

**2004 SURVEY OF SUCCESS
OHIO COMMUNITY AND TECHNICAL COLLEGES**

BEGINNING COMPUTER INFORMATION SYSTEMS COURSES

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SURVEY OF SUCCESS IN THE BEGINNING COMPUTER INFORMATION SYSTEMS COURSE

SUMMARY

- ◆ Twenty-two Ohio technical and community colleges were sent, via the Internet, a one-page survey (Table 1) which asked for feedback from computer department Chairs as to best practices utilized at their institutions contributing to student success in beginning Computer Information systems courses. Follow-up telephone calls were made to all colleges that did not respond to the Internet request. The total number of colleges participating in the study is 14 (a response rate of 63.6%). (Table 2)
- ◆ All colleges were asked to list the first CIS class that all degree-seeking students in their program were required to take, and then to provide the number of students enrolled in that course in the Fall of 2002. Lorain County Community College reported the largest headcount (N = 1,059) and Jefferson Community College reported the lowest enrollment (N = 15). The average headcount for all 14 colleges was 226. (Table 3)
- ◆ College representatives were asked how many students in the listed course earned a grade of “A”, “B”, “C”, or “PASS” in the Fall of 2002. Southern State Community College and Edison Community College both reported pass rates of over 90%. The lowest pass rate (17.2%) was reported by Hocking College. The average percent pass rate for all colleges was 69.4%. (Table 3)
- ◆ The most frequently used **student intervention** was: Phone calls or letters to the students regarding their progress (50.0% of the responding colleges used this strategy). (Table 4)
- ◆ Web-based tutorials were the most commonly used **course content modification**, mentioned by over 57% of the colleges. (Table 4)
- ◆ The most frequently used **faculty development strategy** was: Faculty mentoring faculty (practiced by over 78% of the respondent colleges). (Table 4)
- ◆ Only two of the **student intervention** strategies had a sufficient number of ratings to analyze. Phone calls or letters to students regarding progress, and peer mentoring were both considered to be quite successful by the majority of college respondents (mean ratings of 3.71 and 3.60, respectively). (Table 5)
- ◆ The **course content modification** of developing alternative lessons or activities that use varied learning styles was thought to be quite successful by over 85% of those who responded to the survey. In addition, the majority of college representatives (66.7%) rated master testing for each **course content modification** as quite successful or highly successful (mean rating = 3.83). (Table 5)
- ◆ While all three **faculty development** strategies were thought to be at least moderately successful, required faculty training was rated the highest (mean = 4.50). (Table 5)
- ◆ Six colleges had a pass rate of 70% or better and 5 reported a pass rate of less than 70% for the beginning computer course at their institution. Responses were examined to see if colleges with better pass rates used different strategies than those with a lower success rate. Although there were no significant differences in strategy use or success ratings when pass rates were taken into account, this could well be a function of the small number of colleges surveyed. (Tables 6 & 7)
- ◆ Table 8 illustrates Sinclair’s use and rating of the strategies as compared to the other Ohio colleges.

TABLE 1: SURVEY INSTRUMENT

What is the first CIS class that all degree seeking students in your program(s) are required to take?	
Course Number: _____	
Course Title: _____	
During Fall 2002, how many students (headcount) were enrolled in the course listed above?	
How many of those students earned the grade of A, B, C, or PASS in that course?	

Please check the items below that you have used to improve student success in the core CIS courses at your institution. Then check the perceived level of success of these strategies in facilitating learning.

Rating Scale: 1= No success; 2=a little success; 3=modest success; 4=quite successful; 5=highly successful

<i>Strategy</i>	Used?	Rating of Perceived success of strategies used				
		1	2	3	4	5
<i>Student Interventions</i>						
1. Peer mentoring						
2. Required tutoring						
3. Required meeting with instructor						
4. Phone calls or letters to student regarding progress						
5. Other (please list):						
<i>Course Content Modification</i>						
6. Reduced amount of content covered.						
7. Mastery testing for each						
8. Changed textbook						
9. Developed or used Web-based tutorials						
10. Developed gaming activities for student practice						
11. Developed alternative lessons or activities that use varied learning styles						
12. Other (please list):						
<i>Faculty Development</i>						
13. Faculty workshop on instructional strategies (pedagogy, classroom management, technology, etc.)						
14. Faculty mentoring faculty						
15. Required faculty training before permitted to teach the class.						
16. Other: (please list)						

If you are willing to participate in a listserv that focuses on improving instruction and student success in beginning computer information systems classes, please provide the following:

Institution:	
Name:	
E-mail Address:	

TABLE 2

• **College Information**

Colleges in the study	Course	Course Title
Central Ohio Technical College	1600	Intro to Computing
Cincinnati State Tech & Community College	IT 5201	Information Technology Concepts
Clark State Community College	CSD_104	Programming Fundamentals
Cuyahoga State Community College	IT 1010	Intro to Micro Application
Edison Community College	CIT 100	Personal Computer Applications
Hocking College	CIS 100	Program Analysis I
James A Rhodes State College	CPT 105	Micro Computers I
Jefferson Community College	CIS 202	Program Logic Development
Lakeland Community College	ISYS 1005	Computers & Information Processing
Lorain County Community College	CISS 121	Microcomputer Applications I
Marion Technical College	IT 121	Intro to Computer Concepts
Northwest State Community College	CIS 130	Computer Mathematics
Rio Grande Community College	CS 20104	Intro to Programming C++
Southern State Community College	140	Introduction to Computers I
Non-participating Colleges		
Belmont Technical College		
Columbus State Community College		
Muskingum Area Technical College		
North Central State College		
Owens Community College		
Terra Community College		
Stark State College of Technology		
Washington State Community College		
Sinclair Community College	CIS 107/108	Intro to Operating Systems/Introduction to Windows 2000 Professional

TABLE 3

• **Headcount and Pass Percentage**

College Name	Fall 2002 Headcount	Fall 2002 Pass Percentage *
Southern State Community College	83	90.4%
Edison Community College	284	90.3%
Northwest State Community College	44	81.8%
Marion Technical College	75	80.0%
James A Rhodes State College	135	74.8%
Jefferson Community College	15	73.3%
Cincinnati State Tech & Community College	240	65.8%
Lorain County Community College	1059	61.4%
Cuyahoga State Community College	450	59.1%
Hocking College	64	17.2%
Clark State Community College	36	NA
Central Ohio Technical College	NA	NA
Lakeland Community College	NA	NA
Rio Grande Community College	NA	NA
<i>Mean for all colleges above</i>	226	69.4%
Sinclair	319	74.3%

* *Students receiving a grade of A, B, C, or PASS*

TABLE 4

• **Strategy Use**

<i>STUDENT INTERVENTIONS</i>	Used	Not Used	% of Colleges Using this Strategy
1. Peer Mentoring	5	9	35.7%
2. Required Tutoring	3	11	21.4%
3. Required meeting with instructor	3	11	21.4%
4. Phone calls or letters to students regarding progress	7	7	50.0%
5. Other (please list)	5	9	35.7%
<i>COURSE CONTENT MODIFICATIONS</i>	Used	Not Used	% of Colleges Using this Strategy
1. Reduced amount of content covered	3	11	21.4%
2. Master testing for each course	6	8	42.9%
3. Changed textbook	6	8	42.9%
4. Developed or used Web-based tutorials	8	6	57.1%
5. Developed gaming activities for student practice	4	10	28.6%
6. Developed alternative lessons or activities that use varied learning styles	7	7	50.0%
7. Other (please list)	2	12	14.3%
<i>FACULTY DEVELOPEMNT</i>	Used	Not Used	% of Colleges Using this Strategy
1. Faculty workshop on instructional strategies	10	4	71.4%
2. Faculty mentoring faculty	11	3	78.6%
3. Required faculty training before permitted to teach the class	6	8	42.9%
4. Other (please list)	2	12	14.3%

TABLE 5

• **Rating of perceived success of strategies used**

	No success			Highly Successful			
STUDENT INTERVENTIONS	N	1	2	3	4	5	<i>Mean</i>
1. Peer Mentoring	5	0.0%	0.0%	40.0%	60.0%	0.0%	3.60
2. Required Tutoring	3	0.0%	33.3%	0.0%	33.3%	33.3%	3.67
3. Required meeting with instructor	3	0.0%	33.3%	0.0%	66.7%	0.0%	3.33
4. Phone calls or letters to students regarding progress	7	0.0%	0.0%	28.6%	71.4%	0.0%	3.71
COURSE CONTENT MODIFICATIONS	N	1	2	3	4	5	<i>Mean</i>
1. Reduced amount of content covered	3	0.0%	33.3%	0.0%	33.3%	33.3%	3.67
2. Master testing for each	6	0.0%	0.0%	33.3%	50.0%	16.7%	3.83
3. Changed textbook	5	0.0%	40.0%	20.0%	20.0%	20.0%	3.20
4. Developed or used Web-based tutorials	8	0.0%	0.0%	62.5%	25.0%	12.5%	3.50
5. Developed gaming activities for student practice	4	0.0%	0.0%	75.0%	25.0%	0.0%	3.25
6. Developed alternative lessons or activities that use varied learning styles	7	0.0%	0.0%	14.3%	85.7%	0.0%	3.86
FACULTY DEVELOPEMNT	N	1	2	3	4	5	<i>Mean</i>
1. Faculty workshop on instructional strategies	10	0.0%	0.0%	20.0%	70.0%	10.0%	3.90
2. Faculty mentoring faculty	11	0.0%	0.0%	18.2%	72.7%	9.1%	3.91
3. Required faculty training before permitted to teach the class	6	0.0%	0.0%	16.7%	16.7%	66.7%	4.50

Rating Scale: 1 = No success; 2 = A little success; 3 = Modest success; 4 = Quite successful; 5 = Highly successful

TABLE 6

• **Percent Use by Pass Rate**

	70% or greater Pass Rate (N = 6)	Less than 70% Pass Rate (N = 5)
<i>STUDENT INTERVENTIONS</i>	Percent Use	Percent Use
1. Peer Mentoring	50.0%	50.0%
2. Required Tutoring	33.3%	25.0%
3. Required meeting with instructor	16.7%	25.0%
4. Phone calls or letters to students regarding progress	66.7%	25.0%
<i>COURSE CONTENT MODIFICATIONS</i>	Percent Use	Percent Use
1. Reduced amount of content covered	16.7%	0.0%
2. Master testing for each	33.3%	75.0%
3. Changed textbook	16.7%	50.0%
4. Developed or used Web-based tutorials	50.0%	75.0%
5. Developed gaming activities for student practice	16.7%	50.0%
6. Developed alternative lessons or activities that use varied learning styles	50.0%	50.0%
<i>FACULTY DEVELOPEMNT</i>	Percent Use	Percent Use
1. Faculty workshop on instructional strategies	66.7%	75.0%
2. Faculty mentoring faculty	83.3%	100.0%
3. Required faculty training before permitted to teach the class	50.0%	75.0%

Note: Chi-square tests of distributional difference were not statistically significant for any of the strategies.

TABLE 7

• **Average Rating by Pass Rate**

	70% or greater Pass Rate (N = 6)	Less than 70% Pass Rate (N = 5)
<i>STUDENT INTERVENTIONS</i>	Average Rating	Average Rating
1. Peer Mentoring	3.67	3.50
2. Required Tutoring	4.50	2.00
3. Required meeting with instructor	4.00	4.00
4. Phone calls or letters to students regarding progress	3.75	4.00
<i>COURSE CONTENT MODIFICATIONS</i>	Average Rating	Average Rating
1. Reduced amount of content covered	5.00	NA
2. Master testing for each	4.50	3.33
3. Changed textbook	5.00	2.00
4. Developed or used Web-based tutorials	4.33	3.00
5. Developed gaming activities for student practice	4.00	3.00
6. Developed alternative lessons or activities that use varied learning styles	4.00	3.50
<i>FACULTY DEVELOPEMNT</i>	Average Rating	Average Rating
1. Faculty workshop on instructional strategies	4.00	4.33
2. Faculty mentoring faculty	3.80	4.25
3. Required faculty training before permitted to teach the class	4.00	5.00

Note: T-test of mean difference were not statistically significant for any of the strategies.

TABLE 8

• **Sinclair Comparison Statistics**

	SINCLAIR		OTHER COLLEGES	
	USE Yes/No	Rating	Percent Use	Mean Rating
<i>STUDENT INTERVENTIONS</i>				
1. Peer Mentoring	No		35.7%	3.60
2. Required Tutoring	No		21.4%	3.67
3. Required meeting with instructor	Yes	3.00	21.4%	3.33
4. Phone calls or letters to students regarding progress	No		50.0%	3.71
<i>COURSE CONTENT MODIFICATIONS</i>				
1. Reduced amount of content covered	No		21.4%	3.67
2. Master testing for each	No		42.9%	3.83
3. Changed textbook	No		42.9%	3.20
4. Developed or used Web-based tutorials	No		57.1%	3.50
5. Developed gaming activities for student practice	No		28.6%	3.25
6. Developed alternative lessons or activities that use varied learning styles	No		50.0%	3.86
<i>FACULTY DEVELOPEMNT</i>				
1. Faculty workshop on instructional strategies	Yes	3.00	71.4%	3.90
2. Faculty mentoring faculty	Yes	3.00	78.6%	3.91
3. Required faculty training before permitted to teach the class	No		42.9%	4.50