



# Electronic Portfolio Participation and Student Success

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**BGSU**

**BOWLING GREEN STATE UNIVERSITY**

**AIR Forum**

**May 17, 2006**

# Tough Times in Higher Education

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- Ill-prepared students
- Consumerist attitudes
- Rising costs
- Shrinking resources
- Low faculty morale
- Calls for “accountability”

# Student Portfolios

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- An increasingly popular assessment method
- Feedback about student performance to improve curricula and pedagogy
- Determining individual students' mastery of learning
- Change the student role in assessment from passive research subject to active participant in assessment

# Web-Based Portfolios

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- Accessibility and portability of artifacts, faculty/advisor assessments, and student reflections
- Video and sound
- Allow students to control who is able to view each artifact
- Permit both developmental/assessment and showcase formats to be presented

# WKnight.with.BGSU.edu



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## William Edward Knight

Administrator

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### About Me

I am Director of Planning and Institutional Research at BGSU and a faculty professional associ  
Education and Student Affairs.



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# MGromko.with.BGSU.edu



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## Mark H. Gromko

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### About Me

Vice Provost for Academic Programs

### Send Me A Quick Note

Use the below field to send a quicknote to **Mark H. Gromko**. Please include your name and contact information with your message.



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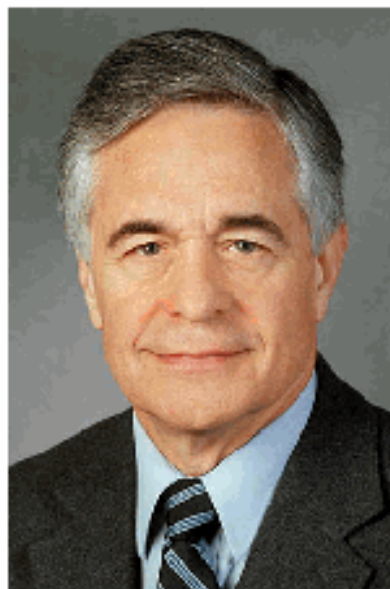
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### About Me

Ohio Board of Regents Eminent Scholar in Industrial and Organizational Psychology; Fellow of Industrial and Organizational Psychology, the American Psychological Society, and the American Society for the Advancement of Science. [\[More...\]](#)

### Academic Goals

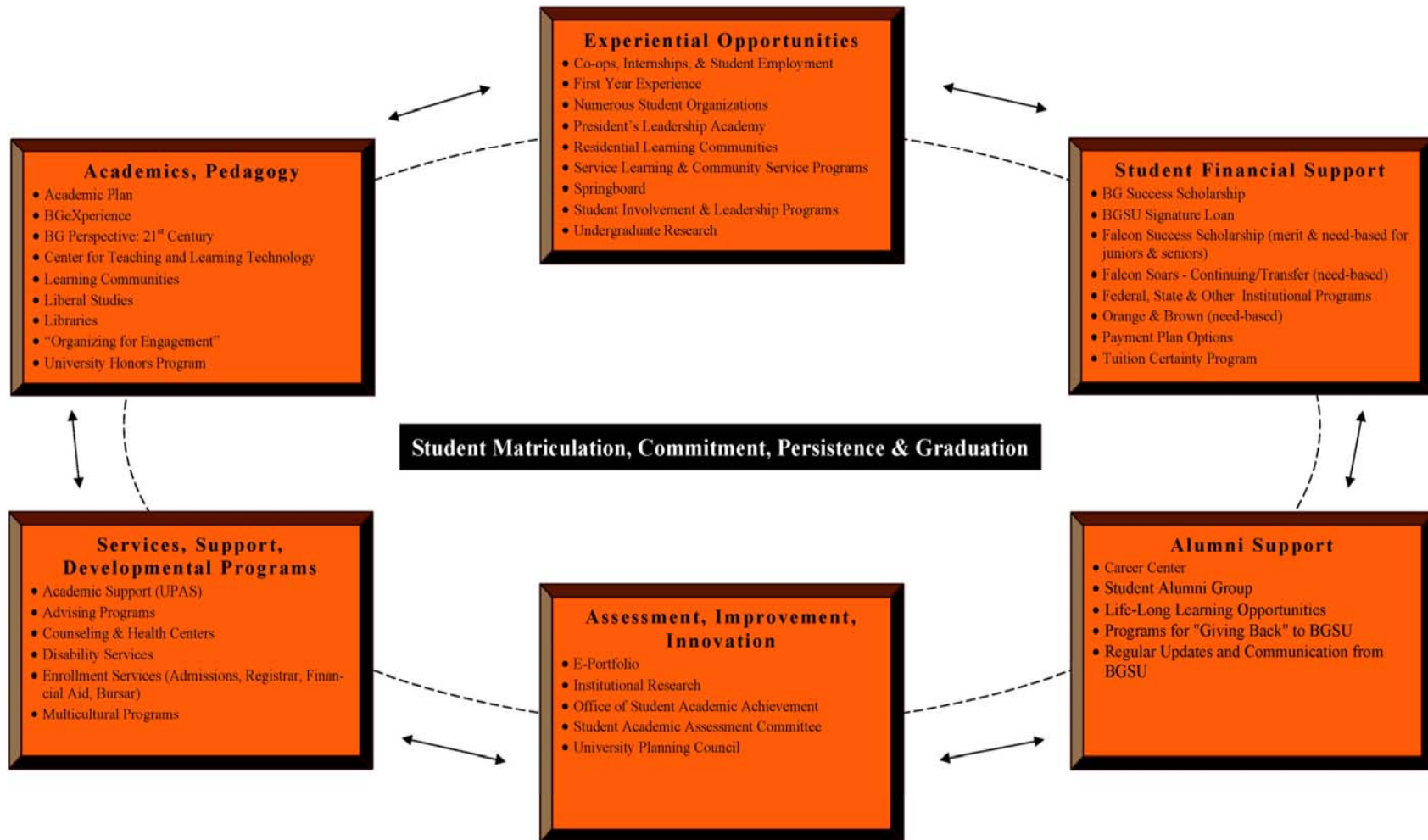


# Institutional Context

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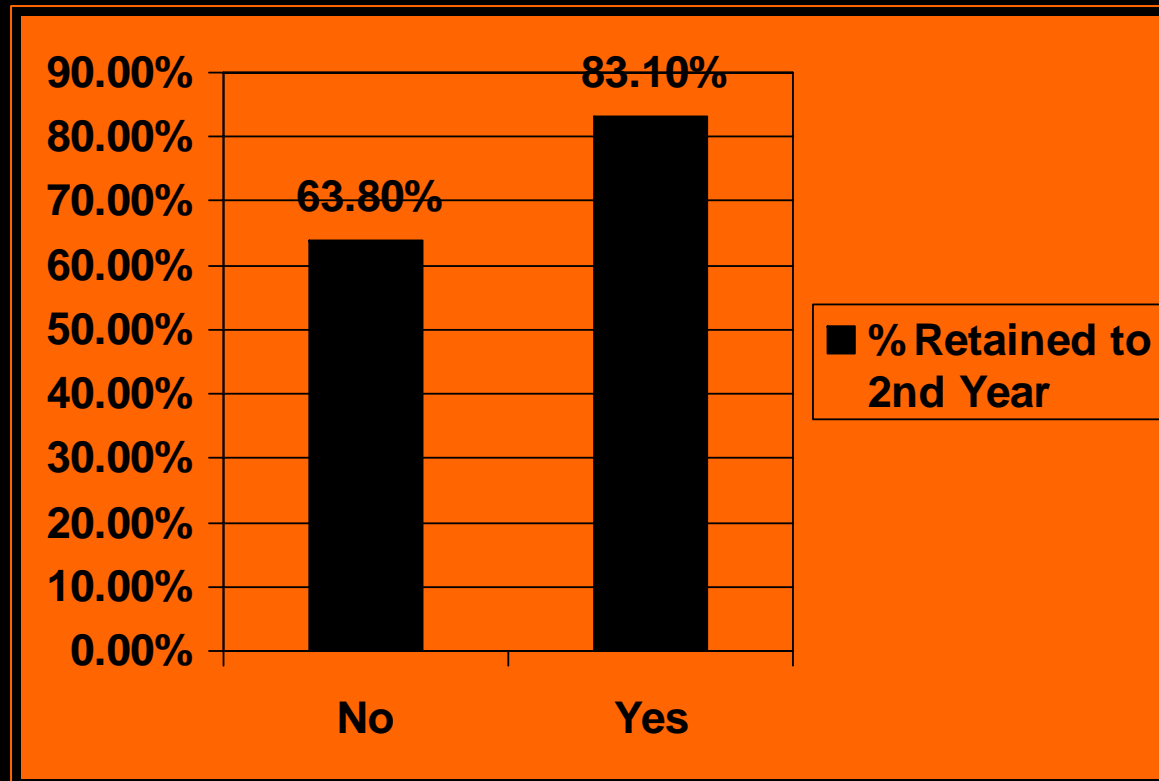
- State-assisted, residential, doctoral-research intensive university in northwest Ohio
- Considerable progress in assessment but not widespread “culture of evidence”
- University learning outcomes
- Improved institutional research capacity
- Upgraded technology infrastructure
- Redesigned general education
- Learning communities and other student academic enrichment programs
- Vision to be “the premier learning community in Ohio and one of the best in the Nation”

A strategic, comprehensive, and integrated effort for student access and success



# Enroll in 1<sup>st</sup> Year Program?

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Now all new students enroll in at least one 1<sup>st</sup> Year Program.  
Result: Overall retention to second year rose to 79.9%

Students graduate from BGSU at a rate 12% higher than is predicted from their academic credentials (ACT score and high school grade point average)



BGSU's six-year graduation rate is

**65%,**

substantially higher than the 43% rate at other moderately selective universities.

# BGSU is a Learning-Centered Institution

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- Achieve clarity about learning outcomes
- Coordinate teaching and assessment to promote student learning
- Align structures and resources to serve student learning
- Work continuously to improve the environment for learning

Learning goes  
beyond knowing

to being able to *do*  
what one knows

# BGSU's Learning Outcomes

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- Inquiry – observe or study by close examination and systematic questioning, analyze evidence.
- Creative Problem Solving – integrate theory, knowledge, and practice across domains.
- Examine Values in Decision-Making – recognize and justify values present in decisions or dilemmas
- Writing – author or compose in writing or other symbol systems (logic, math, music, spatial).
- Presenting – make a presentation
- Participate – have a part or share in something
- Lead – guide or influence a group to achieve goals

# Computer Science

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- Program in a higher-level language
- Work effectively with a client and members of a software development team to analyze, specify, design, implement, test, and document software that meets the client's needs
- Acquire new computer-related skills independently as technologies evolve
- Communicate technical concepts to non-technical persons, both orally and in writing
- Develop a plan to integrate hardware and software into a particular environment

# Electronic Portfolios

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- Students create, edit, and upload examples of their best performances for regular review, anytime, anywhere
- Both baseline performance and the ***cumulative*** record of development is easily retrievable by students themselves, advisors, instructors, and other authorized university staff members
- Students decide what, if anything, is to be displayed online

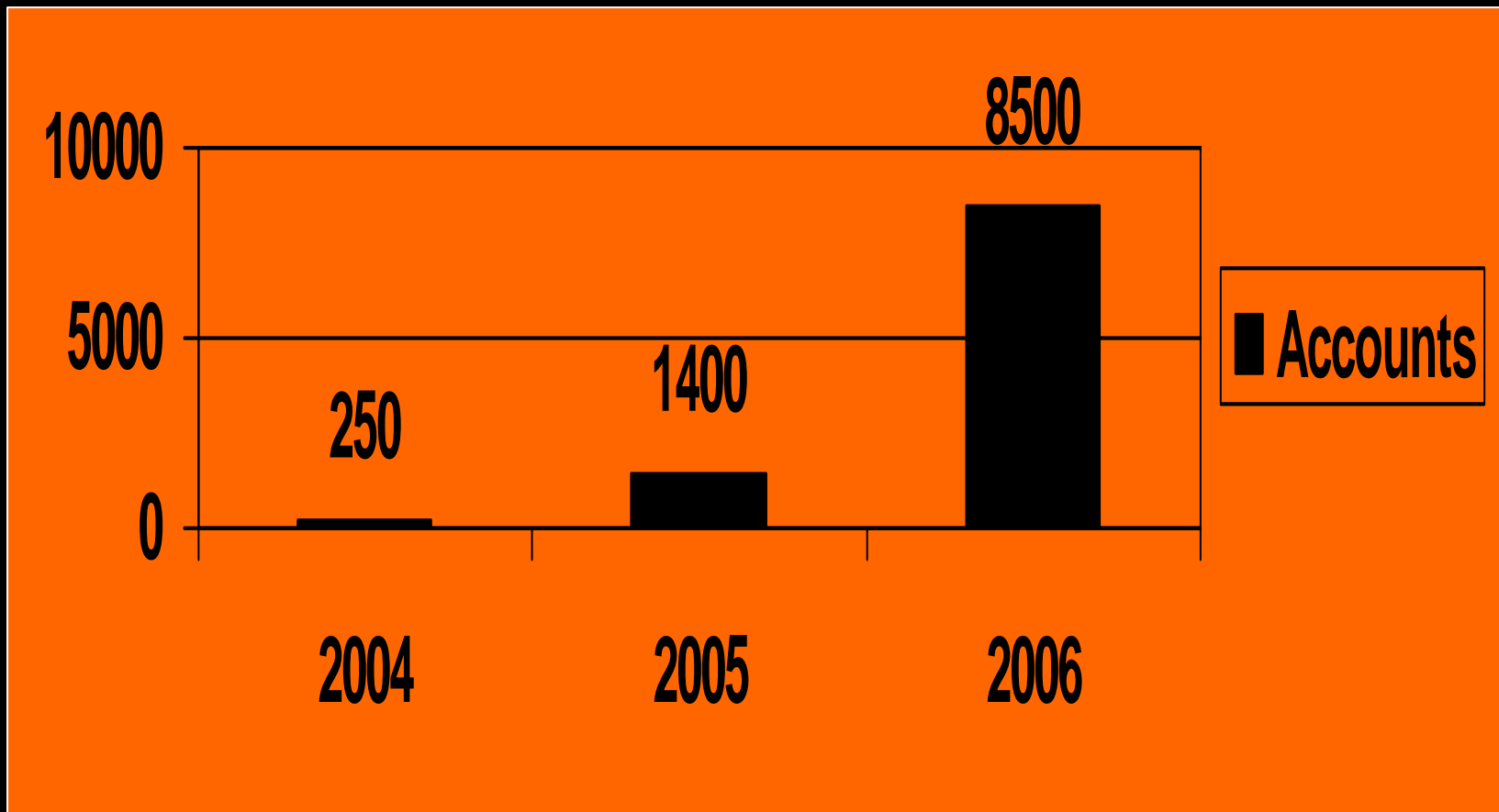
# What's in it for Students

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- Showcase for friends, family
- Showcase to potential employers
- Can track own progress
- Secure and reliable file storage
- Group project networking
- Required by some instructors or in some programs (e.g., teacher education)

# ePortfolios at BGSU

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## Help

### Bookmarks

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## Freddie and Frieda Falcon

Last Modified: 7/28/2005

[\[More Info\]](#)

### About Me

On January 16, 1950 the first Freddie Falcon, Bob Taylor, appeared at the BGSU-Ohio basketball game. I've been flying around this place ever since, hoping to graduate some day.

### Academic Goals

At this point I have not decided on a major. Being a friendly bird at heart, I want to inspire BGSU students to soar high. The sky is the limit!

### Send Me A Quick Note

Use the below field to send a quicknote to Freddie and Frieda Falcon. Please include your name and contact information with your message.

Name:  Message:

Email:

Submit



Matrix

The Matrix is a way to manage the demonstration of student learning outcomes based on institutional learning goals.

[Read More About Matrix \(opens new window\)](#)

Select a Matrix

Outcome	1st	2nd	3rd	4th
Inquiry	Ultra Deep Field Reflection on Deep Field	Freddie Goes to Chicago	Solar system distances	
Creative Problem Solving	Genetic Hypothesis Regarding Hair Color Reflection on Hair Color	Gene Pool Calculations Reflection on Calculations	Notes on Quantitative Genetics Reflections on Quantitative Genetics	A Heretical View of "Spec Reflection on Species dra
Writing	Fractured English Around the Globe Fractured	Cockpit	Half Tree Whole Barrel Reflections on Half-Whole	Sleeping Giant
Presenting	Freddie Goes to Iowa	Boardwalk At Gray's Beach		
Participation	Freddie Goes to East Toledo			
Leadership			Gabe Conducts His Composition	
Examining Values in Decision-Making	Academic Honesty Policy			

1

- Continuous vs Mendelian traits
- Distributions characterized by  $s^2$  and  $\bar{X}$ 
  - draw several distributions
  - explain: average squared deviation from the mean
- Variance partitioning
  - $V_P = V_G + V_E + V_{G \times E} + 2COV(GE)$ 
    - can either set complex terms to zero, or
    - lump them in non-additive component
    - $V_G = V_A + V_D + V_I$

	vid 1	vid 2	vid 3
	++	++	+++
	+-	+	-
G =			
additive	3	3	3
dom	2	3	3
epl	4	3	5

- $V_P = V_A + V_D + V_I + V_E$
- Breeding value: if an individual is mated to a number of individuals at random taken from the population, then its breeding value is twice the mean deviation of its progeny from the population mean.
- Cannot pass on dominance effects or epistatic effects. Can only pass on 1/2 A. So it is only the additive component that contributes to breeding value and to heritability.



Reflection

Date: 8/21/2003 1:59:00 PM

Reflection: These are notes on introductory quantitative genetics. Compared to the "Gene pool selection" example, this material moves to another level of abstraction. In the gene pool example, the trait was modeled as the result of two alleles at one locus ("one gene"). Here, there are many genes affecting the trait. Here, the analysis is statistical in nature (hence the reliance on variance) and treats the value of the measurable character (which is the result of the action of the many genes), rather than treating the genes themselves.



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The Showcase page features multimedia presentation files, highlighting the best or most recent academic or professional accomplishments.  
[Read More About Showcase \(opens new window\)](#)

#### Freddie and Frieda Falcon's Showcase

BGSU is becoming the premier learning community in Ohio and one of the best in the nation. The evidence is visible everywhere on our campuses. Take a look at the items in my showcase. And watch for more to come!



**Title:** Student Learning Showcase

**Description:** 12 brief (about 2 minute) videos showing learning communities in action.

[View Showcase Item \(Opens New Window\)](#)



**Title:** Making Music

**Description:** Brief videos showing what students can do with their knowledge.

[View Showcase Item \(Opens New Window\)](#)



**Title:** More Spirit

**Description:** Lots of events coming up!

# BGSU

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# [ Freddie & Frieda ]

GO FALCONS !

## [ HISTORY ]

### Falcon Traditions

Freddie & Frieda Falcon, a.k.a. The Birds



About Resume - The Resume furnishes an online resume or CV page for the user to highlight academic and work experiences.  
[Read More About Resume \(opens new window\)](#)

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# Freddie Falcon

## OBJECTIVE

I want to inspire BGSU students to soar high. The sky is the limit

## EDUCATION

- BGSU, 1950 - still at it

## EXPERIENCE

- BGSU Years ago - still at it, Gum Distributor  
Give gum to kids at BGSU events and activities.

## COMMUNITY SERVICE

- Athletic Events, Raise spirits, rouse the crowds, and do what needs to be done.

## ADDITIONAL INFORMATION

- J. Russell Coffey, professor emeritus of health and physical recreation, taught at Bowling Green from 1948-89 and was instrumental in establishing Freddie Falcon as the University's mascot. He served for 20 years as adviser to the Alpha Phi Omega service fraternity and received the fraternity's Distinguished Service Award at his 100th birthday celebration in 1998. In the fall of 2000, he received BGSU's Honorary Alumnus Award.
- On January 16, 1950 the first Freddie Falcon, Bob Taylor, appeared at the BGSU-Ohio basketball game.
- David Humphrey of Elyria spoke during graduation ceremonies on May 9 and 10, 2003, in Anderson Arena of Memorial Hall. Humphrey has served as school mascot Freddie Falcon, was director of Dance Marathon, and was named 2002 Homecoming King. Active in the Kappa Alpha Order, he participated on the Homecoming and Greek Week steering committees and has worked in the office of the vice president for student affairs.

## REFERENCES

# 2004 Pilot Study

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- Compared retention rates, grade point averages, and credit hours earned between the population of 75 BGSU students who had e-portfolio artifacts and a matched sample who did not
- Undergraduate students with e-portfolio artifacts had significantly greater cumulative grade point averages and credit hours earned than undergraduates without e-portfolio artifacts; no significant difference in retention rates
- No significant differences for graduate students
- Number of e-portfolio artifacts was not significantly related to retention, grade point average, or credit hours earned

# 2005 Study

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- Compared students with e-port artifacts (N=935), a matched control group without e-port artifacts (n=935), and students with portfolio accounts but no artifacts (N=559)
- Student background characteristics
- Retention rates, GPA, SCH
- Engagement (NSSE and local instrument)
- Retention rates, GPA, SCH after background characteristics are controlled
- Relationship between number of artifact measures and retention rates, GPA, SCH

# Results

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- Those with portfolio artifacts were significantly more likely than students without e-portfolio artifacts to be younger, female, students of color, freshmen and sophomores, in the College of Education and Human Development as well as undeclared, to live on campus, and to have higher ACT scores and high school grade point averages

# Results

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- Significantly higher retention rates for undergraduates with e-port artifacts than those without; no difference for graduate students
- Significantly higher grade point averages for undergraduates with e-port artifacts than those without; no difference for graduate students
- Significantly higher credit hours earned for undergraduates with e-port artifacts than those without; no difference for graduate students

# Results

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- No significant differences on measures of student engagement (NSSE or a locally developed instrument)

# Results

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- Significantly higher **retention rates** for undergraduates with e-port artifacts than those without after sex, race, age, high school grade point average, college, and living arrangements were controlled

# Results

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- Significantly higher **grade point averages** for undergraduates with e-port artifacts than those without after sex, race, age, high school grade point average, college, and living arrangements were controlled

# Results

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- Significantly higher **credit hours earned** for undergraduates with e-port artifacts than those without after sex, race, age, high school grade point average, college, and living arrangements were controlled

# Results

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- No significant relationship between number of matrix artifacts and total number of files uploaded and retention rates
- Significant negative relationship between number of showcase artifacts and grade point average
- Significant positive relationship between grade point average and number of showcase artifacts, total number of files uploaded, and number of resumes uploaded
- Significant positive relationship between credit hours earned and total number of files uploaded and number of resumes uploaded

# Limitations

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- Population of students with e-portfolios, while considerably larger than the one used for the earlier pilot study still represents a relatively small proportion of all students at the University and is skewed in terms of several demographic and educational factors
- Students' utilization of e-portfolios at BGSU remains a voluntary activity and there is no way to control for differences in motivation between students with e-portfolios and others as comparisons are made

# Conclusions

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- Undergraduate students with e-portfolio artifacts had significantly higher grade point averages ( $d=.02$ ), credit hours earned ( $d=.03$ ), and retention rates ( $d=.02$ ) than a matched set of students without e-portfolio artifacts after background factors were controlled for
- No significant differences on academic engagement measures for undergraduates
- Some significant positive relationships between various measures of e-portfolio utilization and grade point average ( $d=.01$  to  $.13$ ) and credit hours earned ( $d=.01$  to  $.08$ ) among undergraduates

# Next Steps

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- Currently developing rubrics for learning outcomes and student reflections that, when implemented, will allow reliable measurement across faculty and advisors in various disciplines of student learning as documented in e-portfolios
- Portfolios still need to be better understood by many students and most faculty and advisors
- Still looking for fit between e-ports and areas of the curriculum and co-curriculum
- Still improving the technical infrastructure
- Still improving the climate for student success

# Benchmarks for Communication Skills

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- Express a clear, coherent thesis
- Focus on the thesis or purpose and provide transitions among ideas that enhance audience understanding
- Advance an argument with sound evidence and references
- Arguments in support of thesis flow logically
- Connect ideas within the material and to other ideas and sources
- Move beyond surface understanding and demonstrate facility with topical and disciplinary knowledge
- Convey a sense of audience by using language that demonstrates understanding of terminology
- Material is organized in a way that enhances audience understanding
- Provides strong introductions and conclusions

# Benchmarks for Thinking Skills

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- Questions and goal(s) of project stated explicitly, with appropriate focus
- Multiple relevant sources searched for background information
- Sufficient number of sources to provide a representative depiction of relevant background information
- Review of background information considers both confirming and disconfirming evidence
- Method of investigation sufficient to answer all research questions
- Analysis strategy is direct, competent, and appropriate for goal(s) of project
- Conclusions are based on the results of the analysis or are a logical extension of the findings
- Demonstrate an understanding of theory as well as how to apply it to current project
- Use disciplinary frameworks and concepts to illuminate relationships among apparently diverse items
- Examine phenomena from multiple viewpoints, both concretely and abstractly
- Specify the limits or boundaries within which generalizations apply
- Apply abstract academic knowledge to solve concrete practical problems

# Benchmarks for Social Interaction Skills

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- Prepare in advance
- Actively participate and ask questions in discussions
- Take a large part in setting group goals and agendas
- Listen actively and show understanding by paraphrasing or by acknowledging and building on others' ideas
- Share information openly
- Volunteer willingly and carry own share of the group's responsibilities
- Comfortable and confident in exercising leadership duties
- Show respect to all group members
- Balance the need for task accomplishment with the needs of individuals in the group
- Encourage input from less vocal members of group
- Check for agreement, acceptance, and buy-in
- Assign tasks by seeking volunteers, delegating as needed
- Find creative solutions for in-group conflict
- Give recognition and encouragement

Questions