



**E.nopi 3 Year  
Longitudinal Study:  
First and Second  
Years 2007-09**

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Daekyo**

*Dr. Shi Hae Kim*  
*University of Wisconsin-Parkside*

# Purpose of Study

**Implement E.nopi MATH for  
3 consecutive years and document  
and analyze improvement  
in students' computational skills**

# Measuring Tools

**Measures of Academic Progress  
(MAP) math test**

**Wisconsin Knowledge and  
Concepts Examinations (WKCE)-**

**Interviews: teachers and students**



# **Only Upper Grade Data Available.**

- **Lower grade research results will be reported next year.**

# Participants (Upper Graders)

**Year 1 2007-08**

- **E.nopi Group: 51**
- **Control Group: 47**

**Year 2 2008-09**

- **E.nopi Group: 42**
- **Control Group: 45**



# **Q1. Did E.nopi group do better than control group on posttest?**

**Yes**


- **Year 1: MAP and WKCE tests**
- **Year 2: MAP**



**Q2. Was there a difference in gained scores between experimental and control group?**

**Yes. The difference was statistically significant.**

- Year 1: 11.94% vs. 5.36%**
- Year 2: 17.61% vs. 13.17%**



## **Q 3. Was there a difference in gained scores between low and high ability groups?**

- **Year 1: Lower group gained more.**
- **Year 2: No significant difference between groups; similar gains between two groups.**



# **Was there correlation between pretest and posttest scores?**

**Yes**

- **If a student had a high pretest score, then the student's posttest scores were also high.**



## **Q4. Did number of completed booklets correlate to posttest?**

### **Mixed results**

- **Year One, positively correlated to the post MAP score**
- **Year Two, not significant.**

# Completed booklets

- **Year 1- Range:13-100 Average: 65**
- **Year 2- Range: 16-80 Average: 50**



# Teacher Interviews

- **4 second and third grade teachers were interviewed in May 2009.**
- **Prepared questions were used; additional questions were employed.**

# Second Year Experience

- **First year returning students showed enthusiasm and confidence; E.nopi is part of routine. (M, 09)**

# Second Year Experience

- **“I am impressed with the students ability to work independently.”**
- **“I have very few if any questions anymore .... they expect to do their corrections. The children seem to enjoy it very much.”  
(A, 09)**

# Reasons Students Enjoy E.nopi

- **“I think they like working independently, and I think they feel they are at their own levels, so that makes them feel successful, feeling accomplishment that they can do it.” (A, 09)**



## **Teachers say E.nopi is...**

- **“.... a program that we do in the classroom. We spend 10 minutes where they are uninterrupted at math time; they work for 10 minutes at their own level in individual booklets. Once they complete that booklet they move on to the next one.” (M, 09)**

# Expectations Regarding E.nopi

- “..... hopefully we are going to see their math scores on the WKCE improve and things will be much better.” (M, 09)

# Expectations Regarding E.nopi

- “I would expect automaticity in their math facts and that they also gain an understanding that  $9+6$  is just  $10+6-1$ ; so, they have a basic understanding of the concepts, a deeper understanding of the concepts. Most of them are there, there still a few that are struggling....” ( A, 09)

# Side Effects of Doing E.nopi

- “...become more independent.”
- “ More confidence. It is not just for E.nopi , I can see that in other subjects too.” (M, 09)
- “ I think the concentration and the stamina; I think I see both of those things.” ( A, 09)

# Stamina

- **“...they can stick with it. They’ll even come say they got a whole book done today... they stay in their seats the whole time. Nobody gets up out of their seats unless to return a book. ” (A, 09)**



# **Influence on Class Math Program**

- **“The program (Houghton Mifflin) doesn’t have the fact practice on a daily basis like Saxon does, so it’s a missing component. Enopi is definitely providing the missing component to my program this year.”**

# **E.nopi MATH and Classroom Math**

- **“ Yes, it’s definitely helping them do better in math and understanding what I’m presenting. I’m not having to spend the time with the facts practice as much as I did last year.”  
(A, 09)**

# Doing E.nopi for 3 Years

- “I think it’s a good idea. I think we will really see a big difference. One year was good, but I think the continuity of seeing it and having it come back will make a big difference in their math education. I think it is helping them to like math too.” (A, 09)

# Finger Counting

- **Less than half the class is using their fingers. (M, 09)**

# Value of Repetition

- **“I think the repetition helps tremendously. You know with repetition it will eventually become automatic, and that is what we are hoping for.”(M, 09)**

# Value of Repetition

- “ I think repetition is important in everything... if you don't have that basic understanding you are not going to be able to progress into the higher level math at all.” (A, 09)

# E.nopi and Homework

- “.... it probably just depends on the family. .... I think it’s worth a try.” (M, 09)
- “My class would do that. I send things home daily that need to be returned and they send it back.” (A, 09)



# **Students' Attitudes Toward E.nopi**

- **“I think they enjoy it. It is more of a treat.” (M, 09)**
- **“They like it very much. I think all of them, I can't think of anyone who doesn't like it.” ( A, 09)**
- **“I'm going to say that they have been doing a good job, so we're going to do it for 15 minutes.” (A, 09)**

# Are There Common Problems?

- “At this point very little.” ( A, 09)
- “My lower readers struggle with the directions.” (M, 09)

# Specific Difficulties

- “E.nopi is presented a little more right to left; we teach the children left to right progression. When they see it that way they are a little confused because they are trying to read it from left to right, so that would be the only common problem that I see.” ( A, 09)

# **Growth in Concentration Ability?**

- **“They are progressing. I do see that most of the kids are able to concentrate a lot better in other areas because they have had experience with the 10 minutes in Enopi.” (M, 09)**

# Concentration

- **“Yes. Some students have attention problems; even those students show an increase in their ability to concentrate. Because it’s short, that’s all they have to do; they know if they stick with it, they’ll have something finished.”  
( A, 09)**

# Handwriting

- I'll say, "It's going to be marked wrong if they can't read it," and they'll say, "Well this is right." I'll say, "That doesn't look like that number and I'm sure the person who checked it thought that wasn't that number either." They are becoming more accurate in writing their numbers so they are readable. ( A, 09)

# Rate E.nopi Impact On Class

**-10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10+**

# Impact of E.nopi on teachers

- "I would give it probably +6 or 7. I have seen impact on a number of kids on their concentration and computation in math. I can see the impact on helping in other areas."  
(m, 09)

-10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10+

# Impact on Students

- “+8 or 9”
- “The automaticity with their basic facts; better understanding of the underlying concepts in adding and subtraction; the word problems with the pictures; I really like that and how it’s right there for them.”  
(A, 09)

-10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10+

# Impact On The Teacher

- “I think +10. I love the program. I was resistant at first. It was hard in the beginning for them to understand what to do. Now, at the end of my 2<sup>nd</sup> year I would give it a +10. I think it is a wonderful time for them; they come in and it calms them down. It gets them in the frame of mind that recess is over, and now we are back to serious work. I think it’s serious, and I think they take it seriously.” (A, 09)

-10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10+

# Recommend E.nopi to Others?

- “I would. Seeing how it affects not just their math skills, but also their concentration, I think I would definitely recommend it.” (M, 09)
- “ I do, definitely.” (A, 09)