USING TECHNICAL SKILL ASSESSMENT RESULTS FOR PROGRAM IMPROVEMENT

National Career Clusters Institute Washington, DC June 2012

Missouri Department of Elementary and Secondary Education and NOCTI

June 2012

Missouri's Approach to Technical Skill Attainment (TSA)

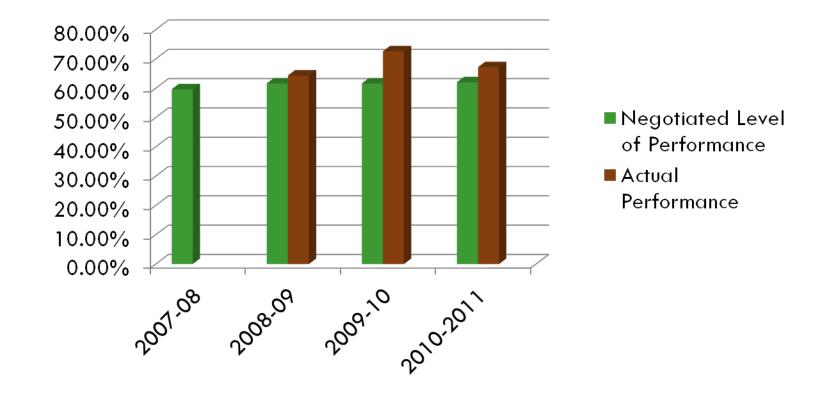
- Local Control State
- Local decision regarding which TSA to use to meet Perkins requirement
- State-approved list that locals choose TSA from
- Narrowing the list by aligning TSAs with model curriculum

http://www.dese.mo.gov/divcareered/perkins
iv tsa.htm.

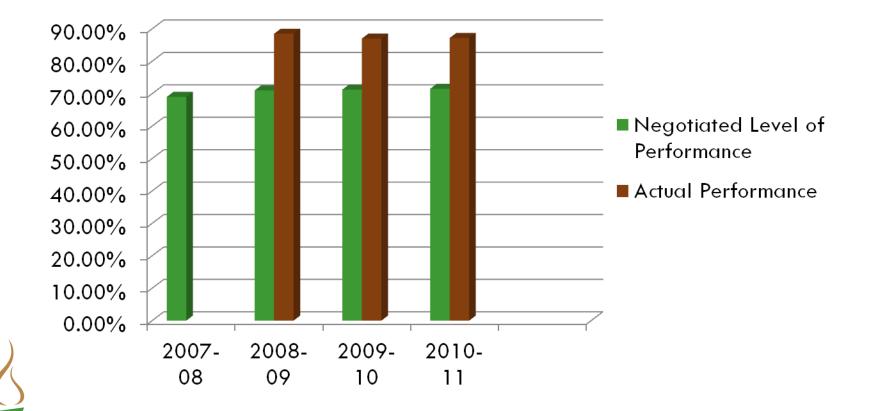
### **Program Area Assessments**

- Agriculture Education uses State FFA proficiency exams and NOCTI
- Business, Marketing and Information Technology ASK, MBA Research, NOCTI State-Developed Exam
- Family Consumer Science and Human Services NOCTI, AAFCS, SkillsUSA, and Prostart
- Health Sciences NOCTI, SkillsUSA, and State Certification Exams
- Skilled Technical Sciences NOCTI, SkillsUSA, Industry Certification Exams

### Statewide Secondary Perkins Performance 2S1 Technical Skill Attainment



### Statewide Postsecondary Perkins Performance 1P1 Technical Skill Attainment



# The Missouri Plan – Testing a Percentage of Completers

Second	ary
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- □ 2008-09 25%
- **2009-10** 50%
- **2010-11** 75%
- □ 2011-12 75%
- □ 2012-13 100%

### **Postsecondary**

- □ 2008-09 33%
- □ 2009-10 66%
- **2010-11 100%**
- □ 2011-12 75%
- □ 2012-13 100%

### The Missouri Plan – Performance Levels

### Secondary

- 2008-09 61.60% pass
- 2009-10 61.60% pass
- □ 2010-11 62.00% pass
- □ 2011-12 62.50% pass
- □ 2012-13 63.00% pass

### Postsecondary

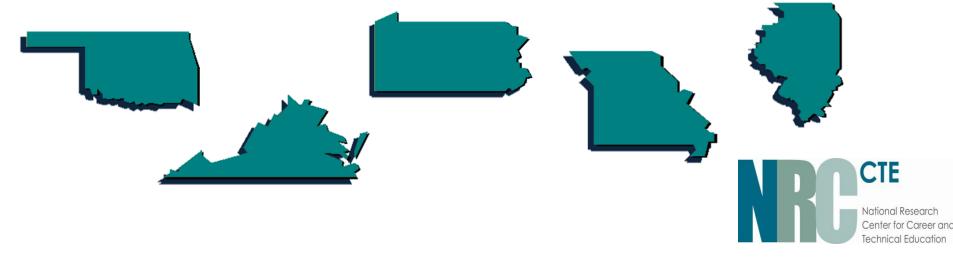
- □ 2008-09 71.00% pass
- □ 2009-10 71.25% pass
- □ 2010-11 71.50% pass
- □ 2011-12 72.00% pass
- □ 2012-13 7250% pass

# **Determining Pass/Fail**

- Four possible ways:
  - Testing vendors provide a cut score
  - National norm is available
  - Bundle (Example: NA3SA)
  - 65% becomes the cut score when the first two are not available.

### Missouri Participation in NRCCTE CTEDDI

- Use a social networking site as a means of building a community of practice
- Use pre-test, post-test, questionnaires, facilitator surveys, self reported perceptions
- Involve 42-80 individual educators



### Fort Osage Career and Technical Center History and Data Use

- Sixth year testing
- Have learned to look at data differently
- Incorporated many instructional activities and motivational plans
- Sustained growth the past two years with small learning communities in place
- Empowered students to be involved in the goal setting/learning process

# **Yearly Timeline**

#### **Fall Semester**

- Pre-Test: September
- Set Goals with Students and Show scores: Sept/October
- PD Review Data: October
- Develop Spring Goal in small learning community: October
- Vocabulary Strategies:
   November

#### **Spring Semester**

- CTSO Contest Season: January, February, March
- Presentations to Students
   (Motivational): Late March
- Students complete test info sheet: Late March
- Testing Season: Mid April
   & Early May
- □ Celebration!: Mid May

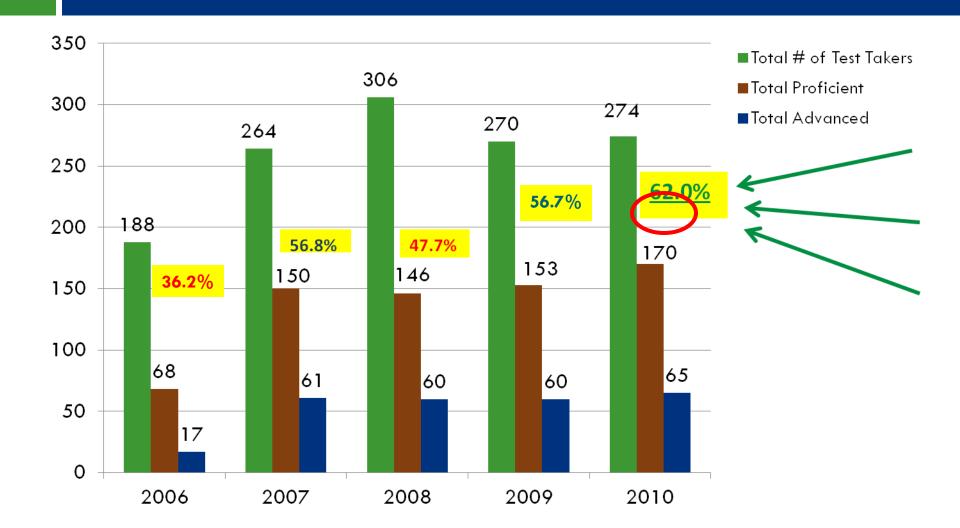
### Student Motivation Plays a Huge Role in Success

- The next eight slides were an excerpt from a motivational/information presentation to students
- Fed students breakfast and snacks each day they tested
- Tested in multiple sessions to reduce fatigue
- TEAM awards versus individual played a huge role
- Large building celebration with music at end for reaching goal.

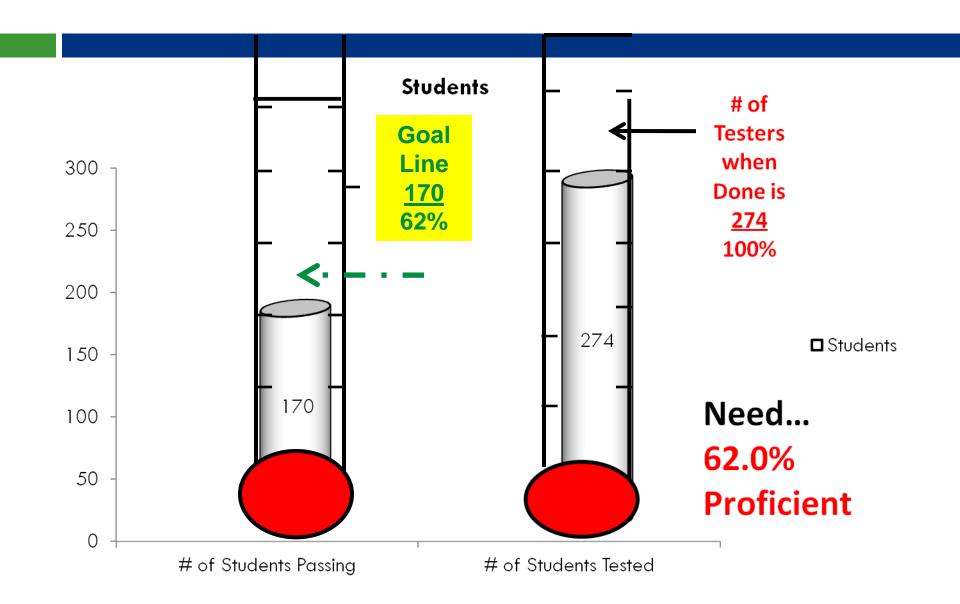
# 62%...Why is that important to me? My Class? The CTC?

Have you seen or heard about this poster? Now you might know they are there.

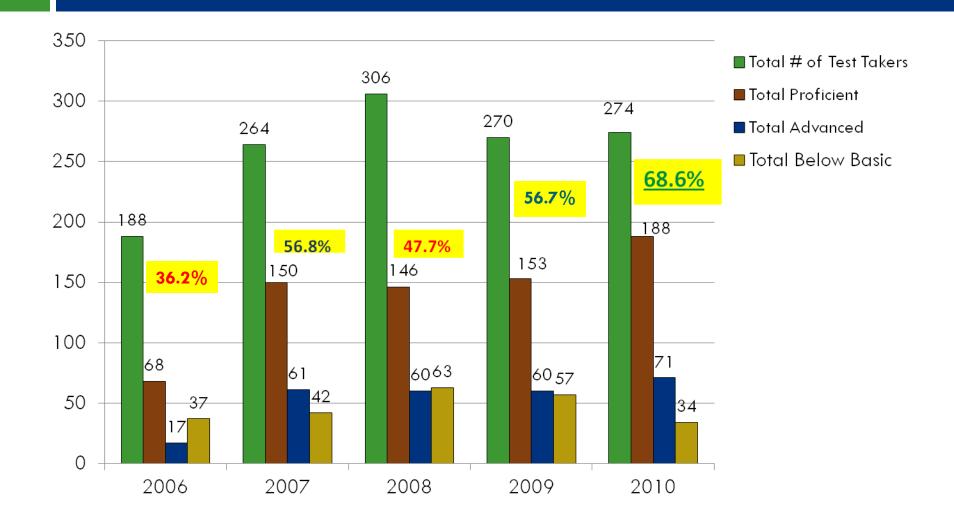
### CTC 4 Year Data – And what is needed in 2010



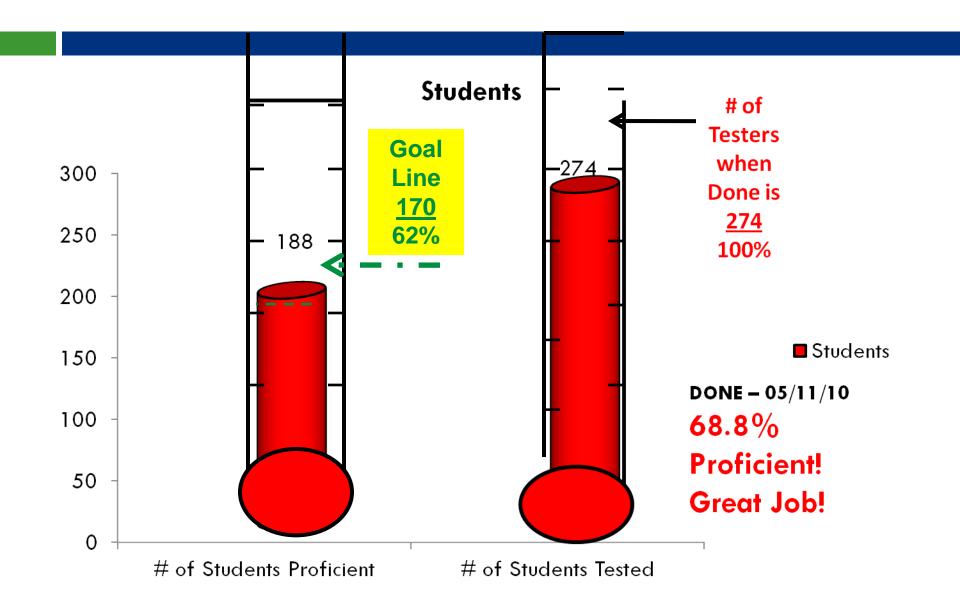
### Keeping track from April 12 – May 5



### CTC 5 Year TSA Data



### CTC TSA Success: April 12 – May 11



### So...here's what we know

- Best ever from 2005 2009...56.7%
  proficient.
- We needed and promoted...62.0%
  proficient.
- CTC Students came through at <u>68.6%</u>
- Great job to all students that tested. Every Score Counted!

### Simple things to remember

- It is great that so many passed, but it is so much better and rewarding that so many tried their <u>absolute best</u>! Every score counts!
- Best performing students in short CTC TSA assessment history!
- All of you are awesome and that is why we celebrate as a group/team, not as individuals.
- □ Thank you, thank you, and thank you for your effort!

## Friendly Competition – Good Data for The Students To See

#### 2009-2010 Technical Skills Assessment Challenge

Any Course Section where <u>62%</u> or more of its participants score at the cut score (proficient) is a winner - "*Every score counts!*"

CTC Program:	Computer Support	t Specialist I			
Name of Assessment:	NOCTI 3415: Com	puter Repa	ir		
Test Cut Score/Nation	al Avg: <b>58.7%</b>		# of Questions:	155	
AM Information:	Number of Students	16	Number of Stude	ents Proficient:	14
	% of Students Proficient	<u>87.5%</u>			
	Average score on Test:	67.3%	High	Score on Test.	79.3%
PM Information:	Number of Students	16	Number of Stude	ents Proficient:	12
	% of Students Proficient	<u>75.0%</u>			
	Average score on Test:	<b>66.2%</b>	High	Score on Test.	86.5%
Winner of the CTC AM/	PM TSA Challenge:	EVERYO	NE! PROG	GRAM PROFICIE	NCY: <b>81.3%</b>

### **Factors Affecting Achievement**

### Teacher factors

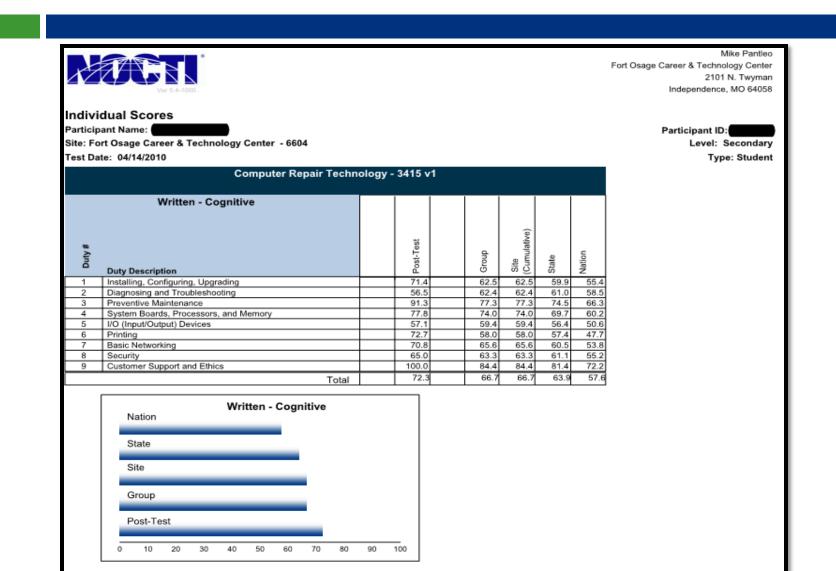
- Small learning communities one designated to TSA. Meets once a week, develops strategies for whole building
- Teacher using the data and involving students in the goal setting process
- Alignment of curriculum
  - If you teach it, the odds of students doing well in that area go up immensely – Program of Study

### Data, Data, Data

#### 2010 Career and Technology Center All Program - TSA Data Summary

Brogrom	Number of students taking exam	TSA Pre Test	TSA Post Test	% Growth	National Norm or Test Goal	Percentage above national average or	Number of students scoring above national norm or test	% of Students Reaching the National Average, Test Goal. or 65%
Program CTC PROGRAM 1	Ţ					goal	goal	
	26	XXX	58.2%	XXX	55.6%	2.6%	20	76.9%
CTC PROGRAM 2	32	37.8%	53.4%	15.6%	52.5%	0.9%	21	65.6%
CTC PROGRAM 3	23	45.8%	53.5%	7.7%	52.0%	1.5%	16	69.6%
CTC PROGRAM 4	11	49.9%	59.9%	10.0%	57.2%	2.7%	8	72.7%
CTC PROGRAM 5	32	50.8%	66.7%	15.9%	58.7%	8.0%	26	81.3%
CTC PROGRAM 6	18	46.7%	60.7%	14.0%	58.8%	1.9%	10	55.6%
CTC PROGRAM 7	12	48.4%	62.3%	13.8%	54.7%	7.6%	9	75.0%
CTC PROGRAM 8	11	70.4%	79.1%	8.7%	69.1%	10.0%	10	90.9%
CTC PROGRAM 9	20	56.6%	64.4%	7.8%	70.0%	-5.6%	8	40.0%
CTC PROGRAM 10	13	52.7%	63.8%	11.0%	55.0%	8.8%	11	84.6%
CTC PROGRAM 11	12	44.8%	59.4%	14.6%	55.0%	4.4%	7	58.3%
CTC PROGRAM 12	5	51.1%	55.4%	4.3%	55.5%	-0.1%	3	60.0%
CTC PROGRAM 13	37	66.2%	76.8%	10.5%	70.0%	6.8%	33	89.2%
CTC PROGRAM 14	4	xxx	67.3%	xxx	64.9%	2.4%	3	75.0%
CTC PROGRAM 15	18	xxx	58.3%	xxx	70.0%	-11.7%	3	16.7%
	274	xxx	xxx	xxx	xxx		188	68.6%
	Real Growth A	verage (Buil	ding Wide)	11.4%		4.8%		
*National Average Composite Average	60.6%						2010 Nati	onal Averages
CTC Average Composite Average	65.5%							

### Individual Score Reports Come From Each Testing Company



### Looked hard at our data, **<u>Pre-test</u>** and Post-test

asse	SS I <u>Pre-1</u> ssment blu TI 3415 "Ce	Jeprir	nt anal		Percentage Score	1. Installing, Configuring, Upgrading	<ol> <li>Diagnosing &amp; Troubleshooting</li> </ol>	3. Preventive Maintenance	<ol> <li>System Boards, Processors, and Memory</li> </ol>	5. I/O Devices	6. Printing	7. Basic Networking	8. Secrurity	<ol> <li>Customer Support and Ethics</li> </ol>		
	Test Blueprint	by Percen	ntage			100.0%	14.0%	15.0%	15.0%	6.0%	9.0%	7.0%	15.0%	13.0%	6.0%	100.0%
Test Blu	eprint by # of quest	ions per s	ection (Esti	mated)		155	22	23	23	9	14	11	23	20	9	155
Last Name	First Name	#	School	Grade	Class											
Sample 1	First Name 1	1	BS	11	AM	60.0%	52.4%	60.9%	69.6%	77.8%	42.9%	54.5%	45.8%	65.0%	90.0%	
Sample 2	First Name 2	1	OG	11	AM	52.3%	42.9%	43.5%	52.2%	55.6%	57.1%	90.9%	41.7%	50.0%	70.0%	
Sample 3	First Name 3	1	FO	11	AM	42.6%	52.4%	39.1%	47.8%	66.7%	28.6%	27.3%	29.2%	45.0%	60.0%	
Sample 4	First Name 4	1	BS	11	AM	46.5%	42.9%	47.8%	69.6%	11.1%	28.6%	54.5%	41.7%	40.0%	70.0%	
Sample 5	First Name 5	1	OG	11	AM	49.0%	52.4%	34.8%	60.9%	55.6%	64.3%	36.4%	41.7%	40.0%	70.0%	
Sample 6	First Name 6	1	FO	11	AM	61.3%	76.2%	52.2%	82.6%	77.8%	35.7%	45.5%	41.7%	60.0%	90.0%	
Sample 7	First Name 7	1	FO	11	AM	49.7%	52.4%	47.8%	60.9%	66.7%	35.7%	27.3%	37.5%	55.0%	70.0%	
Sample 8	First Name 8	1	BS	11	AM	36.1%	33.3%	34.8%	52.2%	22.2%	14.3%	27.3%	20.8%	60.0%	50.0%	
Sample 9	First Name 9	1	BS	11	AM	56.1%	52.4%	47.8%	60.9%	88.9%	50.0%	27.3%	58.3%	55.0%	80.0%	. 0
Sample 10	First Name 10	1	FO	11	AM	61.3%	66.7%	65.2%	69.6%	44.4%	57.1%	18.2%	54.2%	75.0%	80.0%	%
Sample 11	First Name 11	1	BSS	11	AM	53.5%	52.4%	56.5%	65.2%	44.4%	57.1%	45.5%	29.2%	60.0%	80.0%	_
Sample 12	First Name 12	1	BS	11	AM	53.5%	57.1%	56.5%	65.2%	55.6%	35.7%	45.5%	41.7%	55.0%	70.0%	TOTAL
Sample 13	First Name 13	1	BSS	11	AM	38.7%	42.9%	56.6%	39.1%	44.4%	35.7%	36.4%	20.8%	35.0%	40.0%	
Sample 14	First Name 14	1	FO	11	AM	52.3%	47.6%	47.8%	78.3%	66.7%	50.0%	36.4%	41.7%	50.0%	50.0%	2
Sample 15	First Name 15	1	FO	11	AM	63.9%	66.7%	43.5%	87.0%	66.7%	64.3%	45.5%	58.3%	60.0%	90.0%	
Sample 16	First Name 16	1	BS	11	AM	34.8%	19.1%	34.8%	39.1%	22.2%	21.4%	27.3%	29.2%	60.0%	60.0%	P
																and
																QUESTIONS
Sample 17	First Name 17	1	BS	11	PM	56.8%	76.2%	60.9%	69.6%	66.7%	57.1%	18.2%	41.7%	45.0%	70.0%	ō
Sample 18	First Name 18	1	FO	11	PM	61.3%	47.6%	60.9%	73.9%	77.8%	50.0%	45.5%	58.3%	60.0%	90.0%	Ē
Sample 19	First Name 19	1	BS	11	PM	40.6%	33.3%	43.5%	52.2%	55.6%	35.7%	27.3%	37.5%	35.0%	50.0%	o'
Sample 20	First Name 20	1	GV	11	PM	60.6%	52.4%	69.6%	73.9%	77.8%	50.0%	63.6%	41.7%	50.0%	90.0%	ш
Sample 21	First Name 21	1	BSS	11	PM	45.8%	38.1%	43.5%	60.9%	66.7%	42.9%	18.2%	41.7%	35.0%	80.0%	
Sample 22	First Name 22	1	BSS	11	PM	61.3%	66.7%	60.9%	69.6%	55.6%	35.7%	45.5%	50.0%	75.0%	90.0%	G
Sample 23	First Name 23	1	BSS	11	PM	62.8%	47.6%	69.6%	87.0%	77.8%	64.3%	36.4%	58.3%	50.0%	70.0%	_
Sample 24	First Name 24	1	FO	11	PM	33.5%	38.1%	43.5%	43.5%	44.4%	21.4%	18.2%	20.8%	30.0%	40.0%	. ◄
Sample 25	First Name 25	1	OG	11	PM	41.9%	47.6%	47.8%	47.8%	11.1%	35.7%	45.5%	33.3%	45.0%	50.0%	5
Sample 26	First Name 26	1	OG	11	PM	54.8%	52.4%	39.1%	56.5%	44.4%	50.0%	27.3%	70.8%	65.0%	80.0%	TOTAL
Sample 27	First Name 27	1	BSS	11	PM	48.4%	42.9%	52.2%	73.9%	66.7%	42.9%	27.3%	37.5%	50.0%	30.0%	
Sample 28	First Name 28	1	BS	11	PM	61.9%	52.4%	52.2%	87.0%	88.9%	57.1%	27.3%	50.0%	65.0%	90.0%	
Sample 29	First Name 29	1	BS	11	PM	27.7%	14.3%	21.7%	39.1%	44.4%	21.4%	36.4%	25.0%	30.0%	30.0%	
Sample 30	First Name 30	1	BS	11	PM	51.6%	57.1%	43.5%	56.5%	66.7%	57.1%	27.3%	45.8%	50.0%	70.0%	
Sample 31	First Name 31	1	BSS	11	PM	72.3%	57.1%	82.6%	91.3%	77.8%	71.4%	54.5%	62.5%	70.0%	80.0%	
Sample 32	First Name 32	1	BS	11	PM	55.5%	52.4%	60.9%	56.5%	77.8%	57.1%	54.5%	37.5%	50.0%	80.0%	
Sample 33	First Name 33	1	BS	11	PM	36.1%	33.3%	34.8%	39.1%	44.4%	28.6%	36.4%	37.5%	30.0%	50.0%	
Sample 34	First Name 34	1	BSS	11	PM	44.5%	42.9%	43.5%	47.8%	77.8%	28.6%	45.5%	41.7%	40.0%	50.0%	
e ampie e i	1.01.10.04		000					10.073			20.070	10.073		10.070	00.070	
		34														
Cla	ass Average (Tot	tal and p	er Section	1)		50.9%	48.9%	50.0%	62.5%	58.5%	43.7%	38.3%	41.9%	51.2%	67.9%	50.9%
	onal Averages (T					58.9%										

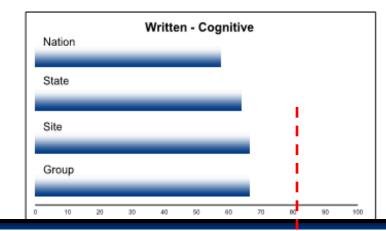
### Looked hard at data, Pre-test and **Post-test**

Br	CSS I 2010 Post-Test Results Broken down based on assessment blueprint Test Blueprint by Percentage Test Blueprint by # of questions per section (Estimated)							<ol> <li>Diagnosing &amp; Troubleshooting</li> </ol>	3. Preventive Maintenance	<ol> <li>System Boards, Processors, and Memory</li> </ol>	5. I/O Devices	6. Printing	7. Basic Networking	8. Secrurity	9. Customer Support and Ethics	
	Test Blueprint	by Percen	tage			100.0%	14.0%	15.0%	15.0%	6.0%	9.0%	7.0%	15.0%	13.0%	6.0%	100.0%
Test Bluep	print by # of quest	ions per s	ection (Estin	mated)		155	22	23	23	9	14	11	23	20	9	155
Last Name	First Name	#	School	Grade	Class											
AM Student 1	First 1	1	BS	11	AM	72.3%	71.4%	56.5%	91.3%	77.8%	57.1%	72.7%	70.8%	65.0%	100.0%	
AM Student 2	First 2	1	OG	11	AM	64.5%	71.4%	56.5%	78.3%	66.7%	57.1%	45.5%	62.5%	60.0%	80.0%	
AM Student 3	First 3	1	FO	11	AM	61.3%	57.1%	52.2%	65.2%	55.6%	64.3%	54.5%	62.5%	65.0%	80.0%	
AM Student 4	First 4	1	BS	11	AM	56.8%	47.6%	43.5%	73.9%	66.7%	21.4%	72.7%	58.3%	70.0%	60.0%	
AM Student 5	First 5	1	OG	11	AM	66.5%	76.2%	65.2%	82.6%	66.7%	71.4%	36.4%	66.7%	50.0%	70.0%	
AM Student 6	First 6	1	FO	11	AM	70.3%	61.9%	60.9%	78.3%	77.8%	42.9%	54.5%	75.0%	90.0%	90.0%	
AM Student 7	First 7	1	FO	11	AM	70.3%	61.9%	56.5%	78.3%	77.8%	57.1%	45.5%	83.3%	80.0%	90.0%	
AM Student 8	First 8	1	BS	11	AM	67.1%	76.2%	65.2%	91.3%	66.7%	57.1%	36.4%	58.3%	60.0%	80.0%	
AM Student 9	First 9	1	BS	11	AM	75.5%	71.4%	73.9%	87.0%	88.9%	78.6%	72.7%	58.3%	75.0%	90.0%	.0
AM Student 10	First 10	1	FO	11	AM	72.9%	85.7%	65.2%	82.6%	44.4%	64.3%	45.5%	75.0%	75.0%	100.0%	%
AM Student 11	First 11	1	BSS	11	AM	59.4%	38.1%	47.8%	69.6%	88.9%	57.1%	45.5%	70.8%	55.0%	80.0%	_
AM Student 12	First 12	1	BS	11	AM	68.4%	61.9%	69.6%	78.3%	100.0%	57.1%	72.7%	70.8%	55.0%	60.0%	.◄
AM Student 13	First 13	1	BSS	12	AM	55.5%	52.4%	52.2%	65.2%	77.8%	35.7%	54.5%	45.8%	50.0%	90.0%	5
AM Student 14	First 14	1	FO	11	AM	66.5%	66.7%	73.9%	87.0%	77.8%	35.7%	63.6%	54.2%	55.0%	90.0%	2
AM Student 15	First 15	1	FO	11	AM	79.3%	76.2%	82.6%	95.7%	77.8%	64.3%	72.7%	75.0%	80.0%	80.0%	-
AM Student 16	First 16	1	BS	11	AM	69.7%	76.2%	69.6%	87.0%	66.7%	57.1%	45.5%	66.7%	55.0%	100.0%	and TOTAL
																QUESTIONS
																Z
PM Student 1	First 1	1	BS	11	PM	71.6%	71.4%	65.2%	87.0%	88.9%	64.3%	45.5%	75.0%	65.0%	80.0%	<u>o</u>
PM Student 2	First 2	1	FO	11	PM	72.3%	52.4%	69.6%	87.0%	88.9%	78.6%	54.5%	75.0%	60.0%	100.0%	E
PM Student 3	First 3	1	BS	11	PM											S
PM Student 4	First 4	1	GV	11	PM	72.9%	76.2%	56.5%	78.3%	88.9%	71.4%	63.6%	83.3%	60.0%	90.0%	Щ –
PM Student 5	First 5	1	BSS	11	PM	67.7%	57.1%	73.9%	69.6%	66.7%	64.3%	45.5%	70.8%	70.0%	90.0%	2
PM Student 6	First 6	1	BSS	11	PM											
PM Student 7	First 7	1	BSS	11	PM	73.5%	76.2%	65.2%	82.6%	77.8%	64.3%	72.7%	66.7%	75.0%	90.0%	L L
PM Student 8	First 8	1	FO	11	PM	45.2%	33.3%	34.8%	39.1%	55.6%	57.1%	45.5%	45.8%	45.0%	80.0%	2
PM Student 9	First 9	1	OG	11	PM	65.2%	52.4%	69.6%	69.6%	66.7%	64.3%	81.8%	70.8%	45.0%	80.0%	TOTAL
PM Student 10	First 10	1	OG	11	PM	74.8%	76.2%	60.9%	82.6%	77.8%	64.3%	54.5%	79.2%	80.0%	100.0%	Ĕ
PM Student 11	First 11	1	BSS	11	PM	66.5%	61.9%	69.6%	78.3%	77.8%	64.3%	45.5%	54.2%	65.0%	90.0%	
PM Student 12	First 12	1	BS	12	PM	76.8%	76.2%	73.9%	82.6%	88.9%	78.6%	81.8%	70.8%	60.0%	100.0%	
PM Student 13	First 13	1	BS	12	PM	42.6%	33.3%	34.8%	60.9%	66.7%	28.6%	45.5%	33.3%	40.0%	60.0%	
PM Student 14	First 14	1	BS	11	PM	70.3%	57.1%	73.9%	78.3%	55.6%	78.6%	63.6%	70.8%	70.0%	80.0%	
PM Student 15	First 15	1	BSS	11	PM	86.5%	81.0%	91.3%	91.3%	88.9%	85.7%	72.7%	87.5%	80.0%	100.0%	
PM Student 16	First 16	1	BS	12	PM	65.8%	61.9%	52.2%	82.6%	77.8%	64.3%	54.5%	66.7%	55.0%	90.0%	
PM Student 17	First 17	1	BS	11	PM	52.9%	38.1%	60.9%	56.5%	44.4%	42.9%	72.7%	50.0%	50.0%	70.0%	
PM Student 18	First 18	1	BSS	11	PM	54.8%	42.9%	52.2%	56.5%	77.8%	50.0%	63.6%	45.8%	65.0%	60.0%	
		34														
Clas	s Average (Tot	al and p	er Section	I)		66.7%	62.5%	62.4%	77.3%	74.0%	59.4%	58.0%	65.6%	63.3%	84.4%	66.7%
Nation	al Averages (T	otal and	nor Conti			58.7%	52.2%	58.0%	63.6%	57.8%	50 70/	55.1%	66.0%	55.3%	68.8%	
											59.7%			55 39		

#### Analysis of Scores

#### Site: Fort Osage Career & Technology Center - 6604 Test Date: 04/14/2010

	Computer Repair Techno	ology -	3415 v	1				
Duty #	Written - Cognitive	Group	Site(Cumulative)	State	Nation	Criterion- Referenced CutScore	Standard Deviation	Standard Error of Measurement
-	Duty Description N=	32	32	51	786			
1	Installing, Configuring, Upgrading	62.5	62.5	59.9	55.4		19.1	6.0
2	Diagnosing and Troubleshooting	62.4	62.4	61.0	58.5		18.0	5.7
3	Preventive Maintenance	77.3	77.3	74.5	66.3		20.0	6.3
4	System Boards, Processors, and Memory	74.0	74.0	69.7	60.2		22.9	7.2
5	I/O (Input/Output) Devices	59.4	59.4	56.4	50.6		19.4	6.1
6	Printing	58.0	58.0	57.4	47.7		19.8	6.3
7	Basic Networking	65.6	65.6	60.5	53.8		18.1	5.7
8	Security	63.3	63.3	61.1	55.2		17.1	5.4
9	Customer Support and Ethics	84.4	84.4	81.4	72.2		20.4	6.5
	Total	66.7	66.7	63.9	57.6	63.7	15.4	4.9



# IT MAKES IT EASIER WHEN THE COMPANY DOES IT FOR YOU!



# **NOCTI Competency Profile**

#### Specific Competencies and Skills Tested in this Assessment:

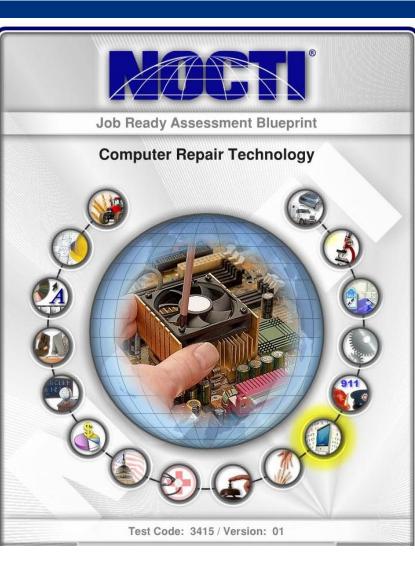
#### Installing, Configuring, Upgrading

- Install, configure, optimize, and upgrade system board, power supplies, and cooling systems
- Differentiate characteristics of various processor and memory types
- Display familiarity with CMOS setup and BIOS upgrade
- Identify functionality, install, and configure storage device options
- Identify and describe characteristics of various peripherals and ports used
- Display knowledge of operating system and licensing requirements

#### Diagnosing and Troubleshooting

- Display familiarity with processor and memory faults
- Demonstrate ability to isolate and resolve power supply, system board, and battery failures
- Display ability to identify and resolve storage device issues
- Identify uses of troubleshooting utilities
- Troubleshoot and resolve video issues
- Demonstrate ability to isolate and resolve peripheral and connectivity failures
- Identify tools, diagnostic procedures, and troubleshooting techniques for operating systems and recovery





# **Competency Profile Continued**

Written Assessment:

Number of Questions: 155

3 hours

1496

15%

15%

13%

Installing, Configuring,

Upgrading

Preventive Maintenance

System Boards, Processors, and Memory

I/O (Input-Output) Devices

Customer Support and Ethics

Diagnosing and Troubleshooting

Printing

Security

Basic Networking

Administration Time:

Areas Covered:

#### Specific Competencies and Skills continued:

#### System Boards, Processors, and Memory

- Identify processor compatibility, architecture, and upgrade issues
- Identify and differentiate memory characteristics and upgrade issues
- Identify and differentiate system board characteristics and upgrade issues

#### I/O (Input-Output) Devices

- Display understanding of human interface devices
- Identify uses of various input devices (i.e., digital camera, scanner, biometric devices)
- Identify various I/O connectivity methods

#### Printing

- Identify and differentiate various printer methodologies
- Identify various printer connectivity methods

#### **Basic Networking**

- Install, configure, and troubleshoot Network Interface Cards (NICs)
- Install, configure, and troubleshoot analog and digital connections
- Install, configure, and troubleshoot wired and wireless connections
- Identify various network topologies
- Identify various network access methods
- Differentiate between a client/server and a peer-to-peer network



# Standard Reports...

Plus Norm <u>AND</u> Criterion Referenced Scores



500 N BRONSON BIG RAPIDS MI 49307 231,796,4695 noct@noct.org

#### Group Score Report

Site: Any Career Tech Center (30000) Test Date: 05/06/2005 Level: Secondary Type: Post-test

	Architectural Drafting - 3004 v01														
Daty #	Written - Cognitiv	2 Versepare	Alitimy Bhas w	Than Church	legiscreaties.	je belevi	in the 20 million	ALTER LADING	Active in a de	hery Solighted	A of Mag	a ann a bh	lands /von t	Tes Au	Damp Mile
1	Preparing to Draw; Sasia Drawi	mp/Dimensioning	ML0	0.0	44.4	25.8	35.3	30.0	35.6	19.5	48.7	6.0	6.0	28.6	18.1
2	Recruite Construction		38.1	29.0	31.9	30.0	66.T	60.0	30.0	32.4	80.0	88.7	28.6	36.0	32.4
8	Ropfied Interfervenius		180.0	100.0	77.8	98.0	88.0	30.0	66.3	71.4	80.0	38.5	32.1	94.5	75.4
4	Drawing Techniques; Suppleme	ensary Views	81.8	100.0	38.5	35.8	66.T	60.0	87.5	181	86.7	88.7	42.0	33.1	38.1
8	Rewing		98.2	79.0	31.9	65.3	44.4	60.0	66.3	153	\$8.3	50.0	71.4	94.5	33.3
8	Architectural Drawing Types		36.0	0.0	44.4	25.8	35.3	30.8	35.6	19.5	46.7	6.0	6.0	28.6	18.1
7	tite Rele		38.1	29.0	31.9	38.0	66.7	80.0	30.0	32.4	80.0	88.7	28.6	36.0	32.4
8	Situational Creatings		100.0	100.0	77.8	98.0	88.0	30.0	66.1	21.4	80.0	38.5	32.1	94.5	75.4
9	Mechanical and Electrical Syste		81.8	100.0	38.3	35.8	86.7	60.0	87.5	181	86.2	66.7	42.0	33.1	38.1
10	Supplemental Drafting Architic	5	48.2	78.0	31.9	65.8	44.4	60.0	66.1	15.5	\$8.3	30.8	71.4	94.5	35.8
11	Specifications		81.8	100.0	36.3	35.8	66.7	60.0	87.5	181	86.7	66.7	42.0	33.1	38.1
	TOTAL ICOBE		68.3	78.0	81.0	68.8	45.4	60.0	66.3	85.5	65.5	80.0	714	64.5	38.8
	beefermanee - Breeke	matas W	2		3			3	a .	3					
q N dec.	Performance - Psycho Job Tille	motor subary	addiery addeed	Date Dates	Rady & Constraints	jaho sina	Point y Starting	o native 1 weight	PERMIT FOR ME	المراجع متواهد	Versities	Free Place	Ot args / one	Nee Nu	County Ship
		Avriation	adder y denne	40 (F 10)	2 anja constant	intera estera	and with the second		E secondo de	panying share 2	Section 2		Ge on De Vooren	84.994 94.3	
Job #	Job Title Indiana Igniticana Alle Devation	Avriation	-	5m		-	tan'	Planet	<b>P</b> ERMIN	ŝ	-	1003	8	2 au	Commit
,500 W	Job Title Indefensationand Alle Resolution Rishers and Reference Floor	Avriation	100.0	2 190.0	9 77.8 38.5 30.9	90.0 30.3 60.3	4 889 G 88.0 66.7 64.4	20.0	44.1 37.1 44.1	3 4 71.4	80-3 86-7 93-3	8 002 31.3	6 304	94.3 50.1 94.3	Comer
300 N	Job Tible Includental Ignitisticand Allo Deviation Distance and Behrstein Floor Light Potenting of SII Well	Avriation	100.0 81.8 48.2 50.0	2 1903 1903 78.0 0.0	4 77.8 36.5 30.9 64.4	98.0 38.3 46.3 25.3	400 00 00 00 00 00 00 00 00 00 00 00 00	100000 20.00	64.3 84.3 84.3 84.3 25.4	544 71.4 153 153 193	80.0 86.7 83.3 46.7	8 9 2 1 3 3 3 3 44.7 50 3 10 1	8 51.1 71.4 50	94.3 50.1 94.5 28.6	1. Comment
Job #	Job Title Indefensationand Alle Resolution Rishers and Reference Floor	Avriation	100-3 81-8 48-2	2 1903 1903 78.0 0.0	9 77.8 38.5 30.9	98.0 35.3 45.3 25.3	4 889 G 88.0 66.7 64.4	20.0 20.0 20.0	44.1 37.1 44.1	21.A 181 13.3	80-3 86-7 93-3	8 992 51.5 86.7 50.3	8 51.1 71.4 50	84.3 50.1 64.3 28.6	E E Commen-
300 H	Job Title Indiana (polotice) Alto Investor Dates and Dates an Tise Light having of UK Well Total BOOK Sen - Cognitis Sen - Cognitis	I Preparing to Draw, See II Contracting Construction II Applied Methometrics II Queening Techniques; In II Reading	100.3 81.8 98.2 56.0 48.3 6 Dead	2 1903 78.0 78.0 78.0 78.0	77.8 36.3 30.9 64.4 81.9	90.0 30.3 40.3 20.3 60.3 60.3	4 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10	30.0 60.0 30.0 50.0 50.0 50.0 50.0 50.0 50.0	44.1 37.1 44.1 35.6 44.3	21.4 18.1 19.1 19.1 19.1 19.1 19.1 19.1 19.1	80.0 80.7 83.3 40.7 95.3 40.7 95.3 chom	8 31.3 86.7 50.3 85.6 0tor	8 804 714 80 714 80 714	94.3 50.1 94.5 28.6	10000 71.4 38.1 38.3 18.1 18.1
20 7 1 2 3 4 Will K	And Title Institution Ignition and Alls Research United and Reference Theor Spin Prening of UK Well Ports, ICCOR Sen - Cognition 29, 2012	I Preparing to Dates; See II Connectify Construction II Applied Medicenteries II Operating Techniques; So	100-0 81-8 48-2 50-0 48-2 60 December 10 D	2 1903 78.0 20 78.0 78.0 78.0 78.0 78.0	77.8 36.3 30.9 64.4 81.9	90.0 30.3 40.3 20.3 60.3 60.3	480 06.7 04.4 33.3 46.4 Per	30.0 60.0 30.0 50.0 50.0 50.0 50.0 50.0 50.0	04.3 27.3 04.3 25.4 64.3 04.3	21.4 18.1 19.1 19.1 19.1 19.1 19.1 19.1 19.1	800 807 805 407 903 407 903 407 903 407 903 10	8 31.5 86.7 50.0 80.0 80.0 80.0 80.0	8 82.4 82.0 71.4 8.0 71.4 8.0 71.4 8 80 71.4 8 80 71.4 8 80 71.4 8 80 71.4 8 80 71.4 8 80 71.4 71.4 80 71.4 80 71.4 80 71.4 71.4 80 71.4 71.4 80 71.4 71.4 71.4 71.4 71.4 71.4 71.4 71.4	8 44.5 55.1 64.5 28.6 64.3	71.4 38.1 38.3 18.1

See Northern

Measuring what matters!



500 N BRONSON BIG RAPIDS MI 49307 231.796.4695 nocti@nocti.org

Integrated Academics - Group Report

Site: Any Career Tech Center (XXXX) Test Date: 05/04/2008

Standards Level: National

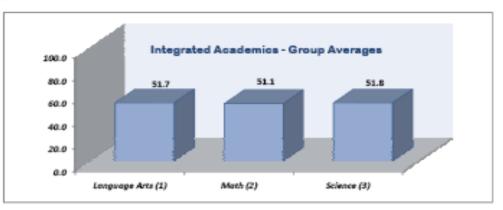
Level: Secondary Type: Post-test

Carpentry - 3015 v01												
Written - Cognitive		Percentage	of Items Answere	d Carrectly								
Participant Name	Total Test Score	Language Arts (1)	Math (2)	Scheence (3)								
Mickey Mouse	\$6.7	20.0	40.0	25.0								
Don Deck	66.7	25.0	50.0	75.0								
Vera Wang	\$0.0	40.0	25.0	\$3.0								
Fagis Philbin	66.7	50.0	75.0	32.0								
George Jones	46.7	25.0	90.0	45.0								
Conway Twitty	71.4	75.0	30.0	63.0								
Mineie Mouse	66.7	90.0	45.0	25.0								
Butty Boop	\$0.0	30.0	60.0	75.0								
Eufly Eagel	77.5	\$9.2	47.0	79.3								
Tin McGraw	46.7	60.0	90.0	32.0								
Kenny Chesney	66.7	75.0	30.0	45.0								
Group Averages	68.7	\$1.7	\$1.1	51.8								

(1) NCTE - National Council of Teachers of English

(2) NCTM - National Council of Teachers of Mathematics

(3) NSES - National Science Education Standards



This Group Report shows the percentage of integrated academic items answered correctly, by academic discipline, and provides each test taker's total test score for reference. A group average for each discipline is also provided.

# Integrated Academics Reporting Tool

Measuring what matters!

## **Task Link Reporting**

Provides in-depth information on performance at task level

□ Use to identify strengths and areas for improvement



Site Name Coordinator Name 123 Any Road Nowhere, US 12345 site email address

#### Task Level Report Multiple Choice Assessment

Items Correct by Participant

Test Code: 2031 v01 Test Title: Electrical Occupations Test Date: 05/11/2009 Level: Secondary Type: Post-test

Duty		Task Description	# Items Possible per Task	Average Correct by Group	RONDA MCDONALD	JOEY BUOY	TOM CRUZE	HERMAN MUNST	GEORGE STORM	SHERRY CHIP	PETER RABB
Safety	1	Apply shop safety rules and ergonomics	3	2.1	3	2	3	2	3	2	0
Safety	2	Describe protection procedures when working in confined spaces	3	1.6	2	2	1	2	1	2	1
Safety	3	Explain fire prevention guidelines and methods	3	2.3	2	3	3	2	3	2	1
Safety	4	Demonstrate lock-out/tag-out procedures	3	1.9	3	1	2	3	1	2	1
Safety	5	Describe procedures for responding to electrical hazards & shock emergencies	3	2.0	3	1	3	1	3	2	1
Safety	6	Explain the OSHA requirements of grounding on a job site	2	1.6	2	2	1	2	1	1	2
Safety	7	Demonstrate the proper use of ladders and scaffolding	3	2.3	2	3	3	2	3	2	1

#### Task Level Report Performance Assessment Points Earned by Participant

Test Code: 2031 v01 Test Title: Electrical Occupations

Test Date: 05/11/2009

Level: Secondary Type: Post-test

	Job		Criteria	Points Possible	A verage Points Earned by Group	RONDA INCDONALD	JOEY BUOY	TOM CRUZE	HERINAN MUNST	GEORGE STORIM	SHERRY CHIP	PETER RABB
2	Wire Lighting Control	13	Test Lighting Control	5	4.4	5	5	1	5	5	5	5
2	Wire Lighting Control	14	Time to Complete Job 2	5	5.0	5	5	5	5	5	5	5
3	Install Door Chimes	15	Selection of Tools	5	3.6	3	5	5	1	3	3	5
3	Install Door Chimes	16	Door Chime Installation	20	12.6	8	12	12	16	16	12	12
3	In stall Door Chimes	17	Test Door Chimes	10	8.9	10	10	10	8	8	8	8
3	Install Door Chimes	18	Time to Complete Job 3	5	4.4	5	5	5	5	5	5	1

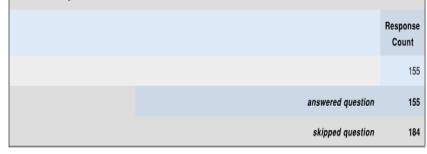
### **Student Factors Affecting Achievement**

- Student motivation survey data on effort
- Students academic/reading ability graph
- Student's attendance
- Student's participation in CTSO

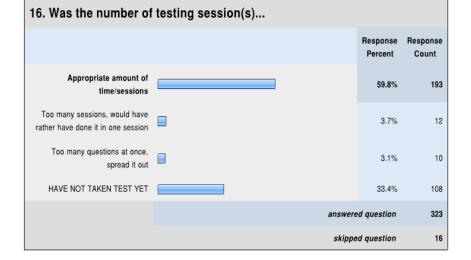
# Survey Data from 2010

13. Did you put forth y	our best effort on the computerized e	exam?	
		Response Percent	Response Count
Yes		64.4%	208
No	0	0.9%	3
Sort of		5.6%	18
HAVE NOT TAKEN TEST YET		29.1%	94
	answere	ed question	323
	skippe	ed question	16

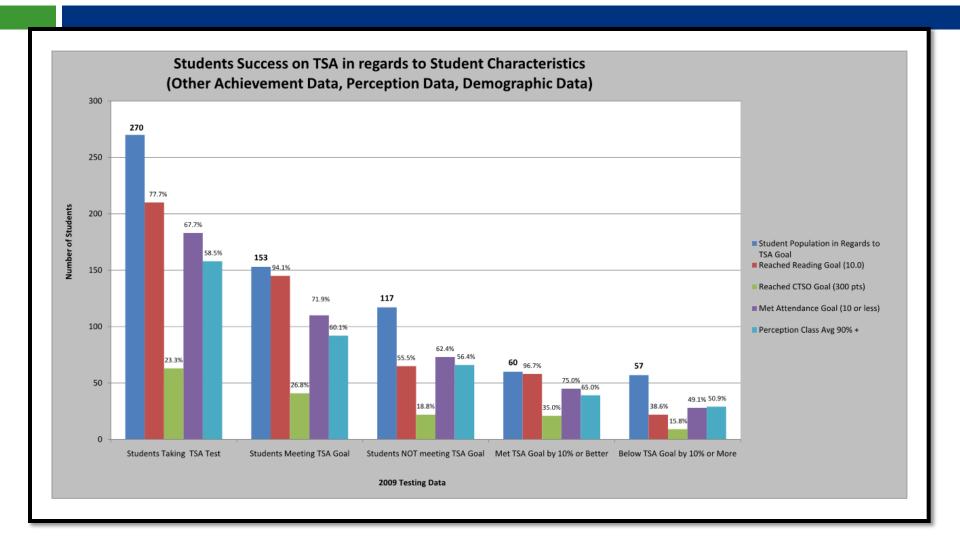
14. Based on how you answered the question above, why did you put forth the effort you did?



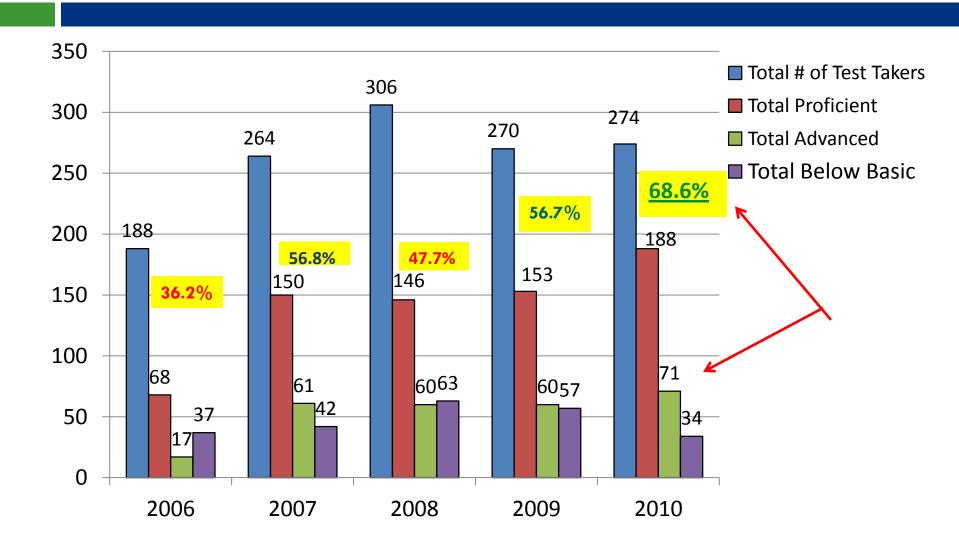




### **Characteristics of Test Takers**



### **CTC Five-Year TSA Data**



# Indexing The Scores

#### 2010 Student TSA Index Scores by Program

		scoring more	# of students		udents ing at out less 10% ove	scoring the goal more th	udents a below l, but no lan 10% below	scoring more b	tudents g 10% or elow the oal	Total Test Takers	NOCTI Index Score
		#	т	#	т	#	т	#	т		
	Programs		(10)		(8.5)		(6.5)		(4.5)		
1	Program 1	4	40	16	136	5	32.5	1	4.5	26	81.92
2	Program 2	6	60	15	127.5	5	32.5	6	27	32	77.19
3	Program 3	3	30	13	110.5	5	32.5	2	9	23	79.13
4	Program 4	3	30	5	42.5	2	13	1	4.5	11	81.82
5	Program 5	15	150	11	93.5	4	26	2	9	32	87.03
6	Program 6	4	40	6	51	5	32.5	3	13.5	18	76.11
7	Program 7	5	50	4	34	3	19.5	0	0	12	86.25
8	Program 8	6	60	4	34	1	6.5	0	0	11	91.36
9	Program 9	0	0	8	68	5	32.5	7	31.5	20	66.00
10	Program 10	10	100	8	68	7	45.5	1	4.5	26	83.85
11	Program 11	1	10	2	17	1	6.5	1	4.5	5	76.00
12	Program 12	14	140	19	161.5	4	26	0	0	37	88.51
13	Program 13	0	0	3	25.5	1	6.5	0	0	4	80.00
14	Program 14	0	0	3	25.5	4	26	10	45	17	56.76
		7	1	1	17	5	2		34		
		25.	9%	42	.7%	19.	0%	12	2.4%		
			68.6%	At or Ab	ove Goal		31.4%	Below G	ioal		
	TOTAL SCORES/AVERAGES		18	88			6	6		274	79.42

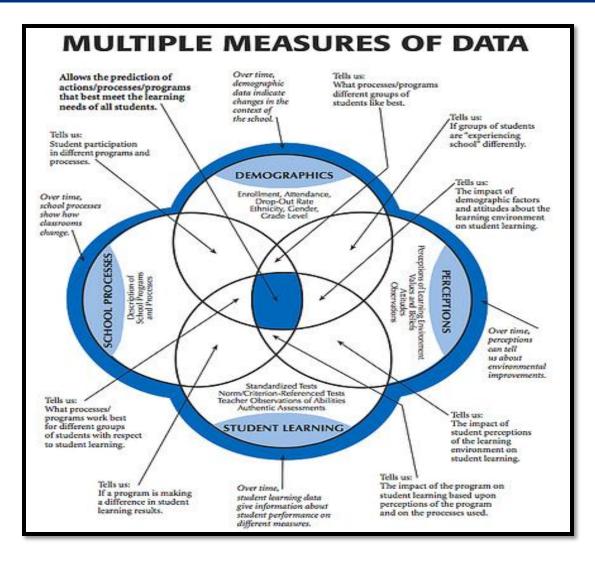
Exceeds Expectations = 87.0 - 100

Meets Expectations = 72.00 - 86.9

Belows expectations = 71.9 - 59.5

Not Acceptable = 59.4 - below

### TSA Data – Only One Source



### Questions ?

- For more information:
- Dennis D. Harden, Ed.D.
- Coordinator, Career Education
- **Missouri Department of Education**
- Dennis.harden@dese.mo.gov
- (573) 751-3500

Dr. John Foster, President/CEO NOCTI John.Foster@nocti.org (800) 334-6283 Ext. 218