

**“MATH--  
I PREFER IT TO SEX”  
THE TEACHING PRACTICES PROJECT**

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- **IN THIS STUDY WE OBSERVED TEACHERS IN SCHOOLS WHERE STUDENTS HAD EXCEPTIONAL PERFORMANCE ON THE GRADE 9 PROVINCIAL ACHIEVEMENT TEST**

**■ WHAT ARE SOME OF THE THINGS THAT  
PEOPLE ATTRIBUTED THE STUDENTS  
SUCCESS TO?**

**“WE HAVE THE BEST MATH TEACHER AT  
OUR SCHOOL.”**

**A SCHOOL PRINCIPAL**

**“THE PARENTS IN THIS COMMUNITY  
ARE VERY SUPPORTIVE.”**

**A TEACHER**

**“THE TEACHER PROVIDES AN ENVIRONMENT  
FOR LEARNING; SHE FACILITATES GOOD  
LEARNING AND SHE HELPS WHEN ASKED.”**

**A PARENT**

**“THE TEACHER HELPS US  
UNDERSTAND;  
SHE NEVER GIVES UP.”**

**A STUDENT**

**WE NOTED—**



## **THE COMMUNITIES—**

- WERE PROUD OF THEIR SCHOOLS**
- WERE PROUD OF THEIR STUDENTS AND TEACHERS**
- AND VALUED HARD WORK**

## **THE STUDENTS—**

- TOOK RESPONSIBILITY FOR THEIR WORK**
- WORKED HARD**
- ACTIVELY PARTICIPATED**

## **THE TEACHERS—**

- **WERE PASSIONATE ABOUT MATHEMATICS**
- **MADE MATHEMATICS REAL AND RELEVANT**
- **MADE CONNECTIONS WITHIN MATHEMATICS AND BETWEEN MATHEMATICS AND THE PHYSICAL WORLD**
- **CARED ABOUT STUDENTS' MATHEMATICS KNOWING**
- **HAD DEMANDING INSTRUCTION, BOTH IN TERMS OF CLASSROOM BEHAVIOUR AND THE LEVEL OF MATHEMATICAL THINKING**
- **USED CHALLENGING CONTENT**
- **HAD HIGHLY INTERACTIVE LESSONS**
- **WERE WELL PREPARED FOR TEACHING**
- **REFLECTED ON THEIR OWN TEACHING PRACTICES AND ASSESSED THEIR OWN INSTRUCTION**
- **TOOK OWNERSHIP OF THE CURRICULUM**

*“Our teacher loves math.”*

THE TEACHERS WERE PASSIONATE ABOUT MATHEMATICS

*“You mean the other class got this too?”*

THE TEACHERS AND STUDENTS TOOK OWNERSHIP OF THE MATHEMATICS  
AND MADE MATHEMATICS REAL AND RELEVANT

*The child wants to attain competence in his own world of experience.*

*He needs the co-operative guidance of a fully caring adult to accomplish this. The one-caring as teacher, then, has two major tasks: to stretch the student's world by presenting in effect a selection of that world with which she is in contact, and to work co-operatively with the student in his struggle toward competence in the world.*

*(Noddings, 1984, p. 178)*

**THE TEACHERS CARED ABOUT THEIR STUDENTS  
AND THEY CARED ABOUT MATHEMATICS**

*“The teacher receives and accepts the student’s feeling toward the subject matter; she looks at it and listens to it through his eyes and ears. How else can she interpret the subject matter for him? As she exercises this inclusion, she accepts his motives, reaches toward what he intends, so long as these motives and intention do not force an abandonment of her own ethic.” Noddings, 1984, p. 177*

*“The teacher works with the student.  
He becomes her apprentice and gradually  
assumes greater responsibility in the tasks they  
undertake.” (Noddings, 1984, pp. 177–178)*

THE INSTRUCTION WAS DEMANDING



- Youth can become addicted to challenging tasks.
- Successful video games are hard. Indeed there is a whole industry in gaming devoted to creating cheat sheets and online “tutoring” (see Johnson, 2005)

THE MATHEMATICS CONTENT WAS CHALLENGING

*“We talk about something different everyday.  
He asks the class to give answers....  
It makes me listen more.”*

THE TEACHING WAS INTERACTIVE

*“When a teacher asks a question in class and a student responds, she receives not just the “response” but the student. What he says matters, whether it is right or wrong, and she probes gently for clarification, interpretation, contribution. She is not seeking the answer but the involvement of the cared-for.” (Noddings, 1984, p. 176)*

ATTENTION TO LANGUAGE

*“The heart of any teaching episode is the explanation of an idea or phenomenon.... Regardless of which type of teaching one is describing, explanations given or the construction of an explanation are fundamental to the learning process” (Leinhardt, 1988, pg. 56–57).*

THERE WAS AN ATTENTION TO EXPLANATION

*“Teachers [need] to become aware of and regulate their own teaching strategies; that is, become researchers of their own practice. For this to occur teachers need to develop their own self-confidence with respect to mathematics and mathematics teaching”  
(Hoyles 1988, p. 164).*

TEACHERS WERE REFLECTIVE AND ASSESSED THEIR TEACHING PRACTICES

# ST. AL'S: CASE STUDY

[HTTP://WWW.EDUCATION.GOV.AB.CA/K\\_12/  
CURRICULUM/BYSUBJECT/MATH/TEACHPRACT.PDF](http://www.education.gov.ab.ca/k_12/curriculum/bysubject/math/teachpract.pdf)

IN SUMMARY: THESE  
TEACHERS--

- **WERE COMMITTED TO TEACHING STUDENTS MATHEMATICS**
- **PLACED HIGH EXPECTATION ON STUDENTS**
- **HELPED THEIR STUDENTS MAKE MATHEMATICS REAL AND RELEVANT**
- **TAUGHT CHALLENGING MATHEMATICS**



- **INSISTED STUDENTS ARE ACTIVE PARTICIPANTS IN THE MATHEMATICS LESSONS**
- **WENT BEYOND THE MANDATED CURRICULAR OUTCOMES**
- **WERE WELL PREPARED FOR TEACHING**
- **KNEW THE MATHEMATICS THEY TAUGHT**

# TEACHING PRACTICES PROJECT

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