School Context Shapes Peer Ethnic Discrimination

As with other forms of bullying, students who are verbally or physically harassed because of their membership in an ethnic group suffer declines in their psychological, social, and academic health.

Students who experience such “peer ethnic discrimination” report lower self-esteem and higher levels of depressive symptoms. They perform less well in school, view school as less important, and report less academic motivation, compared to students who report rarely experiencing discrimination.

UW–Madison education professor Amy Bellmore says that peer ethnic discrimination is particularly worrisome during adolescence. That’s because it affects two key developmental features—feeling left out at the time when fitting in with peers peaks in importance, and forming a negative opinion of oneself at the time when one’s ethnic identity is developing.

For 4 years Bellmore and colleagues studied a group of 1,072 students attending 84 high schools in southern California that varied in ethnic composition. Of these students, 82% remained in the same high school across all years they participated in the study.

Bellmore surveyed students about peer interactions, teacher behaviors, and school norms, and asked them to indicate whether they had been called insulting names by other kids, threatened by other kids, or excluded from activities because of their ethnicity. She also asked how often they had such an experience over the preceding 6 months.

Bellmore expected to find the highest levels of discrimination in settings with only moderate ethnic diversity, and that turned out to be the case. It seems to be about power. As she explained, when two ethnic groups are present in approximately equal sizes, they may jockey for the highest status or the most power. As a result they may target the other ethnic group.

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It is my great pleasure to write this first column to all of you. My first several months as the director of WCER have been a pleasure. I have been talking with as many people in the Center as possible, and have found WCER to be a home to fascinating people doing important work.

Needless to say, I step into very big shoes. During his nine years as director, Adam Gamoran oversaw the continued growth and diversification of the WCER portfolio. Adam was also the intellectual leader of many research advances during his tenure. We wish him well in his new position as President of the William T. Grant Foundation.

As you may notice below, I have a rather different background from Adam. I am a professor of astronomy, and my students and I study issues in stellar astrophysics. I also lead an NSF center, the Center for the Integration of Research, Teaching and Learning. The mission of CIRTL is to prepare STEM future faculty – currently graduate students and post-docs – to be both excellent researchers and excellent teachers. CIRTL now comprises 22 major research universities across the nation. Needless to say, WCER is its administrative home.

The core of WCER – its people and its work – is solid and top notch. Over the next years I seek to increase the visibility and the impact of WCER’s research across UW, around the state of Wisconsin, and beyond. I also seek to nurture those new to the field and to WCER—early career faculty and academic staff, graduate students, and undergraduate students seeking research experiences. WCER will welcome all across the School of Education and the campus who wish to explore directions in education research.

Robert Mathieu
WCER Director
Vilas Distinguished Professor of Astronomy

In contrast, schools with the highest diversity had the lowest levels of discrimination, possibly because of a more even distribution of power among groups.

In schools where many ethnic groups are represented and no single group holds the majority, Bellmore found that ethnic diversity has a positive effect on students’ peer experiences. In these schools, compared with schools with only moderate diversity, adolescents feel safer and less victimized by peers. They report lower levels of loneliness and social anxiety, and sometimes adapt better when victimized by their peers.

Her study found that the school ethnic context, rather than a student’s membership in any particular ethnic group, is most closely associated with students’ experiences of peer ethnic discrimination. Further, her study found three factors that may protect students from peer ethnic discrimination during high school:

1. positive peer interactions among students from all ethnic groups,
2. teacher encouragement of positive interactions among students from all ethnic groups, and
3. school norms that promote ethnic and cultural diversity.

Bellmore says students’ perceptions of school climate can be modified over time. Attending to student interactions is important because reducing conflict between students from different ethnic groups can shape the school climate for incoming classes.

But other factors might be especially difficult to change. For example, a school’s interracial climate may be tied to the history of the community in which a school exists. In this case, a multilevel approach may be required, to address both school and community factors.

Bellmore says the task ahead is to identify and address the factors that have the biggest impact, so that the welfare of students can be enhanced.
Learning English Isn't Enough

For years we’ve heard the debate about whether teachers should use bilingual or English-only instruction when teaching English Language Learners (ELLs). This debate overlooks a more important issue: How can educators ensure ELLs’ overall academic success—not merely their acquisition of basic English?

The argument about educating ELLs is often more political than pedagogical. Framing the issue in terms of which approach is best for “learning English” has misled educators and the public. Learning English is simply not enough when the majority of students are also learning math, science, social studies, the regular English language arts curriculum, and many other subjects.

Policy makers and the public remain largely unconvinced of the role of the student’s native language and the need for long-term support. They see the purpose of bilingual or ESL programs solely in terms of compensatory English skills instruction, not as an issue of access and mastery of the whole academic curriculum.

The insistence on seeing English skills as a prerequisite for, rather than an outcome of, a meaningful school experience costs ELL students valuable time they need to close the academic learning gap.

The classical bilingual education debate has tended to revolve around two program models: transitional bilingual education and structured English immersion. Both typically last three years or fewer and are called “early exit” programs. Both have an English as a second language component where students learn to speak, read, and write English.

Both models are traditionally mostly remedial and are often taught through pull-out approaches, where the ELL student leaves the regular classroom and goes to a bilingual or ESL teacher for a number of hours per week “to learn English.” But these remedial programs become linguistic and cultural “ghettos” that isolate students from normal, content-rich classrooms. Neither model aligns itself with what regular classroom teachers teach. To meet the needs of ELLs, schools should shift away from such isolated programs toward integrated, inclusive programs throughout schools.

And three years is simply not enough time. Early exit programs drop support too soon, just at the point where ELL students are learning basic conversational skills. They still lack sufficient academic and literacy supports to ensure success as they move toward the more difficult content covered in succeeding grades.

ELL support programs should provide three things:

- input that students can comprehend in English, the native language, or both;
- early access to the same academic content and standards as English-speaking peers; and,
- long-term academic support.

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For that reason education researchers favor what are called “late-exit” programs, which offer sustained support for academic progress. They usually last 4–6 years, or as long as it takes to be confident that students have the knowledge to thrive academically.

Instruction in the student’s native language is important. For children to understand and benefit from classroom work they must receive input that is comprehensible to them. Children who enter schools not speaking English find that most everything they hear is incomprehensible.

Beyond that, each academic subject presents its own unique discourse issues that involve distinct terms, concepts, and ways of relating to others. Each academic subject requires a certain degree of conceptual background knowledge, attained in either the student’s first or second language, to ultimately make the curriculum comprehensible. These skills, even with adequate support, take 5–7 years to fully develop for most ELL students.

Remedial programs are often highly teacher-directed. This orientation, as opposed to student-centered approaches, tends to be more tightly controlled by teachers and allows less time for students to engage in small group learning activities that have proven effective.

Late-exit programs, in contrast, emphasize cooperative learning, experiential discovery-based approaches, integrated language arts, and interdisciplinary thematic teaching. These methods emphasize acquiring language through the common core academic content and are designed to be highly interactive.

A number of recent studies have identified practices that appear to help ELL students master high-quality curricula in core academic subjects:

- long-term support is better than early exit,
- content-based support within language and literacy-rich environments is superior to traditional remedial or basic language teaching, and
- programs that also develop native language skills are significantly better than English-only approaches when and to the extent that schools can provide them.

If academic success in the mainstream classroom is the ultimate goal for ELL programs, programs with an initial advantage are those that begin teaching the common academic curriculum in the language students understand. Without native language support as one of the tools, schools often struggle to provide a quality curriculum to ELLs who are just beginning to learn English. It is possible to reach these students but it’s not easy. For communities that contain a sizable population of language-minority students it makes sense to maintain and develop the language of the linguistic minority and to share it with the majority. That would seem to be bilingual education’s best hope for more widespread implementation, where feasible. Although structured English immersion approaches can succeed, bilingual programs offer a bonus: bilingual and biliterate citizens.

The traditional insistence on framing the bilingual education debate simply around quick mastery of English versus maintenance of the native language has led most researchers and policy makers to repeatedly ask the wrong questions. The answers to those questions never seem to get any clearer. But if we begin by defining the purpose of schooling in terms of academic success, and if we see success for ELLs as an issue both of long-term support and access to mainstream curriculum, then we are offered the prospect of creating programs that truly work for these students.

Director, World-Class Instructional Design and Assessment (WIDA)
Parents’ expectations shape children’s success in school and beyond.

That’s true for students without disabilities. And new evidence says the same for students with disabilities.

Parental expectations have been linked to an adolescent’s academic achievement, school engagement, college attendance, occupational attainment, and adjustment to working life. Parents may transmit their expectations through covert and overt behaviors, and high expectations result in relatively high positive outcomes for their children.

But relatively little research has measured the impact of parental expectations on the outcomes of adolescents with disabilities.

UW–Madison education professor Bonnie Doren examined the relationship between parents’ expectations and the actual achievement of their child with a disability of important school and postschool goals. These include graduating from high school with a standard diploma, finding postschool employment, and enrolling in or completing postsecondary education.

Doren’s study found significant associations between parents’ expectations and whether or not their adolescent:

- graduated from high school,
- was employed after high school,
- was enrolled or had completed postsecondary education and
- was engaged in both employment and postsecondary education

Doren found that parental expectations vary by family income and by the adolescent’s particular disability, ethnicity or race, and gender.

Descriptive findings include the following. Parents of minority adolescents had significantly lower expectations than parents of nonminority adolescents that their child “definitely will get a paying job after school.” Parents from lower-income backgrounds had significantly lower expectations than parents from higher-income backgrounds that their child “definitely will graduate from high school with a standard diploma,” “definitely will get a paying job after school,” or “definitely will enroll in postsecondary school.”

Doren also found several significant differences depending on the child’s type of disability. Parents of adolescents with a learning disability (LD) had significantly higher expectations than parents of adolescents with intellectual disability (ID) or emotional disturbance (ED) that their child “definitely will graduate from high school with a standard diploma.”

Parents of adolescents with ID/mental retardation had significantly lower expectations that their child “definitely will get a paying job after secondary school,” compared to parents of adolescents with LD, ED, and other disabilities. Parents of adolescents with LD had significantly higher expectations that their child “definitely will attend a postsecondary institution,” compared to parents of adolescents with ID and ED.

Doren conducted a number of analyses to understand the predictive power of parent expectations on the achievements of their child with a disability. Doren found parental expectations that their child would graduate with a standard diploma, or would find a paying job, or attend postsecondary education, or both, were significantly and positively associated with the likelihood that adolescents with disabilities would achieve these outcomes.

However, one finding differed by type of disability. Higher parental expectations that their child would graduate with a standard high school diploma was significantly related to actual graduation for adolescents identified with LD or other disabilities, but did not impact actual graduation for adolescents with ID.

Different parent expectations based on family income, and adolescent’s ethnicity or race and gender did not differentially predict the actual achievement of their child’s school or postschool outcome’s based on these characteristics.

Previous research had found that parental beliefs, expectations, and styles affect levels of their adolescent’s autonomy-related behaviors and perceptions. A student’s autonomy, in turn, shapes outcomes such as psychosocial

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Parental Expectations for Students with Disabilities
Crafting Better Explanations in Science Classes

Scientific explanations offer insights into how and why things work. But too often science educators use the term “explanation” to refer to other discourse activities that are not necessarily explanatory—for example, elaborating or clarifying a response to a question.

To make science education reform a reality, teachers and faculty would benefit from a clearer vision of what scientific explanation truly is and does.

UW–Madison education professor Melissa Braaten points out that scientific explanation for natural phenomena often involves unseen entities. They include atoms and forces, underlying processes such as genetic drift or oxidation, statistical or probabilistic patterns, or broad scientific theories.

For example, a teacher asks students to explain why condensation appears on the outside of a cold glass of water. A description would emphasize observable features such as the cooler temperature of the water in the glass and the presence of droplets on the outside of the glass. In contrast, an explanation would emphasize unobservable processes such as molecular motion and energy. It would employ key scientific ideas and theories and would seek underlying causes.

Scientific explanations seek to illuminate the workings of natural events in the world. However, when teachers press students to explicate the meaning of their terms, or to communicate their thinking about a problem or their procedures for arriving at solutions to problems, the object of the “explanation” is no longer natural phenomena.

A number of recent interventions have addressed teachers’ and students’ work with scientific explanations and argumentation. These interventions have made major strides toward supporting shifts in reform-oriented science teaching, but they tend to prioritize argumentation at the expense of scientific explanation. The reference to “how” or “why” is sometimes lost within the intervention as it shifts emphasis toward supporting students’ argument construction: Students may be prompted to provide pieces of evidence to substantiate their claims and to write statements illustrating their reasoning about evidence.

Simply exhorting teachers to engage in a practice, no matter how valuable, does not make the practice happen. Teachers need support for learning how to engage in ambitious science teaching practices. With colleagues, Braaten created a rubric they call the Explanation Tool (see figure below). This tool delineates a simplified continuum of scientific explanations that:

- employ major scientific theories,
- seek underlying theoretical causes for observable events in nature, and
- use mathematical models to describe patterns in data, when appropriate.

<table>
<thead>
<tr>
<th>What</th>
<th>How</th>
<th>Why</th>
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| Explanations with Theoretical Components | - Student describes what happened.  
- Student describes, summarizes, or restates a pattern or trend in data without making a connection to any unobservable/theoretical components. | - Student describes how or partial why something happened.  
- Student addresses unobservable/theoretical components tangentially. | - Student explains why something happened.  
- Student can trace a full causal story for why a phenomenon occurred.  
- Student uses unobservable/theoretical components of a model to explain an observable event.  
- Student uses powerful science ideas to explain observable events. |
| Explanations with Mathematical Components | - Student describes what happened.  
- Student describes, summarizes, or restates a pattern or trend in data. | - Student describes how something happened.  
- Student links observations to mathematical concepts in isolation.  
- Ex: correlates the # of strings supporting a load in a pulley system with effort to lift the load. | - Student explains why a mathematical model accounts for a phenomenon.  
- Student links observations to statistical or other mathematical models.  
- Student explains the links between observations and statistical or other mathematical expressions. |
Braaten says science education would benefit from conversations about three questions:

1. What constitutes a “good” scientific explanation in a science classroom?
2. What makes an explanation explanatory rather than descriptive? and,
3. How might teachers evaluate the merits of students’ alternate explanations?

The Explanation Tool offers a powerful way to organize teachers’ thoughts about scientific explanations in their classrooms. It scaffolds teacher learning in three ways.

1. Propels teachers to examine the science content of their lessons. Some teachers working with Braaten began to critique their standard instructional materials and found the lessons seemed to lack key theoretical concepts, or tended to focus exclusively on measuring and describing easily observed variables.

2. Helps teachers refine the questions they pose to students during class and in written assignments. Some teachers used the tool to help sift through the myriad questions in their instructional materials and to select questions that emphasized explanatory reasoning instead of questions asking students to recall facts or define words.

3. Helps teachers examine their students’ lines of reasoning. Teachers used the tool to map out their learning goals in advance, and then to systematically analyze their students’ responses throughout a unit of instruction, tracing lines of thought and modifying subsequent instruction.

The tool has proven to offer at least four valuable functions for teachers. It embodies a valued practice (e.g., scientific explanation), applies across grade levels and subject matter subdomains, represents practice in accessible language, and describes levels of performance from which teachers and students can identify “where they are” and what constitutes the next levels of performance.

Braaten says that she, her colleagues, and science teachers have benefited from discussing scientific practice and knowledge construction. These conversations have challenged teachers’ and Braaten’s own thinking about scientific explanations.

With well-conceptualized systems of tools and with the constant support of a group of colleagues, novice science teachers can accomplish ambitious forms of science teaching that are otherwise generally unattainable by novices and even many expert teachers.