

research in education at the National Institute of Education, Singapore

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# Foreword



Professor Lee Sing Kong

Director

National Institute of Education

EDUCATIONAL RESEARCH at the National Institute of Education (NIE) has come a long way since the establishment of the Centre for Research in Pedagogy and Practice in 2002. NIE is proud to have received S\$96 million of research funding in our current funding cycle. We have also set up additional research centres, including the Learning Sciences Lab, the Centre for International Comparative Studies, and the Centre for Arts Research in Education, with an overarching Office of Education Research that embraces the four centres.

NIE has made significant strides in our educational research to serve the needs of the Ministry of Education and the school community, with particular focus on baseline and intervention studies that promise to enhance learning and teaching in Singapore. Our researchers strive to break new ground and effect innovations that would benefit local practices and the international academic arena.

NIE's two journals, namely the Asia Pacific Journal of Education and Pedagogies:
An International Journal, have facilitated academic discourse in the field of education. Our Research Brief Series

offers summaries of research projects that provide references for policymakers. Our e-magazine for teachers, *SingTeach*, provides a platform for sharing best practices among Singapore teachers.

I am now proud to present this new publication, ReEd (Research in Education), which is a research bulletin aimed at sharing the major research ideas of NIE researchers. It reflects the breadth and depth of educational research in NIE, and aims to communicate some of our research ideas to a wider community. It shows the efforts of our researchers to advance understanding about our students, including their physical and psychological needs, our teaching and learning environment, and some of our intervention efforts that aim to bring our educational achievements to a higher level.

As a part of the global community, I am pleased to share our research efforts with you. We would be gratified if you feel this sharing can enrich your research ideas. We will be grateful if you could offer us feedback and comments, so that we can further improve our research.

### **EDITORIAL TEAM**

Lee Wing On Lin Ai-Leen Karina Wong Jing-Ya Jarrod Tam Chun Peng **ReEd** (*Research in Education*) is a research bulletin aimed at sharing our research contributions with the global community. This is an initiative of the Office of Education Research at the National Institute of Education (NIE), Singapore.

#### **ACKNOWLEDGEMENTS**

We would like to thank Ms Annie Lim, Ms Anastasia Ong, and Ms Patricia Campbell and her team from NIE's Public, International and Alumni Relations (PIAR) Department for their support.

## Re Training the Brain to Learn Better

#### **PROJECT TEAM**

**Principal Investigator** Kerry Lee, National Institute of Education, Singapore **Collaborators** Ng Swee Fong, Ang Su Yin, Kenneth Poon Kin Loong, Chelsea Chew Liang Ru, National Institute of Education, Singapore; Ringo Ho Moon-Ho, Nanyang Technological University, Singapore; Rebecca Bull, University of Aberdeen, UK

**EVER WISHED** you could tell at a glance if your students are learning as they should? And to get this feedback in real time, without having to mark test scripts. This could well become a reality in the not-too-distant future, if research by people like Dr Kerry Lee takes off.

Kerry is a research psychologist. To find out how we can improve learning outcomes, or how well a teaching method works, he looks to the brain for answers.

Improving Learning Kerry is particularly interested in "working memory", the ability to think and remember at the same time. He uses traditional psychological tests as well as methods like neuroimaging—basically taking pictures of the brain—and brain "training" to see how learning can be improved.

His latest project focuses on "training" the brain to "update" information, an important aspect of working memory which he believes may be useful for improving academic performance.

"We know Singapore kids do well, but we are interested in finding out the contributing factors to individual differences: Why do some kids do better? Why do some kids have difficulty with mathematics?" explains Kerry.

Working Memory This project is a spin-off of a larger longitudinal study of students from kindergarten to Secondary 3, looking at the relationship between the cognitive capacities that they bring with them into the classroom and their performance in academic tests.

From previous studies, we know that children with poorer working memory perform poorly in math. Kerry's research has found that working memory accounts for about a third of individual differences in performance, and that working memory improves with age.

By accurately measuring students' present capacities, we have an added tool to predict how well they will do in school. And by better understanding how we can enhance how the brain functions, we can help to improve their learning.

**Brain Training** As with any other muscle, the brain needs "training" in order to perform better. "We wanted to see if our training helps with children's working memory as well as academic performance," says Kerry.

The team worked with a group of Primary 1 pupils who were identified as having problems with math. Training was provided in the form of playing computer games. These games were specially designed to train the brain's ability to refresh and retain relevant information—to "update" the content of conscious thoughts.

Tests are still ongoing, but the early signs are promising. While brain training is no silver bullet, it may be a cost-effective way to help those who are having difficulties with school work.

One day in the not-too-distant future, with beginning work in portable infrared spectroscopy, you may step into class, ask your students to put on their special headbands and tell at a glance that Aida, Ben and Cheng are having difficulties with their work. Let's see how we can help them.



Kerry looks to the brain for answers.

## Gaming Addiction Exposed Re

#### ROJECT TEAM

Principal Investigator Angeline Khoo, National Institute of Education, Singapore Collaborators Douglas Gentile, Iowa State University, USA; Albert Liau, National Institute of Education, Singapore; Vivian Chen, Nanyang Technological University, Singapore; Choo Hyekyung, National University of Singapore, Singapore; Timothy Sim, Hong Kong Polytechnic University, Hong Kong; Daniel Fung Shuen Sheng, Institute of Mental Health, Singapore

**DR ANGELINE KHOO** is a gamer and not ashamed to admit it. She plays *World of Warcraft*—a popular multi-player online game. But she is quick to add that she is not addicted to the game. In fact, she is out to dismantle the many myths surrounding gaming addiction.

Angie's excitement over her research is evident even as she talks about it. She has reason to be excited, because what they have found have thrust her and her international research team into the media and academic limelight.

Dangers of Addiction Over the last 3 years, the team has been studying gaming addition among primary and secondary school students in Singapore. They have observed over 3,000 participants—8.7% of whom were identified as pathological gamers. They found that though gaming addiction is a very real problem, playing a lot of video games need not necessarily lead to addiction.

"What we have found is that if you are addicted and you continue to spend a lot of time playing video games, in 1 year or 2 years later, you can develop depression, anxiety and social phobia," warns Angie. "It was previously believed to be the other way around—that those who are depressed or socially inept tend to use gaming to escape from their problems."

Identifying Addicts To be classified as an addict, one has to have five or more symptoms that the team has identified. These include increased aggression, irritation and restlessness; a decrease in social skills; falling grades; lying to family and friends about time spent on gaming; and stealing games or money to buy games.

And while there is no sure-fire way to prevent students from becoming video-game addicts, the findings from the team's study are pivotal.

With the knowledge gained from their research, we can identify those who are at risk of gaming addiction early before the problem escalates. We can also put measures in place to curb the growth of gaming addiction and encourage cyber wellness.

The next step is to understand how schools and the community can effectively intervene to help young gamers. For addicts, it is critical that they be identified quickly so that counsellors and those working in child guidance clinics can intervene.



Angie studies addiction among gamers.

## Online Games Take Learning to the Next Level

#### **PROJECT TEAM**

**Principal Investigator** Chee Yam San, National Institute of Education, Singapore **Collaborator** Daniel Tan Kim Chwee, National Institute of Education, Singapore

**THE FUTURE** of learning has been taking shape at NIE's Learning Sciences Lab, where Dr Chee Yam San has been investigating a new way of learning. He and his team have developed the game *Legends of Alkhimia*, which is designed to be played in the classroom.

Computer games in the classroom? You may raise an eyebrow at this, but Yam San's research into what he calls "games to learn", as opposed to "games to teach", has yielded significant results.

**First-person Learning** Yam San's education games seek to develop learners who can make connections between lessons from playing the games and the real world. "Games allow a *first-person* learning experience. You're directly involved in the learning process, not merely learning 'stuff' that someone else has already preformulated for you," he says.

The games are designed to help students "act and enact" what they learn. They are different from other games in two key ways: one, they are aimed at *learning by doing*, rather than being taught subject content directly; and two, "playtime" is guided by teachers who challenge students to think about the underlying meanings related to the gameplay experience.

Legends of Alkhimia, for example, creates a "surrogate" world where students take on the role of chemists. In this game, one of the things they have to do is create ammunition to repel monsters effectively. To do so, they need to understand how chemicals work in order to figure out the right chemical compositions and reactions with other substances.

**Dialogic Learning** Students are encouraged to play the game, dialogue or talk about it, and perform or act on what they learn. They are encouraged to experiment on their own—virtually, of course—to determine what works and, more importantly, *why*. In this way, students learn through an inquiry process that couples action in the game world with reflection-on-action.

Learning becomes a personal and personalized experience where students can determine a comfortable pace. They are challenged to think for



Yam San defines the future of learning.

themselves and to take informed risks. The games help students to develop the dispositions and authentic capacities akin to real-life professionals.

"Games are conducive to nurturing an environment for learning through dialogue," says Yam San. These discussions offer a collaborative learning experience, which helps to broaden students' thinking, give them a "voice" in the learning process, and contribute to improving social skills.

**Challenges** Could this be the future of learning in Singapore classrooms? Yam San would certainly like to see this rolled out to more schools.

"The challenges faced by game-based learning are really social ones," says Yam San. "They involve helping teachers develop the necessary facilitation skills and helping parents understand and accept that computer games, when supported by effective pedagogical principles, can be very effective tools for learning."

## Teaching and Learning Get a Makeover Re

PROJECT TEAM

**Principal Investigator** Peter Gordon Taylor, National Institute of Education, Singapore

Collaborator Dennis Kwek, National Institute of Education, Singapore

IN 2003, Raffles Girls' School (RGS) took a very bold step. Already renowned for producing top-quality students and academic results, they decided to effect a total revamp of teaching and learning across the whole school. Thus was born the Raffles Programme—a whole-school curriculum reform that promised to take learning to a whole new level.

**Curriculum Reform** The Raffles Programme has many of the ideals of what is broadly termed "21st century teaching and learning"—self-directed learning, student-centred pedagogy, assessment for learning, distributed leadership, professional learning communities, just to name a few.

But achieving this sort of whole-school reform was no small feat. It was going to entail a significant change in school culture, classroom practice, and learning habits—and there was no precedent for this in Singapore.

The school's focus was on developing students' dispositions, skills and values as lifelong learners. To achieve these goals, the teachers had to design and implement a reformed curriculum, including new subjects such as Research Studies and Philosophy.

Students were respected as active participants in their own learning process, and were empowered to choose tasks based on their own perceived level of competency. Learning became a shared responsibility—between teacher and students.

Good Pedagogy A research team from NIE's Centre for Research in Pedagogy and Practice, led by Visiting Professor Peter Taylor, was impressed by the school's commitment to curricular innovation and change. They noted that such an innovation can only be sustained if there is a supportive school culture.

Can this model of teaching and learning be applied to other schools? The team maintains that it is possible. The bottomline is having good pedagogy.

"Good pedagogy can occur whether your students are gifted or struggling learners, or whether you have fantastic or limited school resources," says Dennis Kwek, a leading member of the research team.

It doesn't matter whether you are from "elite" or "neighbourhood" schools, says Dennis. "It's about being able to see beyond narrow assumptions about any deficiency in student abilities and trusting that students really do want to come to school to learn."

Educational philosopher John Dewey talked about the "great object of education". He said that teachers need to recognize the needs, interests, curiosities and knowledge of the student, and know how to provide learning experiences to engage these. Teachers who do this are practising forms of good pedagogy.

The RGS example shows us that with enabling leadership, good pedagogy can significantly transform learning. The model of innovation may need to be adapted to specific school contexts, but however you choose to implement it in your school, it must never be at the expense of your students' capacity to learn.



Lead Research Associate, Dennis, believes good learning outcomes boil down to good pedagogy.

## 🖼 Taking Teaching Practice to Task

#### **PROJECT TEAM**

**Principal Investigator** David Hogan, *National Institute of Education, Singapore* **Collaborators** Phillip Towndrow, Serena Luo, Ridzuan Abdul Rahim, Dennis Kwek, Melvin Chan, Berinderjeet Kaur, Guo Libo, *National Institute of Education, Singapore* 

"TEACHING IS TALKING, learning is listening." This continues to be the order of the day in many classrooms around the world, including Singapore's. But research from NIE's Centre for Research in Pedagogy and Practice (CRPP) is challenging the idea that this is all that happens in our classrooms.

In Singapore Classrooms For the last 6 years, researchers in CRPP's Core research team have been seeking to "hold a mirror up to the system", as Principal Research Scientist Professor David Hogan puts it. They want to know what's going on in Singapore classrooms—what teachers are really doing, what learning is taking place, and what relationship teaching has to learning in the Singapore context.

Fellow researcher Phillip Towndrow explains, "We can't just talk about what's being done successfully. We need to explain how we do things and why."

In their latest foray into our classrooms—what they call "Core 2"—the team has found "immensely rich" data from over 60 Singapore schools, which they hope will broaden our understanding of instruction in our schools.

**Quality Tasks** One of the many themes that has emerged from the research thus far has to do with the work and activities teachers ask students to do in class.

These *instructional tasks*, and the activities they are made up of, are a crucial part of the backbone of what takes place in the classroom.

"We've found that in many ways, it's the *design* of instructional tasks, along with the learning goals that teachers select, that really sets the tone for classroom instruction," explains Prof Hogan. So if we can improve the quality of the work that teachers set for students, then we increase the likelihood that better learning outcomes will be achieved.

But while challenging learning goals and well-designed instructional tasks are crucial to high quality learning outcomes, they are not all that matters, says Prof Hogan. "What also matters is

that the kinds of instructional methods teachers use, how they organize the classroom, and how they interact with students, need to be properly aligned with the learning goals and tasks."

**Quality Outcomes** Phil notes: "Our teachers are good at employing a range of instructional strategies. What they can be better at is deciding which strategies to use for a particular purpose."

Does it matter, you may ask? After all, whatever we're doing now is certainly working—and remarkably well at that, judging from our performance in international benchmark tests.



Hogan and Phil take a closer look into Singapore's classrooms.

"For students, it does," says Phil. "When students can see the importance of the work they do, they are likely to do it better. There might be cases where students don't know what they're doing. If that is the case, then there's room for improvement."

"It can be disconcerting because if you look closely at what's going on, you see all sorts of imperfections," adds Prof Hogan. "But it's also an immensely important learning process for the system as a whole because we get to understand how we might help the system move to the next level."

## Everyone Can Solve Math Problems with Confidence Re

PROJECT TEAM

**Principal Investigator** Toh Tin Lam, *National Institute of Education, Singapore* **Collaborators** Quek Khiok Seng, Leong Yew Hoong, Tay Eng Guan, Dindyal Jaguthsing, *National Institute of Education, Singapore* 

**PROBLEM SOLVING** is at the heart of the Singapore Mathematics curriculum. While it is important for math educators to be aware of this, it is even more important for them to equip their students with problem-solving skills—as well as the confidence to solve problems!

According to Dr Toh Tin Lam, the process of problem solving is vital, and all students must be given the opportunity to develop their ability in this area. This strong belief led him and his research team to name their project "Mathematical Problem Solving for Everyone" (or M-ProSE, for short).

A Practical Approach The M-ProSE's creative approach to problem solving takes the form of math "practical lessons". Inspiration for this stemmed from the teaching of Science, where the *theory* of science and the *process* of "doing science" are equally important. Extending this concept to math education, both math theory and the process of "doing math" should be equally valued—problem solving is this process.

"Currently, our Math curriculum only has theory lessons. The whole idea of math practicals is analogous to science practicals; it should go hand-in-hand with math theory lessons," says Tin Lam.

Students go through the entire process of problem solving during these math practical lessons, complete with specially designed worksheets. The M-ProSE team hopes that these practical lessons will explicitly communicate the problem-solving processes to students.

**Aims and Aspirations** "Problem solving is difficult. The whole idea of problem solving is to facilitate the development of students' skills to tackle problems they have never seen before," explains Tin Lam.

Very often, problem solving is reduced to merely teaching students heuristics to tackle different types of problems. "Our plan is to equip students with a complete model of problem solving through the math practical lessons."

Recognizing the importance of problem solving, the experiment school has made math practicals part of a core module for all Secondary 2 students. More schools are keen to explore this innovative approach to doing math.

The M-ProSE team is publishing a handbook for mathematics teachers entitled Making

Mathematics Practical: An
Approach to Problem Solving,
published by World Scientific.
The book combines math content
and pedagogy, providing teachers
with appropriate math problems
for problem solving, suggested
schemes of work and detailed
lesson plans for math practicals,
and proposals on how problem
solving can be assessed.



Tin Lam has a practical approach to mathematical problem solving.

## A Critical Resource for ы Web-based Teaching

Principal Investigator Mark Charles Baildon, National Institute of Education, Singapore Collaborators Suhaimi Bin Mohamed Afandi, National Institute of Education, Singapore; James Damico, Indiana University, USA

IF YOU'RE attending Mark Baildon's Social Studies class at NIE, chances are you'll need to bring a laptop. And make sure you have Internet access, because you'll soon be directed to the Critical Web Reader (CWR).

Mark and colleague James Damico from Indiana University are the originators of the CWR. As they were thinking about how best to address the challenges of teaching and learning in the 21st century, they found that the answer was at their fingertips—literally.

Web-based Solution The CWR was their solution—a Web-based teaching tool to help students become careful and critical readers of Web sources. It contains everything you need to teach using anything that is derived from the Internetfor almost any grade level and subject. Plus, it's really easy to use!

For the past 5 years, they have been working to perfect their approach, constantly improving the tool each year. They have tested it around the world, including Science, Social Studies and Health classes in Indiana, high school Humanities lessons in Taiwan, and in their own university classes.

Basically, the CWR takes a Web page of the teacher's choosing and places it within an interactive learning frame. Within this frame, students use in-built "lenses" to help them evaluate the information. These lenses help to scaffold the learning process for students—and teachers, too.

Each teacher begins with four primary lenses, each developing different skills: descriptive, academic, critical and reflexive. Each lens includes questions and suggestions to guide students' responses. Teachers can also create, customize and share lenses with other CWR teachers.

"Teachers are able to begin using the CWR in ways that align with their experience, skill and comfort level," explains James. "Social Studies teachers in Singapore, for example, can strengthen the way they teach the target skills by using the CWR to help their students analyse sources.'

Encouraging Inquiry Mark and James' goal is really to equip students to engage in inquirywhich for them, is all about asking good questions. "When students engage in inquiry, it requires them to develop a whole range of skills, which is critical to living in the 21st century," explains Mark.

Mark believes inquiry empowers people. Through inquiry, students are able to take ownership of their learning. They learn how to ask the right questions, to interrogate information, and to find relevant information from different websites.



Mark and James are the brains behind the Critical Web Reader.

More importantly for Mark, the ability to inquire also gives students a chance to think about their roles in society and their responsibilities beyond the classroom.

Over time, teachers also find that it helps them think about expanding their own repertoire of professional and pedagogical skills. "We are starting to see teachers expand their teaching methods," notes James. "They are also starting to think more about using inquiry-based approaches and 21st century skills."

More information about the Critical Web Reader may be found at http://cwr.indiana.edu/

### Grooming Concerned Citizens Re

PROJECT TEAM

**Principal Investigator** Jasmine Sim, National Institute of Education, Singapore **Collaborators** Theresa Patricia Alviar, Ho Li-Ching, National Institute of Education, Singapore

AS PART of their Community Involvement Programme (CIP) last year, one student remembers being asked to paint dustbins in bright colours while another recounts a visit to an old folks' home. Neither one remembers why, nor was there any discussion of their learning experience after the activity.

CIP projects often take a backseat in the larger scheme of learning in schools. As such, some schools are content to leave much of the planning to the students. We forget that the CIP experience provides important learning opportunities in what it means to be a concerned citizen.

Citizenship Education The Ministry of Education defines a concerned citizen as one "who is rooted to Singapore, has a strong sense of civic responsibility, is informed about Singapore and the world, and takes an active part in bettering the lives of others around him". Our schools have been tasked to nurture each child to become a concerned citizen.

Jasmine Sim and Theresa (Tracey) Alviar, both Assistant Professors at NIE, strongly believe in this notion of active citizenship and have sought to study its presence in Singapore schools. "The main objective of our research is for all students to

know that all citizens can make a change to their society in a way that is informed and responsible," says Jasmine.

One reason why this doesn't always happen is that our students do not see themselves as agents of change. "Schools have systems in place for feedback and participation but many students still believe everything comes from the top. They just accept that things will not change," says Tracey.

Active Participation The duo have found that civic knowledge is closely tied to a school's ethos and culture. They believe that all schools can develop students into engaged citizens with a sense of civic responsibility. The CIP is an important starting point in developing these sensitivities. Jasmine and Tracey recommend selecting meaningful projects that will encourage reflection.

"It is not just about introducing a new curriculum package or changing pedagogies but the way of thinking and showing students how to question responsibly," says Jasmine. "There is a need for more discussions instead of teacher-led lectures, beyond the History and Social Studies curriculum."

However, they also recognize the challenges involved in working towards creating a more active citizenship. "We have to understand that as a society, being active citizens is a recent notion," notes Jasmine. "It is a cultural change."

If schools advocate such active participation, students will be receptive to the idea that they can be enthusiastic and active citizens in their own countries. It's really all about preparing our students for the future.

Jasmine and Tracey believe in active citizenship.



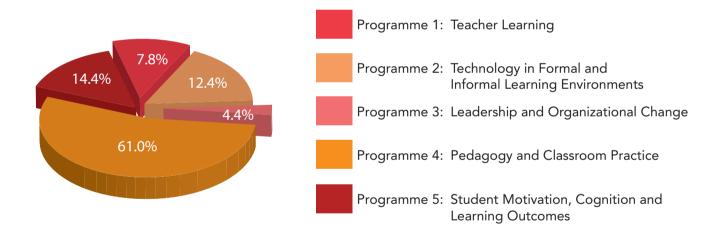
### Research at NIE

**EDUCATION RESEARCH** is a key pillar at the National Institute of Education (NIE), Singapore's sole teacher training institution. Guided by a policy-driven and evidence-based research framework, academic and research staff work together to improve the quality of teaching and learning in Singapore schools and to enhance NIE's standing as a leading international research institute.

The Office of Education Research (OER) was established in 2008 to forge an NIE-wide programme of research, development and innovation. With four research centres under its purview, OER oversees the planning, design and management of education research across the Institute.

OER also administers the Education Research Funding Programme (ERFP), a pool of research funds provided by the Ministry of Education, Singapore. The current cycle of funding is for the period 2008–2012. To date, a total of 102 research projects have been approved for funding.

#### OER-funded Research Projects by Programme



#### Projects Approved in OER's 4th Request for Proposals

**OER CONGRATULATES** our colleagues whose research projects were approved for funding in the 4th Request for Proposals.

Project No.	Project Title	Principal Investigator	Programme
OER 04/10 LEL	Building an Evidence-Base for Initial Teacher Education (ITE) in NIE: A Bridging Project	Low Ee Ling	1
OER 05/10 LYH	Singapore Youth's Participation in New Media Ecologies – A Pilot Study	Rose Liang Yee Hing	2
OER 06/10 WLH	A Mobile-assisted Game-based Learning Environment to Improve Pupils' Chinese Character and Phrase Learning	Wong Lung Hsiang	2
OER 07/10 LCH	Images of Practice in Arts Education in Singapore	Lum Chee Hoo	4
OER 08/10 LC	Arts Research for Students and Teachers 2 (Arts 2)	David Hung	4
OER 09/10 RS	Comprehending Reading Comprehension: An Intervention in P4 Reading	Rita Elaine Silver	4
OER 10/10 DH	PERI Summative Evaluation Baseline Study 1: Quantitative Study	David Hogan	4
OER 11/10 CL	PERI Qualitative Case-Studies (Baseline)	Christina Lim-Arasaratnam	4

For the full list of approved projects, please refer to Research@NIE on the NIE website (www.nie.edu.sg).

## Research Highlights

#### In the News

#### Best Paper Award

Mark Baildon and Jasmine Sim were recently awarded the Best Paper Prize by the *Cambridge Journal of Education* for their article, "Notions of criticality: Singaporean teachers' perspectives of critical thinking in social studies", published in December 2009. Their article was selected from a pool of 20 articles and commended for its rigour, originality, significance and clarity.

#### New Book Released

Social Studies as New Literacies in a Global Society: Relational Cosmopolitanism in the Classroom

by Mark Baildon and James S. Damico

This book helps teachers rethink Social Studies teaching and learning in ways that will prepare students to live in "new times"—prepared for new forms of labor in the post-industrial economy, equipped to handle new and emerging technologies and function in the new media age, and prepared to understand different perspectives to participate in an increasingly diverse, multicultural global society. Mark and James offer an integrated theoretical framework and concrete examples of teachers and students doing inquiry-based investigations with Web-based texts.



Published by Routledge, 2010

#### Distinguished Visitor

#### CJ Koh Professorship 2011



"Personalized learning is not just customized and flexible but should also be humanizing and enjoyable."

– Professor Andy Hargreaves, NIE Staff Seminar,16 February 2011

Professor Hargreaves from the Lynch School of Education, Boston College, was invited to be NIE's 5th CJ Koh Professorial visitor. He is the author of *Teaching in the Knowledge Society* (Teachers College Press, 2003) and co-author of *The Fourth Way: The Inspiring Future for Educational Change* (Corwin Press, 2009).

#### **Upcoming Event**

#### 4th Redesigning Pedagogy International Conference

Transforming Teaching, Inspiring Learning

The 2011 Redesigning Pedagogy International Conference will be held from 30 May to 1 June 2011. Organized by NIE, this biennial event brings together teachers, researchers, educational leaders and policymakers to share innovative ideas and best practices. Registration for the conference is currently open. More information is available at: http://conference.nie.edu.sg/





