

THE DOCUMENTARY

# THE BIGGEST STORY PROBLEM

WHY AMERICA'S STUDENTS ARE FAILING AT MATH



imagine  
education

## Media Contact

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## FILM DESCRIPTION

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An independent documentary film exploring the middle school math crises in the U.S., from the perspective of one math teacher-turned-game-designer, 15 teachers willing to try something new and hundreds of middle school students from across the country.

## SHORT SYNOPSIS

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*The Biggest Story Problem* is an independent documentary film examining the sudden drop in math scores and competency seen as students in the U.S. transition from primary to secondary schools. From a global perspective, U.S. students typically score above average in elementary school, yet the U.S. ranks in the bottom tier of math scores for 15 year-old students. Numerous studies have attributed this dramatic drop in competency to a “crowded curriculum” that’s “a mile wide and an inch deep.” Yet, despite these concerns, middle school math curriculum has yet to truly change.

The documentary interweaves the story of New Mexico’s teacher-turned-game designer, Scott Laidlaw, creator of *Ko’s Journey*, an innovative online story-based math game; the stories of teachers and schools taking part in a pilot program using *Ko’s Journey* to increase student engagement in math; and the broad-based story of math education in the U.S., contrasting it to countries, such as Finland, that consistently score in the top tier of the OCED. The central message to the story is that our country is failing in math, and that may come down to a simple lack of meaning and purpose.

## EXHIBITION AND CREDITS

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Exhibition Format: DVD and Blu-ray 90 minutes

Sound Format: Dolby Stereo

Premiere: TBD

A Film by.....Jennifer Lightwood & Scott Laidlaw

Written & Directed by.....Scott Laidlaw & Jennifer Lightwood

Cinematography by.....Alex Usatine, David Aubrey & Hagoth Aiono

Editing by.....David Aubrey & Alex Usatine

Art.....Larry Finn & Elizabeth Haidle

Animations.....Artatom

Music.....Kirry Nelson, Ed Dillon & Artatom

Assistant Production by.....Kate Martin

Co-produced by.....Martha Riecks

An Imagine Education Production

### LONG SYNOPSIS

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*The Biggest Story Problem* is an independent documentary film examining the sudden drop in math scores and competency seen as students in the United States transition from primary to secondary schools, narrated from the perspective of a middle school mathematics teacher.

From a global perspective, U.S. students typically score above average in elementary school, yet the U.S. ranks in the bottom tier of math scores for 15 year-old students. Numerous studies have attributed this dramatic drop in competency to a “crowded curriculum” that’s “a mile wide and an inch deep.” Yet, despite these concerns, middle school math curriculum has yet to truly change.

The documentary interweaves the story of New Mexico’s teacher-turned-game designer, Scott Laidlaw, creator of *Ko’s Journey*, an innovative online story-based math game; the stories of teachers and schools taking part in a pilot program using *Ko’s Journey* to increase student engagement in math; and the broad-based story of math education in the United States, contrasting it to countries, such as Finland, that consistently score in the top tier of the OCED.

The central message to the story is that our country is failing in math, and that may come down to a simple lack of meaning and purpose. *The Biggest Story Problem* looks at a variety of factors that are influencing math education and scores in the United States, from textbooks, with more chapters than there are weeks in the school year, to the drill-reward-repeat structure embraced in math classrooms throughout the country and most game-based interventions, that might actually be making the problem worse due by emphasizing that math is a subject that must be memorized to be mastered, rather than a subject with meaning, purpose and relevance that is waiting to be explored.

The film features interviews with a number of noted education experts, reformers and researchers, including NPR’s Math Guy, Keith Devlin, Ph.D., a Stanford University researcher looking at the use of media technology to teach and communicate mathematics; Marilyn Burns, leading author, math educator and founder of *Math Solutions*; Ann Shannon, national standards consultant; and Alfie Kohn, author and lecturer on human behavior and education, exploring the impact of rewards, assessment and learning.

*The Biggest Story Problem* also goes into classrooms and homes, as students and teachers alike grapple with the challenges of math – and the challenges that arise with pioneering innovative technological interventions. The film offers a refreshing and uplifting perspective on the role of math teachers in school and society, providing personal stories and insights into what brings teachers into the math classroom, day after day, year after year.

The documentary film was undertaken as part of a Wave II Next Generation Learning Challenges Grant received by Imagine Education to conduct an in-school pilot program and efficacy study of *Ko’s Journey* during the 2011-2012 school year. With film production supported by the NGLC, Imagine Education is now looking to secure additional underwriting to distribute professional development copies as an effort to reach every public middle school in the United States.

### FEATURED INTERVIEWS (IN ORDER OF APPEARANCE)

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#### **Todd Wynward & Margeret Bartlett, Co-Founders of Roots & Wings Community School**

Todd Wynward & Margeret Bartlett co-founded Roots & Wings, a K-8 public charter school in rural New Mexico. Develop based upon the Expeditionary Learning school model. Wynward & Bartlett are dedicated to designing school curriculum that blends academic and recreational development, enriches the lives of students, and serves the community.

#### **Stephanie Owens, School Designer Consultant & K-12 Educator**

Dr. Stephanie Owens is a leading researcher on Pretend Play (*Evolution's Pedagogy: An Adaptationist Model of Pretense and Entertainment (2001)*). Owens is dedicated designing school curricula in Expeditionary Learning models and incorporating educational best practices in the classroom.

#### **Kevin Simpson, Global Education Consultant & Founder of KDSL**

Kevin Simpson founded Know.Do.Serve.Learn (KDSL) which partners with education organizations worldwide with a focus on global learning, innovation and collaboration. Simpson was a National Consultant with the U.S. Department of Education's Teacher-to-Teacher Initiative provided effective, research-based practices to educators across the country.

#### **Keith Devlin, Executive Director at Stanford University & NPR's "Math Guy"**

Dr. Keith Devlin is co-founder and Executive Director of the university's H-STAR Institute, a co-founder of the Stanford Media X research network, and a Senior Researcher at CSL. His current research is focused on the use of different media to teach and communicate mathematics to diverse audiences. He has written 31 books and over 80 published research articles. Devlin is 'the Math Guy' on National Public Radio.

#### **Marilyn Burns, Best Selling Author & Founder of Math Solutions**

Marilyn Burns, founder of Math Solutions, is one of today's most highly respected mathematics educators. For more than 40 years, Burns has taught children, led professional development sessions, spoken at educational conferences nationwide and created mathematics resources for teachers and administrators including 22 professional books. Burns received the Louise Hay Award for Contributions to Mathematics Education in 1997.

#### **Alfie Kohn, Author of *Punishment by Rewards***

Alfie Kohn writes and speaks widely on human behavior, education and parenting. The author of twelve books and scores of articles, he lectures at education conferences and universities as well as to parent groups and corporations. Kohn's criticisms of competition and rewards have been widely discussed and debated, and he has been described in *Time* magazine as "perhaps the country's most outspoken critic of education's fixation on grades [and] test scores."

#### **Madlon Laster, Author of *Teach the Way the Brain Learns***

Dr. Madlon Laster is a veteran teacher of 42 years. Laster specializes in brain-based learning and is a "teacher of teachers" through methods courses. She leads conferences and workshops world-wide and is dedicated to establishing children's libraries in underdeveloped countries.

#### **Ann Shannon, Mathematics Consultant**

Dr. Ann Shannon is a mathematics educator with decades of experience specializing in assessment and urban education. She works as an independent consultant helping states, districts, and schools to better serve the needs of diverse learners of mathematics.

#### **Julie Young, President & CEO of Florida Virtual School**

Julie Young pioneered the launch of Florida Virtual School with the goal of providing high quality, online courses to in-state students. That vision has resulted in Florida Virtual School becoming the largest provider of Internet-based courseware and instruction for middle and high school students in Florida and around the globe.

#### **Jukka Gustafsson, Minister of Education, Finland**

Jukka Gustafsson has served as the Minister of Education and Science for the country of Finland for the past year. Gustafsson brings more than 40 years experience in the Finnish educational system from planning to Headmaster as well as leading countless Boards and Committees in education management and training.

### SELECT EXCERPTS

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*"To the extent that American kids, especially in the older grades, seem to be faltering in terms of math proficiency and interest by the way which I think is not measured on international or national standardized tests but is the key to understanding proficiency. Do kids enjoy doing it? Do they feel engaged and excited by it? The answer increasingly is no, we take the kids who love playing with numbers and letters and words and ideas and turn them into kids who can't wait for school to be over. That's not a natural developmental process. That's a function of bad schooling."* – Alfie Kohn, Author of *The Schools Our Children Deserve*

*"We chop up mathematics into tiny little pieces and we serve those pieces up to students and we turn it into scree. And what we are actually doing is attempting to make it so easy and research shows that when mathematics is made so easy that it's actually un-learnable."* – Ann Shannon, National Math Consultant

*"When I started teaching middle school students, what fascinated me was the fact that in third grade math was still play. In middle school, math became pain. And, in third grade, when kids were learning math, they actually understood what they were doing – they were manipulating, they were drawing pictures, they were understanding what those numbers meant and how they combined. And then I realized based on how the instruction was designed in middle school, that oftentimes kids could get the right answer but they absolutely had no idea why."* – Julie Young, President & CEO of Florida Virtual School

*"So we are shifting to asking questions, where yes, I still know the answer to  $99+17$ , but what I'm listening to is how the students thinks not listening for the right answer. I'm listening to get inside the kids head."* – Marilyn Burns, Founder of Math Solutions

*"Mathematics is really about thinking. So if I want to distinguish between writing symbols, which is what people think is doing mathematics, from what I mean by doing mathematics, I'm going to call it mathematical thinking. In other words, it's got nothing to do with paper and pencils and symbols and blackboards and whiteboards. It's all about thinking a certain way, and ultimately that's what mathematics is. It's a way human beings have developed to think about the world that's proved incredibly useful to the way we live our lives today."* – Keith Devlin, NPR's "Math Guy"

*"If you have these patterns that are visual patterns for the concepts you are teaching and then you teach in a way that integrates the subject matter because when you are learning in life things overlap."* -Madlon Laster, Author of *Teach the Way the Brain Learns*

*"So if choice making and narrative and adventure can be part of math, or a project that has mathematical steps to come to an outcome, that's what matters, so math will actually matter to a child"* – Todd Wynward, Co-founder of Roots & Wings Charter School

*"You don't have to have toys and Legos and props to have a virtual environment. You need a good story that has characters and plot and a setting and dialog, all the things you expect your students to have when you ask your students to write a creative essay. All the things that suck you into a novel, when you're reading – you need to have in your math."* – Dr. Stephanie Owens, School Designer Consultant

*"If we're going to affect any change in society, it's going to come in education. It's going to come from the teacher. Teachers are the only profession where you actually touch the lives and souls of kids."* – Miriam Kim, Principal of Tesis Math and Science Academy.

### THE FILM TEAM

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#### **Scott Laidlaw, Writer, Director & Producer**

Dr. Scott Laidlaw developed story-based, math games that became the focal point of his middle school curriculum. As CEO and Co-Founder of Imagine Education, Laidlaw is bringing his games forward to new technologies with an underlying pedagogy based on human learning and imagination. While new to documentary filmmaking, Laidlaw is a natural storyteller.

#### **Jennifer Lightwood, Writer, Director & Producer**

Jennifer Lightwood, CPA, CMA, Executive Producer and Co-Founder of Imagine Education, brings over 18 years of diversified management experience in finance and business. She is dedicated to transforming educational thought and programs through multi-media technologies and believes film is one of the most powerful mediums to create change.

#### **Alex Usatine, Cinematographer & Editor**

Alex Usatine is the owner of High Desert Digital, a high quality video production company. Usatine specializes in professional videography, dynamic editing and industry-level color correction.

#### **David Aubrey, Cinematographer & Editor**

David Aubrey, owner of Lightningwood Pictures, brings 28 years of experience in features, television, documentary, educational, commercial, promotional, art and interactive film and video. Aubrey received an American Cinema Editors Nomination for Best Edited Documentary for *Baraka*.

#### **Hagoth Aiono, Cinematographer**

Hagoth Aiono is a freelance artist, musician and filmmaker. He is also the Creative Director at Royce Entertainment Group.

#### **Larry Finn, Lead Artist**

Larry Finn is a well-experienced web developer supporting *Ko's Journey* and co-owner of Cube 2 Media. Finn provides full scope consultation from design to programming in a multitude of technologies.

#### **Elizabeth Haidle, Concept Artist**

Elizabeth Haidle is a professional artist bringing a vintage modern and elaborate minimalism style to complex thought designs.

#### **Artatom, Animations & Music**

Artatom is a multi-media production company specializing in psychologically based designs through focused storytelling.

#### **Kirry Nelson, Music**

Kirry Nelson is a professional songwriter, singer and guitarist. She created "*Ooh Ah Ooh*," in her first album, *Storybook*, and offered it as the title track song in *The Biggest Story Problem*.

#### **Ed Dillon, Music**

Ed Dillon is a guitarist of many compositional styles, active music transcriber and music educator. He composed the entire score for *Ko's Journey* as well as contributed music to *The Biggest Story Problem*.

#### **Kate Martin, Assistant Producer**

Kate Martin is the Production & Support Coordinator for Imagine Education. Kate is also a film student and professional actress. She stars in *Ko's Journey's* unprecedented bridge curriculum videos that transfer game learning to standardized tests.

#### **Martha Riecks, Co-Producer**

Martha Riecks is a grant writing consultant and Director of Communication & Outreach for Imagine Education. She has spent over a decade in the nonprofit sector, developing a strong background in environmental outreach, experiential education and STEM programming for girls, in diverse roles within a range of organizations.



## THE BIGGEST STORY PROBLEM

### ABOUT IMAGINE EDUCATION

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Imagine Education is founded on the idea that pretend play and storytelling, the oldest architectures of human learning, transform student attitudes, improve test scores and establish a solid foundation for future learning. Through immersive environments, from multi-media platforms to live forums, Imagine Education uses the power of story to create dialogue and experience to facilitate a paradigm shift, resulting in systematic change. Scott Laidlaw, Ed.D. and Jennifer Lightwood, CPA, blended the worlds of education and business in 2009, to establish a dynamic organization that is capturing, and sharing, the big stories in education.

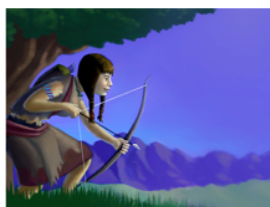


[www.imagineeducation.org](http://www.imagineeducation.org)

### ABOUT KO'S JOURNEY

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The *Ko's Journey* project was one of 19 projects chosen from a highly competitive field of finalists as part of the NGLC Wave II Challenge to select technology-enabled programs that are helping students master 7<sup>th</sup> to 9<sup>th</sup> grade-level math and literacy, aligned with the Common Core State Standards. The grants support both the development and promote the early-stage adoption of programs in order to help refine promising approaches and expand others to more students in an effort to put more US students, particularly those from low-income and minority backgrounds, on the pathway to college- and career-readiness.



[www.kosjourney.com](http://www.kosjourney.com)

### PROJECT FUNDING

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Next Generation Learning Challenges (NGLC) is a collaborative, multi-year grant program aimed at dramatically increasing college readiness and completion through applied technology. The initiative brings together an active community of innovators and educators committed to driving next generation learning forward to dramatically improve college readiness and completion in the U.S. The initiative is funded by the Bill and Melinda Gates Foundation and the William and Flora Hewlett Foundation.

[www.nextgenlearning.org](http://www.nextgenlearning.org)



### PILOT PROJECT SCHOOLS

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The nationwide *Ko's Journey* pilot program, supported by the Next Generation Learning Challenges Program, included the following schools, which are featured throughout this film:

1. **Florida Virtual School** – Orlando, FL  
*Featuring Jeramy Gatz, Brian Greer, Alicia Slater, and Julie Young*
2. **Gila Vista Junior High School** – Yuma, AZ  
*Featuring Brian Azriel and Kourtnee Klupacs*
3. **Hollenbeck Middle School** – Los Angeles, CA  
*Featuring Emily Jaffe, Jorge Reyes and Ruben Escobar*
4. **IS 30 Mary White Ovington School** – Brooklyn, NY  
*Featuring Robert Agoglia and Sharline Bryan*
5. **Kirtland Middle School** – Kirtland, NM  
*Featuring Cherlynn Lee and Shawna Yager*
6. **Questa Junior High** – Questa, NM  
*Featuring Bill MacDonald*
7. **St. Andrews Middle School** – Columbia, SC  
*Featuring Kathy Haupt*
8. **Telesis Academy of Math & Science** – West Covina, CA  
*Featuring Cynthia Alvarez, Cristina Canales, Janet Chong and Miriam Kim*
9. **Thurgood Marshall Middle School** – Los Angeles, CA  
*Featuring Asmara Ogbai*
10. **Tse 'Bit' Ai Middle School** – Shiprock, NM  
*Featuring Marjorie Hulsey and Doroteo Amora*

### DISTRIBUTION

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The film will be completed in June 2012. Initial distribution efforts will be directed to schools and educational professionals, alongside screenings and dispersal at national and regional educator conferences. While math teachers and administrators represent the primary target market, *The Biggest Story Problem* has a general audience appeal to all teachers and parents of students of any age as well as documentary enthusiasts concerned with educational issues.

Imagine Education is seeking underwriting to help support our efforts to reach schools and educational professionals. With film production supported by the Next Generation Learning Challenges grant, we are now looking to distribute professional development copies as an effort to reach every public middle school in the United States.

To pledge support for this distribution initiative, go to [www.thebiggeststoryproblem](http://www.thebiggeststoryproblem) or see our project at Kickstarter: <http://www.kickstarter.com/projects/1923314699/1146234773?token=87f13f95>.