Sounding off on Stereotypes
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Lesser (2014a, p. 568) states: “Stereotypes are encountered in many contexts in society and are often reflected in the humor of a community.” Could stereotype-based jokes or comments we make in our schools have a negative (even if unintentional) impact on our students?

After presenting an invited workshop on equity at the 2013 NCTM Interactive Institute for High School Mathematics, I browsed the NCTM bookstore booth. Having interest in using content-related fun to humanize and improve learning in the classroom (e.g., Lesser et al., 2013; Lesser 2014b), I bought a new book (Vennebush, 2012) of math jokes. While reading it back home, I had a nagging feeling that the jokes were unduly (and avoidably) reinforcing negative stereotypes (especially for gender) in mathematics.

To test my gut feeling, I did a count and saw that neutral words referring to an authority figure or a professional (e.g., statistician, mathematician, engineer, etc.) were revealed by subsequent pronoun usage to correspond to males five times more often than to females. Such disparities undermine the message of equity and opportunity for which NCTM and TODOS stand. For what it’s worth, a much older collection of math jokes (Azzolino, Silvey, & Hughes, 1978) actually has the much better ratio of 2:1.

Other jokes were problematic for other reasons –e.g., focusing on females’ appearance or attractiveness or implicitly accepting the not uncommon notion in popular culture that mathematics is an intimidating, boring, or useless gatekeeper.

Lesser, continued on page 2

Mark Your Calendars!

TODOS 2016 Conference
Ensuring Equity and Excellence in Mathematics for All
June 23 - 25
Scottsdale Plaza Resort, Phoenix Metro Area, AZ

Registration & Hotel Information and Conference Highlights on pages 5 to 7

Winter 2015/16, Volume 11, Number 2
In this issue:
- Sounding of on Stereotypes, p. 1
- News from the President, p. 2
- TODOS 2015 Iris Carl Equity and Leadership Award, p. 3
- Carol Edwards Retires as Executive Secretary, p. 4
- Call for Nominations for the TODOS 2016 Iris Carl Equity and Leadership Award, p. 4
- TODOS 2016 Conference, Information and Highlights, p. 5-7
- “I Will Survive,” p. 7
- TODOS Student Award at CMC-S, p. 8
- Newsletter Editors and Contributors, p. 8

TODOS Mission Statement
The mission of TODOS: Mathematics for ALL is to advocate for equity and high quality mathematics education for all students—in particular, Latina/o students.
The bigger point, of course, goes beyond joke books, dolls (Leggett, 1992), songs (Oldenburg 1999), or t-shirts (McCaughey, 2011). I started reflecting more generally about how subtle and pervasive stereotypes are and how real their damage is, and this inspired me to write my first op-ed, a *Mathematics Teacher* Sound Off column (Lesser 2014a). Space limitations allow me to summarize and supplement, but not reproduce that piece, so I personally invite you to read the full piece, discuss with your co-workers, and share your reactions.

Most of the research I cite in that piece details the effect of stereotypes on students’ attitude and performance, but stereotypes also affect how students are taught. For example, Chval and Pinnow (2010) report (in the most-cited paper to date in our TODOS journal *Teaching for Excellence and Equity in Mathematics*) how pre-service elementary teachers’ misconceptions or stereotypes affect how they would teach mathematics differently to English language learners who emigrated from China compared with those who emigrated from Central America. Chval and Pinnow also note that Good (1987) documented how “differential expectations… would lead to differential treatment in the classroom in terms of grouping practices, locus of responsibility for learning, feedback and evaluation practices, motivational strategies, public display of thinking, and cognitive demand of tasks posed to students” (p. 10). Such inequities are clearly not consistent with the equitable, rigorous, and high quality mathematics education TODOS calls for at [http://www.todos-math.org/mission-goals](http://www.todos-math.org/mission-goals). Other examples of stereotyping and misconceptions are more subtle and I believe most instructors (including myself) have at some point committed some version of at least one of the verbal slights or false assumptions detailed by Su (2015). I highly recommend that you read that column and his follow up column in the December 2015/January 2016 issue of that periodical. And if students – e.g., the viral letter by Mauldin (2015) – are pointing out the bias and stereotypes still found in mathematical disciplines, then shouldn’t we teachers reflect if we are doing everything we can to counteract those stereotypes?

In Lesser (2014a), I share several responses, resources, and recommendations – including the need to cultivate empathy for our diverse students (e.g., Lesser, 2015) and cultivate awareness of the pitfalls of stereotyping.
I also call for greater awareness of how mathematics itself can be a vehicle to teach concepts of tolerance (e.g., Lesser, 2007) by confronting student tendency to overgeneralize (mathematically or otherwise) and that statistics itself can be a tool to uncover possible instances of bias (e.g., using randomized response, list experiments, etc.) or inequity.

And I also give examples how the habits of mind called for in documents such as the Common Core might be leveraged to appropriately disrupt stereotypes.

I invite you to share the inspiring profiles of women and minorities in our field (e.g., http://ggstem.wordpress.com or http://bio.sacnas.org/biography/), assess your own possible biases (e.g., https://implicit.harvard.edu/implicit/education.html), and to learn strategies from http://reducingstereotypethreat.org/reduce.html.

REFERENCES


2015 Iris M. Carl Equity and Leadership Award

As it has been announced in the Summer 2015 issue of Noticias (available on the TODOS website), the 2015 award was announced at the 2015 TODOS business meeting on April 15, in Boston MA, to Dr. Gill Cuevas. Following is the complete text of the announcement that was read by Carol Edwards.

Our awardee already stated 30 years ago that “the language used to convey mathematical ideas to students has become a topic of increased concern to mathematics educators…” He also stated that “an inadequate grasp of the language of instruction is a major source of underachieving in schools.”

In the decades that followed, our awardee has participated at all levels of mathematics education with the focus on teaching mathematics to English Language Learners, cultural and linguistic issues, and the appropriate pedagogy to teach this student population.

He has collaborated with many researchers and mathematics educators, including colleagues in Australia, Mexico and Central America, advised masters and doctoral students, given workshops for in-service teachers, and worked with pre-service teachers and school children. He has made presentations at many conferences, including as the invited opening speaker at the conference organized by CEMELA in Tucson in 2010, and given workshops for in-service teachers. He highlights the necessity to prepare new teachers to understand the culture and the language needs of immigrant students while developing teaching methods that support their learning of mathematics and language. His impressive publication list of articles, book chapters, chapters and book reviews includes articles in the Journal for Research in Mathematics Education and the Navigating through Algebra series of the National Council of Teachers of Mathematics.

Our awardee’s lengthy list of accomplishments reflects his unwavering commitment to the mathematics education of ELLs and minority students. His early experiences in the United States included teaching fifth grade in a small rural community in southwest Florida. Visiting the family of one of his students at a migrant camp was an eye opener into the poverty, racism, and educational inequities faced by his students. These experiences significantly influenced his future professional career. He received an award from the Mathematical Sciences Education Board of the National Research Council, National Academy of Sciences for work contributing to the increase of minority student representation in mathematics.

Our awardee is one of the founders of the International Study Group of Ethnomathematics (ISGEm). He was the founding president of Future Leaders of America, a program that had been created to support struggling high school students, the majority of which were Latina/o.

Iris Carl Award, continued on page
Carol Edwards Retires as TODOS Executive Secretary

During the Annual Business meetings held on April 15, 2015 at the NCSM conference in Boston, TODOS President Susie Håkansson thanked board members who ended their terms that day (see this information on the Summer Issue of Noticias on the TODOS website.)

One of these members was Carol A. Edwards. Her dedicated contributions deserve a special mention in Noticias. Carol has been on the TODOS Board for 9 years, and the last 7 as its Executive Secretary

The position of Executive Secretary was created as TODOS was growing in size and becoming more involved in its commitment to its mission and goals.

Carol agreed to be the first executive secretary of TODOS. But then ... she agreed to continue renewing her appointment several times. Finally, after seven years in the position, Carol retired on April 2015.

TODOS wish to thank Carol for her diligent job, for the tireless “behind the scene” planning and organizing efforts, for setting up dates for task completion and checking in to see if the tasks were, indeed, completed. We are grateful that she offered help when members took new responsibilities and mentored them into their positions. Carol was very encouraging while holding high expectations for every required task.

While in her position as Ex. Sec, Carol received the 2011 TODOS Iris Carl Award and the 2012 NCSM Ross Taylor/Glenn Gilbert Award.

TODOS is thankful to Carol for her continued commitment to TODOS: Now as non-executive secretary she continues volunteering for TODOS as part of the Planning Committee for the 2016 TODOS Conference.

Past TODOS president and Iris Carl awardee Nora Ramirez is TODOS Executive Secretary since April 2015. We are looking forward to enjoying Nora’s leadership.

CALL for NOMINATIONS for the TODOS 2016 Iris M. Carl Equity and Leadership Award

➢ Nominate a deserving mathematics educator for TODOS’s top award!
➢ For information about the criteria, nomination process, and nomination forms, please consult www.todos-math.org/awards
➢ Questions should be directed to iriscarlaward@todos-math.org.

VOTE IN TODOS ELECTIONS!

On behalf of the TODOS Election Committee, Ellen Barger, Chair

I’m pleased to announce a slate of 4 wonderful candidates to fill TWO open positions for TODOS Directors. The candidates are: Kyndall Brown, Sandra Crespo, Tod Shockey and Alejandra Sorto.

Please, read the candidates’ statements on the TODOS website and vote!

Irish Carl Award, continued

In that program high-achieving students became peer mentors of recent immigrants to not only assist them academically but also to provide emotional and social support. The Los Angeles Times reported that enrollment of Latina/o students at community colleges in areas where the program was implemented increased in the years following the implementation. Our awardee was one of the founders of TODOS in 2003, having served on NCTM’s Equity and Diversity Committee, and has since held TODOS leadership positions as director, chair of several committees, and Vice President.

Our awardee is Professor of Mathematics at Texas State University-San Marcos and Professor of Mathematics Education Emeritus at the University of Miami. At Texas State University, he has served as a leader in building a successful Mathematics Education doctoral program, served as Co-Pi in an NSF DRK-12 Project to investigate the impact of dynamic geometry software in a large predominantly Latino school district. He has helped and supported young faculty through the difficult path to tenure and advises doctoral students, providing support without reservations. According to one of his colleagues, he is a true educator, sensitive mentor and open-minded leader.

For his pioneering work and lifetime commitment to the mathematics education of Latina/o and other underrepresented students and for his continued remarkable collaborations with scholars, practitioners, future teachers and students, I am very pleased, on behalf of TODOS, to present the 2015 TODOS Iris M. Carl Equity and Leadership Award to Dr. Gil Cuevas.
TODOS 2016: Ensuring Equity and Excellence in Mathematics for All Scottsdale Plaza Resort, Phoenix Metro Area, AZ

The TODOS 2016 Conference is co-sponsored by NSF-funded Arizona Master Teachers of Mathematics (AZ-MTM) - Award #1035330

Conference Overview

TODOS thanks to the Conference and Program Committees whose members have been working diligently to organize each aspect of the conference. From the selection of the keynote speaker, to the design of the application form and the careful acceptance process, to the scheduling of sessions and activities, everything will be ready for attendees to enjoy, learn, and become energized to continue striving for equitable mathematics education.

Thursday, June 23 - Opening Day
- Check in and Materials pickup will open at 3:00 PM
- Keynote presentation by Lee Stiff at 5:00 PM
- Presentation of the 2016 Iris Carl Equity and Leadership Award after the keynote
- Reception with hors d’oeuvres and a cash bar after the award presentation

Friday, June 24
- Continental Breakfast and Orientation, Setting the Tone!
- Morning: Impact Sessions each focusing on one of the conference themes (see topics and speakers at: https://toma.memberclicks.net/assets/docs2015/2015Enews/10.impactsessions.pdf)
- Lunch: Ignite Sessions will be presented during lunch time. Speakers will "enlighten us but will make it quick"!!
- Last session of the day will be a return to your Impact Community.
- Student Awards: Following the last session on Friday, we will have the TODOS Student Award Presentation. Students were selected from underserved populations, especially Latino/Hispanic; they had demonstrated continued success in mathematics while striving to go "above and beyond" in areas of their interest.
- Dinner (on your own): There are plenty of restaurants to choose from; some around the hotel, others 5 to 8 miles away.

Saturday, June 25
- Continental Breakfast
- Lunch Panel on Social Justice
- Throughout the day on Friday and Saturday there will be a variety of Investigate Sessions. These are 30, 60 and 90 minute sessions that focus on the conference themes. Updates of these sessions will soon be on the conference homepage.
- The “capstone” event for the TODOS 2016 Conference is a set of sessions titled the Kay Gilliland Equity Workshops (see next page)

The Conference sessions will focus on these themes:
- Integrating Language, Literacy, and Culture in Mathematics
- Building on Student, Family, and Community Strengths
- Framing Mathematics Education through the Lens of Social Justice
- Implementing Rigorous Mathematics Standards-Based Curriculum
- Assessing Student Mathematical Thinking through Formative Assessment
- Developing Leaders to Achieve Equity and Excellence in Mathematics
The Kay Gilliland Equity Workshops at TODOS 2016

The capstone event for the TODOS 2016 Conference is a set of sessions titled, "Kay Gilliland Equity Workshops," to honor Kay’s legacy and forward the equity agenda of TODOS. Kay Gilliland was tireless in her efforts to seek quality mathematics for all students and a champion for TODOS.

The workshop speakers for the 2016 TODOS Conference year are:
- Don Balka (TODOS Past President)
- Jose Franco (TODOS Past President)
- Diane Kinch (TODOS President Elect)
- Matt Larson (NCTM President Elect)
- Nora Ramirez (TODOS Past President), and
- John W. Staley (NCSM President)

Conference Registration

FEE: $350, which includes:
- Conference materials
- Thursday: Reception with hors d’oeuvres
- Friday: Continental breakfast & lunch
- Saturday: Continental breakfast and lunch

NOTE: Stipends for K-12 teachers
A limited amount of stipends for K-12 teachers are available through the NSF funded Arizona Master Teachers of Mathematics administered by the Department of Mathematics at The University of Arizona. Part of the application for the teacher stipend includes submitting a Teacher Assignment Verification Form. Registration will be capped, so don't delay your registration!

Housing:
K-12 Teachers Eligible for Stipends may also apply for a pre-paid room. Housing reservations are now open. A block of rooms at a special conference rate has been reserved at the Scottsdale Plaza Resort. The special rate is available to conference attendees two days before and two days after the conference on a space available basis.

Transportation:
- Scottsdale Plaza Resort provides shuttle service to and from Phoenix Sky Harbor Airport every half hour from 5:00 AM to 9:00 PM at a cost of $23 one way. For airport pickup arrange ahead of time with the hotel by calling 800-306-0059.
- Super Shuttle provides shuttle service for a fee. Check www.supershuttle.com
- Uber and Lyft are also available.
- There is a Hertz car rental desk in the hotel. The rates may be less than renting a car at the airport.
- Free self-parking at the resort.
- The Scottsdale Trolley provides free rides around Scottsdale.

Shopping, Eating and Recreation
Scottsdale has shopping, many fine restaurants and several breweries, with easy access via the Trolley. Restaurants and shopping across the street from Scottsdale Plaza Resort.
Kierland Commons which includes restaurants and shops is about 6 miles north of the Resort.
Scottsdale Fashion Square, which is a major mall, is 3 miles south.
Old Town Scottsdale with shops and restaurants is about 4 miles south.
Spas, hiking trails and golf courses are everywhere.
Sightseeing Around Phoenix
Are you free in the morning and afternoon before the beginning of the conference?
Spend your extra time visiting and enjoying these unique sites in Phoenix.

◆ The Desert Botanical Garden
https://www.dbg.org/
Note: Try to go early in the morning to avoid the heat

◆ The Heard Museum of American Indian Art and History
(Late morning or early afternoon)
http://heard.org/

Don’t miss the “groundbreaking exhibition
Remembering Our Indian School Days: The Boarding School Experience”
http://heard.org/exhibits/boardingschool/

With all the controversy and stress over high stakes testing some teachers might smile at this song’s lyrics and, perhaps, get some stress relief when singing and/or dancing with their students to his music!

“I Will Survive” lyric © 2007, 2015 by Larry Lesser
(Tune: Gloria Gaynor’s 1979 hit with the same-title.
Song by Dino Fekaris & Freddie Perren)
(https://www.youtube.com/watch?v=XZGwHtGBZJU)

At first I was afraid, I was petrified--
Kept thinking they won’t pass that test without me by their side.
But then we spent so many months on a preparation path
Until at last they knew the language of doing math!

And now it’s here, we drilled all year--
I just peeked in the room to see we have sharp minds and pencils here.
They should have had a healthy breakfast, they should have had a
good night’s rest.
I cannot doubt for just one second that they’re ready for this test!

CHORUS:
Oh, now -- go, walk out the door--
We’ll turn our school ‘round, and beat the cutoff score!
Weren’t you the test that put the stakes way up so high?
Did you think we’d crumble did you think we’d lay down and
die?
Oh no, not I – I will survive:
Oh, as long as I know how to teach with my job on the line.
Multiple-choice will never show all that my kids know
but I’ll survive, I will survive!

It takes all my mind to think why a passing rate’s
The only thing they use to say who’s doin’ good or great.
And I spent oh so much focus on those near the passing line,
I used to cry that I left some child behind!

Now let me teach the way that’s best--
And that’s more than boring drills for the latest test!
Some try selling magic bullets and just expect they’ll set us free,
But by just practicing good teaching, then each student can
succeed!

(Repeat CHORUS)
TODOS Student Awards at CMC-S
TODOS recognized 8 students at the 56th CMC-South Annual Mathematics Conference in Palm Springs, CA on November 6, 2015.
Students were selected from underserved populations, especially Latino/Hispanic; they had demonstrated continued success in mathematics while striving to go "above and beyond" in areas of their interest.
The student awardees are:
Standing left to right: Natalie Rose, Elvis and Julianna.
Sitting left to right: Carolyn Amber, Raul, Evan and Valeria.
Not shown: Christopher

TODOS thanks Texas Instrument for providing Graphic calculators for the student award winners.

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