

# We Dig Digits @ HCC



IMPROVING  
STUDENT  
SUCCESS IN  
DEVELOPMENTAL  
MATH

Haywood Community College

# We Dig Digits @ HCC



## HOW DID WE START?

Haywood Community College

Presenter:  
Elaine Barnes

# A Successful Plan **MUST**



- Directly Impact Student Learning
- Be Measurable
- Be Feasible
- Have a Positive Impact on the Campus



# Topic Selection



## Qualitative Data

- Focus Groups
- Faculty Forum
- Student Forum
- College Advisory Council

## Quantitative Data

- Educational Research
- Critical Success Factors
- Decision Matrices



# QUALITATIVE DATA

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## TOPIC SELECTION

- ◉ How can we improve student success?

Our

- ◉ What do students need to succeed?

Questions

- ◉ What barriers exist that impede student success?

Developmental English

Developmental Math

Computer Literacy

Employability Skills

Advising/First Year Experience

Critical Thinking

Which will it be?

INPUT

FROM COMMUNITY, FACULTY, STAFF,  
& STUDENTS



~~Developmental English~~

**Developmental Math**

~~Computer Literacy~~

~~Employability Skills~~

~~Advising/First Year Experience~~

~~Critical Thinking~~

**The Choice**



**I N P U T**

**FROM COMMUNITY, FACULTY, STAFF,  
& STUDENTS**



# QUANTITATIVE DATA

## TOPIC SELECTION

- ◉ Critical Success Factors Data
  - Developmental vs. non developmental student performance
    - ◉ In developmental courses
    - ◉ In subsequent courses
- ◉ Age factor
- ◉ Student failure rates by course subject
- ◉ Cohort study

# OUR DECISION PROCESS

**Planning & Evaluation Process**

**Qualitative Research**

**Campus Community Involvement**

**Quantitative Research**

**Data Matrices**

**Final Survey**

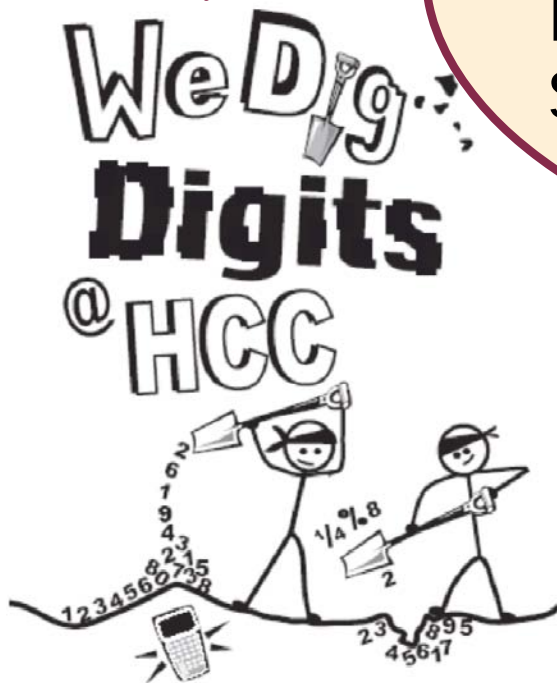
**CAC, AC**

**Improving developmental math student success**

# COMMUNICATING THE QEP TO THE CAMPUS

CREATED  
BY STUDENTS

FACULTY AND  
STAFF JOIN IN



POSTERS  
PENCILS  
TEE SHIRTS  
SCREENSAVERS



# BUILDING

# RELATIONSHIPS



- Faculty and Students
- Faculty and Administration
- Colleagues
- Community

# SACS ACCREDITATION VISIT



Haywood Community College

Southern Association of Colleges and Universities



## Focused Report

# Haywood Community College

Presenter:  
Margaret Studenc

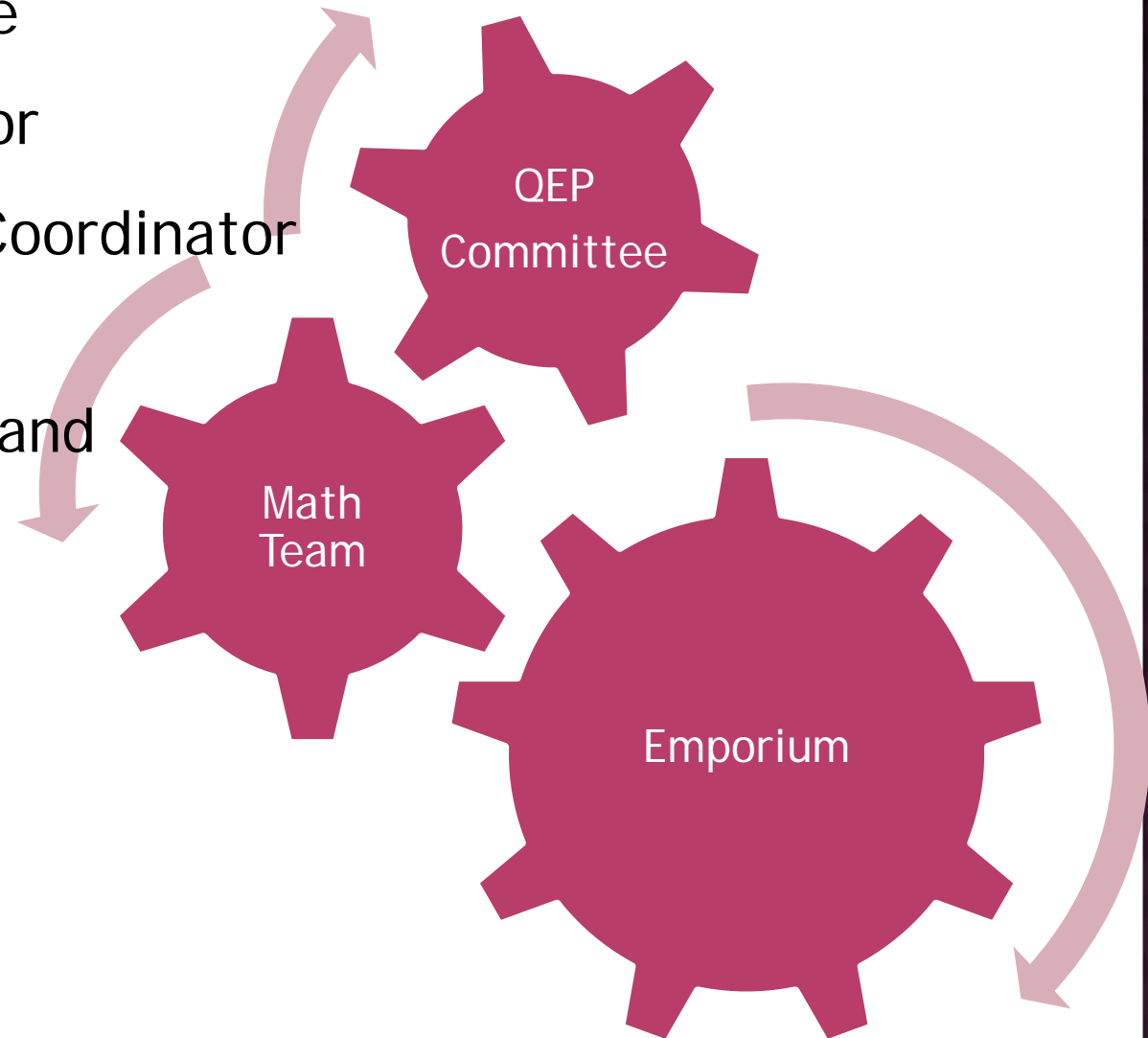


# EMPORIUM CONCEPT

- Redesign of Math Instruction
  - Lecture to combination of lecture and lab
  - Instructors and students employ MyMathLab™
  - Mastery System
- Increased Support
  - Math Instructional Assistant
  - Tutors

# WHO AND WHAT WAS INVOLVED

- QEP Committee
- QEP Coordinator
- QEP Assistant Coordinator
- Math Faculty
- HCC President and Vice President
- Director of SSS
- Technology
- Facilities



# QUALITY ENHANCEMENT PLAN

## Implementation

- Develop a full-scale math emporium/lab

- ★•Offer two course sections of hybrid math classes for MAT 060 and MAT 070

- Accelerate developmental math course completion processes

- ★•Offer 8-week math developmental hybrid course registration for MAT 060 and 070

- Develop additional newly-designed departmental pretests for MAT 060, MAT 070, and MAT 080

- ★•Add Accuplacer end-of-course/post testing

- ★•Employ encrypted pass codes to maintain security

- ★•Utilize bar code readers to monitor student emporium attendance and activity

- ★•Require 90% overall attendance

- ★•Provide professional development opportunities

- ★•Initiate comprehensive data collection

- ★•Perform end-of-semester and end-of-year analyses



# DEVELOP A FULL-SCALE MATH EMPORIUM & LAB



# EMPORIUM

Spring 2009

- ◉ Six Pods
- ◉ Thirty Computers
- ◉ Instructor Station
- ◉ Assistant Station
- ◉ Projector



# MATH SUPPORT LAB

Fall 2009



- ◉ Two Pods
- ◉ Fourteen Computers
- ◉ Tutor Support -peer and faculty tutors, five days per week

# EMPORIUM CLASSES

## PILOT YEAR

## YEAR ONE

Fall 08

Spring 09

Fall 09

Spring 10

MAT 060  
1 section

MAT 060  
1 section

MAT 060  
2 sections

MAT 060  
1 section

MAT 070  
1 section

MAT 070  
1 section

MAT 070  
2 sections

MAT 070  
3 sections

MAT 080  
none

MAT 080  
none

MAT 080  
2 sections  
1 canceled

MAT 080  
2 sections  
1 canceled





# EMPLOY ENCRYPTED PASS CODES TO MAINTAIN SECURITY



- Utilize bar code readers to monitor student emporium attendance and activity





# ACCELERATE DEVELOPMENTAL MATH COURSE COMPLETION PROCESSES

- ◉ Offer Eight-week Sessions
  - MAT 070 and 080 – Fall 09
  - MAT 070 ONLY – Spring 10
- ◉ Created Fast Trac



- Developmental department policy

- Attendance directly correlates to student success

- Students have an opportunity to appeal



Require 90% overall attendance



# PROVIDE PROFESSIONAL DEVELOPMENT OPPORTUNITIES

## Who Gets It?

- ◉ Faculty
- ◉ Staff
- ◉ Students

## What Did We Give?

- ◉ Campus-wide Program Overview
- ◉ Lunch and Learn
- ◉ Teaching and Learning Center Workshops
- ◉ Tutor Training



# INITIATE COMPREHENSIVE DATA COLLECTION

- ⦿ Completion
- ⦿ End of Course  
Grades
- ⦿ Placement Scores
- ⦿ Time on Task

## Sampling from Fall 2009

### MAT 060

Accuplacer

30 point average improvement

Pre/Post Exams

53 point average improvement

### MAT 070

Accuplacer

30 point improvement

Pre/Post Exams

62 point average improvement

### MAT 080

Accuplacer

28 point average improvement

Pre/Post Exams

68 point average improvement





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## PERFORM END- OF-SEMESTER AND END-OF- YEAR ANALYSES

Implementation Year One



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## OTHER GOOD DEEDS

Math Instructional Assistant  
Video Project  
Addition of Online Emporium

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HOW DOES IT  
WORK?

Haywood Community College

Presenter:  
Beverly Brown



# PILOT YEAR

2008-2009

- Borrowed Lab Space
- Two Courses and sections
  - Essential Mathematics
  - Introductory Algebra





# THE TEAM

- Lead Math Instructor
- Math Faculty
- Math Instructional Assistant

# ASSESSMENT

- Pre-Post Tests (competency exam)

- Accuplacer

@ Campus > Offices > Developmental Education > Shared Files >

Haywood Community College Hello, Margaret Student Log Out Support Help

*Haywired @ HAYWOOD*

Campus Campus Life MyCruiser Academics Administration Haywired Help

Offices

Offices  
My Offices  
All Offices

Current Office  
Welcome  
Announcements  
Blogs  
Photo Albums

Member Areas  
Message Board  
E-mail Members  
Chat Room  
Calendars  
Address Book  
Tasks  
Shared Files  
Bookmarks

Survey Tools  
Designer  
Publisher  
Survey Manager

Admin Tools  
Customize Welcome  
Edit Announcements  
Edit Settings  
Member Manager  
Calendar Manager  
Blog Manager  
Bookmark Manager  
Photo Album Manager  
Address Book Manager  
Tasks Manager  
Shared Files Manager  
Message Board Manager  
Team Manager  
Tool Access Manager

System Tools  
Navigation Manager  
Role Manager

Campus > Offices > Developmental Education > Shared Files >

Printable Format

Developmental Math Tests

File Name	Size	Last Uploaded
MATH 060 Comp. (Sp2010).docx	25KB	03/23/2010 11:19 AM
MATH 060 Pre Test (Sp2010).docx	22KB	03/23/2010 11:20 AM
MATH 060 Sample Comp. (Sp2010).docx	24KB	03/23/2010 11:20 AM
MATH 070 COMPETENCY SP10.docx	20KB	05/03/2010 01:09 PM
MATH 070 Pretest SP10.docx	20KB	03/23/2010 11:21 AM
MATH 070 SAMPLE COMPETENCY SP10.docx	20KB	03/23/2010 11:21 AM
MATH 080 COMPETENCY SP 10.docx	27KB	03/23/2010 11:21 AM
MATH 080 PRETEST SP10.docx	30KB	03/23/2010 11:21 AM
MATH 080 SAMPLE COMPETENCY SP 10.docx	27KB	03/23/2010 11:21 AM

Items : 9 Size : 215KB Used : 110.3MB / 1,024MB (11%). Available : 913.7MB.

Note : Click file icon for detail.

[https://prod.campuscruiser.com/...Files-list&cmp=F22.0-51.0\\_22&cx=22.325-51.2734#/Documents/Developmental Math Tests\[7/21/2010 5:46:02 PM\]](https://prod.campuscruiser.com/...Files-list&cmp=F22.0-51.0_22&cx=22.325-51.2734#/Documents/Developmental Math Tests[7/21/2010 5:46:02 PM])

# OUR CLASSES

- ◉ Combination of Lecture and Lab
- ◉ Five Contact Hours per week
- ◉ Hybrid format: both face to face and via the internet
- ◉ Lab
  - Two required day
  - One optional day
  - Instructor and assistant
- ◉ Support Lab
  - Peer Tutors
  - Instructor





# MASTERY SYSTEM

- Homework
- Tests
- Competency Exams





# COMPUTER-ASSISTED

# LEARNING

- MyMathLab
- Blackboard
- Website



<http://www.mymathlab.com/>