Minnie Piper Stevens Portfolio

submitted to

Faculty Issues
Subcommittee
Faculty Senate

presented by

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Lamar University
Texas State University System
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  John Jablonski – Student
  Michael Cruz – Student
  Maya Saran – International Faculty I Mentored
  David M. Clark – External Colleague and Co-author
  Valerio De Angelis – External Colleague
  Steve Doblin, Provost Emeritus, Lamar University
  MaryE Wilkinson, Chair, Department of Mathematics
Introduction

Thank you for reviewing my portfolio and considering me for Lamar’s Minnie Stevens Piper (MSP) nominee. You are viewing more than is required because I prepared this under the mistaken assumption that we were operating under the new MSP guidelines adopted by the Faculty Issues Subcommittee last year. It is an honor to be considered. My professional accomplishments are diverse, but all revolve around a simple immutable fact. I love what I do. Every day I awake thinking about what I will do when I arrive at school. Every day I arrive at work before seven. Every day, I serve my students, colleagues, administrators, and co-authors to the best of my ability. I simply enjoy academia and all aspects of the trinity that is research, service and teaching. My research inspires my teaching and my students inspire me to continue to research. My service and advising helps my students and my students’ needs cause me to push Lamar to provide better service for my students. My love for Lamar makes me want to represent it nationally at conferences. I like what I do, so I do a lot of it. I often say to my students, “the only goal of college is to find a job that, when you go home at night, you take your work home – not because it must be done, but because you want to do it. If you can find that job, you will make good money and be happy.” I found that job and hope that they do as well.

The selection criteria specifically lists:

1) Significant teaching innovation and course development.

Of the twenty-four courses I have taught, I have created a complete set of course notes for ten. I co-founded the Journal of Inquiry-Based Learning in Mathematics which enables others to teach using active learning pedagogies by providing the only source of refereed course materials for instructors. Due to the increased evidence of the efficacy of IBL methods, this journal sees thousands of visits and downloads each month.

2) Community engagement and service. Extracurricular activity including guiding undergraduate research, advising, mentoring, advising student organizations or other activities that indicate connection with students.

I advise approximately 25% of our majors, and have served as faculty advisor for three different clubs: the mathematics club (2006 – 2013), the martial arts club (2001 – 2011), and the sailing club from (2013 – present). The non-profit MathNerds which I co-founded provided support for more than 200,000 students from 1996 – 2014.

3) High scores in teacher evaluations over the past 2 years and a comprehensive list of comments from those evaluations: The candidate should provide sufficient evidence to the college selection committee from ‘Course Evaluations’ about his/her performance in class, including bar diagrams (distributions) with scores and comments from students regarding the candidate’s performance in class.

Every semester, I conduct my own course evaluations which are collected and typed up by our Administrative Assistant. Comments from all students taught in 2013-2015 are included my F2.08s in this document (p11). Comments from any class are available upon request.
According to Lamar’s Online Evaluation Summary for all courses taught at Lamar, my teaching consistently ranks above that of my department and college as indicated by the on-line summary provided on page 50. Cut and pasted from Lamar’s On-line Evaluation Service, here are the most recurring words in my on-line evaluations.

4) Evidence of superior research/creative endeavors, including publications, special projects, external support, thesis/dissertation supervision.

With more than $2,000,000 in funded grants, mostly to support innovative teaching, materials development and inquiry-based learning teaching my work in creative endeavors and special projects is significant. Additionally, I have remained active in my field publishing a total of twenty-two papers and two books. My active learning style in the classroom has attracted six masters students to work with me and I have served on two doctoral committees, one of which was international.

Research
- 24 refereed publications (including 2 books)
- 21 articles or news stories by others addressing my work
- $2,000,000 in funded grant proposals
- 32 invited addresses (5 taped and archived at UT for their historical significance)
- 43 additional presentations
- 4 websites built and maintained

Service
- 3 journal editorships (one of which I co-founded)
- 10 years as advisor to the martial arts club (and 22 medals)
- 7 years as advisor to the math club (several calculus competition awards)
- Chair of Texas Section of Mathematical Association of America
- consulting (local oil industries, Montessori school, America's Cup design team)
- elected faculty senator (multiple terms, two universities)
- developed BS/MS FastTrack program in mathematics department
- library dean search, economic development committee, academic lecture series

Teaching
- 6 graduate students and service on two doctoral committees
- 10 student workers funded through grants
- 24 courses taught (10 of which I wrote all the notes for)
- mentor to dozens of faculty on teaching using active learning strategies
- dozens of undergraduates and graduate students escorted to conferences
Abbreviated Curriculum Vitae – W. Ted Mahavier

EDUCATION
1995 Ph.D., North Texas
1990 M.S., Emory University, Mathematics
1985 B.S., Auburn University, Applied Mathematics

HONORS
2002 - 2012 Six teaching and advising award nominations

INDUSTRY AND TEACHING EXPERIENCE
2010 - present Professor of Mathematics, Lamar University
2001 - 2010 Associate Professor of Mathematics, Lamar University
2005 - 2009 Master Teacher, Texas Mathworks Summer Camp, Texas State
1995 - 2001 Assistant Professor of Mathematics, Nicholls State University
1985 - 1987 SPARTA Inc., Huntsville, Alabama, Defense Contractor

COURSES TAUGHT

GRADUATE STUDENTS
2003 – 2015 Advisor to six masters student, doctoral committee member for two graduate students (one international at Lahore Institute in Pakistan), and served on committee for an additional five masters students

UNDERGRADUATE RESEARCH, STUDENT MENTORING AND ADVISING
2014 – Present Advisor, Lamar University Sailing Club
2011 – Present Mentored four graduate students to teach Calculus using IBL
2013 – 2014 Liaison between LU Sailing Club and Port Arthur Yacht Club
2006 – 2013 Faculty advisor for Mathematics Club – multiple competition awards
2001 – 2011 Faculty advisor for LU Martial Arts Club – 22 medals in tournaments
2001 – 2011 Supported 18 student workers through grants
2001 – 2014 Escorted more than 30 students to attend or speak at conferences
2001 – 2014 Multiple off-load undergraduate research courses

BOOKS
2009 *The Moore Method: A Pathway to Learner-Centered Instruction*, co-authored with Coppin et al, Mathematical Association of America
SELECTED RESEARCH (22 peer-reviewed articles in addition to the books)


2014  “Teaching the Backtracking Method using Intelligent Games,” with Anca Andrei, ACET J. of Computer Education and Research, Vol. 9


SELECT ARTICLES AND NEWCASTS COVERING MY WORK (21 articles/papers)

2013  “Igniting the Spark of Achievement in Math,” Understanding Our Gifted, Dorothy Sisk.


2008  “MathNerds/Mathworks Help Young Students,” by Tamara Bell, Chronicle of Higher Education On-line Edition


SELECT INDUSTRY and CONSULTING (10 total)

2014  STEMscopes Board Member for Mathematics Curriculum, Rice Univ.

2008  External evaluator for LaSIP pre- and post-tests at Nicholls State

2004  Consulted with Bayside Montessori School in Clear Lake City, Texas

1996 - 1999  Customers from academia, industry, finance, and education included one America's Cup yacht racing design team and local, oil-related industries

1993 - 1999  Five consulting jobs omitted

WEBSITES DEVELOPED (each was a grant supported project)

2013  www.legacyrlmoore.org/mahavier/wtm - documents my teaching methods

2012  www.legacyrlmoore.org/mahavier - documents my father’s teaching
2007 – Present  www.jiblm.org- Journal of Inquiry-Based Learning in Mathematics

SELECT FUNDED GRANT PROPOSALS ($2,000,000 in funding from National Science Foundation, Texas Education Agency, Educational Advancement Foundation, Mellon Foundation, Louisiana Educational Quality Support Fund and Meadows Foundation)

2013 – 2014  $37,916 - Co-PI, with Dr. Dorothy Sisk, to support The Texas Governor’s School, a LU summer camp for gifted mathematics students
2011 – 2015  $360,000 Co-PI with Judy Kennedy, joint funding from the Educational Advancement Foundation and Lamar to fund student scholarships
2012 – 2013  $67,000 Co-PI, with Dr. Dorothy Sisk, Texas Governor’s School
2011 - 2012  $53,120 Moore Method Analysis Video Project
2008  $61,835 proposal to the Educational Advancement Foundation to support the Journal of Inquiry-Based Learning in Mathematics
2004 – 2007  $1,120,229 Co-PI, TEA grant “Lamar University English Language Learner Mathematics Initiative”
2006  $247,000 grant proposal to the Meadows Foundation to support creating a MathNerds Mentoring Network
2005  $36,523 grant from the Educational Advancement Foundation, to co-authoring of the book The Moore Method: A Pathway to Learner-centered Instruction
2004  $79,500 grant from Educational Advancement Foundation to double Lamar University's graduate mathematics scholarships.
1997 - 1999  $124,255 NSF and Louisiana Educational Quality Support Funds grant to implement a Technology-Assisted Classroom at Nicholls State University.

SELECT INVITED ADDRESSES (32 total)

2013  “Inquiry-Based Learning in Calculus – two distinct approaches” University of Alabama at Birmingham Colloquium, October 4th, 2013
2013  “Inquiry-Based Learning at the University Level,” Southeast Sectional Meeting, Winthrop University, South Carolina
2011  “Inquiry-Based Learning in Mathematics at Lamar University,” Lamar University Education Research Conference with C. Coppin and D. Daniel

SELECT CONFERENCES, WORKSHOPS and PANEL SESSIONS (10 total)

2015  Conference co-organizer for AIM Workshop, “Research on Inquiry-Based Learning in Undergraduate Real Analysis”
2012  Workshop Coordinator (4 Hours), “Implementing Inquiry-Based Learning in Calculus III,” University of California, Santa Barbara
2007  “MathNerds, Moore Method, and Mathematics Education: What do they have in common?” Panel Session
2006  “Moore Method and Constructivism,” Panel Session
2003  “Modified Moore Method Teaching,” Organizer of 3-hour workshop/panel discussion for UTeach
1999 – 2003  Four more panel sessions omitted

PRESENTATIONS
1995 – 2015  Forty-three presentations omitted (in addition to those listed)

CONFERENCES ATTENDED
1995 – 2015  Seventeen conferences attended with minimal presentation in order to work on grants, seek grant funding, or collaborate

SELECT SERVICE EXTERNAL TO LAMAR
2007 - Present  Co-Founder and Managing Editor of the Journal of Inquiry-Based Learning in Mathematics, www.jiblm.org, the only journal dedicated to publishing free refereed course materials for IBL courses in math
2001 - Present  Mentor to 18 faculty wishing to implement inquiry-based learning pedagogies in their classrooms. Subsequent to mentoring, at least four received teaching awards of which I am aware.
2014 – Present  Coordinating Editor, Missouri Journal of Mathematical Sciences
2007 – Present  Co-founder and Managing Editor, Journal of Inquiry-Based Learning in Mathematics
2001 – Present  Referee for six journals
2001 – Present  Lamar Liaison, Texas Section Mathematical Association of America
2013 – 2016  Chair Elect, Chair & Past Chair, Texas Mathematical Association
1995 – Present  Membership in multiple professional societies, volunteer at high school competitions, science fair judge at Harmony Science Academy, Math Counts tutor at Harmony, volunteer at Lamar Math Puzzle Competition, and outreach through MathFest and talks at local high schools

SERVICE AT LAMAR
Five leadership roles stand out: (i) the complete revision of the mathematics core and degree plans in 2003 and again in 2014, (ii) the modernization of our graduate course inventory in 2006, (iii) the co-authoring of our successful defense of our MS program to the state in 2010, (iv) the development of a policy using both high school GPA and SAT/ACT scores to improve retention in our calculus and pre-calculus courses in 2011, (v) the development of the FastTrack BS/MS program in 2012.

2001 – 2014  Additional service includes head of Undergraduate Curriculum Committee for nine of fourteen years, service on seven hiring committees, service on Graduate Curriculum Committee for fourteen years, multiple elections to the faculty senate at two universities, and service on dozens of committees outside of the department.
FACULTY ANNUAL REVIEW
LAMAR UNIVERSITY

Submitted by: _____W. Ted Mahavier______________________________

College: ____A&S____________________ Department: ___Mathematics_

Rank: ___Professor____ Status: □ Non-Tenure Track
□ Tenure Track x Tenured

Reporting Period, Calendar Year _2013_____.

Performance Scores:

<table>
<thead>
<tr>
<th>Exemplary Performance</th>
<th>Numeric score</th>
<th>Merit Reward Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(level 5)</td>
<td>Highest merit</td>
</tr>
<tr>
<td>High Performance</td>
<td>(level 4)</td>
<td>High merit</td>
</tr>
<tr>
<td>Adequate Performance</td>
<td>(level 3)</td>
<td>Merit</td>
</tr>
<tr>
<td>Marginal Performance</td>
<td>(level 2)</td>
<td>No merit</td>
</tr>
<tr>
<td>Unsatisfactory Performance</td>
<td>(level 1)</td>
<td>No raise</td>
</tr>
</tbody>
</table>

Chair: ________________________ (Signature)                        Date:______________

Evaluation/Merit Score: 5 (from Section IV, page 5)

Performance was satisfactory X
Performance was unsatisfactory □

[Note: An unsatisfactory rating on Section I mandates an unsatisfactory overall performance evaluation for any faculty member.]

Faculty Acknowledgment

___________________________ (Signature)                             Date:________________

☐ Faculty disputes the evaluation [Attach documentation of appeal, give to chair for transmittal to dean]

COLLEGE of ARTS and SCIENCES

Dean: _______________________________________________________ (Signature)  Date: ________________

Performance was satisfactory □
Performance was unsatisfactory □

Comments (not required):
I. TEACHING AND INSTRUCTIONAL ACTIVITIES (For examples, see Appendix IV to Form F2.08, “Instructions and Comments.”)

Goals (See Appendix IV, Item #1):

My primary instructional goal every semester is to develop my students’ knowledge of and appreciation for mathematics. To accomplish this, I learn the name of and give personal attention to all students with whom I come in contact, while maintaining the highest ethical and academic standards in the classroom. Simple examples of student interactions include communicating with Latin Americans in their native tongue, serving as faculty advisor to student organizations, holding problem sessions in addition to scheduled class meetings, welcoming students to my office during all times of the day regardless of posted office hours, preparing fresh materials for every class I teach, and using student interaction to recruit majors. I provide my personal email address, home phone, and cell phone number to my students to assure they know that I want them to reach me when they need to reach me.

Accomplishments for the evaluation year:

In 2013 my goals were:

1. Continue to mentor Moore Method Apprenticeship Fellows in IBL instruction.
2. Teach two unpaid/off-load sections of 4131
   a. one to train students in IBL strategies for developing math camp materials for the Texas Governor’s Program
   b. one to train students in Sobolev Descent methods for numerical differential equations in preparation for guiding their theses

In 2013 my accomplishments were:

1. We have successfully graduated Brandy Comer and Kim Wesberry from the Moore Method Apprenticeship Program and have five enrolled: John Jablonski, Robert O’Connor, Chris Sams, Paul Wright and Wes Hoffer.
3. Taught 4131 during summer for 6 students doing research. Directed undergraduate research for Clint Worthy in Summer 2013 Sobolev Descent which he presented as part of the ASCENT grant.
4. Taught 4131 in order to train Robert O’Connor, Paul Wright, Wes Hoffer and Brandy Comer to develop IBL materials for teaching in the Texas Governor’s School.

Teaching Proficiency/Teaching Effectiveness.
Faculty Schedule. [Note: Faculty member’s teaching schedule for all semesters (provided on-line by LU Faculty Web Pages) or a summary that includes at a minimum course identification and numbers enrolled. Other information may be included — e.g., off campus, web-based, interactive video, etc.]

Spring 2013
- Math 2413, Calculus I, 40 students, inquiry-based learning pedagogy
- Math 5390, Thesis – Brandy Comer
- Math 4131, 5 students, Special Topics to train students to develop materials for teaching in Texas Governor’s School
- Math 4326, Analysis II, 11 students, inquiry-based learning pedagogy

Fall 2013
- Math 2413, Calculus I, 38 students, inquiry-based learning pedagogy
- Math 2414, Calculus II, 38 students, inquiry-based learning pedagogy
- Math 5308, Graduate Differential Equations, 5 students, inquiry-based learning pedagogy
- Math 5390, Thesis – Robert O’Connor

My on-line evaluations are available for your viewing and, when I have looked at them, were above average for the department in almost every category for every course. To receive more thorough feedback than on-line evaluations allow, I have developed my own evaluation method which I use in all my classes. These evaluations are passed out, collected by one student, typed up by the administrative assistants, and the typed results are delivered to me after grades are issued. All hand-written responses from all classes follow my Faculty Schedule listing. I included only one class below, but all my courses use the same evaluation and all the evaluations are remarkably parallel. All are available upon request. I love to teach, the students recognize this, they work hard and we all enjoy the experience.

Analysis II, 4326.01

I believe the most effective part of this course was:
--The emphasis on getting students to the board to prove theorems
--We were forced to work through the material on our own. Even though I was not fond of this and sometimes felt a little lost, I would not have learned near as much from a more lecture-based class.
--I’m honestly not sure because I feel that I only gained any real understanding outside of class, which I suppose means the homework was the most effective.
--The presentation in front of the class.
--Board work!
--Having to do homework as well as boardwork in which the homework could not be something someone has already proved on the board.
--The building up of a solid intuition (but very slow).

To improve this course in future semesters, the professor should:
--Drastically overhaul the test format. A more effective testing format would be to focus on negation of definitions and theorem questions concerning how or what method (nested
interval, glb/lub, etc.) to solve, not necessarily solving the proofs. The reason for the shortened test format would be because solving proofs quickly is a very difficult task. Homework due every other Friday would problem increase students’ focus on solving in class at the board.

--It would be nice to have a more efficient way to present proofs. Maybe use the Elmo more? However, Prof. Mahavier is aware of this problem and for the time being it is really just a limitation of this type of course. Overall, I am happy with the way this course is run.

--Set aside a class day every week or two to “make rounds” and help each student on a problem they are working on in class. This way, there is sure to be something to present the next class and the students can get good pointers on how to approach the proof(s) they are working on. Not so much extensive help as putting students on the right track.

--Change nothing!
--change nothing!
--Allow students to research---pull up similar problems…

Talking to another student thinking about taking this instructor’s class, I would say:

--Take it as early as possible. The logic skills you gain from this course positively effects your analysis and decisions on other areas of life.

--Take it. It’s hard but rewarding and he is a very effective teacher. I would definitely recommend him for any advanced, proof-based math course.

--Take it. The class may be difficult, but is worth taking and the instructor is great.

--Absolutely take the class, especially if you’re considering graduate school.

--Take him!

--To take this instructor’s class because it has helped me so much with understanding other courses.

--Only if you’re masochistic.

I would like the professor to know that:

--This is my favorite course to date. Keep up the great work and strive to get his material taught earlier!

--I felt like he really cared about the students. I am grateful that when I wasn’t doing well, he reached out and helped me along. I have a severe anxiety disorder and I would have been lost without his extra care and effort.

--Thanks:)

--He is a fantastic educator.

--He changed the way I look at math. I really wish I had him earlier in my collegiate career.

--I thoroughly enjoyed this semester and want to say thank-you for one of my favorite classes that I have taken at Lamar!

--Even though he put us through hell, I see he enjoys torturing students, especially when the students start liking the torture.

Calculus I, 2413.03

I believe the most effective part of this course was:

--learning my mistakes at the board. However, I would have had less mistakes if the professor spent more time explaining problems before I had to do them.

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W. Ted Mahavier

10/10/2015
--the presentation and student driven part of the course. It has really helped.
--The use of boardwork and homework in learning
--everything! He was a very fair and realistic professor.
--You did a brilliant job explaining limits. After 4 calculus teachers, you are the only one to adequately explain them,
--putting homework problems on the board
--interaction with the students, professors and graduate students. You felt the bond and understanding when you had a problem.
--the highly interactive socratic method used in the presentations and lectures
--the ability to be able to go to the board and get hands on learning
--I don’t know
--that he had everyone go up to the board to demonstrate whether or not they understood what they did
--Proving almost every formula before actually applying them.
--Doing problems on the board.
--the most effective part was derivatives
--the presentations
--having to figure everything out on our own but still being able to ask questions and have others work them out if needed.
--the days you lectured on a difficult concept
--the combination of lecture and practice of the concepts in class
--learning how to solve problems different ways
--presentations on the board. Really helped me to understand the problems
--having to figure out the homework for ourselves
--lecture days
--giving the freedom he does to students. I’ve never been in a class like this, and even though I have a very hard time presentation in front of people, let alone presenting on a subject I feel I am not good at, I feel it was incredibly effective to be allowed to teach to the class.
--the way the homework is set up so that the class makes the pace

To improve this course in future semesters, the professor should:
--spend more time explaining concepts, and especially creating formulas for problems like related rates.
--maybe lecture a little more. I actually liked his industry based examples.
--not change a thing
--I wouldn’t change a thing
--Keep the students informed of what problems need to be completed. Also, if students are getting to study, make an appearance to help answer questions
--keep it the same
--make lectures before going into a new subject. It’s a little frightening jumping into a material that you had no idea of.
--keep improving in the direction it seems he’s going in his teaching method
--try to focus a couple more times a week doing a lecture and introducing new material
--have the students explain their problems more
--randomly call students to go up to the board that way everyone remains on edge
--lecture more
--do more practice problems on the board. Have a day that you ask on how to do homework problems
--I couldn’t even think of a way because he’s already perfect
--maybe lecture a little more
--maybe spend a little more time lecturing when people don’t bring in problems for the board
--possibly designate a day (like Mondays, after a weekend full of forgetting) to lecture on what’s going on, if only for the start of class.
--try to better balance the lecture and presentation
--it’s fine just like it is
--not very much. Maybe more quizzes?
--make more detailed notes
--spend more days lecturing, but I like the board problems too
--do nothing. Ted was/is (also Wes and Jeff) awesome. One of my favorite professors.
--stay the same

Talking to another student thinking about taking this instructor’s class, I would say:
--take it if you want a challenge, or if you want to really learn the material
--I would recommend it because I like the teaching method. It is an effective way to learn
--Definitely take it if at all possible
--I recommend Mr. Mahavier for Calculus! Specifically because I’ve taken calculus the previous semester and I did not understand a thing. In Mr. Mahavier’s class I’ve gained my love back for math, whether I am right or wrong.
--This class is wonderful if you want to learn the material well!
--He has good teaching skills
--you would have to stay on top of your game. It’s all about teaching yourself as Ted is just there to guide you through or when you’re confused. Good luck!
--Take it if you believe an interactive learning environment would be conducive to your education. Take if you have interest in a degree in mathematics.
--that having a self paced class is the most beneficial thing in a math course
--that the teaching style is rather different and difficult to get used to, but effective. I would tell students that learn by listening not to take this class, but students who learn by doing to definitely take it.
--It is a very fun class that helps you understand just how much you think you know.
--stay on top of your work. Don’t let yourself lag too far behind if possible, always try to stay ahead
--Yes you should take Ted, he is a great teacher and you learn a lot by doing board work
--He’s the most cool teacher
--Most definitely, take this course
--definitely take him, but be prepared to work.
--take this class to learn calculus, but only if you’re willing to work
--that you will learn the concepts but you have to practice after class
--this class if very interesting and if you give your absolutely best you should be fine
--take it!
--the class was eye opening
--do it! I have told people to take Ted
--very exposing in a good way, humbling
--take it

I would like the professor to know that:
--He is awesome
--before this class I have always struggled with math. I feel like I might be more interested in taking higher math now instead of being afraid of it

Minnie Stevens Piper

W. Ted Mahavier
--He’s the best professor I’ve had
--You are a wonderful professor
--I love that most of the grade is in class work. Bad test grades freak me out when I know I’ve studied in class
--I would hope to have him in the future
--He is a great teacher, easy to communicate with and very friendly. I’ll be glad to have him again if these math courses were in my major!
--His method has worked well for me
--I definitely learned calculus this semester
--He’s great
--It was definitely an interesting course
--I will be taking him for Cal 2 and likely Cal 3
--I am very thankful that he was my calculus teacher. I had never had a math teacher that made me understand the material that well. Thank you.
--He really did help me and worked with me during the semester and I appreciate it.
--He is an amazing professor
--I actually enjoyed this class
--this class has uncovered an unknown skill and passion of mine, mathematics, that I want to pursue as a definite career
--I enjoyed the class
--That I’ve tried and gave my all and if I fall short, I still appreciate all the methods and problems I did learn
--I really enjoyed the class, the method of teaching works extremely well for me.
--yes
--I’ll see him next semester
--He is phenomenal. He’s mathematical!
--He was very inspirational and kept me from giving up.

**Differential Equations, 5308.01**

I believe the most effective part of this course was:
--Presentation by students
--The mixture of analysis with ODE
--Learning my own limits
--The board presentations
--The coverage of general linear systems

To improve this course in future semesters, the professor should:
--Push forward in the material faster. This is not to say lecture would be better but that he should force students to work on more problems in the book.
--IDK
--State the axioms with multiple examples
--Keep doing what he is doing
--More thorough introductory material more quickly, and possibly remove the analysis portion

Talking to another student thinking about taking this instructor’s class, I would say:
--Take his class, but be prepared to be challenged
--Take it
--I’d question your sanity
--Do it!
--Take it if you are interested in physical applications of diff. eq

I would like the professor to know that:
--I learned more in this class than any other this semester. I liked his exam, even though it was very difficult
--I enjoyed the class
--This class wasn’t enjoyable
--He did awesome
--This class should be taught more regularly

**Calculus II, 2414_13f**

**I believe the most effective part of this course was:**
--When Ted teaches with a visual. This gives us as students a better grasp on how things work
--Learning how to study and do problems on our own
--Definitely the amount of practice problems we get, and the way on participates in class it is actually a good way to learn not only from our mistakes but also classmates mistakes
--having to learn on my own, however I did not like it at first but I felt I did learn more from doing so.
--Learning the work first and figuring it out rather than just lecturing it to us and then doing examples first.
--Putting homework problems up on the board and making them a big percentage of the overall grade.
--The homework
--Having so many problems that we can present and being able to present problems just about everyday
--The days he decided to lecture and explain things. He was a big help during his office hours.
--The fact that he had us actually do and present the problems.
--The unique teaching method. Learning by the Moore Method is very effective.
--Writing problems on the board.
--presentation
--doing presentations
--the presentation part is very effective, and I like how available Ted and his T.A.s are.
--Going up to the board to present homework.
--Lecture days
--Making you figure out things on your own
--lecture days
--studying on my own or in groups, study labs, and Ted’s office.
--having to learn the material myself
--having the students put up hw problems on the board everyday
--TA—helping in math lab; teaching yourself helps you to actually learn the material; any questions answered at beginning of class
To improve this course in future semesters, the professor should:
--Ted should do a thorough explanation, kind of a jump start into everything new, that we study.
--Lecture a little bit more, only on things that students are having trouble with.
--He should try to bring more lectures in class and work and practice problems on the board exactly the way he does them.
--give more quizzes and perhaps a review sheet other than the packet problems. The quizzes do help you prepare and realize what you don’t know.
--Reword some of the problems given, to help specify exactly what is supposed to be found or done.
--more lectures from time to time because I have a hard time trying to learn by myself first.
--Maybe a hint about how to do the homework coming up.
--give the students a hint on how to do upcoming homework and give at least a week’s notice for quizzes.
--have more lecture
--Potentially give a set presentation goal to encourage students to present.
--having homework instead of quizzes. I’ve had both, and I definitely prefer the homework.
--assign home problems for a grade rather than take quizzes; the notes were decent but did not help much when it came to learning
--more “reading with Ted” before quizzes would help.
--Introduce how to at least use the calculator as a tool instead of all hard work
--maybe give a little more guidance, and the addition of some review days before tests
--few more quizzes
--lecture more often
--(nothing)
--do more examples/lecture more
--make only 2 or 3 day presentations and rest of the time lecture
--have teaching with Ted more often
--nothing
--not have homework/presentations everyday

Talking to another student thinking about taking this instructor’s class, I would say:
--Take if you don’t like doing homework and teaching yourself then do not take his class
--Take him only if you’re willing to work calculus every day of the semester; his book makes you think a lot and since he doesn’t lecture much you have to be willing to learn everything on your own
--That overall he is a smart professor who can help you get a good foundation on the course. Take him!!
--I would say he is a good teaching always willing to help students on his own time as well as in class but be prepared to figure things out on your own first
--Take him he is a good teacher. He doesn’t lecture much but you learn stuff on your own and then he’ll show you his way of doing it.
--If you don’t like homework and learning the material yourself don’t take him, but he is a really good teacher.
--He is arsome, and if you want to larn by doing he the class for you. If you like lectors and hate professor then take Dr. Dokens
--Take the class!
--It would depend on the teaching method they preferred. For myself, I like lecture and taking notes.
--I absolutely love this class. Definitely one of the best professors/teachers that I’ve ever had.
--Carefully think about how you learn; his teaching style is odd but effective for some students.
--Don’t take the class unless you’re better at teaching yourself or you’re a math major.
--definitely do it!
--Definitely take it, he is extremely knowledgeable and will keep explaining until you understand the material (if you ask of course)
--I would recommend it but make them aware of his teaching strategy. I like it but it’s not for everyone.
--It is awesome and he is the professor to take for math.
--You have to have a lot of free time and be motivated
--Take it, but keep up with your homework
--If you’re shy I wouldn’t take Ted’s class
--Get ready
--Do homework every night
--Yes
--Yes if you can learn, not memorize and are actually good in math. If not, rethink your major

I would like the professor to know that:
--I have enjoyed this class, not so much the five days a week, but after it’s said and done, I did learn something. But Ted you are a great teacher, I would like to see you teach more.
--I like the way that he teaches challenges us to work harder and think more
--he is a very good professor, but he should definitely lecture more
--I have probably learned more in here than any other math class before.
--I like his way of teaching. It makes a student think and learn on his/her own. He’s not like a normal professor robot 101.
--I have had a really great time learning and expanding my knowledge of calculus over the past two semesters.
--I enjoyed the class even tho I end up missing a good amount through different issues. And can’t wait to have Cal 3 with you next year.
--I enjoyed your class very much
--He was a great help but I did not like the amount of presentations over lecture.
--He’ll be seeing me as much as possible. If the class is offered by him, I’m taking it!
--He’s one of my favorite pros of all time.
--Very helpful, good personality, but needs a better method for teaching
--(nothing)
--His approach to teaching math works perfectly.
--I had fun and look forward to seeing him next semester.
--I want to ride on the boat!
--his boat art is amazing
--(nothing)
--he is awesome
--I think he is a very good teacher when he lectures
--I would take his class again
--I really enjoyed his class
--I will miss his humor, very funny and nice, thanks for a great semester.

Chair Review: Evaluation Score: 5
(NOTE: A score of 1 on this section mandates an overall unsatisfactory rating by Chair.)
Comments: Dr. Mahavier is an important senior faculty member in our department. Year after year, it is clear that he is an exemplary instructor. His data points are consistently higher than the department, division, and institution averages; his students are appreciative of his efforts.

II. RESEARCH, PUBLICATION, SCHOLARSHIP, AND/OR CREATIVE ACTIVITIES (For examples, see Appendix IV to Form F2.08, “Instructions and Comments.”)

Accomplishments for the evaluation year:

In 2013 my goals were:

1. Serve as Managing Editor for Journal of Inquiry Based Learning in Mathematics
2. Publish one mathematics paper.
3. Give one talk on IBL in mathematics.

In 2013 my accomplishments were:

[Note: Indicate refereed items with an asterisk (*) and invited items with a pound sign (#).]

1. Journal
   a. Served as managing editor of JIBLM which continues to thrive. In fact, I was recently invited to speak as a panelist on Open Source Publishing at MathFest in Portland Oregon, August 6-9, 2014. The journal is seeing more than 700 downloads per month and is the only journal of its type in the world.

2. Grants
   a. Helped write and served on the grant as Co-PI, with Dr. Dorothy Sisk, on proposal to support The Texas Governor’s School, a summer camp for gifted mathematics students at Lamar University, $67,000, January 2013 – July 2013.
   b. Continue to administer the grant that I co-authored with Judy Kennedy. $180,000 proposal to Educational Advancement Foundation to support graduate student scholarships at Lamar University titled, “A Moore Method Apprenticeship Program (M^2AP) at Lamar University”

3. Publications

4. Talks
   a. “Inquiry-Based Learning in Calculus – two distinct approaches,” University
of Alabama at Birmingham Colloquium, October 4th, 2013.
b. “Inquiry-Based Learning at the University Level,” Southeast Sectional Meeting of the Mathematical Association of America, Winthrop University, South Carolina, March 15-16th, 2013.

Chair Review: Evaluation Score: 5

Comments: Dr. Mahavier had three publications and another submitted, plus three invited talks. These, along with his work on grants and as managing editor of JIBLM earn him the highest evaluation.

III. PROFESSIONAL SERVICE TO THE DISCIPLINE, UNIVERSITY, AND/OR COMMUNITY (For examples, see Appendix IV to Form F2.08, “Instructions and Comments.”)

Accomplishments for the evaluation year:

In 2013 my goals were:

1. Serve on a plethora of departmental and university wide committees.
2. Complete moving MathNerds to ASU.
3. Continue serving as Advisor to Math Club.
4. Restrict departmental pre-requisite overrides to departmental advisors.

In 2013 my accomplishments were:

1. Currently serving as Chair Elect for the Texas Section of the Mathematical Association of America, which I will serve as Chair for next year.

2. Served on a plethora of departmental and university wide committees.

   I serve as chair of the departmental undergraduate curriculum committee.
   I advise all FastTrack BS/MS students in the department.
   I advise approximately 1/3 of all majors in the department.
   I served on the hiring committee for the two visiting faculty lines for 2012-2013
   I am currently serving on the hiring committee for the three tenure track lines and the two visiting lines beginning in fall of 2014.

3. MathNerds

   MathNerds is under new management and we plan to close the non-profit side and donate some of the proceeds to Lamar, finally completing this task.

4. Assisted PJ Couch in taking over the mathematics club which I ran for a decade.
5. I serve on the Faculty Senate and serve as vice-chair of the Ad-hoc Committee on Retention.

6. I was unable to convince the administration that allowing advisors all over campus to override departmental pre-requisites was a mistake, but I certainly tried to get the university to do the right thing.

Additional service to the department, college, university and community included:

**Discipline Service**
- Member, American Mathematical Society
- Member, Mathematical Association of America
- Departmental Liaison: Texas Section, Mathematical Association of America

**Chair Review:** Evaluation Score: 5

**Comments:** Dr. Mahavier had a busy year of service. His efforts on the faculty search committee alone would have been sufficient to earn him the highest evaluation! His guidance on the department’s undergraduate curriculum committee has been extremely important during this year of CORE and program corrections.

**IV. EVALUATION/RECOMMENDATION BY CHAIR**

**Workload Distribution for this Evaluation Year:**

\[
\begin{align*}
(40 \text{ to } 60\%) & \quad (20 \text{ to } 40\%) & \quad (10 \text{ to } 30\%)
\end{align*}
\]

% Teaching = 50 \quad % Research/Scholarship = 20 \quad %Service = 30

The Chair will calculate a Composite Score for each faculty member, according to departmental workload policies.

\[
\text{(Teaching score)} \cdot \text{(% workload)} + \text{(Research/Scholarship score)} \cdot \text{(% workload)} + \text{(Service score)} \cdot \text{(% workload)}
\]

\[
5 \cdot 0.5 + 5 \cdot 0.2 + 5 \cdot 0.3 = 5
\]

= 5 **CHAIR’S COMPOSITE SCORE**

[Note: Chair’s Composite Score should be recorded also on Evaluation/Merit Score line on page 1 of this form.]

**Chair’s Overall Comments:** Dr. Mahavier is an important senior faculty member in our department. In the fall of 2014, he will be asked to serve as mentor to one of the new faculty members, helping to guide the person through the tenure process.
FACULTY ANNUAL REVIEW

LAMAR UNIVERSITY

Submitted by: W. Ted Mahavier

College: A&S
Department: Mathematics

Rank: Professor
Status: Tenured

Reporting Period, Calendar Year 2014.

Performance Scores:

<table>
<thead>
<tr>
<th>Performance</th>
<th>Numeric score</th>
<th>Merit Reward Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplary Performance</td>
<td>(level 5)</td>
<td>Highest merit</td>
</tr>
<tr>
<td>High Performance</td>
<td>(level 4)</td>
<td>High merit</td>
</tr>
<tr>
<td>Adequate Performance</td>
<td>(level 3)</td>
<td>Merit</td>
</tr>
<tr>
<td>Marginal Performance</td>
<td>(level 2)</td>
<td>No merit</td>
</tr>
<tr>
<td>Unsatisfactory Performance</td>
<td>(level 1)</td>
<td>No raise</td>
</tr>
</tbody>
</table>

Chair: ____________________________ (Signature)  Date: ___________
Evaluation/Merit Score: __________ (from Section IV, page 5)

Performance was satisfactory ☐
Performance was unsatisfactory ☐

[Note: An unsatisfactory rating on Section I mandates an unsatisfactory overall performance evaluation for any faculty member.]

Faculty Acknowledgment
_________________________ (Signature)  Date: ___________

☐ Faculty disputes the evaluation [Attach documentation of appeal, give to chair for transmittal to dean]

COLLEGE of ____________________________

Dean: ________________________________ (Signature)  Date: ___________

Performance was satisfactory ☐
Performance was unsatisfactory ☐

Comments (not required):
I. TEACHING AND INSTRUCTIONAL ACTIVITIES (For examples, see Appendix IV to Form F2.08, “Instructions and Comments.”)

Goals (See Appendix IV, Item #1):

My primary instructional goal every semester is to develop my students’ knowledge of and appreciation for mathematics. To accomplish this, I learn the name of and give personal attention to all students with whom I come in contact, while maintaining the highest ethical and academic standards in the classroom. Simple examples of student interactions include communicating with Latin Americans in their native tongue, serving as faculty advisor to student organizations, holding problem sessions in addition to scheduled class meetings, welcoming students to my office during all times of the day regardless of posted office hours, preparing fresh materials for every class I teach, and using student interaction to recruit majors. I provide my personal email address, home phone, and cell phone number to my students to assure they know that I want them to reach me when they need to reach me.

Accomplishments for the evaluation year:

In 2014 my goals were:

1. Continue to mentor Moore Method Apprenticeship Fellows in IBL instruction.
2. Train students in IBL strategies for developing math camp materials for the Texas Governor’s Program
3. Get Robert O’Connor out the door with an MS and off to a PhD program.

In 2014 my accomplishments were:

Each of the above goals were (mostly) accomplished.

8. We have successfully graduated Robert O’Connor, Wesley Hoffer and Paul Wright from the Moore Method Apprenticeship Program and have three currently enrolled: John Jablonski, Chris Sams, Sarah McQueen. Paul is at NSA (wow!), Wesley is seeking employment and Robert is teaching for us while waiting for his girlfriend to graduate. Then they will try to find jobs or graduate programs in the same town.
9. Aided John Jablonski in developing his curriculum to teach IBL during Texas Governor’s School, which he did during the summer of 2014.

Teaching Proficiency/Teaching Effectiveness.
Faculty Schedule. [Note: Faculty member’s teaching schedule for all semesters (provided on-line by LU Faculty Web Pages) or a summary that includes at a minimum course identification and numbers enrolled. Other information may be included — e.g., off campus, web-based, interactive video, etc.]

Spring 2014
- Math 2305, Discrete Mathematics, 25 students, inquiry-based learning pedagogy
- Math 3435, Calculus III, 30 students, inquiry-based learning pedagogy
- Math 5390, Thesis, Jeff O’Connor
- Math 5390, Thesis John Jablonski
- Math 4131, 2 TALH students, one LU student

Fall 2014
- Analysis I, 23 students, inquiry-based learning pedagogy
- Calculus I, 35 students, inquiry-based learning pedagogy*
- Math 5390, Thesis – John Jablonski

*Note that Jablonski was the instructor of record on this course. As I was his mentor and he was using my notes, I attended every single class day and assisted in his development thereby taking far more time than if I had actually taught the course myself. Assisting meant discussing his strategy and lesson before class, attending class and discussing his areas of success and improvement after class.

My on-line evaluations are available for your viewing and, when I have looked at them, were above average for the department in almost every category for every course. To receive more thorough (useful) feedback than on-line evaluations allow, I developed my own evaluation method which I use in all my classes. These evaluations are passed out, collected by one student, typed up by the administrative assistants, and the typed results are delivered to me after grades are issued. All hand-written responses from all classes follow. I love to teach, the students recognize this, they work hard and we all enjoy the experience.

MATH2413.02, Fall 2014
Note: This was the course in which I mentored John Jablonski and he was instructor of record, so these are his evaluations. However, they reflect my mentoring, so I include them. I would say that for a first-time teacher using such a challenging method, these are outstanding evaluations.

1. I believe the most effective part of this course was:
   - To work out a problem and explain it again in the front of the class helps you grasp a better understanding.
   - Putting problems on the board helped me understand stuff better.
   - The way the homework/board presentation were done. Made me not just learn the material, but learn it good enough to have to explain to others.
   - The presentations. Although I didn’t like to get up in front of the class, it was an effective way of further learning the material.
That we were held accountable for homework by it being part of our grade. If I didn’t need to do homework, I probably wouldn’t have done well.

Having a list of definitions and then seeing demonstrations with them.

He made it fun and enjoyable to learn.

Presentations in class.

How 55% of the grade was based on board presentations. This was nice because you control how many problems you present by doing the homework. The board presentations help everyone learn.

The criticism and the correcting of board work.

Very interactive professors. Explained things well.

Board work. It allowed us to teach ourselves.

Going home and doing the actual work and figuring it out.

Doing board presentations.

The class participation.

Writing problems on the board, because you got to see how other people might have approached the problem.

The teaching style. The course was not a typical lecture, but instead required student involvement to be successful. Though it can be intimidating, I think it requires you to learn the material and I gained much more from this class than from other lectures.

I believe the most effective part of this course was the presentation because I that it makes us understand more.

Board presenting. It made students keep up with the rest of the class.

When he had the students put problems on the board. I liked that better because I think it made everything easier to understand. I liked it better than lecturing the whole class.

The progression of the topics and how built upon each other was helpful. Weekly quizzes helped keep the topics fresh with me as well. The availability and approachability of the professor was excellent as well.

2. To improve this course in future semesters, the professor should:

Honesty the course was pretty good.

Save more time to lecture about new material at the end of class. Try not to stray off topic too bad.

Explain examples a little better instead of rush through them and not skip steps.

Do more in class work worksheets during class would allow students to practice what they have learned while having the professor present – this way if they get stuck on a problem they can get help and move forward.

Lecture more, and maybe do like HW worksheets, not a whole packet, it’s kind of overwhelming.

Have a few more lectures.

Use more time going over the harder things in cal I.

Provide more detailed lectures more often.

Have examples in the notes, so that students have same kind of idea to start.

Examples in the notes for students to look forward on.

Go over his lecture before class and make sure to be totally clear and minimize mistakes. Everything else seemed good.

PLEASE show more examples of upcoming material. There is to be no use of a book however I know everyone must use an outside source to understand material.

Keep up the great teaching.
3. **Talking to a student who is considering a class with this professor, I would say:**

- In this class, you get 5 min lectures, one example problem on each topic, and mostly self-teach. Although manageable.
- This option is not a bad one, the professor will help you out and it will improve your ability to stand n front of a class and present problems.
- To take it only if you need to learn. If Cal II or III is not needed, I would say shop around for an easier course. I did learn what was layed out in the syllabus. The class was challenging but do-able. If you have to take Cal II of III take this class, you will learn if you do what is expected of you.
- Make sure you are confident in your college alg/pre-cal skills. Also don’t give up when things do make sense, go to tutorials or ask for help.
- Stay on top of your homework, work on it a little per night. Always start the review early and don’t be afraid to ask questions.
- I recommend this class. The beginning of the year was a rocky start, but I learned a lot from it.
- Take this class.
- Due to the “self-learning” I would advise them to take another course. Although, I do believe this was an easy class.
- I recommend taking this class, it has a more laid back atmosphere but still requires you to work just as hard as your other classes. It’s more of a fun class because the professor actually cares for his students success. Not a a boring repetitive lecture class.
- Take it!
- The professor is helpful and interactive. If you are not shy, then I would recommend other students take this professor.
- I really want to know the concepts and the background of how to get an answer, this this professor. Be expected to have problems to present on the board.
- That is a fun effective and you actually learn. The teacher is always available and very understanding and easy to talk to. You want to go to class because it is fun and you are learning. Who doesn’t want to pass and have fun fun at the same time.
- To take this class.
- Go ahead. He’s a good teacher and he will improve in time.
- Its challenging to stay motivated and do your homework every night, but overall that is what is going to help you pass.
- Be prepared to step out of your comfort zone, but it will be worth it. The class is different and challenging, but the concepts will be very clear to you if you are willing to put forth the effort.
- Yes.
- Do the problems at home, they are vital for your grade. John knows how to teach and is available most of the day for help.
This class helped me understand what was going on. It wasn’t as scary as I thought it would be because of the way it was taught.

I would definitely recommend it. It’s a friendly, open environment and is good for learning. Good professors.

4. I would like the professor to know that:

- He did a great job for his first time. And there has one time that he said he would be in his office but he wasn’t. That’s the only bad experience I had though.
- This class was easy for me because of the way you taught it.
- I took a lot out of this class, and it’s helped change bad study habits.
- The class was great.
- This type of lecture is very helpful. Students who did not learn the material weren’t willing to put in the effort. I feel I would recommend this course to anyone.
- I’m glad I got to be in his class this semester. I learned a lot.
- Maybe add a few homework assignments.
- He was a good teacher.
- I really enjoyed this course and with the professor was teaching the next level.
- At first I honestly did not like the teaching method that was presented. The farther we got into the semester, the more it started to make sense.
- Although having the majority of the grade based on board presentations is creative and useful, some students are not comfortable on presenting in front of other students. The professor may say it is not a big deal, but it still does not persuade the student to step out of their comfort zone.
- Sometimes it throws people for a loop when the two of you go back and forth. It helps because you can correct each other. But when a Cal III lesson is thrown out there it confused the hell out of people.
- He did a very good job in instructing us, however there were very few times where I was unsure about something and it turned out he made a mistake in his explanation. Overall he did good. I like that he cares, he teaches us as if he knows out position since he is also a student.
- He did well explaining some things, but must present examples of problems more often.
- I really enjoyed the learning experience of this class.
- I wish I could take him next semester for cal II.
- He was extremely helpful and personable. He made us feel more comfortable and confident in this class and future classes.
- I think his teaching methods will become more solid over time. Seeing this is his first semester, I can’t see much to heavily critique him on.
- Asking test questions makes you look less knowledgeable than you are.
- This semester has been fun, keep doing what you enjoy.
- John is doing a pretty good job to make this class as easy to everyone as possible. Good job as a first year, and good luck in the future.
--quiz every week, made you prepare for quiz during the week
--the method of teaching
--going to the board
--the teacher trying to help
--how stress free you made us feel. I really liked the presentations and quizzes.
--the ability to be corrected or see corrections during presentations
--trying to work the problems on my own, and if I was not able to answer, at least trying helped me understand a little better
--the lecture days
--students have their own ideas for each problem and after they show their solutions of problems, teacher gives us his idea. That’s a good thing for students’ studying
--The presentations in class
--No Comment
--the lectures that were shown and problems that the teacher did
--everyday homework that forces you to stay on top of your work
--teacher listens to all questions from students
--presenting problems on the board for 55% credit, it’s nice not having 30% weighted tests
--the fact that we did not have a lot of practice problems to go back study because it made me really research how to do problems properly
--the lecture and quizzes
--the idea of giving the students the freedom of doing work their own way and discussing different ways of solving problems with fellow classmates
--the presentation aspect when I was the presenter. It forced me to look at a tough problem or theorem and then get feedback on how the problem was completed.
--I liked seeing different people present because sometimes the different styles of explanation helped clear up questions and offer a solution method/approach different from what I has used.

2. **To improve this course in future semesters, the professor should:**
--use the actual book so that the student have examples for the chapter which help student to understand more or have several examples on the pdf books
--Not give a quiz on every Friday, I believe that maybe one every other Friday
--I would like to have know that the quiz on Friday come from the practice problem and not from our homework; partial credit should be given to students who work the problem but don’t get to present.
--N/A
--Have reference books to fall back on.
--Definitely slow down during lectures. I had trouble keeping up while taking notes
--Get a class that doesn’t start at 8:00 and provide more clear examples of problems in lectures
--Give credit to students who have done a lot of homework, but lose their problems to other people repeatedly in the same day.
--Nothing it is already a good course
--Reduce the presentation grade to 40%
--Instead of taking quizzes we should turn in homework so everyone can stay on track
--If he wants, lecture a little more so we can understand it better.
--give more choices for extra credit.
--Do more course oriented lectures
--Not sure
--Do about two lecture days a week instead of one.
--Give more lectures
--Work out more examples for the students to have an idea on how to do the homework
--Find a way to get the people who had a bunch of presentations early in the semester still involved later, as others decide to join in on presentations. I think the current method is very fair, but also inhibits some of the steadier students, as they sometimes have a hard time getting on the board because of the numbers game.
--Should make more test towards the class then just having one test and a final. Then have a quiz question from the practice problems.
--It would greatly improve the course if the professor would lecture more often
--Pay more attention to people that does not present and ask them what is the reason of why they are not presenting, and if it is a reasonable reason then find a different way of give him or her credit.
--Give some small credit to student who did not get to present like five problems in a row.
Additionally, say what problems in the notes might be beneficial towards Friday’s quiz. (Example: “Hey guys, our quiz will be over conservative fields, so studying problems 510, 511, and 512 could help!)
--I believe he should lecture more often. Just because a few students present problem continuously and they understand the material does not mean the entire class understands.
--Have at least one more test, preferably two to reduce the stress/weight of each and encourage more studying.
--Not sure if this is up to professor, but I believe this class should be held 5 days a week. One lecture a week and 4 days of presentations.
--I like having several exam grades as a good indicator of how I’m doing and so that each exam doesn’t have massive amounts of influence on the final grade.
--I would have liked to see a few more examples worked for each type of problem. Specifically, problems that are more “real world” and computational, and less theorem/proof-based.

3. **Talking to another student thinking about take this instructor’s class, I would say:**
--I would not recommend since other professors do the examples very clearly, we only have students in class do them and most of them give a wrong or bad standard of solution. We need a unify way to do the problems.
--Be prepared to teach yourself, he will help you if you need it, but I feel as if he wants you to learn on your own.
--Overall a very nice guy. He knows how to apply the concepts to the real world application. Be prepared to self teach due to unfrequent lectures.
--Take him now!
--Take it, but be wary of the questions on the board.
--Make sure you present often
--Take the class
--Prepare to work hard, but get higher rewards from the class
--Good teacher, but be prepared to work
--Be prepared to present problems and learn on your own (there ARE lecture days, don’t get me wrong)
--Absolutely
--I haven’t talked to anyone who had this class before me
--I really enjoyed having him as a professor and I would definitely sign up for his class again
--not applicable
--For them to take this class if they wanted to know calc
--You should def take him, in my opinion you’ll learn a lot plus he is a good teacher
--If you are a talkative person, just take it
--Be ready to present in class
--No Comment
--It is a very different type of class environment where everyone communicates and talk to each other for help or question
--TAKE HIM! But be prepared to work hard.
--Make sure you have time to study at home and spent hours trying to solve one problem because you are going to have to teach yourself.
--Great teacher, just be sure to present often and study for the quiz every Thursday night.
--Be prepared to learn a lot on your own and present as often as possible.
--Definitely do so, though his teaching method is better for Calculus I and II
--That Ted is a great guy and always there to help.
--Go for it if you like presenting more than a HW/Test cycle.
--The class is a lot of hard work. You have to work through the note and ask questions and you need to try at least 3-4 problems for presentations.

4. **I would like the professor to know that:**
--I need more examples to be put in the pdf books so that students have the way to do similar problems
--He is very smart.
--Having to keep up with the homework is tough must less needing to work through practice problems; I much rather a lecture style course not thrown to the wolves.
--He'll be seeing me as much as I can make possible.
--I enjoyed the real-life applications of the homework-it helped solidify concepts.
--I enjoyed the class despite it being very difficult.
--I enjoyed your class very much.
--He runs a tight ship and the method works.
--He is a good professor and very good to the university.
--His is the best math professor I’ve ever had, because of his support.
--This semester was brutal!!!
--Thank you for being reasonable with my schedule this semester.
--He’s a great professor and a better man.
--Some students need to see before doing as in traditional lecture then work approaches.
--No Comment
--Thank you for being an awesome Cal I, II, and III teacher.
--None
--He is really good professor.
--No comment
--Ted is a very smart professor that is one of the few good teachers at Lamar.
--That he is by far the best professor when it comes to relating to students and applying class to real world.
--Not everyone has the time at home to teach themselves.
--This course was pretty cool.
--I enjoyed the class, however, I feel like after the semester I will not remember anything we were supposed to remember for future classes.
--No comment
--It was a pleasure to be in his class this semester and that I would recommend this class to anyone that needs to take Cal 3 in their undergraduate courses.
--Holy Moore Method, Batman! This is a great alternative to how most math classes are run.
--I appreciate his frankness and getting to the point and try to offer me the most for my money (tuition).

Course Evaluations
Mahavier, 4325, F14

1. **I believe the most effective part of this course was:**
--I truly believe the most effective part of this course is how it is self-learn so to speak. You give us hints and make us challenge ourselves to better our knowledge. It truly feels great when first solving a problem perfectly.
--The requirement of turning in a proof or problem every Friday. This forces a lot of students, who would otherwise slack, to solve a new problem periodically.
--The way the notes are set up. They sequentially get harder and guide you to concepts very carefully.
--Being able to refer to Facebook to see presented problems was highly convenient and helpful.
--The student-presented theorems. This lets an undergrad explain things in such a way that other undergrads understand it.
--The feedback on hw. Understanding the presentations done in class only goes so far is we immediately move on to the next theorem.
--To have a presenter to write his/her proof on the board, and the class as a whole give input on what could be changed on the proof.
--Turning in proofs every Friday. This forced us to actually do the work.
--Forcing us to work on our own. It was a struggle at first because I was used to receiving help from classmates but this class assisted me tremendously in developing my own mathematical skills more fully.
--Encouraging us to try to prove problems alone.
--Eating oranges, bananas and peanuts in class; Facebook pictures.
--I like that the professor gives us his inputs when the proof is put on the board.
--Dr. Mahavier’s help that he offers.
--Ted’s comments on BW
--Each person being able to choose problems, instead of everyone doing all of them.
--When we proved problems on the board, so we can see how the problem was to go.
--The work involved. The method of teaching is great.
--Giving every student an opportunity to participate actively, and explore the measures that must be taken to convince their peers (& professor) of the understanding.
--Explanation by the professor on the board after its presented.

2. To improve this course in future semesters, the professor should:
--I think it would have been better to not have a problem due on the same day as the test. Also, not sure if you do this, I think it would be ok to have one dropped turn in where it didn’t count. Sometimes doing a problem that can take hours to solve while having other classes and commitments and tests is hard.
--I think group assignments are sometimes good for people who don’t learn as fast. Maybe every couple of weeks.
----Continue doing what he is doing!
--Change absolutely nothing.
--I think that students should be able to confer as long as the class is moving forward because sometimes the teacher who is way smarter cannot explain it to me like a peer would. (As long as they are taking the class together)
--I believe the professor did a good job.
--Mark the hard problems as such and encourage students to not work on just one problem until they get it. I got very behind doing this.
--You are VERY fair! I do not see any major improvements at all!
--Change nothing. I believe his way of constructing the course was a success.
--Ted, bring cookies to class.
--I would like to see more of the professor showing us what an acceptable-valid proof would or should look like.
--The class is perfect as it it.
----allow the students to work which each other and be more clear when explaining things.
--Lecture just a little more.
--Take more opportunities to provide in-class examples of his own proof methods; like, actually teach. Although these are already evident in proofs achieved through individual help during office hours.
--The proof should explain every topic thoroughly before we work on problems for the board.

3. Talking to another student thinking about take this instructor's class, I would say:
--No
--You truly are a terrific professor. I always recommend you to anyone talking about math professors.
--I strongly recommend taking this class. It creates a strong foundation in mathematics.
--Definitely! The class WILL be hard but worth the effort that was put forth.
--Do not take office hours for granted. One-on-one help from the professor is something you need to succeed in Analysis I.
--Take it from Ted, especially if you learn through presentation or conversation.
--Be sure you're comfortable talking to your professor. He’s the only one you’ll be able to talk to so be sure.
--Have a good understanding of intro to advanced mathematics.
--Take it if you’re interested in math. Ted knows what he’s doing.
--Do it! It is a challenge but so worth it! Dr. Mahavier is very down to earth and explain things very clearly!
--Visit Ted’s office often because he will help you as much as possible.
--Ted is awesome. Do a lot of boardwork for presentations. Ted should be a comedian.
--I like some of the ways the class was taught, but there is a lot of work. Be prepare to present problems.
--To wait for the semester Dr. Mahavier is teaching the course.
--Take it from Ted.
--It’s not as hard as it seems at first.
--Make sure you are good at proving theorems and know a lot of math terms.
--It’s the best analysis course, but prepare to be disappointed a lot.
--Be prepared to spend lengthy hours at home pondering the same proof. Possibly days. Only to find the answer, I think that it should have been easy!

4. **I would like the professor to know that:**
   --Every problem solved must be written thoroughly on the board before its posted on Facebook so we can understand when ??? on Facebook.
   --I like how available you are for help. I’ve never tried to contact you and not received a quick response in any of the classes where you were my professor. Also, I like how quickly you grade our papers and return them.
   --I appreciate the very quick grading and dedication to teaching.
   --I appreciate all of the encouraging words that were given to me. Without them I most likely would not have made it through the semester. Thank you! (If I enroll in Analysis II, I promise not to be late)
   --You should teach this class all the time, but I understand why you can’t.
   --I enjoyed this class but midterm test should be sooner so that students can feel like they are tested over those concepts that were mastered and not just seen.
   --His explanations in class of the material is very help when he is explaining the chapter.
   --On top of helping understand the picture and theory, hints towards writing proofs would be nice. Don’t give us the answers, but some people still really struggle to proof.
   --You are very encouraging! Mathematics is not an easy subject to develop and fully understand and you are so helpful and encouraging!
   --I enjoyed the challenge and he’s an awesome math teacher!
   --I really want to pass this class! UR AWESUM
   --I enjoyed the class. He made me work hard for my grade and I would take another class.
   --He is a wonderful professor.
   ----I learned a lot in this class.
   --I felt like you showed favoritism. I saw it a lot trying to go to your office.
   --I enjoyed the class for the most part, and sincerely hope that we as a class have achieved your goals. Thank you.

---

Course Evaluations
Mahavier--2305

1. **I believe the most effective part of this course was:**
   --I like the presentation set up. The professor is always available.
   --His lectures
   --Prof explaining any and most question about the problems so that I could understand the question asked in the homework.
   --The students actively being involved in the classroom, and presenting problems with positive feedback.
   --Presenting on board learning from others.
   --The funny real life examples are funny. But there are a lot of parts of this course that were effective.
   --The Moore Method alongside his teaching. He would teach us and then have us present problems on the board.
   --Learning different ways to do each problem from different students. Being able to put our own opinions and debate problems. Always having an opportunity to meet with you for help.
   --The most effective part of this course was definitely the lectures that you gave, even though there were very few. Also when Ted would go back to a student’s problem and correct it.
   --Board work. It got me to do a lot more of my homework than I normally would complete. I felt I learned the material a lot better this way.
   --The way the class was taught. It is really effective for the visual learners.
   --Student-engaged learning, and professors willingness to help outside of class.
   --Class discussions/arguments really help to understand other perspectives and hence improve proofs.
--How the general humor of the class was conducive to our learning the material.
--How Ted gives his input on every problem that was presented on the board.
--the structure of the class and how involved the professor is with every aspect of it. He makes
certain that everybody understands and is approachable and available if a student does not.
--Problems covered critical concepts to each idea (most of the students’ questions could be answered
by understanding the problems and their solutions).
--The students got to see different methods of each problem go up on the board so we had multiple
times to try to understand problems.
--No comment
--The use of presentation as a large component of the learning process.
--Presenting the problems

2. **To improve this course in future semesters, the professor should:**
--I also like the idea of other getting partial credit if they also worked one of the problems be
presented. Also when you lectures slow down Ted.
--I wish you would lecture a little more before we start each chapter.
--None
--Remain fun and student friendly
--Present MORE ON BOARD
--Consider students who don’t have a lot of board work and encourage them to go on the
board...because the same people go on the board. I don’t know. Why did I say that?!
--N/A
--Do what the calculus guy said about checking work when they can’t present. Also, the ones who
have never seen this info a day of their lives should get/need better explanations. Some of this stuff
was gibberish to me.
-- Give more example problems
--The only thing I could possibly think of would be to maybe add on extra test to alleviate some of
the pressure from the midterm and final.
--Get with the computer science department about enforcing their prerequisites. Had I taken this
class earlier, other classes would’ve gone by smoothly.
--Consider a homework completion grade as 25% of the grade and presentations as 25%, rather than
just 50% for presentations alone; some people who worked hard for a solution didn’t get to present
because someone else had fewer presentations.
--Allowing some co-op presentations might help with some of the bigger problems, and encourage
students to work together outside of class.
--Take better advantage of lecture opportunities after individual problems. Maybe set a lower
general limit to how many problems go up per day.
--I am a visual and example learner and would like to see more explanations from professor rather
than just students putting problems on the board. Especially when it comes to definitions, I would
like a better explanation than just trying to figure it out on my own.
--Implement quizzes here and there. As a student hat’s not particularly a math major, I would like to
know if I am doing the majority of the work correctly before the actual test. Board work is great, but
sometimes there’s only the opportunity to showcase a portion of the problems. Especially since
every student has a different mathematical background.
--Perhaps allow some sort of alternative to in-class presentations for credit.
--Give a brief summary before and after each chapter. Find a way to give credit to those that do the
problem but cannot present because motivation is lost after you do several long problems and do not
get credit for it. Maybe email the professor an hour before class of problems the student has to
prevent students from walking in last minute and claiming a problem they have worked on for a few
minutes before class while a student has worked on it for hours at home. Then out of the students
that emailed pick on to present.
--focus on the students who have not previously been introduced to the material instead of giving so
much attention to students who are familiar with the material. Also, the professor should create a
detailed solutions manual that explains the most trivial information. The solutions should be given
to the students every Friday and should cover the material presented throughout the week.
--To allow for more presentation time, make lectures available on-line. The student is responsible
for watching the lecture outside of class, and then people who get behind could catch up by
rewatching the lecture until they understand.
--Put the limit on number of problems one can present so encourage other student and give them chance to do presentation.

3. **Talking to another student thinking about take this instructor’s class, I would say:**
   --It’s a very good course with Mahavier but if you're not comfortable with theory your in for a rough ride.
   --Take it. He’s friendly, knows his math, and provides an environment that makes it ok to go to the board and be wrong.
   --Yes, not too easy, not too hard. Learn a lot if you do the homework. You will still learn everything in class.
   --Be prepared for a new way of learning, which could seem different and troublesome.
   --It’ll be great you’ll learn from others greatly. Environment is great.
   --Expect to do a lot of good things in this class; life is what you make it…discrete.
   --DO IT!! You’ll regret it if you don’t!
   --Yes, but be prepared for new learning styles, don’t be shy and student EVERYDAY! His class requires you to teach yourself and information most of the time. You need to be involved everyday because that is how you will learn in this class.
   --He is a fair teacher but just try to do at least one homework problem before the next class day.
   --For it. He’s a great professor, but be prepared to work if you really want to understand the material.
   --He is the guy to take it from.
   --It is a lot of work, but you will learn the material; it is better to learn the material than just earn a grade. Take Ted’s class whenever it is available!
   --Absolutely take him, unless you’re deathly afraid of public speaking.
   --Your success in this class is clearly more contingent on your own initiative than a typical math class.
   --I liked the class and I would highly recommend you taking the class.
   --Expect to think critically and independently on each problem.
   --Yes
   --You have to have self determination because there is not push for you to present that much (if you want to you can if not oh well). It is stressful because there is never a solid grade, it fluxuates according to your performance and other student’s performance.
   --No comment
   --Good idea!
   --Very helpful prof. Best teaching style.

4. **I would like the professor to know that:**
   --I ended up finding this course difficult. Not being able to seek outside help made it especially difficult as this is the first taste of theory I’ve had and so far I’m having trouble understanding it.
   --If there was an opportunity to take his class again (hopefully not the same one but future math classes), I will most definitely do so.
   --Great teacher
   --I was second guessing my plans in the future, but Dr. Mahavier solidified by future plans.
   --I wish he could have presented more. Great teacher.
   --“I never said she stole my money” has several meanings. Voyager still transmitted, but Earth didn’t. Stick figure “Can you type this stick figure?”
   --I’ll be seeing him next semester in analysis.
   --I enjoyed the class, but I did struggle because I am not used to his teaching style.
   --I think more examples worked out by the teacher would help the class understand.
   --He did a great job with this course this semester. It was really difficult for me to think of a way to improve this course. Keep doing what you’re doing.
   --I will be taking any class taught by him if needed on my degree plan.
   --I liked that the class was very much on the student’s side in that if you thought you had a solution, you could present and have the class and the professor help you out.
   --This class in particular should be a prerequisite for computing theory.
   --I’m keeping his notes.
   --I enjoyed taking this class. It was a different and interesting learning experience.
--I enjoyed this class and it made me look at math a different way, instead of just a set of notes that a professor writes everyday.
--No comment.
--I have enjoyed the class, but am happy its over. I prefer a professor lecturing with daily homework on paper to turn in and several tests.
--This class made me doubt my career choice, but I got over it.
--If you’re having induction problems, I feel bad for you son, I’ve got nh problems, but recursion ain’t one.
--Best class

Chair Review: Evaluation Score: _______
(NOTE: A score of 1 on this section mandates an overall unsatisfactory rating by Chair.)

Comments:

II. RESEARCH, PUBLICATION, SCHOLARSHIP, AND/OR CREATIVE ACTIVITIES (For examples, see Appendix IV to Form F2.08, “Instructions and Comments.”)

Accomplishments for the evaluation year:

In 2014 my goals were:

1. Serve as Managing Editor for Journal of Inquiry Based Learning in Mathematics
2. Give one talk on IBL in mathematics.
3. Continue to publish inquiry-based notes.

In 2014 my accomplishments were:

[Note: Indicate refereed items with an asterisk (*) and invited items with a pound sign (#).]

5. Journal
   a. Served as Managing Editor of JIBLM which continues to thrive. In fact, I was recently invited to speak as a panelist on Open Source Publishing at MathFest in Portland Oregon, August 6-9, 2014. The journal is seeing more than 700 downloads per month and is the only journal of its type in the world.

6. Grants
   a. Helped write and served as Co-PI with Dr. Dorothy Sisk, on the grant to the Educational Advancement Foundation to support The Texas Governor’s School, a summer camp for gifted mathematics students at Lamar University, $37,916, January 2013 – July 2013.
   b. Continue to administer the grant that I co-authored with Judy Kennedy. $180,000 proposal to Educational Advancement Foundation to support graduate student scholarships at Lamar University titled, “A Moore Method Apprenticeship Program (M²AP) at Lamar University”
c. Prepared $3.8M pre-proposal to Educational Advancement Foundation to launch “Enabling Inquiry-Based Learning,” a national center devoted to inquiry-based learning at Lamar.

d. Co-PI, with Dr. Thomas Judson of Stephen F. Austin, on proposal to support outreach to Greater Texas Foundation, $500,000, January 2015 – July 2017.

7. Publications -- No publications accepted this year, but two are submitted and one is in progress under co-authorship.


8. Talks


Chair Review: Evaluation Score: _______

Comments:

III. PROFESSIONAL SERVICE TO THE DISCIPLINE, UNIVERSITY, AND/OR COMMUNITY (For examples, see Appendix IV to Form F2.08, “Instructions and Comments.”)

Accomplishments for the evaluation year:

In 2014 my goals were:

1. Chair undergraduate curriculum committee.
2. Complete the service on the hiring committee.
3. Serve on the Faculty Senate

In 2014 my accomplishments were:


8. Currently serving as Chair for the Texas Section of the Mathematical Association of America for 2014-2015.

I served as chair of the Departmental Undergraduate Curriculum Committee.
I served on the Departmental Graduate Curriculum Committee.
I advised all FastTrack BS/MS students in the department.
I advised approximately 1/3 of all majors in the department.

10. Placed MathNerds under new management and we have closed the non-profit side and donated the software assets to the public domain and donated the financial assets to Lamar University and Xavier University of Louisiana in recognition of the support these universities provided over the years.

11. Served on hiring committee that hired PJ Couch, Jacqueline-Jensen Vallin and Robert Vallin. As the sole member of the department to attend the Joint Mathematics Meetings in Baltimore in January 2014, it fell to me to interview 7 potential candidates for the job. Thus serving on this committee was a huge time investment as I communicated with these individuals via email and met with them in person.

Additional service to the department, college, university and community included:

**Discipline Service**
- Member, American Mathematical Society
- Member, Mathematical Association of America

**Chair Review:** Evaluation Score: ______

**Comments:**

**IV. EVALUATION/ RECOMMENDATION BY CHAIR**

**Workload Distribution for this Evaluation Year:**

<table>
<thead>
<tr>
<th>Category</th>
<th>(% of workload)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
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<tr>
<td>Research/Scholarship</td>
<td>20</td>
</tr>
<tr>
<td>Service</td>
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</table>

The Chair will calculate a Composite Score for each faculty member, according to departmental workload policies.

\[
\text{CHAIR’S COMPOSITE SCORE} = (\text{Teaching score} \times \% \text{ workload}) + (\text{Research/Scholarship score} \times \% \text{ workload}) + (\text{Service score} \times \% \text{ workload})
\]

[Note: Chair’s Composite Score should be recorded also on Evaluation/Merit Score line on page 1 of this form.]
Student Evaluations

My F2.08s, included above, also include my own evaluation surveys that I collect from every student, every semester. These personal surveys give a much better glimpse into what my students think of my teaching than do the numerical scores below. The yellow highlights indicate areas in which my scores are higher than the departmental average. There are some interesting flaws in the material generated by Lamar. For example, sometimes I am ranked poorly in “Grades returned timely” when, in fact, I have never failed to return a test or quiz on the next class test day!

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<tr>
<th>Order</th>
<th>Question Text</th>
<th>Avg</th>
<th>MATH Avg</th>
<th>Div Avg</th>
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<td>4.25</td>
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<td>Helped achieve learning</td>
<td>4.18</td>
<td>4.15</td>
<td>4.16</td>
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<td>Course material delivered clearly</td>
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<td>4.12</td>
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<td>Syllabus was accurate</td>
<td>4.29</td>
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<td>Assignments aided learning</td>
<td>4.21</td>
<td>4.18</td>
<td>4.17</td>
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<td>Instructor available</td>
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<td>Instructor stimulated interest</td>
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<td>4.1</td>
<td>4.13</td>
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<td>Overall, the instructor is a good teacher.</td>
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<td>Grade reflects performance</td>
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<tr>
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<td>Attend scheduled web conferences to better understand course related material</td>
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<td>3.08</td>
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<td>Communicate ideas effectively.</td>
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<td>Use analytical reasoning</td>
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<td>Develop as a member of a team</td>
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<td>Respects students.</td>
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<td>Respects students.</td>
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<td>Clear course requirements in syllabus</td>
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<td>Clear course requirements in syllabus</td>
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To: Lamar University Faculty Senate

October 7, 2015

Dear Colleagues,

This is a letter of support for Dr. W. Ted Mahavier, nominee for the Piper Professor Award. I offer the perspective of a former student and current colleague.

I first met Dr. Mahavier as an undergraduate student in his analysis course at Lamar University. He offered a stimulating and effective environment for learning. He never took the easy route of giving an answer; he always provided a question that helped me find the answer. He turned what I considered a boring subject into my favorite subject. Most importantly, he taught me how to teach myself.

By the end of my first semester with Dr. Mahavier I changed my major from physics to math. Upon finishing my undergraduate degree I decided to stay at Lamar for my Master’s degree. Dr. Mahavier acted as my thesis adviser and maintained his discovery-based approach. He prepared me for PhD level research and helped me gain acceptance to the University of Oxford to pursue a PhD in math.

Before leaving for Oxford, I was diagnosed with a brain tumor. I contacted former teachers at Lamar to inform them of the situation, and I received lifting responses from all. Dr. Mahavier went a step further by asking if he could join my family at the hospital during the upcoming surgery. This goes beyond any duties of a teacher or adviser; this is an act of true friendship.

I spent a short time at Oxford but moved back to Texas and underwent further cancer treatments. Dr. Mahavier worked with me during the treatment, spending his free time to help me prepare for my return to PhD studies. Our meetings produced a new result which later became a publishing and provided a foundation for my dissertation. I decided to remain near home for my PhD, and Dr. Mahavier aided me in the search for an appropriate program. He introduced me to Dr. John W. Neuberger who became my PhD adviser at the University of North Texas.

At UNT, the math department agreed to a tumor-related disability accommodation by which a publishing would substitute for qualifying exam credit. Near the end of my studies there was disagreement over whether or not I had met the unusual criteria in order to defend my dissertation and graduate. I asked Dr. Mahavier for advice, and he took it upon himself to notify the President of UNT and ask that a proper investigation be conducted. Dr. Mahavier aided me further in the appeal process, something that was very foreign to me. I am confident in saying that without the help of Dr. Mahavier my dismissal from UNT’s math program would not have been overturned. With his help, I was allowed to reenter the program, and I successfully defended my dissertation within a matter of months.

It is hard to measure the influence of a given teacher. I can only summarize Dr. Mahavier’s influence by saying that if you remove him from my career I would not have my PhD and would likely never have changed my major to math. If considering only his effectiveness in the classroom, he is the best teacher I have ever seen. When also weighing his commitment to students after their departure from the school I find it difficult to imagine a more deserving candidate for the award. I am honored to support Dr. Mahavier for the Piper Professor Award.

You are encouraged to contact me if needed.

Sincerely,

J. W. Montgomery, PhD
(409) 920-9488
To whom it may concern:

Dr. William Ted Mahavier has been a professor, a mentor, an advisor, and a friend to me for the past 10 years. Our meeting was purely happenstance when I was searching for a new advisor while working on my undergraduate degree. I had recently changed my major for the third time with no direction or goals other than to get through school as quickly as possible. Though I did not know what I wanted to do with my life, I was adamant I would not be a teacher. Dr. Mahavier was understanding and did not push the career on me, instead, he advised me on courses so that I may graduate in my desired time frame.

Three months after graduation, I found myself in front of a high school classroom for the very first time with no training, no plans, and no idea how I ended up in the one place I swore I would never be. I kept close contact with Dr. Mahavier and frequently went to him for advice and support with my arduous career path. I knew I loved mathematics and found helping people understand the subject I love deeply gratifying, but I was clueless when it came to the heart of teaching, planning, classroom management, execution of daily routines, and how to effectively engage my students. I was trying to teach the way I was taught: lecture, lecture, memorize, regurgitate, and repeat. Things were not going well. During this time, Dr. Mahavier secured funds for the Moore Method Apprenticeship Program (MMAP) which granted scholarships for mathematics graduate students and afforded the opportunity to take a hands-on approach with a different teaching method. He was relentless (lucky for me) in his efforts to persuade me back to graduate school after I had worked so hard to graduate in the first place. I was very apprehensive of my ability to successfully complete an MS degree in mathematics, as well as, teach on the college level given my current teaching journey. After months of encouragement and prodding from Dr. Mahavier, I decided to enroll back in school where I was accepted into the MMAP.

Upon the start of my first semester back, I was immediately immersed into this new (to me) way of teaching. I began taking Moore Method style courses, as well as, video recording and observing courses taught by Dr. Mahavier. I had never seen a classroom run so smoothly, students so engaged and confident in their abilities, and a professor so concerned with the educational growth of a student. Towards the end of the first semester I began co-teaching/facilitating courses I had been observing, following Dr. Mahavier’s lead. Students were understanding and excited about working! I was in a teacher euphoria and knew I found what I had been missing. Every week, we would meet to discuss how each class had gone and where we should go from there. Dr. Mahavier was always immensely encouraging and constructive in his criticism, motivating me to work harder than I had the week before, not just for myself, but for our students. By the second semester, and through the rest of my collegiate career, I was teaching my own classes under Dr. Mahavier’s direction, further developing my teaching skills and building confidence in my abilities.

By the time I graduated, I knew I had been called to teach. Working with Dr. Mahavier over the years instilled in me what it actually meant to teach and truly care about the academic
development of your students. I was equipped with the tools to go out and be an exceptional teacher as I had observed from the time spent with Dr. Mahavier. I am now teaching high school again and I love every second of every day. I do not know where I would be if Dr. Mahavier had not encouraged me to go back to school and guided me on my journey, but I do know that I would not have found my calling. My passion. I am very thankful for the wonderful, selfless job he does each and every day, as are many people who have greatly benefited from his efforts.

I appreciate your time and hope that you will consider Dr. William Mahavier for the Minnie Stevens Piper Award. He is above and beyond deserving. Thank you.

Sincerely,

Brandy Comer
Mathematics Department
East Early College High School
Houston Community College
Lamar University
Dear Lamar University Faculty Senate,

I am honored to write a strong and enthusiastic letter to support the nomination of Dr. William Ted Mahavier for the Minnie Stevens Piper Award. Dr. Mahavier’s creative and intellectual approach to questions of pedagogy paired with his desire to assist and mentor students outside of the classroom make him the strongest candidate I know.

I have known Dr. Mahavier for four years. Our first encounter was at a Kutztown University of Pennsylvania where he gave a talk on his unique method of teaching. I was privileged with the honor of attending dinner with Dr. Mahavier and the Kutztown University mathematics faculty after his talk, where it was quickly apparent to me that Dr. Mahavier was extremely knowledgeable and well respected on the subject of pedagogy. As a direct effect of this encounter, I applied and attended Lamar University not only to achieve a master’s degree in mathematics but to also study pedagogy under Dr. Mahavier.

I came to Lamar University from a low-income family in Philadelphia, Pennsylvania. The idea of continuing my educational career in Texas after a bachelor’s degree seemed bleak from a financial perspective. It is because of Dr. Mahavier’s national reputation and work with Dr. Judy Kennedy that I received full funding to pursue my educational goals in Texas at Lamar University. I arrived in Beaumont, Texas on August 10, 2013 on a bus with little more than twenty dollars. Dr. Mahavier quickly noticed my financial struggles and reached out to me with help. While doing odds and ends for Dr. Mahavier around his house in exchange for financial help and stability, I also received mentoring not only on my education but on life as well.

In my first year at Lamar University, I sat in on Dr. Mahavier’s calculus classes and observed firsthand the impact he has on his students. It was in my third semester that I began teaching my own calculus class and Dr. Mahavier took the time every day to attend the class and support me through this endeavor. We had countless conversations, thoughtful debates and brainstorming sessions over teaching and making an impact throughout the semester. Dr. Mahavier gave me full responsibility and freedom during the spring of 2015 to teach calculus 1. Many students from that class have moved on in their own academic careers and still reach out to me for mentoring and inspiration on a regular basis. The impact I made on those students and the success that I had teaching was because of the time that Dr. Mahavier spent with me helping me to grow and learn.

When it came time for me to decide on a professor and topic for my thesis, I had the option to study under Dr. Mahavier in his area of expertise. I had however come across a problem in another class during that time that I was very interested in. I discussed and explained the problem to Dr. Mahavier. He was honest in informing me that his knowledge on the topic was very limited but he believed in my ability and he encouraged me to pursue it. Instead of leading me though my thesis research and teaching me along the way, he gave me the intellectual freedom to pursue the topic and teach myself. He taught me that working hard and believing in yourself is more important than any title or degree. Because of this, I had the belief in myself that I needed to succeed in finding a mathematics-related job after earning my master’s degree. I know that I will continue to grow as a professional mathematician.
Dr. Mahavier and I have remained in close contact and continue to discuss our successes, endeavors and future. He continues to support and mentor me in my life even though I have moved on and back to Philadelphia. He has a very passionate heart and dynamic academic mind. In short, I find it hard to find words strong enough to describe the impact he has made on my life and my future.

I am currently working at Accenture, a Global Fortune 500 company, as a global data management and reporting senior analyst. As I reflect on my time with Dr. Mahavier, I consider how fortunate I am to have been mentored by him and have someone care so deeply about another’s future. It is my sincere hope to have the same impact on another human being the way that he impacted me. It is therefore with overwhelming and unhesitating enthusiasm that I support the nomination of Dr. William Ted Mahavier for the Minnie Stevens Piper Award.

Sincerely,

John Paul Jablonski
Dr. Mahavier:

I understand that you been nominated for the Minnie Stevens Piper Professor Award. From my work with you as student in 1994, you have been a great inspiration to me. I began studying under you as a second year graduate student, with a history of limited success in mathematics. Since I began college as a developmental math student, there was a continual confidence issue as I progressed through my undergraduate math study.

When I began my master’s work, I was doing fairly well with the courses in my program. But when I began taking your courses, the lack of underlying confidence made it difficult. But the words you spoke about the Moore Method stuck in my mind, and I knew that these were skills I could develop to be successful. You also asked me to help work on a research problem, which helped me to see value in what I could contribute to the mathematics. I did not succeed to the level I wanted to in math, but the lessons you taught stuck with me after I left graduate school.

In my current role as Mathematics Professor at Delgado Community College, I have sought to implement many of the techniques I learned from you in my teaching. When I began teaching after working in the private sector, my mind immediately returned to the lessons you taught, and I knew I wanted help develop these skills in my students. It was then that looked you up, and you invited me to attend the Moore Conferences which has benefitted me tremendously.

In my work as Department Chair, I have worked to incorporate discovery methods in all that I do. This includes empowerment of other teachers, and their students. I have recently begun to implement a new paradigm in my relationship with all students. I believe that patient understanding of what it is like to be lost, and using guiding questions to lead students can accomplish wonders in education. Thank you have shown me, and I wish you all success in application for this award, and in all aspects of your life.

Sincerely,

Michael Cruz

Associate Professor/Department Chair of Mathematics
October 6, 2015

Lamar University Faculty Senate
Lamar University
4400 S Martin Luther King Jr Parkway
Beaumont, TX 77710
United States of America

Re: Ted Mahavier, the Moore Method, and a university in India

Dear Members of the Faculty Senate,

In January of 2015 I found myself about to teach Real Analysis to a group of seventeen talented, thirsty, motivated students at Ashoka University, a newly founded liberal arts university near New Delhi, India. None of these students were taking their education for granted, and I was their main resource. I wanted to make a difference to these students; I wanted them to fly. I had just learned of the Moore Method of teaching mathematics, and had decided to try it. In the Moore Method, students are handed a problem set on the first day of class, after which class meetings consist entirely of student presentations of their solutions to these problems. There is no textbook and no lecturing. What, then, does the instructor actually do? I was a novice, and all I had was a set of notes written by one Ted Mahavier. I sent him an email. Thus began the most meaningful – and impactful – professional correspondence I have had the privilege to be part of. Right away, Ted sent me the most helpful response with suggestions for what to do on the first day. As the semester progressed, I had detailed questions about the nuts-and-bolts of evaluation, class discussions, how to help those who needed help. Ted answered every single question, with humor and insight that made our correspondence as much pleasure as it was work. The Moore Method requires you, the instructor, to respond moment-by-moment to what is happening in the class, and to guide without controlling. How one does this is really more art than method. I was fortunate to have Ted as a teacher in this art – his guidance was rooted in his own deep experience, that he shared openly with his prompt, helpful, gentle and encouraging responses. I was deeply grateful for his answers and his time, and the ones who truly benefited were my students. The heart of this method is that learning is handed over to the students; in India, where our classroom culture makes the instructor’s authority paramount, this pedagogic approach is truly revolutionary in its impact.
There is some consensus that you only understand the Moore Method if you have experienced it as a student, yet somehow Ted communicated the spirit and the sensibility of this approach. He gave me the tools to make my students intellectually self-reliant, generous with their peers, and confident in their presentations of their own work. (They also learnt some mathematics!) They did fly, and I have Ted Mahavier’s generous mentorship to thank.

Here is an excerpt from an email I wrote to Ted at the end of the course, on May 2, 2015:

I think the goals of the course were definitely served. In this last week even [one of my most hesitant students] presented a problem. The 4 students about whom I always wondered through the semester: “is this course working for *them*?” all came and thanked me on the last day, and said that they enjoyed it. One student who had been asleep (actually, literally) in my class all of last semester woke up and turned out to be a complete natural at mathematics. He came up with a correct proof of problem 42 [a particularly challenging one] – and then so did another girl – a different proof. He was impressed because he hadn’t been able to make her idea work, though he had thought of it. This kid learnt a lot of math (charging ahead on the problem set) and also learnt how to be respectful of his peers, despite his own greater ease with the subject. The class as a whole went from being combative to supportive, and they all learnt how to present, and also how to critique.

These are 18 year olds – this is their first real math class, the first in which they have had to prove anything for themselves, and certainly the first in which they have had to write down correct proofs with all quantifiers present. They did it, and learnt some important math on the way. Thank you so very much, Ted, for your support and all your answers to my many, many questions. I truly appreciate it. Everyone is just so busy, and everything takes so much time – so I marvel at how willing you are to give your time to someone, anyone, sitting anywhere in the world, who asks for your support.

I am attaching a picture taken on the last day of class. Everyone was present that day, and we finished the class with a party. […] Three of the boys are missing – don’t know where they went at just that moment – but these are my students! I am the one in the sari.

I include the picture below. I’d be more than happy to answer any further questions you may have.

Sincerely,

Dr. Maya Saran
Asst. Professor of Mathematics, Ashoka University
maya.saran@gmail.com / +91-9999-228522 / http://ashokauniversity.edu.in/
End of semester picture, Math CT-204-01, taken on April 30, 2015 at Ashoka University, India.
Dear Senators,

I am pleased to recommend Dr. W. Ted Mahavier for the Piper Award for teaching. I find him a very strong candidate for this recognition. His career has primarily focused on a particular innovation in teaching mathematics which has only recently gained wide acceptance. He has published extensively on this work and is a coauthor of the single book devoted to its pedagogy and implementation. He is frequently asked to speak and conduct workshops on this innovation at national venues. This innovation, broadly know as active learning, advocates the replacement of traditional lectures with some form of active student participation. Its exact form and implementation is highly dependent on the subject and level of the students. In university level mathematics it is called inquiry-based learning (IBL) which is often refined to the Moore Method in more advanced courses.

It is not my intent in this letter to advocate IBL itself. Rather, I want to make the case that Ted is an influential and successful master of IBL at Lamar University, and is a recognized leader in the development and dissemination of IBL teaching techniques in Texas, across the country and beyond. Our teaching techniques will improve only if innovative educators make them broadly accessible so that they can be widely vetted and the best ones can rise to the top. My intent here is to make the case that Ted does exactly that with IBL. I will first discuss his own success with IBL. Then I will outline two of the very successful projects he has spearheaded to engage the broader mathematical community in IBL.

Of course, his students are the only ones qualified to give a first hand evaluation of his teaching, and I trust you have access to their comments. I have worked closely with Ted for the past 15 years, and feel that I have a very good sense of his teaching that I would like to share. Ted gives his students problems to solve and (in more advanced classes) theorems to prove on their own, and has them present, discuss and defend their solutions in class. He is very effective at creating a supportive environment for the student in which errors and unsuccessful attempts are recognized as necessary steps toward the
ultimate solution. He knows which problem each of his students is working on at any time. He will buttonhole a student in the hallway and ask about progress on Number 17. He shows great interest in what the student has to say, and gives encouragement and perhaps some subtle guidance without ever giving away the solution. I’ve been most impressed to see how hard students will work for him as a result of this personal involvement in their success. In the Lamar Mathematics Department he has had a major role in assembling one of the largest groups of IBL practitioners in the country.

In 1996 Ted was co-founder of MathNerds, a highly successful online math help service for K-12 students. This outreach program trains large numbers of volunteer mentors who are available to give free online help with math problems. Mentors offer support and guidance to students without giving answers, just as Ted does with his own students. He recently turned it over to others to run so that he could focus on other projects.

Ted and I both had the good fortune to learn mathematics ourselves from some of the few maverick IBL instructors using it when we were in school. I taught full time from 1969 until I retired in 2013. During that time I continued to use IBL in my own classes. This meant abandoning textbooks and writing course notes that provided students with a graduated sequence of problems to solve and/or theorems to prove in order to develop the subject themselves. It was only when I met Ted in 2001 that I discovered that others might be interested in using my course notes. Ted was in contact with many IBL instructors, and had begun five years earlier gathering IBL course notes and posting them on his MathNerds website.

Looking at the MathNerds collection, I found some excellent notes and some that I considered of questionable value. Ted was quick to suggest that we collaborate on something better. After several years of discussions, groundwork, and building an appropriate team of experts, we founded the Journal of Inquiry-Based Learning in Mathematics with Ted as Managing Editor and me as Submissions Editor. JIBLM is a professionally refereed online journal that publishes classroom tested and freely downloadable course notes for IBL courses. The classroom testing, refereeing and cost free availability ensure that JIBLM will provide a high quality product that will be widely used. We now have 39 published issues, each for a one, two or three semester course sequence, and submissions continue to roll in. While I handle submissions and refereeing, Ted has overseen the technical staff and worked to ensure that JIBLM will reach an ever wider audience. Last year it experi-
enced 8,074 downloads from 136 countries and territories around the world. To me this indicates a vast number of people using IBL to teach mathematics who otherwise would not be.

I have emphasized what I see as highlights, but you will find much more in his resumé. Altogether I see Ted as an outstanding and successful teacher himself who has worked tirelessly to help many others become great teachers as well.

Sincerely,

David M. Clark
SUNY Distinguished Professor (Emeritus)
\{clarkd@newpaltz.edu\}
Piper Professor Selection Committee
Minnie Stevens Piper Foundation
1250 N.E. Loop 410, Suite 810
San Antonio, TX  78209-1539

Dear Members of the Selection Committee:

It is my great pleasure to provide a letter of recommendation for Dr. Ted Mahavier, who has been nominated by Lamar University (LU) as a candidate for a 2016 Piper Professorship. I have known Dr. Mahavier since the fall of 2001, when he joined the faculty of our Department of Mathematics as an associate professor and I joined the leadership team as Provost and Vice President for Academic Affairs. Ted is currently a full professor of mathematics at LU, and I retired from the university on June 30 of this year, having served as Provost and Vice President for Academic Affairs and Professor of Mathematics for fourteen years. He came to Lamar University after earning a B.S. in applied mathematics from Auburn University, a M.S. in mathematics from Emory University, and a Ph.D. in mathematics from the University of North Texas and serving several years as an assistant professor of mathematics at Nicholls State University in Thibodaux, LA. I came to LU after 29 years at the University of Southern Mississippi, the last twelve of which I served as Professor of Mathematics and Dean of the College of Science and Technology. Over the last fourteen years, I have interacted with Dr. Mahavier on many occasions on a wide variety of issues and know a great deal about his professional interests, expertise, commitment to teaching, devotion to students, love for the discipline of mathematics, work ethic, and integrity.

First, and most importantly, Ted is an accessible, supportive, challenging, innovative, and dedicated teacher. While he has taught effectively at both the undergraduate and graduate levels, I believe it is fair to say that his primary career focus has been to recruit, encourage, and prepare undergraduate students to think, succeed, and understand the beauty and utility of mathematics. To these ends, he has served formally, aggressively, and effectively as an academic advisor and as a mentor to many students as well as escorted teams of students to a variety of professional meetings to both attend and make presentations as well as compete (often successfully) in mathematics competitions; has served for five years as a Master Teacher at the Texas Mathworks Junior Summer Camp at Texas State University; has mentored and supervised graduate students as they taught calculus using inquiry-based learning pedagogies (and very few graduate students at LU teach courses) under a special assistantship incentive program funded by the administration; has served as Faculty Sponsor/Advisor for the LU Mathematics Club; has supported many student workers via math education grants for which he served as Principal or Co-Principal Investigator; has authored two books dealing with mathematics teaching and discovery/inquiry based learning; has created and implemented a placement testing program designed to improve student success; has mentored many faculty colleagues in the implementation of inquiry-based learning pedagogies in their classrooms; has co-founded Math Nerds, a non-profit corporation providing free, discovery-based mathematical guidance via an
international, volunteer network of mathematicians (for secondary school students as well as college undergraduates) as well as mentoring networks that connect universities to K-12 school districts as students submit math questions answered by supervised university preservice teachers; and has taught eighteen different scheduled undergraduate mathematics courses, four different scheduled graduate courses, and numerous special topics and independent study courses as well as served on and chaired a variety of master’s degree committees and at least two doctoral committees (LU does not offer the doctorate in mathematics).

Second, Ted Mahavier is a scholar. In addition to directing master’s theses and undergraduate research projects (both often leading to presentations at professional meetings and publications in refereed journals by his students), he has published two books on mathematics education as well as numerous articles on both mathematics and mathematics education topics in international refereed journals, has served as a mathematics consultant for universities, secondary schools, and industries, has as a project director or co-director attracted in excess of $2 million from a variety of federal and state agencies as well as the Educational Advancement Foundation, has made presentations (many invited) on mathematics and mathematics education at professional conferences throughout the country, has served as editor of three different mathematics journals (and co-founder of one of them), and has served as a manuscript referee for at least seven different professional journals of mathematics.

Finally, Mahavier is an effective volunteer, leader and university citizen. He has served as a member of the LU Puzzle Competition, a high school math tutor, and a science fair judge as well as president of the Texas Section of the Mathematical Association of America. He has served on and led the LU Department of Mathematics Curriculum Committee and, while serving on the Graduate Curriculum Committee, led the Fast Track Subcommittee which designed and implemented an innovative five-year BS/MS degree which enables talented undergraduates to complete the two degrees in five years. He also co-authored the successful mathematics M.S. degree defense to the Texas Higher Education Coordinating Board and testified effectively before the Texas House Higher Education Committee and the Senate Higher Education Committee in the culmination of this effort. Ted also led the revision of the undergraduate mathematics core and degree plans as well as the modernization of the department’s graduate course inventory and has served on numerous other committees. On the college level, he has served on committees dealing with strategic planning, scholarship and fellowship advisement, and commencement; and on the university level, he has served in leadership roles on the LU Faculty Senate, Honors College Scholars Development Committee, and the Academic Lecture Series Committee.

As you no doubt have determined, I think a great deal of Dr. Ted Mahavier’s abilities, commitment to excellence, and accomplishments. I have been acquainted with many Texas university faculty members who have been designated as Piper Professors and have known well the three Lamar University faculty members who were selected as Piper Professors during my tenure as Provost and Vice President for Academic Affairs. With respect to the goals of the Minnie Stevens Piper Foundation and the published criteria for the qualifications to be a Piper
Professor, there is no doubt in my mind that Dr. Mahavier’s record equals – perhaps exceeds – theirs. I wholeheartedly and enthusiastically support Ted Mahavier’s nomination as a 2016 Piper Professor. In my view, his selection would bring honor to both the Minnie Piper Stevens Foundation and Lamar University. If there are any issues of importance which I have failed to address, or if you wish to ask me any questions about this letter, please feel free to contact me (847-834-0096, sdooblin@yahoo.com). Thank you for your consideration.

Sincerely,

Steve Doblin
Distinguished Provost Emeritus, Lamar University
Professor Emeritus of Mathematics, University of Southern Mississippi
Faculty Senate  
Lamar University  
Beaumont, TX 77710  

This is a letter of support for Dr. Wm. Ted Mahavier in connection with his nomination for the Piper award.

I have known Ted since 1995, when we both joined the math faculty at Nicholls State University in Thibodaux, LA. From the fall of the following year until last year (a span of 18 years), we worked together on the web project MathNerds, providing free answers to mathematics questions for students, teachers, parents and everybody who stumbles onto a math problem. MathNerds grew from a two-person project to one involving hundreds of mathematics educators. It became one of the leading resource for mathematics on the web, with an archive of about 200,000 exchanges between clients and MathNerds volunteers.

This growth of MathNerds was for the most part due to Ted. He was the single most important contributor to the growth and continued success of the project. In fact, it is likely that without him, the project would not have survived beyond its initial stage. During the later years of the project, he also developed a new web-based mentoring system, the MathNerds Mentoring Networks, to connect together school district classes with university math education classes.

The MathNerds project clearly benefited a large number of people in the community at large for almost two decades, through service and engagement at so many levels (the students, the parents, the teachers, the university professors). But Ted has also been an innovator in the specific area of college mathematics instruction. He founded the Journal of Inquiry Based Learning in Mathematics (www.jiblm.org), of which he is currently the managing editor.

It is evident that Ted is a highly successful mathematician and mathematics educator. His research record is solid and he is quite active with research involving graduate students. His teaching credentials are excellent and he is one of the leading and widely recognized proponent of the inquiry-based approach to math education. His book “The Moore Method: A Pathway to Learner-centered Instruction” (co-authored with C. Coppin) is a wonderful source of material and ideas on how to implement the Moore method, especially useful for instructors who are new to it.

Ted combines an advanced academic training in one of the most "impractical" subjects with a business-like instinct for what is worth pursuing, and what is needed to get there. I am convinced that a lot of his success is due to his ability to run the production and teaching of
mathematics according to business principles, a feat that eludes many mathematicians.

Ted’s organizational and managerial skills are outstanding. I first became aware of his potential during our first year together at Nicholls State University, when a few members of the department contributed to the preparation of a grant proposal to the National Science Foundation for a Technology Assisted Classroom. It soon became evident that Ted was the leading force behind the proposal. He essentially single handedly brought the proposal to successful completion, and also obtained matching funds from LEQSF, for a total of over $100,000 to be used for the purchase of new computer equipment. This first grant continued to produce a long string of successful grant proposals.

Ted’s ability to cut through distracting and irrelevant details and get to the heart of what is necessary, combined with his excellent communication and presentation skills, make him an effective de-facto leader on many occasions. I recall a conversation with another faculty member during which I expressed my opinion about Ted’s role and crucial contributions to the department, and he supported my view by saying: "He carries the math department".

In conclusion, Ted has a demonstrated record of accomplishment in all areas of teaching, research and service, and his contribution to the mathematical community at large through his innovative projects and his unfailing dedication to the promotion of the Moore method is outstanding. I give him my strongest recommendation to become a recipient of the Piper award.

Sincerely,

Valerio De Angelis

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