management/Global Health Program, I implemented the technique once again, over three terms, in two undergraduate, 2nd and 4th year courses. I then collected yet more significant anecdotal evidence indicating great enthusiasm for the jigsaw approach, which has encouraged me to continue using it and learning from it, through my students’, and my own, experience.

Because the evidence for the success of jigsaw I have collected up to now is anecdotal, this past summer I applied and received funding from the Innovation in Teaching Award, sponsored by the Faculty of Health at York, to systematically document and evaluate the jigsaw classroom, with the assistance of an enthusiastic research team of my own undergraduate students.

As I think of ways to share this information and experience with my colleagues, I am in the course of developing a workshop with the support of the Teaching Commons. I invite readers to sign up for this upcoming workshop on November 13. Registration details here: [http://teachingcommons.yorku.ca/event/active-learning-workshop-the-jigsaw-classroom/?instance_id=1870](http://teachingcommons.yorku.ca/event/active-learning-workshop-the-jigsaw-classroom/?instance_id=1870)

References


[i] Readers can learn more about the jigsaw classroom @ [https://www.jigsaw.org/](https://www.jigsaw.org/)
Active Learning

Active learning is generally defined as any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing. While this definition could include traditional activities such as homework, in practice, active learning refers to activities that are introduced into the classroom. The core elements of active learning are student activity and engagement in the learning process. Active learning is often contrasted to the traditional lecture where students passively receive information from the instructor.

In the traditional approach to college teaching, most class time is spent with the professor lecturing and the students watching and listening. The students work individually on assignments, and cooperation is limited.

Such teacher-centered instructional methods have repeatedly been found inferior to instruction that involves active learning, in which students solve problems, answer questions, formulate questions of their own, discuss, explain, debate, or brainstorm during class.

**Example "active" activities include:** class discussion, small group discussion, debate, posing questions to the class, think-pair-share activities, short written exercises and polling the class (Bonwell and Eison, 1991).

A class discussion may be held in person or in an online environment. It is best that these discussions be centered on an open-ended (occasionally controversial) topic (e.g. one that has no right or wrong answer).

A small group discussion is a similar activity between individual, groups, or teams of individuals. A presidential debate is a common debate format. But these also may center around controversial or political topic.

A think-pair-share activity is when learners take a minute to ponder the previous lesson, later to discuss it with one or more of their peers, finally to share it with the class a part of a formal discussion.

A short written exercise that is often used is the "one minute paper." In this exercise students are asked to summarize the day's discussion in a short paper to be turned in before the end of class. This is a good way to review materials.

The following short article has been repeatedly cited in the resources I have reviewed (note the citation above) and may be helpful in identifying those things you already do in the classroom that are typical of active learning. Additionally, the essay may provide some helpful hints on increasing active learning in your courses.
Active Learning: Creating Excitement in the Classroom

by Charles C. Bonwell and James A. Eison

Research consistently has shown that traditional lecture methods, in which professors talk and students listen, dominate college and university classrooms. It is therefore important to know the nature of active learning, the empirical research on its use, the common obstacles and barriers that give rise to faculty members' resistance to interactive instructional techniques, and how faculty, faculty developers, administrators, and educational researchers can make real the promise of active learning.

WHAT IS ACTIVE LEARNING AND WHY IS IT IMPORTANT?

Surprisingly, educators' use of the term "active learning" has relied more on intuitive understanding than a common definition. Consequently, many faculty assert that all learning is inherently active and that students are therefore actively involved while listening to formal presentations in the classroom. Analysis of the research literature (Chickering and Gamson 1987), however, suggests that students must do more than just listen: They must read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation. Within this context, it is proposed that strategies promoting active learning be defined as instructional activities involving students in doing things and thinking about what they are doing.

Use of these techniques in the classroom is vital because of their powerful impact upon students' learning. For example, several studies have shown that students prefer strategies promoting active learning to traditional lectures. Other research studies evaluating students' achievement have demonstrated that many strategies promoting active learning are comparable to lectures in promoting the mastery of content but superior to lectures in promoting the development of students' skills in thinking and writing. Further, some cognitive research has shown that a significant number of individuals have learning styles best served by pedagogical techniques other than lecturing. Therefore, a thoughtful and scholarly approach to skillful teaching requires that faculty become knowledgeable about the many ways strategies promoting active learning have been successfully used across the disciplines. Further, each faculty member should engage in self-reflection, exploring his or her personal willingness to experiment with alternative approaches to instruction.

HOW CAN ACTIVE LEARNING BE INCORPORATED IN THE CLASSROOM?

The modification of traditional lectures (Penner 1984) is one way to incorporate active learning in the classroom. Research has demonstrated, for example, that if a faculty member allows students to consolidate their notes by pausing three times for two minutes each during a lecture, students will learn significantly more information (Ruhl, Hughes, and Schloss 1987). Two other simple yet effective ways to involve students during a lecture are to insert brief demonstrations or short, ungraded writing exercises followed by class discussion. Certain alternatives to the lecture format further increase student level of engagement: (1) the feedback lecture, which consists of two minilectures separated by a small-group study session built around a study guide, and (2) the guided lecture, in which students listen to a 20- to 30-minute presentation without taking notes, followed by their writing for five minutes what they remember and spending the remainder of the class period in small groups clarifying and elaborating the material.

Discussion in class is one of the most common strategies promoting active learning with good reason. If the objectives of a course are to promote long-term retention of information, to
motivate students toward further learning, to allow students to apply information in new settings, or to develop students’ thinking skills, then discussion is preferable to lecture (McKeachie et al. 1986). Research has suggested, however, that to achieve these goals faculty must be knowledgeable of alternative techniques and strategies for questioning and discussion (Hyman 1980) and must create a supportive intellectual and emotional environment that encourages students to take risks (Lowman 1984).

Several additional strategies promoting active learning have been similarly shown to influence favorably students’ attitudes and achievement. Visual-based instruction, for example, can provide a helpful focal point for other interactive techniques. In-class instruction across the disciplines is another productive way to involve students in doing things and thinking about the things they are doing. Two popular instructional strategies based on problem-solving model include the case study method of instruction and Guided Design. Other active learning pedagogies worthy of instructors’ use include cooperative learning, debates, drama, role playing and simulation, and peer teaching. In short, the published literature on alternatives to traditional classroom presentations provides a rich menu of different approaches faculty can readily add to their repertoire of instructional skills.

WHAT ARE THE BARRIERS?

To address adequately why most faculty have not embraced recent calls for educational reform, it is necessary first to identify and understand common barriers to instructional change, including the powerful influence of educational tradition; faculty self-perceptions and self-definition of roles; the discomfort and anxiety that change creates; and the limited incentives for faculty to change.

But certain specific obstacles are associated with the use of active learning including limited class time; a possible increase in preparation time; the potential difficulty of using active learning in large classes; and a lack of needed materials, equipment, or resources.

Perhaps the single greatest barrier of all, however, is the fact that faculty members’ efforts to employ active learning involve risk—the risks that students will not participate, use higher-order thinking, or learn sufficient content, that faculty members will feel a loss of control, lack necessary skills, or be criticized for teaching in unorthodox ways. Each obstacle or barrier and type of risk, however, can be successfully overcome through careful, thoughtful planning.

WHAT CONCLUSIONS SHOULD BE DRAWN AND RECOMMENDATIONS MADE?

The reform of instructional practice in higher education must begin with faculty members’ efforts. An excellent first step is to select strategies promoting active learning that one can feel comfortable with. Such low-risk strategies are typically of short duration, structured and planned, focused on subject matter that is neither too abstract nor too controversial, and familiar to both the faculty member and the students.

Faculty developers can help stimulate and support faculty members’ efforts to change by highlighting the instructional importance of active learning in the newsletters and publications they distribute. Further, the use of active learning should become both the subject matter of faculty development workshops and the instructional method used to facilitate such programs. And it is important that faculty developers recognize the need to provide follow-up to, and support for, faculty members’ efforts to change.

Academic administrators can help these initiatives by recognizing and rewarding excellent teaching
in general and the adoption of instructional innovations in particular. Comprehensive programs to
demonstrate this type of administrative commitment (Cochran 1989) should address institutional
employment policies and practices, the allocation of adequate resources for instructional
development, and the development of strategic administrative action plans.

Equally important is the need for more rigorous research to provide a scientific foundation to guide
future practices in the classroom. Currently, most published articles on active learning have been
descriptive accounts rather than empirical investigations, many are out of date, either
chronologically or methodologically, and a large number of important conceptual issues have
never been explored. New qualitative and quantitative research should examine strategies that
enhance students' learning from presentations; explore the impact of previously overlooked, yet
educationally significant, characteristics of students, such as gender, different learning styles, or
stage of intellectual development; and be disseminated in journals widely read by faculty.

In retrospect, it appears that previous classroom initiatives and written materials about active
learning have all too often been isolated and fragmented. The resulting pedagogical efforts have
therefore lacked coherence, and the goal of interactive classrooms has remained unfulfilled.
Through the coordinated efforts of individual faculty, faculty developers, academic administrators,
and educational researchers, however, higher education in the coming decade CAN make real the
promise of active learning!

SELECTED REFERENCES


ED340272 Sep 91 Active Learning: Creating Excitement in the Classroom. ERIC Digest.

The eight issue series is available through subscription for $120.00 per year ($140.00 outside the U.S.). Subscriptions begin with Report 1 and conclude with Report 8 of the current series year. Single copies, at $24.00 each, can be ordered by writing to: ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036-1183, or by calling (800) 773-3742. Call for a copy of the ASHE-ERIC Higher Education Reports Catalog or visit or web site www.gwu.edu/~eriche.
A CONVERSATION WITH/Elliot Aronson; No One Left to Hate: Averting Columbines

By SUSAN GILBERT    MARCH 27, 2001

Social psychology, the study of how the social environment shapes human behavior, is not an ivory tower science; it is a tool for helping to solve real world problems, like bigotry and violence. Dr. Elliot Aronson, a social psychologist and author, always preached this philosophy to his graduate students, but one day a phone call from a former student forced him to prove it.

It was 1971 and Dr. Aronson was head of the social psychology department at the University of Texas. By then, the former student had become an assistant superintendent in the Austin schools, which were in crisis after desegregation. Riots had broken out among black, Hispanic and white students and the district asked Dr. Aronson to help.

He and some of his graduate students devised a plan, a cooperative learning method in which fourth, fifth and sixth graders were divided into small racially mixed groups to work on some lessons. Each student had a component to research and teach. How well students learned -- and did on the exams that followed -- depended on how well they worked in the group. So, it was in the students' best interest to get along and to get the best work from one another.

At first, the students resented having to work together, but after several weeks their resentment seemed to give way to acceptance. Prejudice, measured by a
psychological test, declined. Students of different races were even playing together at recess.

Now, Dr. Aronson believes that his cooperative learning method, called the jigsaw classroom, can help prevent school violence. As Dr. Aronson sees it, the jigsaw classroom has an edge over several of the preventive measures that have been put into place, like zero-tolerance policies, because it gets to the root of the problem: the cliquish environment in many schools in which unpopular students are ostracized.

Dr. Aronson describes how the jigsaw classroom can be part of a larger plan in his latest book, "Nobody Left to Hate: Teaching Compassion After Columbine," as well as on his Web site (www.jigsaw.org). He estimates that 15 percent to 18 percent of American schools have used the jigsaw classroom, and he continues to get letters from teachers interested in trying it. One came just days before the shooting at Santana High School in suburban San Diego from an administrator of a nearby middle school.

Soon after the shooting at Santana, Dr. Aronson elaborated on his ideas in a telephone interview from his home in Santa Cruz, where he is professor emeritus at the University of California. "There's no bigger, stronger clique than race," he said. "And we overcame that."

Q. You are critical of some policies instituted to curb school violence, such as zero-tolerance policies and posting the Ten Commandments at school. Why?

A. There's nothing wrong with posting the Ten Commandments. There's everything wrong with it if you think it's the solution to the problem.

I don't want to come out and say I'm against zero-tolerance, but that strategy is not without serious problems. There are an awful lot of kids who make idle threats because they are frustrated and unhappy. The question is, How do you separate the kids who really mean it from the kids who don't? None of these strategies gets to the root cause of the problem of school violence, which is the poisonous atmosphere in junior high schools and high schools.
Q. What do you mean when you speak of a poisonous atmosphere in schools?

A. It's the cliquish atmosphere of rejection and humiliation that makes a very significant minority of students, I would say 30 percent to 40 percent of them, very, very unhappy. If kids at the top of the pyramid start calling a kid a nerd, then the kids in the second tier of cliques tease him because that's one way of identifying with the powerful group. Next thing you know, everybody's teasing him. Everybody in school knows what group everybody belongs to. They know whom they can get away with taunting.

Most of the kids who are taunted suffer in silence. Some of them seriously contemplate taking their own lives. A handful -- and it's going to be more than a handful in the next few years -- lash out at their fellow students almost randomly.

Q. In "Nobody Left to Hate," you cite research on men and boys convicted of murder that shows that most had suffered a tremendous sense of shame brought on by rejection and humiliation. How long does it take for repeated rejection and humiliation to have an effect on the person who's the target?

A. That depends on how severe it is. It can happen overnight if the rejection is coupled by humiliation and bullying, especially if it takes place in front of other people whom you'd like to like you. There's a saying that nobody likes a bully, but I think the more likely statement is that nobody likes the person being bullied. Having been bullied is like having a contagious disease in that other students lose status if they hang out with you, so they move away.

Q. Many adults think that forming cliques is a natural part of being a teenager. Is it?

A. I think that there is a tendency to have separate groups and to exclude others. By itself, that wouldn't be such a bad thing. But if the exclusion takes the form of taunting and humiliation, you're beginning to sow the seeds of violence.

Q. How can your jigsaw method help improve the social atmosphere in middle schools and high schools?

A. The jigsaw classroom is a way to help kids learn from experience that kids
who are different from them might have something to offer that's interesting and useful. Someone can tell you over and over that the short fat kid with pimples is really sweet. But there's no substitute for being in a small group with that kid and seeing that he's warm, funny and clever.

Q. Did you see less teasing and bullying in the schools where you used your jigsaw method?

A. There were striking behavioral findings. One of my graduate students went to the roof of some of the Austin schools and took photographs of the students at recess. After six weeks, there was more interracial mixing at the jigsaw schools than at the other schools.

In addition, teachers who didn't know that anything special was going on, such as the music teacher, would tell the classroom teachers that they saw a whole different atmosphere, an atmosphere of friendliness, empathy and inclusion, rather than a tense atmosphere.

Q. How long did these benefits last?

A. We didn't follow any single group of students for more than a year. But I've gotten letters and phone calls from teachers telling me that even though they weren't using jigsaw, kids in their classrooms who were in jigsaw five years earlier were still showing more empathy and compassion than other students.

Q. How much of the school day should be devoted to the jigsaw classroom to get the social benefits?

A. We tested that and we found that with as little as one hour a day, students showed all the benefits, such as decreases in prejudice and in liking school more. If kids spend just one hour a day working in groups, they develop empathy for people they would otherwise have had nothing to do with because of their appearance. So, when teachers say that it's difficult to teach arithmetic with jigsaw, I say, teach only social studies or some other subject that you think works better with jigsaw.

Q. Clearly, cooperative learning alone isn't going to solve the problem of hostile cliquish behavior in school, or of school violence. What else should schools do?
A. They can specifically try to teach kids how to resolve conflicts amicably and institute a policy against bullying.

There's a very successful program in Norway instituted by a social psychologist named Dan Olweus. In this program, teachers are trained to recognize and deal with bullying, cooperative learning is used, principals ensure that lunchrooms and playgrounds are adequately supervised, and counselors conduct intensive therapy with bullies and their parents. The program has reduced bullying by about 50 percent.

Q. Several states are considering legislation that would require each public school district to have an anti-bullying policy. Is this a good step in the right direction?

A. It’s outrageous that there needs to be legislation for such a thing. Clearly, schools should be trying to prevent bullying. My fear is that the legislation is likely to be reactive rather than proactive -- that is, that there will be mechanisms in place to punish bullies rather than to prevent bullying.

Q. In your book you also recommend that schools conduct "friendship coaching" for unpopular students. How does this work?

A. There’s a small group of children in each school who are unpopular because they lack social intelligence -- they’re extremely shy, they don’t know how to start conversations, their interactions with others are awkward or inappropriate.

One psychologist, Steven Asher of Duke, designed a series of six friendship coaching sessions in which unpopular students in the third and fourth grades were taught to act in ways typical of more popular students. A year after the coaching sessions, the students had moved up to the middle of their class popularity ranking.

Q. How could "friendship coaching" be put in place in the real world of a school? I can imagine some parents objecting to their children being singled out.

A. I’m not an educator, so I’m not sure what’s the best way to do this.

One way would be to set up a club on public speaking or sensitivity training and
open it to all students. But the teachers might encourage the unpopular kids to join. Every teacher knows within a month who these kids are.

Q. Could teachers help improve the social atmosphere at school if they intervened when they heard students taunting someone in the hallway?

A. Absolutely. A lot of parents say that the administration and the teachers at their children's schools turn a blind eye to verbal assaults. They will intervene if there's a fistfight, but not if there's taunting. I think it's a good idea for them to intervene. It helps for all the kids to know that the school is coming out against taunting.

Q. What can parents do to help reduce taunting and exclusion among students?

A. Parents can teach their kids about the positive aspects of diversity, whether it's racial, ethnic or the kinds of clothes people wear or whether they're short, tall, fat, thin. Attitudes about that stuff begin in the home.

Q. How much of an effect can we expect schools and parents to have on reducing hostile behavior at school?

A. I think they can have an enormous effect, not necessarily in eliminating cliques, but in making them less aggressive, less humiliating, less exclusionary. I think schools and parents can certainly soften the edges of cliques and make the school a less hostile environment.
Chapter 1: What Happened at Columbine?

It was April 20th, 1999, the day that the corridors, the classrooms, and the library of Columbine High School reverberated with the sound of gunshots. Two students, consumed by rage and armed with an arsenal of guns and explosives, went on a rampage, killing a teacher and several of their fellow students. They then turned their guns on themselves. After the shooting stopped, the building was eventually secured by a SWAT team. They found fifteen people dead (including the two shooters) and twenty-three more who needed to be hospitalized—some with severe wounds. It was the worst school massacre in our nation's history.

As horrendous as it was, we now know that the carnage could have been much worse. The two shooters made videotapes a few weeks before their massacre, and from these we have learned that they had carefully planned the event several months in advance. They had actually placed three sets of pipe bombs that failed to go off: One set a few miles from the school was intended to explode first and distract police by keeping them busy away from the school; a second set was supposed to go off in the cafeteria and kill several students there, but it was also supposed to cause hundreds of terrified students to evacuate the building where Eric Harris and Dylan Klebold would be waiting to gun them down; a third set was planted in their cars in the school parking lot, these timed to explode after the police and paramedics had arrived on the scene, creating more chaos and increasing the number of casualties. The videotapes show the two perpetrators gleefully predicting that, before the day was over, they would kill 250 people.

Try to imagine that you were the parent of a student at Columbine High School. That morning you lovingly packed a lunch for your daughter and sent her off to school before going about your own business. You were content in the belief that her high school was a safe and secure place. So there you are—listening to music on the radio while in your office, writing a memo to the boss, or driving home from the supermarket—when suddenly the music is interrupted by a news bulletin. The somber and somewhat rattled reporter makes the following announcement: "There has been a shooting at Columbine High School. Several students appear to have been killed or seriously wounded. Police have surrounded the school but have not yet entered. The gunmen are roaming free, armed with automatic weapons and explosives. Some students have managed to escape unharmed but most are still trapped in the school at the mercy of the gunmen."

I have four children and five grandchildren, all of whom have gone or will go to public school in various sections of this country. I know how I would feel. I can empathize with the shock and panic that undoubtedly gripped the parents of the Columbine students. I share the feelings of
helplessness, despair, and anger that most parents and grandparents must have felt while watching the horrifying events unfold on the network news that evening or reading about them in the newspapers the next morning. Until recently, most residents of small towns and suburbs believed that extreme acts of violence were an unfortunate and tragic aspect of day-to-day life of the inner city, but that such things did not happen in affluent suburbs and small towns. The realization hit most parents like a punch in the stomach: If such a thing could happen in the middle-class community of Littleton, Colorado, it could happen anywhere. And, unfortunately, it does seem to be happening anywhere and everywhere—small towns and little cities that conjure up Norman Rockwell paintings: Littleton, Colorado; Conyers, Georgia; Notus, Idaho; Springfield, Oregon; Fayetteville, Tennessee; Edinboro, Pennsylvania; Jonesboro, Arkansas; West Paducah, Kentucky; Pearl, Mississippi; Fort Gibson, Oklahoma.

Ironically, these tragedies come at a time when violence, in general, and school violence, in particular, have been declining. In the past ten years, the annual number of school shootings has actually decreased. Broadly speaking, our schools are safe places. Indeed, for those youngsters who live in the crime-ridden, war zone neighborhoods of some of our most troubled inner cities—places like Detroit, New York, Los Angeles, Philadelphia, and Houston—their schools have become the safest place for them to be. Consider the data: There are approximately 50 million students attending some 108,000 public schools in this country, but fewer than one percent of adolescent homicides occur in or around schools.

So why all the panic? Shouldn’t the media pundits be celebrating rather than wringing their hands in despair? Is all the attention being devoted to gun control and the safety of schools just another instance of the media taking a single tragic event and blowing it way out of proportion—manufacturing “trends” and “implications” where none exist?

I don’t think so. Let’s take a closer look. Yes, there has been a decline in the overall number of homicides in our schools. But this decline is almost certainly due to the fact that school officials in dangerous areas have installed metal detectors, surveillance cameras, and security guards in a prudent (and largely successful) attempt to prevent particularly violent or troubled youngsters from bringing weapons into the school.

The sobering statistic is that the number of incidents involving the killing of multiple victims in and around schools has risen sharply in the past few years. In less than two years, there have been eight multiple shootings of students by students, each of these in a place far removed from the turmoil of the inner city. A recent CBS/NY Times poll shows that fifty-two percent of teenagers from relatively benign communities now live with the fear that a Columbine-style attack could strike their school. And it is not only the students living with that fear; their parents also show a great deal of stress and anxiety around the issue of school safety.

What to Do?

In the sad aftermath of a school shooting—especially one as horrifying as the Columbine massacre, our first impulse is to blame someone. We demand to know who might have been negligent, who might have conspired with the killers, who should have seen the handwriting on the wall. We are not content with the explanation that this was performed by two disturbed youngsters. We want to look beyond them for the “real” culprit:

- Were the teachers or the principal negligent? Why didn’t they spot trouble before it erupted?
- What about the parents of the shooters? How could reasonable parents not be aware that their sons kept guns in their bedrooms and were manufacturing pipebombs in their garage?
- What’s wrong with our schools, anyway? Why aren’t they teaching our kids the difference between right and wrong?
- Are these the only video games and slasher movies making our youngsters more insensitive to the pain and suffering of real people—and to the permanence of death? If we could ban these forms of entertainment, wouldn’t that make our schools safe again?

The need to blame is fully understandable. But if we truly want to address the problem, if we truly want to prevent future tragedies of this kind, then it is vital to make a clear distinction between two kinds of blaming: 1) The blaming that is aimed at finding the cause of the disaster so that we might come up with a workable intervention; 2) The blaming that is mere condemnation. Condemnation is a great indoor sport. It somehow makes us feel less helpless if we can unmask a culprit who we can then proceed to vilify. If we decide that the culprit is a school administration that was asleep at the switch, then we can demand that the school principal be fired. But firing a principal will not solve the problem. If we decide the culprit was lax parenting, then perhaps we can humiliate or sue the parents of the killers. But humiliating and suing the killers’ parents will not solve the problem either. This kind of blaming is a simple knee-jerk response. It won’t do us much good in the long run.

But a lot of good can come from rational problem solving. And we humans are problem-solving animals. When a tragedy occurs, we want to know why. This is not idle curiosity. If we can pinpoint a
cause, then we can fix it. For example, whenever an airliner crashes, a great deal of time and effort is expended to try to find the black box even if it's lying under 250 feet of turbulent ocean water. The black box becomes the focal point of a full-scale investigation: Was there a faulty design? Was there metal fatigue or a frayed electrical wire that had been overlooked in the previous inspection? Was it pilot error? Had ice been allowed to form on the wings of the plane while it waited on the runway? Was the plane carrying dangerous cargo? Could it have been a deliberate act of sabotage? The investigation is slow and painstaking. It typically requires several months or even years to complete.

In the aftermath of a school shooting, we are not inclined to be patient. We are tempted to look for instant solutions before we fully understand the cause of the problem. This is why Congress voted to tack on an amendment to the crime bill following the Columbine massacre. The amendment gives the right to allow the display of the Ten Commandments in schools. "I understand that simply posting the Ten Commandments will not instantly change the moral character of our nation," said Robert Aderholt, the measure's sponsor. "However, it is an important step to promote morality and an end of children killing children." Ah, if it were only that simple!

Understandably, parents demanded more security and many school officials were quick to comply. Schools across the country have rushed to install metal detectors and surveillance cameras. They have instituted ID policies. They have ripped out lockers and required students to carry see-through backpacks. They have also asked students to report other students who threaten violence or who seem different (dress strangely, keep to themselves, and so on). Some schools have required that personality tests be administered to all students-tests aimed at profiling those students who might be most apt to go on a murderous rampage. Local police departments have conducted SWAT training at high schools.

Newspaper columnists, TV pundits, politicians, and the general public have been quick to blame permissive parents, lax school officials, the media, and society as a whole. Self-proclaimed experts abound. Each seems to have a different idea of cause and cure. Here are those most frequently mentioned:

**Politically Expedient Interventions**

<table>
<thead>
<tr>
<th>Problems</th>
<th>Quick-Fix Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough moral training in our educational institutions?</td>
<td>Allow prayer in schools or post the Ten Commandments in every classroom.</td>
</tr>
<tr>
<td>Too much violent imagery in the media?</td>
<td>Clamp down on violent movies, TV, and video games.</td>
</tr>
<tr>
<td>Too many guns, too easily available?</td>
<td>Institute more stringent gun control.</td>
</tr>
<tr>
<td>Youngsters are not respectful enough?</td>
<td>Make rules forcing them to call teachers &quot;sir&quot; and ma'am.</td>
</tr>
<tr>
<td>Some students act different from what is considered the norm?</td>
<td>Identify them and either keep them under surveillance, remove them from the school, or subject them to intensive therapy until they are able to be like everybody else.</td>
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**Approaching the Problem Scientifically**

We need to look beyond the perpetrators if we want to reduce the number of school massacres in the future. If we simply dismiss the recent spate of multiple shootings at schools as the random acts of a handful of disturbed youngsters, we would be making a grave mistake. At the same time, it is important to look beyond the perpetrators in a meaningful way-with reasonable tools for looking. Before we rush in with an intervention, we must understand the deepest origins of the problem and the consequences of each proposed intervention.

Basically, there are two classes of intervention: root cause interventions and peripheral interventions. In my judgment, some of the so-called "cures" outlined in the box above have merit; others are useless; still others are almost certain to cause more harm than good. But they are all peripheral interventions. None of them-not even the useful ones-succeed in getting to the root of the problem. If a peripheral intervention (like gun control or metal detectors, for example) proves to be useful, there is no reason why it cannot be utilized. But we must realize that the deeper underlying problem will remain. And before we implement any kind of intervention, we must make sure that there is evidence supporting its use. What is immediately apparent is that most of these "cures" are not based on solid evidence—but rest on emotion, wishful thinking, bias, and political expediency.

Why do I say this? As a social psychologist, I have spent more than forty years studying how we humans behave and what motivates us to behave as we do. Social psychology is a science that is concerned with important aspects of human social behavior: persuasion, conformity, love, hate,
aggression, prejudice, and the like-the stuff of human beings relating with one another. When I say I've been "studying" these things, I don't mean that I've simply been observing human behavior and speculating about what might have caused it. I mean that I have used these observations to specify concrete hypotheses, and then have tested these hypotheses in a rigorous scientific manner.

It might come as a surprise to most readers, but experimental social psychologists use strategies and techniques that are functionally identical to those used by medical researchers testing a new drug. Medical researchers would be drummed out of the business if they allowed themselves to rely entirely on idle speculation, bias, hearsay, folk wisdom, or political expediency to determine whether this or that drug might be helpful, harmful, or of no consequence. Moreover, medical researchers have learned that they cannot simply rely on the testimonials of patients who say they feel better after taking a new drug. After ingesting sugar pills or snake oil, many people feel better and some even think they are cured of serious illness. This is the well-known "placebo effect." The positive feelings generated by a placebo are of limited and temporary value. Yet, there are still plenty of people around some well-intentioned, others charlatans-who capitalize on the placebo effect by peddling untested substances as magical cures for a variety of illnesses from acne to cancer. Fortunately, most consumers are now sophisticated enough to avoid spending huge sums of money on untested cures; most of us now require rigorous scientific investigation before we will ingest any old drug or concoction touted to cure a serious illness.

Such standards should be no less important in designing policies to influence human behavior-especially when the behavior in question is dysfunctional or destructive. For, in the absence of careful scientific investigation, we are just as apt to be fooled by our so-called "commonsense" notions of human nature as by a convincing huckster of snake oil. The fact is that common sense notions of human behavior are frequently wrong and the consequences can be tragic. For example, from 1896 to 1954, most policy makers, as well as the general public, believed in the doctrine of "separate but equal." They believed that it did no harm to separate African-American school children from their white counterparts as long as the facilities were roughly equivalent. In 1954, social psychologists helped reverse this "commonsense" policy; they used scientific evidence to convince the Supreme Court that the mere fact of being segregated has a strong and negative impact on the self-esteem of minority youngsters that interferes with their ability to learn and can permanently stunt their intellectual and emotional development. In short, separate but equal is an oxymoron; being segregated, in and of itself, produces inequality.

So what wisdom does scientific social psychology have to offer concerning tragedies like Columbine and how to prevent them? Quite a lot. In the next several chapters, we will look at the speculations and cures mentioned in the box above through the lens of careful scientific studies. In doing so, we hope to separate the wheat of well-founded knowledge from the chaff of idle speculation on such topics as the easy availability of guns and the impact of media violence on the behavior of children and adolescents. We will also look at data pertinent to such interventions as the posting of the Ten Commandments and requiring students to say "sir" and "ma'am" when addressing their teachers.

Most important, we will try to get to the root of the problem: We will scrutinize the social atmosphere prevalent in most high schools in this country and try to determine how this atmosphere might have contributed to the tragedies that unfolded in the classrooms of Littleton, West Paducah, Springfield, and other communities in recent years.

This last point requires some elaboration. There is no doubt in my mind that these violent acts were pathological. The perpetrators of these horrifying deeds were disturbed. Their behavior was beyond all reason. But if we chalk up these events simply to individual pathology and nothing else, then we are bound to miss something of vital importance. Based on my experience in schools throughout the nation, I would suggest that it is highly likely that the perpetrators were reacting in an extreme and pathological manner to a general atmosphere of exclusion. This is a school atmosphere that most of the student body finds unpleasant, distasteful, difficult, and even humiliating. If this is the case, then instituting a significant change in the social atmosphere of the classroom might succeed in making the school a safer place (reducing the possibility that students will become so disgruntled that they go over the edge and commit acts of extreme violence). This might also succeed in producing the kind of social environment that will make the school a more pleasant, more stimulating, more compassionate, and more humane place for all of the students. This is our ultimate goal.

Why It's Important to Avoid Jumping to the Wrong Conclusion

Why do we need to go about this scientifically or cautiously? Given the extreme importance of the problem, what's wrong with a scattershot strategy-trying several possible interventions at once-in the hope that one or more will do some good? As I implied earlier, the problem is that it is highly likely that some apparently sensible interventions could produce negative or even disastrous consequences, depending on what is actually going on in the school. Let me give you one cogent example. A few days after the Columbine tragedy, my 16-year-old grandson came home from high school and said, "Guess what? The principal sent around a notice asking us to report any kids who are dressing strangely, behaving weirdly, appear to be loners, or out of it."
At first glance, this might seem like a reasonable course of action: The authorities merely want to identify the kids who seem to fit the description of the Columbine shooters-kids who might be unpopular or might cause trouble, kids who dress in black trenchcoats or in other strange ways. The authorities can then keep an eye on them, offer them special counseling, or whatever. But my best guess is that the principal is shining his spotlight on the wrong part of the equation. Here's why: From my classroom research, I have found that the social atmosphere in most schools is competitive, cliquish, and exclusionary. The majority of teenagers I have interviewed agonize over the fact that there is a general atmosphere of taunting and rejection among their peers that makes the high school experience an unpleasant one. For many, it is worse than unpleasant—it is a living hell, where they are in the out-group and feel insecure, unpopular, put-down, and picked on. By asking the "normal" students to point out the "strange" ones, my grandson's high school principal is unwittingly making a bad situation worse by implicitly sanctioning the rejection and exclusion of a sizable group of students whose only sin is unpopularity. By doing this, he is making the life of the unpopular students even more hellish.

It is becoming increasingly clear that a large number of school administrators have been tempted to go this route. They do this because, on the surface, this intervention seems sensible and harmless. Moreover, from the perspective of a bureaucrat, it is a self-serving response. Here's why: If, in the aftermath of the Columbine massacre, my grandson's principal did nothing, and a shooting subsequently took place in his school, he would be in serious trouble. But if a shooting took place after he had made an attempt to identify the "weird loners," very few people would fault him—even though it might have been his action that exacerbated the tension and, therefore, contributed to the outcome.

It is for this reason that school administrators will want to do something-anything-that will keep them from looking as though they are not attempting to address the problem. In my opinion, this is a formula for disaster.

If my reasoning has merit, it might serve to underscore the importance of refusing to rush in with half-baked interventions that have not been properly researched. But we parents are understandably impatient. We crave action. If there is something dangerously broken in our schools, we want to fix it—and fix it fast. We are reluctant to wait for scientific social psychologists to get around to doing the research that will lead the way to better outcomes.

The good news is that we don't need to wait for the research. The relevant research has already been done. Indeed, scientific social psychologists have been doing careful research on these issues for years. We have discovered and tested ways of transforming the general atmosphere of schools from highly competitive, cliquish, exclusionary places-places where you would be shunned if you were from the "wrong" race or the "wrong" ethnic group, came from the wrong side of the tracks, wore the wrong kind of clothes, were too short or too tall, too bad or too thin, or just "didn't fit in"—into places where students have learned to appreciate one another and to experience empathy, compassion, and respect for one another. I have witnessed this on countless occasions: Students who had been prejudiced against each other because of racial or ethnic differences—or simply because they looked or acted differently—actually become close friends.

My colleagues and I have accomplished these minor miracles in two main ways: The first involves teaching youngsters specific ways to gain greater control over their own impulses and how to get along with others so they can resolve interpersonal conflicts amicably. This will be described in Chapter 5. The second way involves the simple device of restructuring the classroom experience so that it promotes cooperation rather than competition and, in the process, motivating students to listen respectfully to one another, help one another, and begin to care about one another. They learn all this while they are in the process of learning history, geography, biology, and all the traditional academic subjects—and learning them as well or better than they would in more traditional classrooms. This approach will be described in Chapter 6.

Unlike the first strategy, the second does not require any new curricular material; it simply involves teaching traditional material in a nontraditional structure, where children pull together rather than compete against one another. My research and the research of my colleagues has demonstrated over and over again that, after working closely with one another in a cooperative way, students begin to see positive qualities in their classmates they hadn't seen before. Within a few weeks of these experiences, artificial barriers of exclusion begin to recede, and a general atmosphere of compassion, respect, and inclusion eventually prevails. Moreover, these positive outcomes are not accomplished at the expense of academics. On the contrary, in these classrooms the academic performance of most youngsters is enhanced—that is, youngsters score higher on achievement tests than they do in traditional, more competitive classrooms.

This is not a pie-in-the-sky solution. Over the past three decades, my colleagues and I have done careful scientific research on these cooperative strategies of learning and have applied them with great success in hundreds of schools all over the country. These findings just need to be
implemented more broadly, so that every youngster in the country can have an opportunity to experience the benefits of being socially included. In the following chapters, we will present the relevant information and discuss the best ways to implement cooperative learning strategies, as well as other educational reforms—reforms that are important, humane, and, best of all, doable.

Wait a minute. If social psychologists have had this knowledge for more than two decades, then why wasn’t it put into more general practice a long time ago? Unfortunately, a wide gulf exists between the scientific findings social psychologists uncover and the utilization of these findings by the relevant segments of our society. Most social psychologists publish the results of their experiments in rather esoteric journals that are read primarily by other social psychologists—not by the general public or policy makers. Moreover, unlike the results from medical research, most social psychological findings are not picked up by the mass media and do not find their way onto the evening news.

It’s not the fault of the media; by and large, we social psychologists have not done a very good job of making our findings accessible to the average person. (As an aside, I am inclined to state that this is not always the case. Given a financial incentive, all kinds of people have been able to ferret out useful social psychological knowledge published in our obscure journals. Advertising copywriters and marketers have made use of our research on such phenomena as the power of familiarity on persuasion and the importance of scarcity in increasing the attractiveness of a product. Corporation executives have studied our research on effective leadership. People who manage political campaigns know something of our work on the relative effectiveness of positive or negative messages. Writers of books aimed at helping couples achieve marital happiness have delved into our research on the antecedents of interpersonal attraction.)

Unfortunately, it often takes a tragedy like Columbine to arouse the general public’s interest in changing the atmosphere in our schools and to motivate social psychologists to make our research more accessible to people who can make use of it: parents, teachers, policy makers, and ordinary citizens. Knowledge is power. Fortified with knowledge of proven, effective classroom interventions, parents and teachers can take action to make their children’s school not only a safer place, but also a more humane and more compassionate place. That is why I have written this book.

Let me restate the aim of this book as clearly and as succinctly as I can: It is my contention that those students who killed their fellow students in schools across the country were undergoing intense stress as a result of having been excluded, mocked, and taunted. There is no doubt that their behavior was both pathological and inexcusable. In my judgment, their behavior was the pathological tip of a very large iceberg. The general atmosphere of exclusion means that a great many students are having a miserable time in middle school and high school. Accordingly, the aim of this book is not simply to try to prevent pathological “losers” from killing their fellow students. It is to create a classroom atmosphere where there are no losers. In that very real sense, this book is about creating an atmosphere in which there is nobody left to hate. It is intended to provide parents and teachers with the tools to make schools more humane and more compassionate places, without sacrificing the basic academic material students are supposed to learn. There is nothing mutually exclusive about learning biology, literature, and calculus while also learning important human values. On the contrary, there is every reason to believe that the one will enhance the other.