

Summary of Research Findings

Overview

This section of the report provides a summary of the most pertinent findings.

- Employer Profiles
- Jobs Outlook for the Next Five Years
- Job Skills and Personal Traits Needed for Current Jobs
- Deficiencies in Job Skills and Personal Traits Observed in Current Employees and Applicants
- Job Skills and Personal Traits Needed for New Jobs Planned for the Next Five Years
- Education and Training Needed for New Jobs Planned for the Next Five Years
- Employer Responses to Market Outlook Questions

More detail can be found in the appendix. Cross-tabulation reports which provide detailed responses for each survey question may be requested from EKCEP.

Employer Profile

The survey respondents were responsible for the staffing decisions at their respective organizations. As such, they tended to be older, more senior executives. The average age among respondents was 49 years, and 60% were over age 50.

The respondents also tended to be industry veterans, with an average of nearly 21 years in their respective industries.

More than 40% of respondents had earned at least a Bachelor degree, and an additional 18% held a graduate degree.

The table below provides a summary of the respondents by industry.

Respondent Profile	Total	Employer Type			
		Sample	Healthcare	Mining	Construction
n=	100	25	10	22	43
	%	%	%	%	%
<u>Respondent Sex</u>					
Male	57	28	70	59	69
Female	43	72	30	41	31
<u>Respondent Age</u>					
34 and Under	7	8	--	9	7
35 to 49	33	42	--	18	43
50 or Older	60	50	100	73	50
Average Age	49.0	46.8	54.3	51.3	48.0
<u>Respondent Education</u>					
High School or Less	10	--	10	23	9
Associate Degree	8	16	20	---	5
Technical/Vocational School	5	4	--	13	2
Some College	15	20	20	18	9
Bachelor Degree	44	48	20	41	49
Masters Degree	16	12	30	5	21
Doctoral/PHD Degree	2	--	--	--	5
<u>Respondent Tenure</u>					
Average Years in Industry	20.6	20.0	27.6	23.3	18.2
Average Years with Company	16.7	15.0	18.2	20.1	15.7
Average Years in Current Position	12.4	12.7	6.8	17.5	10.8

Profile of Employer Companies

The employer companies included in the study were likely to be involved in a variety of industry trade groups and other business organizations, as shown in the table below.

Employer Profile	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
	%	%	%	%	%
<u>Industry Type</u>					
Healthcare	25	100			
Mining	10		100		
Construction	22			100	
General Business	43				100
<u>Professional Organization Membership</u>					
BBB	30	47	17	30	21
Local Chamber	72	68	17	80	83
KY Chamber	45	32	83	40	48
Other (Trade Groups, etc)	39	32	17	50	45
<u>Use of Selected Programs/Tools</u>					
Employee Manual	87	100	100	62	88
Employee Orientation	94	96	100	86	95
Professional Development Opportunities	78	92	80	57	79
Diversity Program	61	67	60	60	59

Employer Jobs Profile

Employers were asked to indicate the number of employees at their location in each of the following categories:

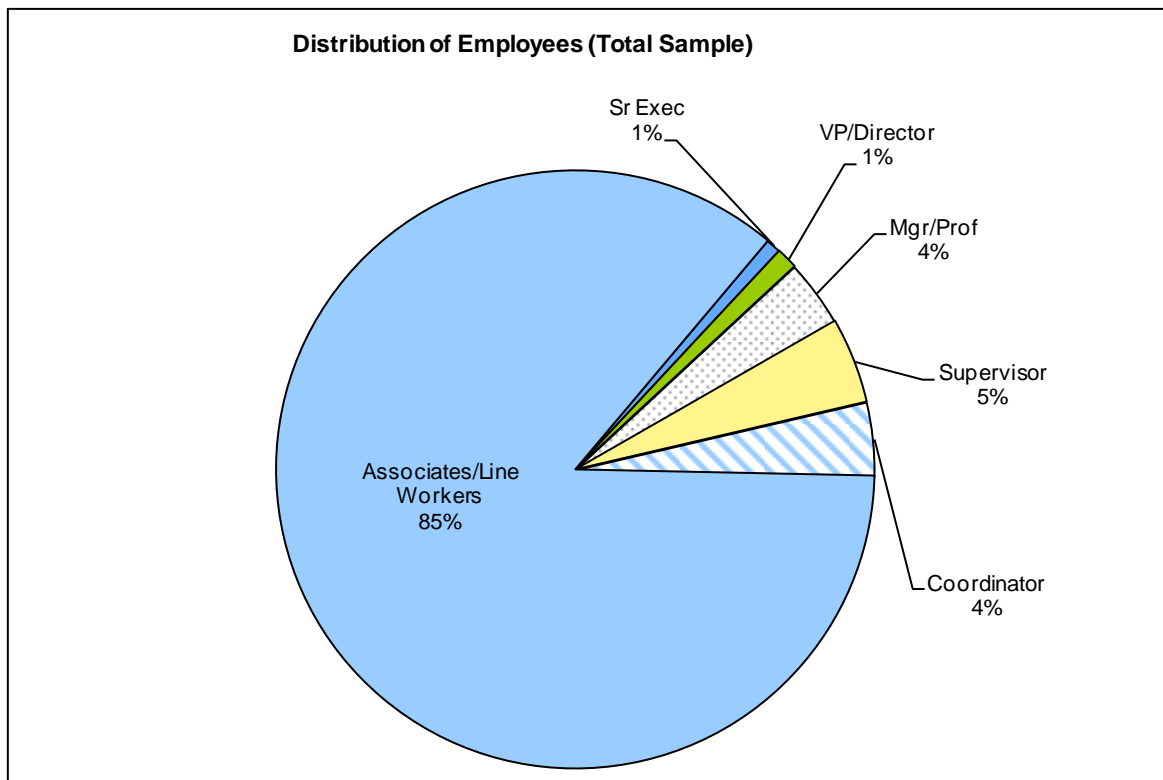
Senior Executive	Top level authority in a company, such as an owner, president, principal, or officer.
Vice President / Director	Controls, manages, and directs staff and resources while reporting directly to a senior level executive.
Manager / Professional	Manages and oversees staff or reports directly to more senior employees

Supervisor	Supervises department and staff while reporting directly to the manager. Mid-level.
Coordinator	Coordinates and completes assigned projects while reporting directly to departmental manager. May not manage others.
Associate / Line Worker	Staff that complete assignments and responsibilities while reporting to their designated supervisor.

Average Employment. The table below shows the average number of employees by industry group. As indicated, the mining and healthcare sectors employ many more employees on average than do those in the other sectors represented.

Employer Job Counts (Average by Job Type)	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
Senior Executives	1.3	1.0	0.9	1.5	1.4
Vice President/Director	1.9	2.4	1.9	1.3	2.0
Manager/Professional	5.9	8.8	7.9	2.6	5.4
Supervisor	7.6	5.1	27.8	5.5	5.4
Coordinator	6.5	7.5	15.0	1.2	6.8
Associate/Line Worker	<u>140.0</u>	<u>259.2</u>	<u>346.5</u>	<u>55.4</u>	<u>66.0</u>
Total Average Employees	168.0	303.0	400.0	67.4	87.1

Distribution of Employees by Job Type. Associates/Line Workers account for 85% of all employees represented by employers surveyed.



Employee Tenure. Senior Executives averaged just over 13 years employment with their company. Associates/Line Workers in the Mining category were likely to be employed with their current company far longer than those in other industries.

Employee Tenure (Average Years by Job Type)	Employer Type				
	<u>Total</u>				<u>General</u>
	<u>Sample</u>	<u>Healthcare</u>	<u>Mining</u>	<u>Construction</u>	<u>Business</u>
n=	100	25	10	22	43
Senior Executives	13.3	11.2	14.6	15.7	12.9
Vice President/Director	6.9	7.4	5.6	5.8	7.2
Manager/Professional	7.8	8.3	13.0	3.4	8.7
Supervisor	5.9	4.6	9.7	3.1	7.2
Coordinator	6.8	6.7	9.2	6.4	6.1
Associate/Line Worker	6.4	6.7	10.5	6.5	5.2

Employee Pay. Employers were asked to provide average wage and salary information for each job type within their organizations. The responses were converted to hourly wage rates for comparative purposes and are shown in the table below.

Employee Pay (Average Hourly Rate by Job Type)	Employer Type				
	<u>Total</u>				<u>General</u>
	<u>Sample</u>	<u>Healthcare</u>	<u>Mining</u>	<u>Construction</u>	<u>Business</u>
n=	100	25	10	22	43
Senior Executives	\$52	\$64	\$74	\$37	\$55
Vice President/Director	\$36	\$37	\$64	\$27	\$32
Manager/Professional	\$26	\$23	\$42	\$23	\$25
Supervisor	\$22	\$18	\$40	\$20	\$20
Coordinator	\$21	\$16	\$37	\$16	\$19
Associate/Line Worker	\$14	\$12	\$25	\$13	\$13

Note: The averages shown in the table above should be used with caution. Some employers were unwilling to provide wage and salary information for all positions, especially for those in executive and ownership positions.

Employee Education. Employers indicated the level of education needed for each job category. Note that the percentages add to greater than 100% because of the varying levels of education needed within each job category. For example, one position in the Associates/Line Worker category might only require a high school education while another might require an Associate degree.

As might be expected, positions in the Healthcare field were likely to require higher levels of education. However, as indicated in the table below, respondents across the board reported rather high incidences of need for college degrees.

Education Levels Needed for Current Jobs	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
Total Sample	n= 100	25	10	22	43
High School diploma or GED	80	76	80	82	81
Vocational/Technical Certification	50	56	70	68	33
Associate degree	42	60	40	18	44
Bachelor degree	67	72	80	50	70
Master degree	32	44	10	27	33
PHD/Doctoral degree	9	24			7
Professional degree	17	40	30	9	5
Other	5		10	5	7

The data were analyzed separately for Associates/Line Workers and for all other employee groups. This is shown in the table on the next page.

For Associates/Line Workers, 74% of employers indicated that high school diplomas were needed, and 48% said that some Vocational/Technical training or Associate Degree was needed.

The majority of advanced degree needs were expressed for higher level jobs.

Education Levels Needed for Current Jobs	<u>Total</u> Sample	<u>Employer Type</u>			
		<u>Healthcare</u>	<u>Mining</u>	<u>Construction</u>	<u>General Business</u>
	n= 100	25	10	22	43
<u>Line Workers</u>					
High School diploma or GED	74	68	80	77	74
Vocational/Technical Certification	36	44	30	55	23
Associate degree	12	28			12
Bachelor degree	7	12			9
Master degree	2	4			2
PHD/Doctoral degree					
Professional degree	3	8			2
Other	4		10	5	5
<u>All Positions Other Than Line Workers</u>					
High School diploma or GED	43	9	5	9	20
Vocational/Technical Certification	29	5	6	11	7
Associate degree	38	13	4	4	17
Bachelor degree	67	18	8	11	30
Master degree	31	10	1	6	14
PHD/Doctoral degree	9	6	-	-	3
Professional degree	17	10	3	2	2
Other	2		1	1	3

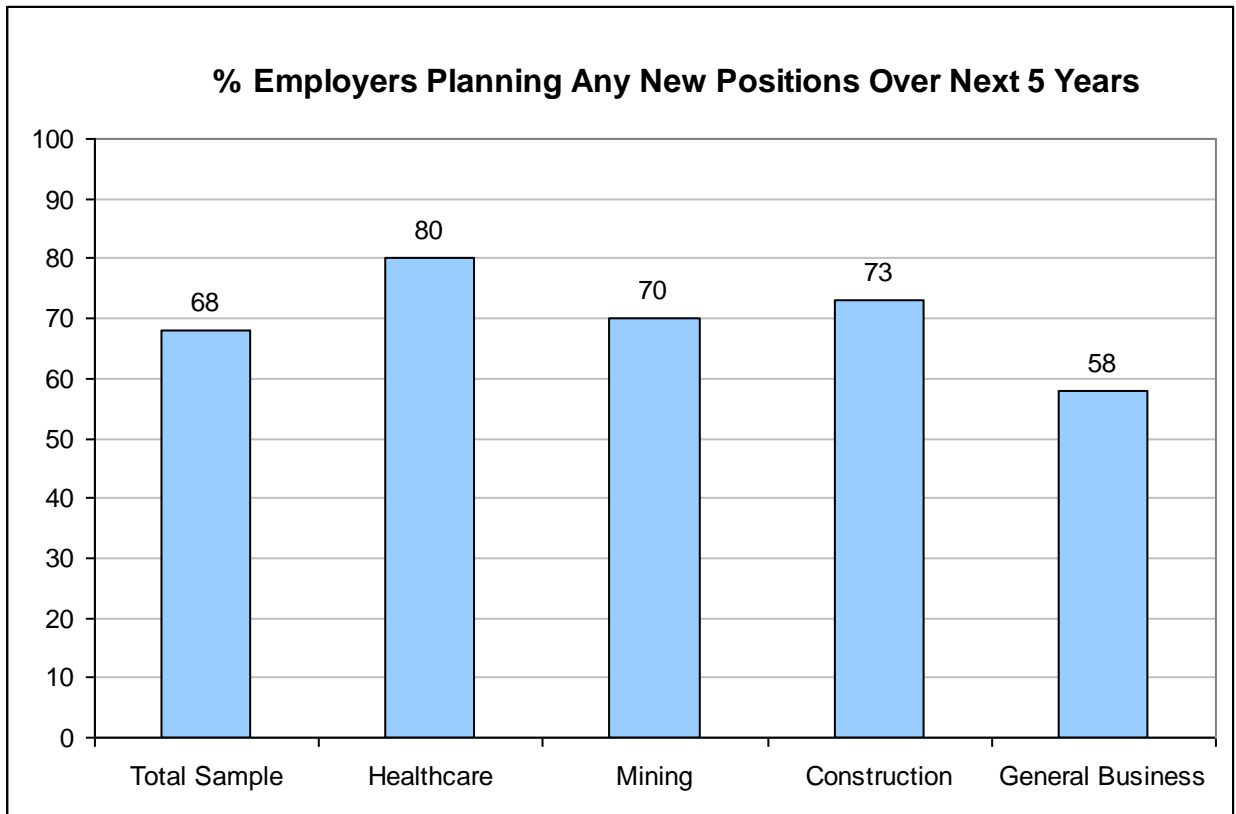
Employment Outlook for Next Five Years

Employer Plans to Add Jobs in the Next Five Years

Employers were asked to indicate the likelihood of creating new positions in each job category over the next five years:

"In the next five (5) years, do you expect the number of employees in each category to increase, remain stable, or decrease?"

Overall, 63% of employers indicated that they planned to increase the number of jobs in their companies over the next five years. Those representing Healthcare companies were more likely to say that their companies planned to add jobs.



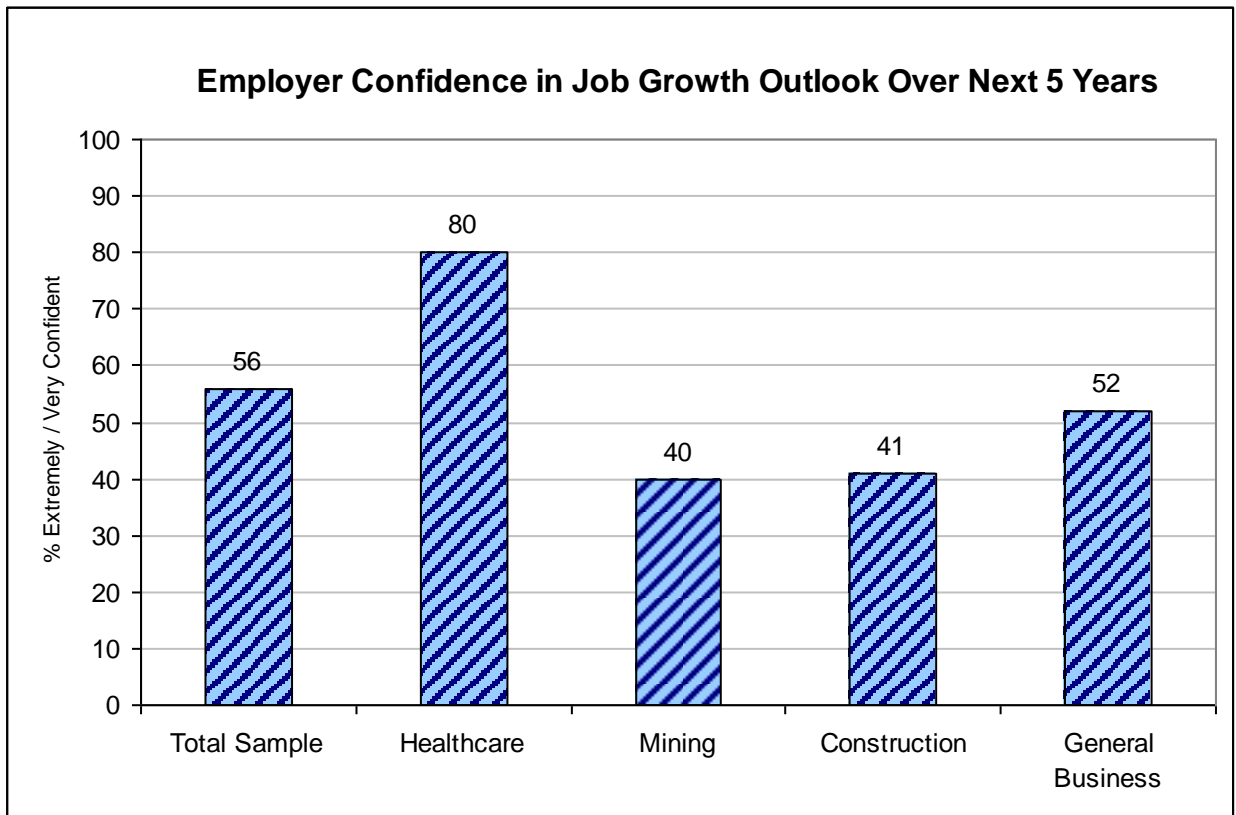
Employer Confidence in Five Year Jobs Outlook

To provide context for the stated hiring plans, employers were asked to indicate the level of confidence they had in the projection. Given the current economic and political situation facing the U.S. in general and the particularly hard-hit economy of Eastern Kentucky, it might be expected that projections might be made with some degree of caution.

The following five-point scale was used:

- Extremely Confident
- Very Confident
- Somewhat Confident
- Not Very Confident
- Not At All Confident

The chart below shows the percentage of Extremely or Very Confident responses by industry. With the exception of Healthcare (80%), these are not particularly high values. Anecdotally, many employers in eastern Kentucky have indicated that they are waiting to see what happens with the economy and/or legislation before taking steps to grow. This is especially true for those in the Mining sector.

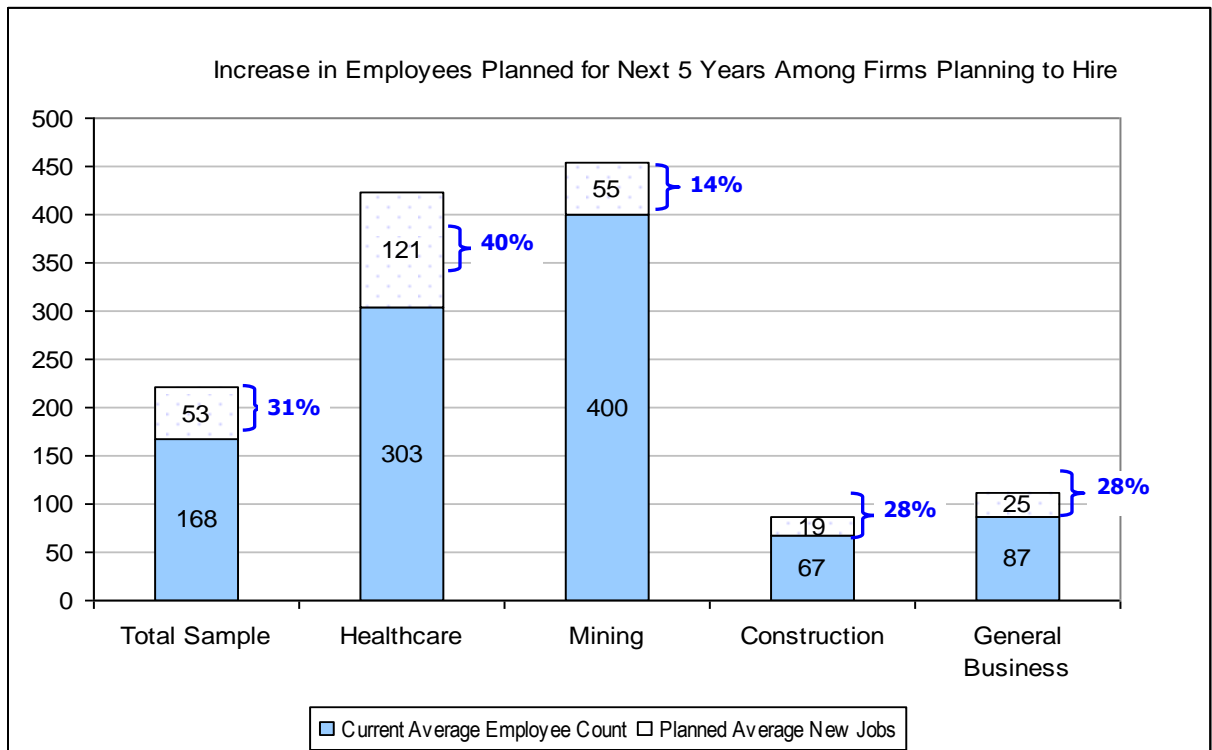


Number of Jobs Planned for Next Five Years

Those who indicated that they plan to add jobs over the next five years were asked to project the number of new positions planned. For those planning to hire, the number of new positions averaged 53. This was driven largely by Healthcare, which averaged 121 new positions. Again, caution should be used when interpreting these projections due to the relative weak confidence expressed by employers.

Average Number of New Jobs Planned Over Next 5 years	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
Average Number of New Jobs Planned (All Levels) Among Firms Planning to Hire	52.9	120.8	54.5	18.6	24.8
Average Number of New Jobs Planned (All Levels) Among All Firms	23.4	55.4	34.4	10.0	9.0

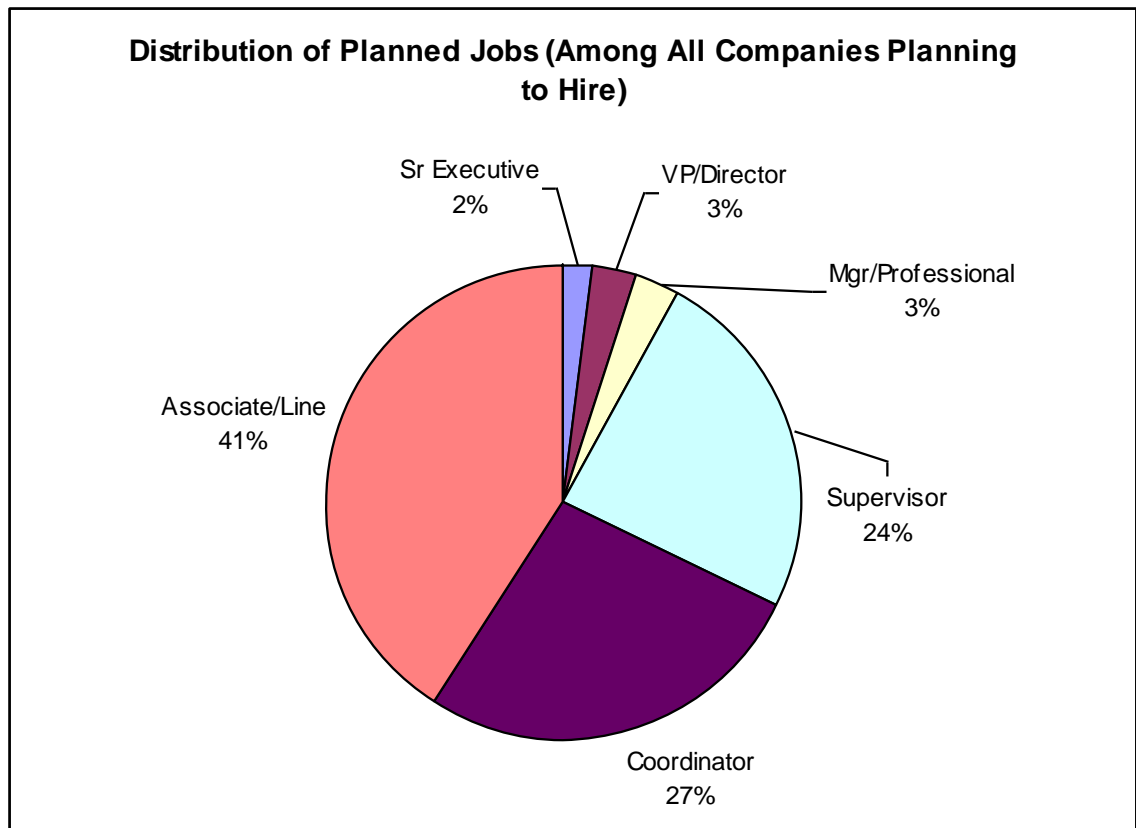
The chart below shows the projected increase in jobs, on average, for those companies planning to hire over the next five years. As indicated, the employer projections represent a 31% growth in jobs (if fully implemented).



The job growth projection data were analyzed by position. The table below shows the averages for those who planned to hire in each given position as well as among the total sample.

Average Number of New Jobs Planned Over Next 5 years	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
Among Firms with Planned Hiring					
Senior Executives	1.5	3.0	1.0	1.0	1.0
Vice President/Director	2.1	2.5	1.0	0.0	2.3
Manager/Professional	2.2	2.5	1.0	2.3	2.3
Supervisor	17.3	59.8	7.3	2.3	3.4
Coordinator	19.2	53.3	3.5	1.7	6.3
Associate/Line Worker	29.7	52.9	44.3	13.1	15.8
Among All Firms					
Senior Executives	0.1	0.2	0.2	0.0	0.1
Vice President/Director	0.2	0.2	0.1	0.0	0.2
Manager/Professional	0.4	0.4	0.2	0.4	0.3
Supervisor	4.3	14.4	2.9	0.6	0.7
Coordinator	0.1	0.2	0.2	0.0	0.1
Associate/Line Worker	18.4	40.2	31.0	8.9	7.7

As indicated, planned growth is focused on Associates/Line Workers, Coordinators, and Supervisors.



Employee Skills Needed for Current Jobs

Employers were asked to indicate the critical job skills needed by position within their organizations.

*"In this section of the questionnaire, we'd like you to consider what skills are needed for the positions you currently have in your organization. In the lists below, simply check those skills that are **most critical** to you when hiring an employee in that category. If a particular skill is not important (or not a priority) for that category of employee, simply leave it unchecked."*

The questionnaire included all of the job skills being measured and employers were free to check as many or as few that applied to each position. See the example questionnaire in the Appendix for more detail.

Job Skills Measured in the Survey

The job skills included in the survey were presented in four categories, as shown in the table below.

100 Physical Skills / Primarily Using Tools	200 Mental Skills / Primarily Using Ideas	300 Social Skills / Primarily Using Relational Abilities	400 Traditional Workplace Skills / Primarily Using Data & Information
101 Physical stamina	201 Mathematical computation	301 Verbal ability	401 Reading Comprehension
102 Carry or lift	202 Writing ability	302 Public Speaking	402 Monitor Processes
103 Work in closed spaces	203 Critical thinking ability	303 Maintains confidentiality	403 Probing
104 Agility	204 Multicultural Awareness	304 Instruct/Teach	404 Computer/Technical literacy
105 Strength	205 Scientific analysis	305 Explain a concept	405 Plan
106 Manual dexterity	206 Abstract thinking	306 Help others	406 Collecting data
107 Build	207 Conducting research	307 Attentive Listener	407 Interpret data
108 Repair	208 Analytical skill	308 Delegate	408 Make decisions
109 Fine motor coordination	209 Understand theoretical concepts	309 Sell a product	409 Organized
110 Cultivate plants	210 Spatial visualization	310 Direct a project	410 Time management
111 Mechanical abilities	211 Design	311 Reach goals	411 Detail-oriented
112 Produce handmade crafts	212 Edit	312 Negotiate	412 Work with computer software
	213 Generate ideas	313 Persuade	413 Keep records
	214 Develop concepts	314 Evaluate	414 Financial analysis
	215 Artistic	315 Works well within a team	415 Project management
			416 Budget

Critical Job Skills Needed By Employers for Current Jobs

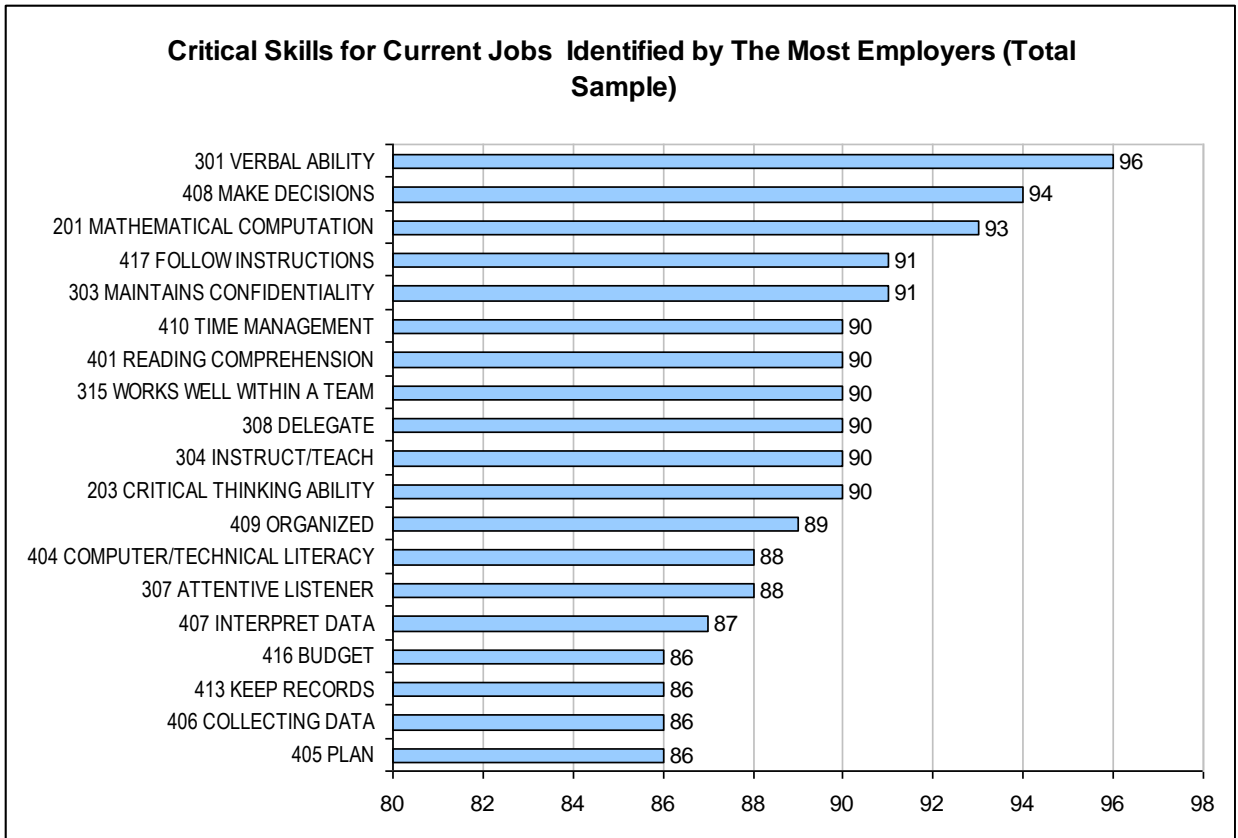
The table on the next page shows the percentage of companies which indicated a need for each job skill for all job levels combined. (Note: breakdowns of critical job skills by job type and industry grouping are provided later in this report.)

The table is organized by skill category (i.e., Physical, Mental, Social, Traditional) and in descending order within each category.

While there were some differences in the absolute percentages expressed by employers in each industry sector, certain skills tended to be important across all industry categories.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample n=	100	25	10	22
	%	%	%	%	%
101 PHYSICAL STAMINA	78	68	100	100	67
102 CARRY OR LIFT	69	52	100	95	58
105 STRENGTH	60	44	90	86	49
106 MANUAL DEXTERITY	56	56	90	73	40
104 AGILITY	54	48	80	86	35
109 FINE MOTOR COORDINATION	51	44	60	73	42
108 REPAIR	50	20	80	82	44
111 MECHANICAL ABILITIES	50	20	90	77	44
103 WORK IN CLOSED SPACES	49	36	80	55	47
107 BUILD	42	12	60	82	35
112 PRODUCE HANDMADE CRAFTS	11	8	--	14	14
110 CULTIVATE PLANTS	7	-	--	9	12
201 MATHEMATICAL COMPUTATION	93	88	90	100	93
203 CRITICAL THINKING ABILITY	90	80	100	91	93
202 WRITING ABILITY	85	76	90	82	91
213 GENERATE IDEAS	84	72	80	91	88
214 DEVELOP CONCEPTS	76	68	90	73	79
206 ABSTRACT THINKING	73	72	70	64	79
208 ANALYTICAL SKILL	73	68	90	59	79
204 MULTICULTURAL AWARENESS	67	68	70	55	72
209 UNDERSTAND THEORETICAL CONCEPTS	61	64	70	59	58
207 CONDUCTING RESEARCH	56	52	80	41	60
211 DESIGN	52	44	60	68	47
205 SCIENTIFIC ANALYSIS	49	60	80	36	42
212 EDIT	47	40	60	45	49
210 SPATIAL VISUALIZATION	45	40	50	50	44
215 ARTISTIC	41	32	50	50	40
301 VERBAL ABILITY	96	92	100	95	98
303 MAINTAINS CONFIDENTIALITY	91	84	100	95	91
304 INSTRUCT/TEACH	90	84	100	91	91
308 DELEGATE	90	80	90	95	93
315 WORKS WELL WITHIN A TEAM	90	80	80	95	95
307 ATTENTIVE LISTENER	88	84	100	91	86
305 EXPLAIN A CONCEPT	85	80	80	86	88
306 HELP OTHERS	85	76	80	86	91
310 DIRECT A PROJECT	85	76	90	91	86
311 REACH GOALS	85	76	90	82	91
312 NEGOTIATE	85	76	90	86	88
314 EVALUATE	85	76	80	86	91
302 PUBLIC SPEAKING	81	80	70	82	84
313 PERSUADE	79	64	90	82	84
309 SELL A PRODUCT	64	48	50	68	74
408 MAKE DECISIONS	94	84	100	100	95
417 FOLLOW INSTRUCTIONS	91	80	100	100	91
401 READING COMPREHENSION	90	88	90	95	88
410 TIME MANAGEMENT	90	84	90	91	93
409 ORGANIZED	89	80	90	95	91
404 COMPUTER/TECHNICAL LITERACY	88	80	90	82	95
407 INTERPRET DATA	87	76	100	91	88
405 PLAN	86	76	80	91	91
406 COLLECTING DATA	86	76	80	91	91
413 KEEP RECORDS	86	76	90	91	88
416 BUDGET	86	84	90	86	86
411 DETAIL-ORIENTED	85	80	90	91	84
414 FINANCIAL ANALYSIS	84	80	90	77	88
402 MONITOR PROCESSES	83	80	80	77	88
412 WORK WITH COMPUTER SOFTWARE	82	84	60	73	91
415 PROJECT MANAGEMENT	80	80	70	82	81
403 PROBING	64	64	70	59	65

Among all categories, the job skills identified as being critical by the highest percentage of employers are shown below.



Deficiencies in Critical Job Skills Identified By Employers

Employers were asked to consider the job skills that they deemed critical for each job category and were then asked to indicate those skills that they observed lacking or deficient in employees and candidates for employment. The interviewers reviewed these one by one with the employers on a skill-specific basis:

"Let's review your answers to the questions about the skills needed for your employees. You said that the important skills in the (Skills Category Name) skills category for (Job Group) are (READ ITEMS CHECKED). Do you find that any of those skills are typically deficient or under-developed when hiring or evaluating employees in the (Job Group)? (If Yes) Which ones?"

The table on the next page shows the percentage of employers who A) needed a particular skill and B) indicated that the skill was deficient in employees or candidates.

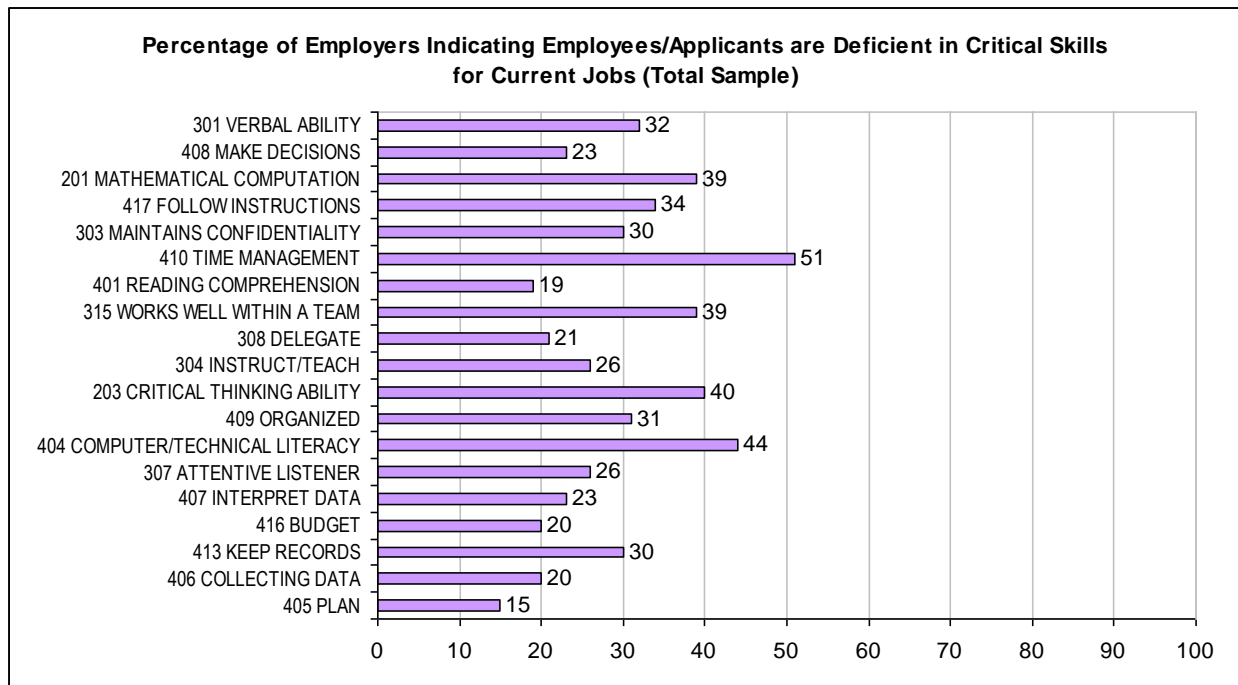
Note that these data are not weighted in any way. For example, job skill 110 Cultivating Plants shows that 50% of employers said this was a deficiency. However, this was the response by those who said that was a skill needed, which was 8% of the total sample. The analysis that follows the next table will address the weighting issue by focusing on those skills that were indicated as critical by higher percentages of employers.

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	n=	Employer Type				
		Total	Healthcare	Mining	Construction	General
		Sample				Business
	100	25	10	22	43	
	%	%	%	%	%	
110 CULTIVATE PLANTS	43	-	--	-	40	
111 MECHANICAL ABILITIES	46	40	56	41	47	
108 REPAIR	34	40	38	33	32	
112 PRODUCE HANDMADE CRAFTS	7	--	--	-	17	
101 PHYSICAL STAMINA	32	18	50	14	48	
104 AGILITY	28	33	38	21	27	
105 STRENGTH	27	18	44	11	38	
107 BUILD	24	67	33	17	20	
109 FINE MOTOR COORDINATION	24	27	50	13	22	
106 MANUAL DEXTERITY	23	14	44	6	35	
102 CARRY OR LIFT	23	15	30	10	36	
103 WORK IN CLOSED SPACES	22	22	38	8	25	
202 WRITING ABILITY	40	42	33	39	41	
203 CRITICAL THINKING ABILITY	40	40	50	25	45	
201 MATHEMATICAL COMPUTATION	39	27	33	45	43	
204 MULTICULTURAL AWARENESS	36	41	14	42	35	
208 ANALYTICAL SKILL	34	41	44	38	26	
213 GENERATE IDEAS	32	22	63	15	39	
210 SPATIAL VISUALIZATION	22	10	20	27	26	
215 ARTISTIC	22	25	20	9	29	
206 ABSTRACT THINKING	22	11	43	21	24	
207 CONDUCTING RESEARCH	20	8	25	22	23	
211 DESIGN	19	18	17	27	15	
205 SCIENTIFIC ANALYSIS	18	20	25	13	17	
214 DEVELOP CONCEPTS	17	-	33	13	24	
209 UNDERSTAND THEORETICAL CONCEPTS	15	13	29	15	12	
212 EDIT	11	-	-	20	14	
315 WORKS WELL WITHIN A TEAM	39	40	50	43	34	
302 PUBLIC SPEAKING	36	40	57	33	31	
301 VERBAL ABILITY	32	39	60	33	21	
303 MAINTAINS CONFIDENTIALITY	30	29	30	33	28	
311 REACH GOALS	27	16	33	28	31	
307 ATTENTIVE LISTENER	26	19	30	30	27	
304 INSTRUCT/TEACH	26	29	50	10	26	
305 EXPLAIN A CONCEPT	24	20	38	21	24	
309 SELL A PRODUCT	22	8	-	27	28	
308 DELEGATE	21	20	11	19	25	
313 PERSUADE	19	19	33	17	17	
306 HELP OTHERS	19	21	38	11	18	
310 DIRECT A PROJECT	19	11	33	15	22	
312 NEGOTIATE	18	32	22	11	13	
314 EVALUATE	18	11	13	11	26	
410 TIME MANAGEMENT	51	57	44	45	53	
404 COMPUTER/TECHNICAL LITERACY	44	40	67	44	41	
412 WORK WITH COMPUTER SOFTWARE	34	29	50	31	36	
417 FOLLOW INSTRUCTIONS	34	30	60	36	28	
409 ORGANIZED	31	25	22	33	36	
413 KEEP RECORDS	30	16	11	45	34	
411 DETAIL-ORIENTED	26	20	11	25	33	
408 MAKE DECISIONS	23	29	50	9	22	
407 INTERPRET DATA	23	26	-	20	29	
406 COLLECTING DATA	20	11	25	20	23	
416 BUDGET	20	14	22	16	24	
401 READING COMPREHENSION	19	18	33	14	18	
402 MONITOR PROCESSES	18	10	13	12	26	
414 FINANCIAL ANALYSIS	18	15	33	12	18	
415 PROJECT MANAGEMENT	18	10	-	11	29	
403 PROBING	16	19	-	8	21	
405 PLAN	15	11	13	5	23	

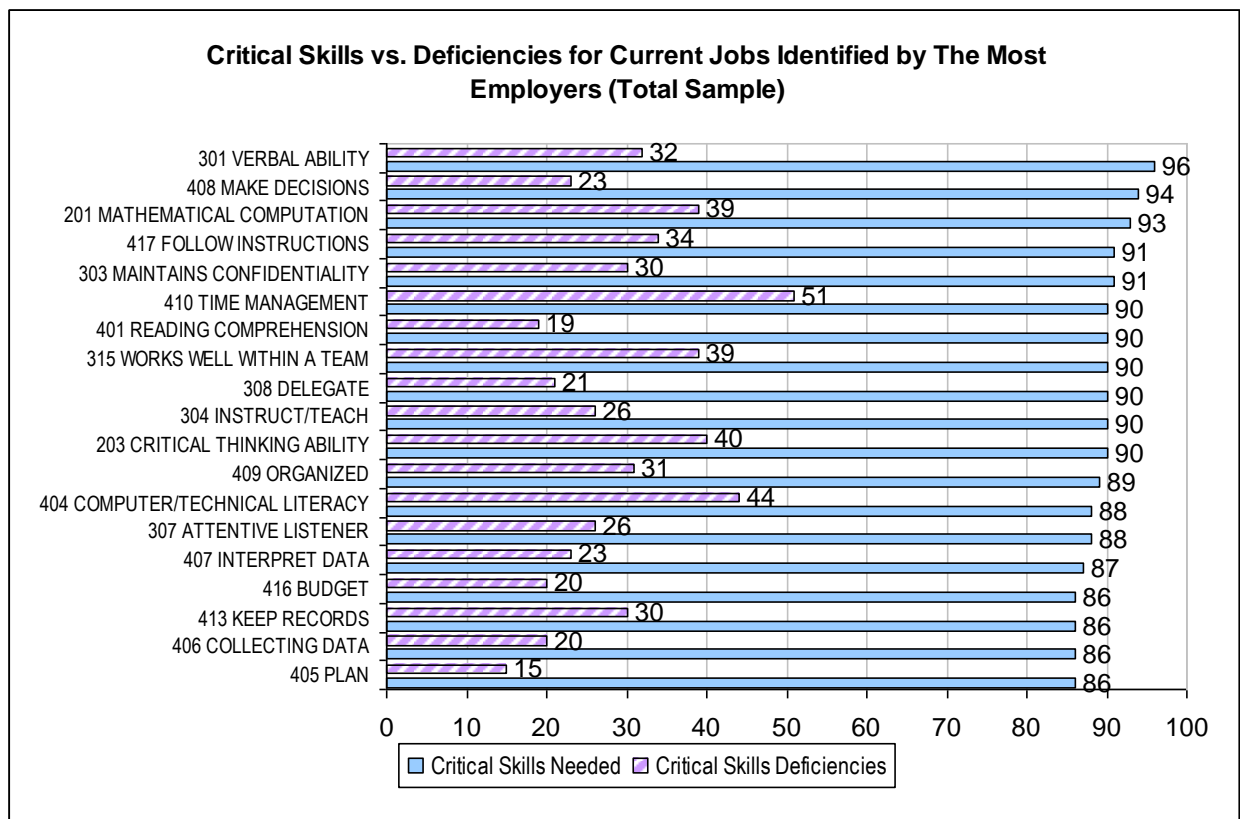
The chart below shows the deficiency results for the most critical job skills. The values indicate the percentage of employers who said the skill was critical and also said they observed a deficiency in that skill among applicants or employees.

As shown here, 51% of the employers who said that 410 Time Management was a critical skill also said that they observed deficiencies in their applicants or employees in this area. Of the 19 most critical job skills identified by employers, six were identified by more than 33% of employers as being a deficiency:

- 201 Mathematical Computation
- 417 Follows Instructions
- 401 Time Management
- 315 Works Well Within a Team
- 203 Critical Thinking Ability
- 404 Computer/Technical Literacy



In the chart below, the most critical skills are plotted with their associated deficiency scores. As indicated, there are specified areas of needed improvement in today's workforce and a plethora of training opportunities to increase their current skills.



The table on the next page includes projections of the percentage of employers who have employees lacking or deficient in each skill measured. This was calculated by multiplying the percentage response for each skill as critical for employees at any level by the percentage response (among those employers) in claiming that there was a deficiency in that skill among employees or applicants.

Example: 101 Physical Stamina (78% Critical x 32% Deficient = 25%)

While these projections are theoretical, they do provide EKCEP with a tool that can help focus resources in providing job skills training for employers.

Estimated Percentage of E KY Employers With Workforce Lacking Critical Skill (Base: Employers Needing Each Skill)	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample				Business
n=	100	25	10	22	43
	%	%	%	%	%
101 PHYSICAL STAMINA	25	12	50	14	33
102 CARRY OR LIFT	16	8	30	9	21
103 WORK IN CLOSED SPACES	11	8	30	5	12
104 AGILITY	15	16	30	18	9
105 STRENGTH	16	8	40	9	19
106 MANUAL DEXTERITY	13	8	40	5	14
107 BUILD	10	8	20	14	7
108 REPAIR	17	8	30	27	14
109 FINE MOTOR COORDINATION	12	12	30	9	9
110 CULTIVATE PLANTS	4	0	10	0	5
111 MECHANICAL ABILITIES	23	8	50	32	21
112 PRODUCE HANDMADE CRAFTS	4	8	10	0	2
201 MATHEMATICAL COMPUTATION	36	24	30	45	40
202 WRITING ABILITY	34	32	30	32	37
203 CRITICAL THINKING ABILITY	36	32	50	23	42
204 MULTICULTURAL AWARENESS	24	28	10	23	26
205 SCIENTIFIC ANALYSIS	9	12	20	5	7
206 ABSTRACT THINKING	16	8	30	14	19
207 CONDUCTING RESEARCH	11	4	20	9	14
208 ANALYTICAL SKILL	25	28	40	23	21
209 UNDERSTAND THEORETICAL CONCEPTS	9	8	20	9	7
210 SPATIAL VISUALIZATION	10	4	10	14	12
211 DESIGN	10	8	10	18	7
212 EDIT	5	0	0	9	7
213 GENERATE IDEAS	27	16	50	14	35
214 DEVELOP CONCEPTS	13	0	30	9	19
215 ARTISTIC	9	8	10	5	12
301 VERBAL ABILITY	31	36	60	32	21
302 PUBLIC SPEAKING	29	32	40	27	26
303 MAINTAINS CONFIDENTIALITY	27	24	30	32	26
304 INSTRUCT/TEACH	23	24	50	9	23
305 EXPLAIN A CONCEPT	20	16	30	18	21
306 HELP OTHERS	16	16	30	9	16
307 ATTENTIVE LISTENER	23	16	30	27	23
308 DELEGATE	19	16	10	18	23
309 SELL A PRODUCT	14	4	0	18	21
310 DIRECT A PROJECT	16	8	30	14	19
311 REACH GOALS	23	12	30	23	28
312 NEGOTIATE	15	24	20	9	12
313 PERSUADE	15	12	30	14	14
314 EVALUATE	15	8	10	9	23
315 WORKS WELL WITHIN A TEAM	35	32	40	41	33
401 READING COMPREHENSION	17	16	30	14	16
402 MONITOR PROCESSES	15	8	10	9	23
403 PROBING	10	12	0	5	14
404 COMPUTER/TECHNICAL LITERACY	39	32	60	36	40
405 PLAN	13	8	10	5	21
406 COLLECTING DATA	17	8	20	18	21
407 INTERPRET DATA	20	20	0	18	26
408 MAKE DECISIONS	22	24	50	9	21
409 ORGANIZED	28	20	20	32	33
410 TIME MANAGEMENT	46	48	40	41	49
411 DETAIL-ORIENTED	22	16	10	23	28
412 WORK WITH COMPUTER SOFTWARE	28	24	30	23	33
413 KEEP RECORDS	26	12	10	41	30
414 FINANCIAL ANALYSIS	15	12	30	9	16
415 PROJECT MANAGEMENT	14	8	0	9	23
416 BUDGET	17	12	20	14	21
417 FOLLOW INSTRUCTIONS	31	24	60	36	26

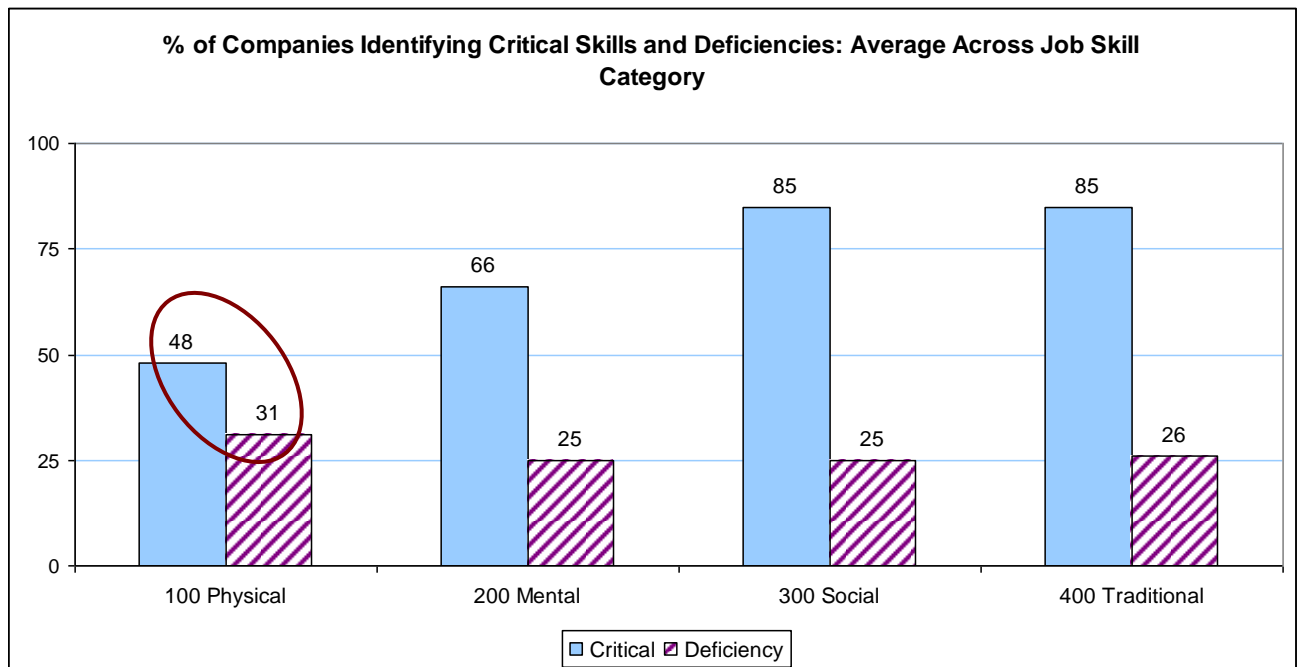
Critical Job Skills and Deficiencies Across Skill Categories

The average responses for identification as a critical job skill and deficiency were calculated across the four job skills categories. The results are shown in the following chart.

Skills in the 300 Social and 400 Traditional groups appear to be, on average, more critical than those in other categories.

The degree to which employers identified deficiencies in skills was roughly equal across all four job skill categories.

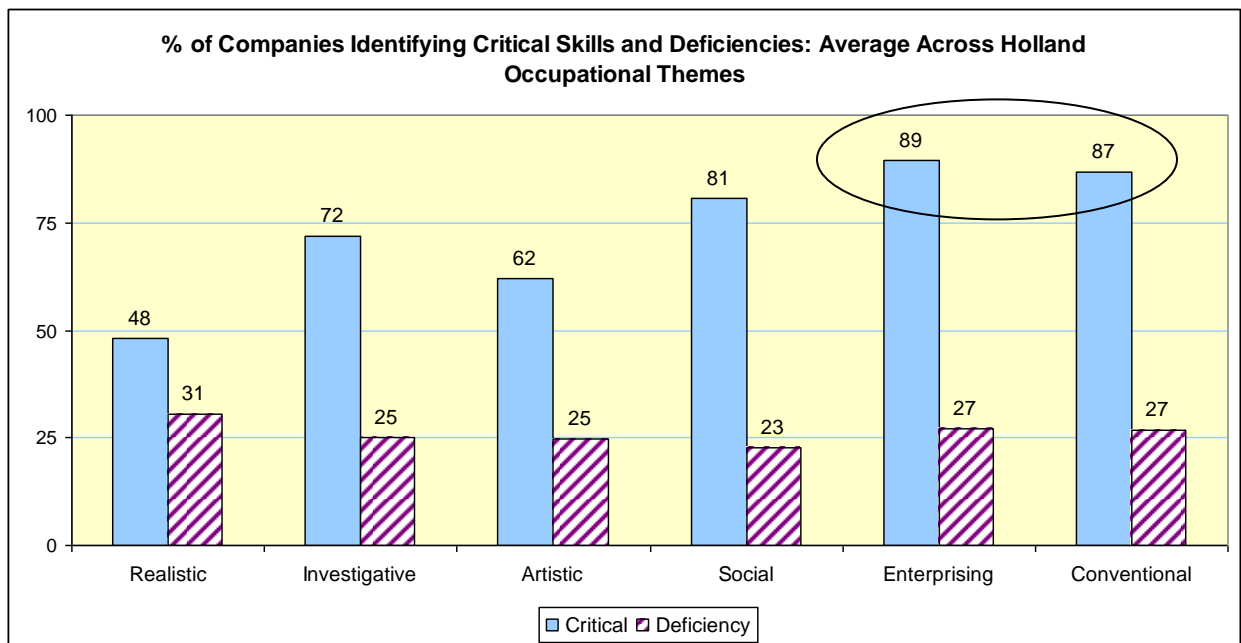
The graph suggests that while the skills in the 100 Physical group were not as critical as other groups of skills, a higher proportion of employers needing people with those skills are observing deficiencies. Among jobs requiring physical skills, the gap between supply and demand for prepared workers can be interpreted to be “more severe” than for other jobs.



Critical Job Skills and Deficiencies By Holland's Occupational Themes

The average responses for identification as a critical job skill and deficiency were also calculated across the six Holland occupational themes described on pages 12-15.

Skills in the Enterprising and Conventional themes were generally identified by higher percentages of employers as being critical for employees.



Employee Traits Needed for Current Jobs

Employers were asked to indicate the personal traits which were critical for employment in their companies.

"Next, please consider personality and character traits required for employees at the various levels in your company. In the lists below, check the three (3) most important traits when hiring an employee in that category. Be sure to prioritize for each category of employee and just choose the top three for each employee group in each of the four categories of traits."

The questionnaire included all of the job skills being measured. In this section of the questionnaire, employers were directed to choose only the three most critical traits needed for each job category. The responses were limited to three to force prioritization of many desirable traits. See the example questionnaire in the Appendix for more detail.

Employee Traits Measured in the Survey

The personal traits included in the survey were presented in four categories, as shown in the table below.

500 Personal Character Traits	600 Motivation Traits	700 Social Traits	800 Intellectual Traits
501 Honesty	601 Self confidence	701 Resolves conflict	801 Curiosity
502 Methodical	602 Industrious	702 Cooperative	802 Inquiring
503 Strong work ethic	603 Challenge status quo	703 Team-player	803 Rational
504 Reliability	604 Success driven	704 Compassionate	804 Effective problem-solver
505 Professionalism	605 Continuous improvement	705 Caring	805 Creativity
506 Dedication	606 Ambitious	706 Tactful	806 Decision-maker
507 Focused on task	607 Self management	707 Seeks feedback	807 Deductive reasoning
508 Punctual	608 Achieves goals	708 Courteous	808 Willingness to learn
509 Adaptable	609 Informed risk-taker	709 Persuasive	809 Forward Thinking (to future)
510 Respectful	610 Take the initiative	710 Clearly expresses ideas	
511 Role model for others	611 Inspires others	711 Fosters Collaboration	
	612 Tenacity	712 Likable Personality	
		713 Open to constructive criticism	

Critical Personal Traits Needed By Employers for Current Jobs

The table on the next page shows the percentage of companies which indicated a need for each personal trait for all job levels combined. (Note: breakdowns of critical personal traits by job type and industry grouping are provided later in this report.)

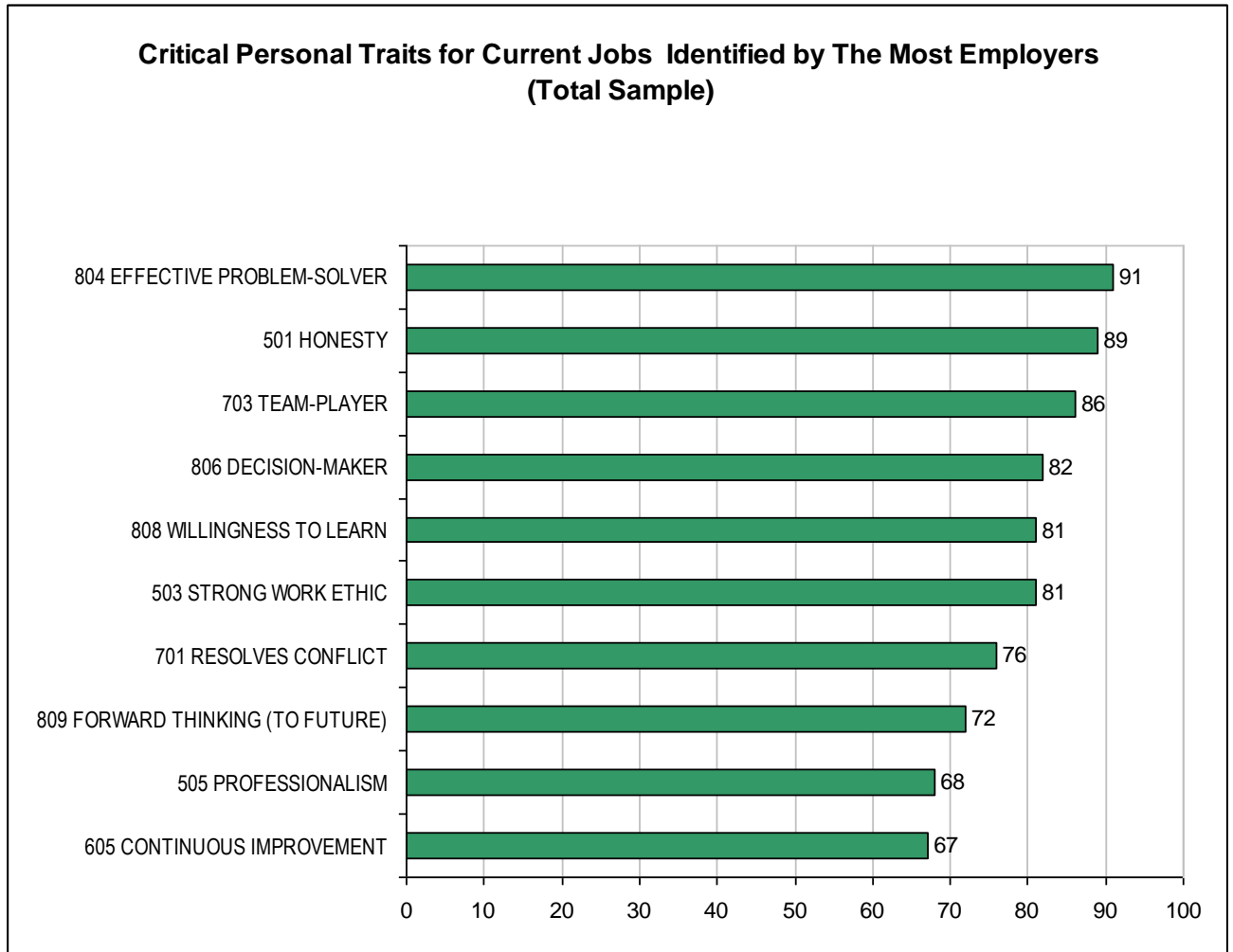
The table is categorized by trait grouping (i.e., Personal Character, Motivation, Social, Intellectual) in descending order within each category.

There is a clear distinction between the personal traits considered most critical and those selected by fewer employers.

Of the 45 personal traits measured, just 15 were identified as critical by 60% or more of the employers. Six traits were selected by 80% or more of the sample. The average percentage response for each trait was approximately 50%.

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample				Business
n=	100	25	10	22	43
	%	%	%	%	%
501 HONESTY	89	76	90	95	93
503 STRONG WORK ETHIC	81	72	90	91	79
505 PROFESSIONALISM	68	72	70	59	70
504 RELIABILITY	64	44	90	68	67
506 DEDICATION	47	36	60	50	49
511 ROLE MODEL FOR OTHERS	42	40	60	36	42
507 FOCUSED ON TASK	37	32	40	36	40
508 PUNCTUAL	31	24	40	27	35
509 ADAPTABLE	25	24	20	27	26
510 RESPECTFUL	23	16	40	14	28
502 METHODOICAL	18	8	30	27	16
605 CONTINUOUS IMPROVEMENT	67	52	90	59	74
611 INSPIRES OTHERS	65	60	90	64	63
601 SELF CONFIDENCE	63	64	70	64	60
608 ACHIEVES GOALS	60	52	80	64	58
607 SELF MANAGEMENT	59	56	80	50	60
610 TAKE THE INITIATIVE	59	60	80	64	51
602 INDUSTRIOUS	53	36	80	64	51
604 SUCCESS DRIVEN	51	40	50	50	58
606 AMBITIOUS	43	24	70	55	42
603 CHALLENGE STATUS QUO	24	8	40	32	26
609 INFORMED RISK-TAKER	22	12	10	23	30
612 TENACITY	22	16	30	18	26
703 TEAM-PLAYER	86	80	100	91	84
701 RESOLVES CONFLICT	76	76	100	73	72
702 COOPERATIVE	62	44	70	77	63
710 CLEARLY EXPRESSES IDEAS	54	56	70	45	53
713 OPEN TO CONSTRUCTIVE CRITICISM	52	40	40	64	56
711 FOSTERS COLLABORATION	42	48	70	27	40
709 PERSUASIVE	40	24	70	27	49
707 SEEKS FEEDBACK	38	12	60	45	44
708 COURTEOUS	38	28	30	55	37
704 COMPASSIONATE	37	32	30	27	47
706 TACTFUL	36	20	50	45	37
705 CARING	30	32	40	18	33
712 LIKABLE PERSONALITY	26	24	10	36	26
804 EFFECTIVE PROBLEM-SOLVER	91	80	100	95	93
806 DECISION-MAKER	82	72	100	82	84
808 WILLINGNESS TO LEARN	81	68	90	86	84
809 FORWARD THINKING (TO FUTURE)	72	60	70	73	79
803 RATIONAL	62	60	100	55	58
807 DEDUCTIVE REASONING	53	32	70	64	56
805 CREATIVITY	46	28	70	36	56
802 INQUIRING	44	36	70	45	42
801 CURIOSITY	29	20	50	23	33

The graph below shows the traits most frequently selected by employers as being critical for employees to possess. Note that there are traits from each category represented in this list. The Motivation category had only one item trait in the top 10.



Deficiencies in Critical Personal Traits Identified By Employers

Employers were asked to consider the job skills that they deemed critical for each job category and were then asked to indicate those skills that they observed lacking or deficient in employees and candidates for employment. The interviewers reviewed these one by one with the employers on a skill-specific basis:

"Now let's review your answers to the questions about the personal traits needed for your employees. You said that the important traits in the (Traits Category Name) personal traits category for (Job Group) are (READ ITEMS CHECKED). Do you find that any of those traits are typically deficient or under-developed when hiring or evaluating employees in the (Job Group)? (If Yes) Which ones?"

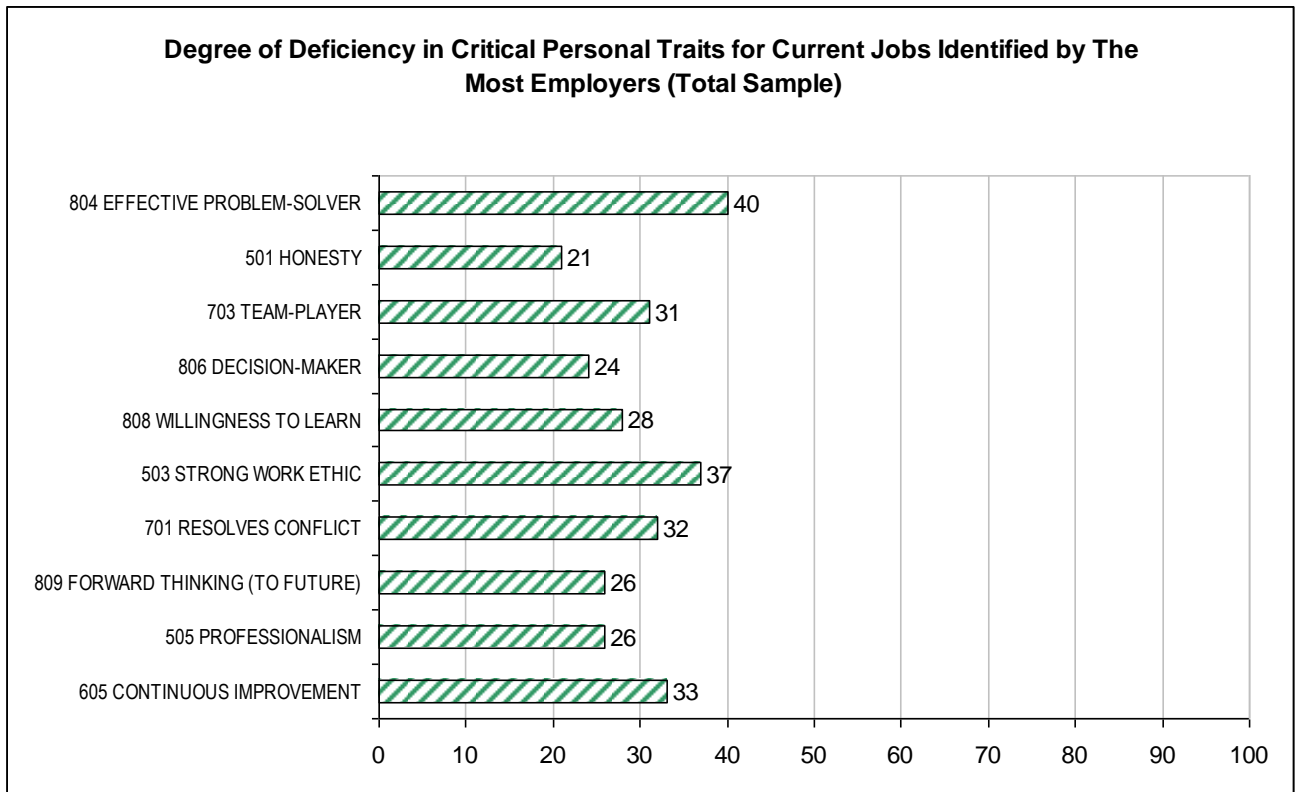
The table on the next page shows the percentage of respondents who A) needed a particular traits and B) indicated that the trait was deficient in employees or candidates.

As with the job skills data presented earlier in this report, these data are not weighted in any way. For example, the data for the 809 Curiosity trait shows that 14% of employers said this was a deficiency. Since just 26% of employers said this trait was critical, the actual proportion of employers for whom this trait is a deficiency is far less than 14%.

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants	Employer Type				
	Total	Healthcare	Mining	Construction	General Business
	Sample				
(Base: Employers Needing Each Traits)	n= 100	25	10	22	43
	%	%	%	%	%
508 PUNCTUAL	52	33	75	33	60
507 FOCUSED ON TASK	41	38	50	50	35
504 RELIABILITY	38	27	33	40	41
503 STRONG WORK ETHIC	37	72	11	30	29
509 ADAPTABLE	32	33	-	33	36
502 METHODICAL	28	50	33	-	43
505 PROFESSIONALISM	26	17	57	31	23
511 ROLE MODEL FOR OTHERS	26	10	67	13	28
510 RESPECTFUL	26	-	75	-	25
506 DEDICATION	26	11	50	27	24
501 HONESTY	21	11	22	24	25
610 TAKE THE INITIATIVE	44	53	38	29	50
608 ACHIEVES GOALS	35	31	50	29	36
611 INSPIRES OTHERS	34	40	33	29	33
605 CONTINUOUS IMPROVEMENT	33	23	56	46	25
612 TENACITY	32	75	33	25	18
606 AMBITIOUS	30	33	43	33	22
603 CHALLENGE STATUS QUO	29	-	50	14	36
602 INDUSTRIOUS	28	44	25	21	27
609 INFORMED RISK-TAKER	27	-	100	-	38
604 SUCCESS DRIVEN	25	20	20	18	32
607 SELF MANAGEMENT	25	21	38	27	23
601 SELF CONFIDENCE	19	13	29	21	19
713 OPEN TO CONSTRUCTIVE CRITICISM	50	50	50	43	54
706 TACTFUL	33	40	60	-	44
710 CLEARLY EXPRESSES IDEAS	33	14	57	40	35
701 RESOLVES CONFLICT	32	16	40	25	42
703 TEAM-PLAYER	31	25	10	35	39
712 LIKABLE PERSONALITY	31	50	100	13	27
711 FOSTERS COLLABORATION	29	33	14	33	29
707 SEEKS FEEDBACK	26	67	50	-	26
709 PERSUASIVE	25	-	43	17	29
708 COURTEOUS	21	14	-	8	38
702 COOPERATIVE	19	18	29	12	22
704 COMPASSIONATE	19	50	33	-	10
705 CARING	17	13	25	-	21
804 EFFECTIVE PROBLEM-SOLVER	40	45	50	33	38
807 DEDUCTIVE REASONING	30	38	-	29	38
808 WILLINGNESS TO LEARN	28	35	33	26	25
805 CREATIVITY	28	43	14	13	33
809 FORWARD THINKING (TO FUTURE)	26	28	30	28	22
806 DECISION-MAKER	24	28	30	28	19
803 RATIONAL	19	27	30	8	16
801 CURIOSITY	14	20	-	-	21
802 INQUIRING	14	22	14	-	17

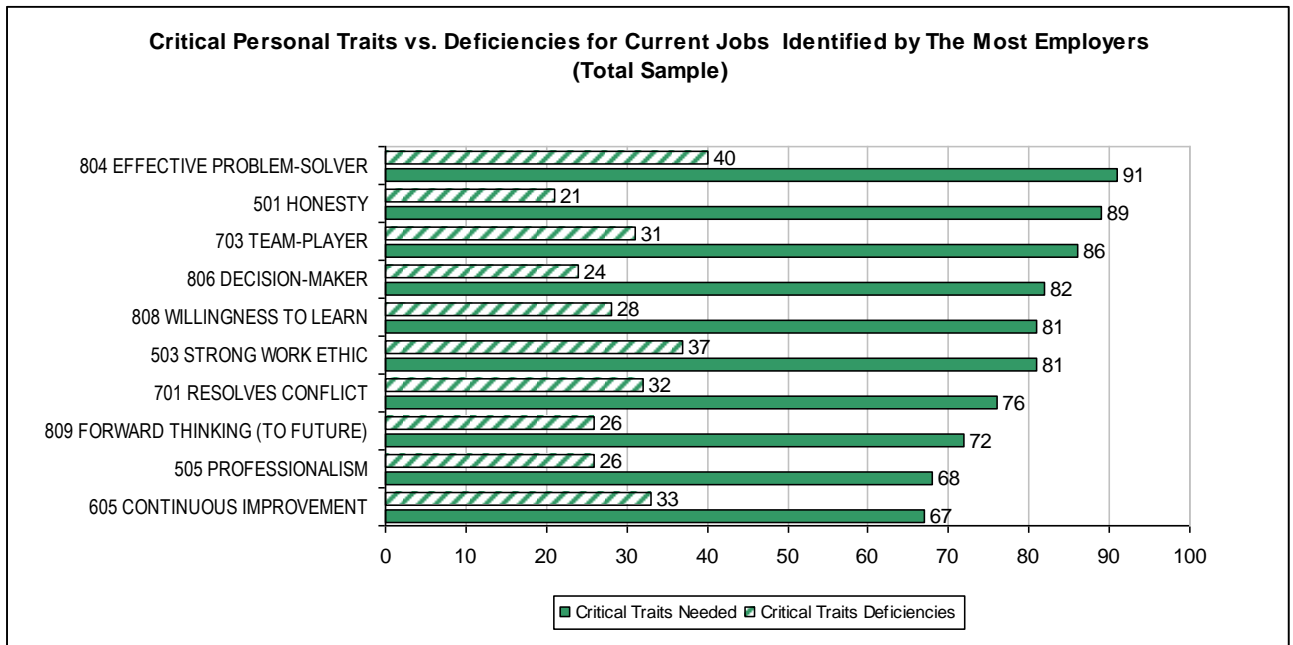
The traits that were identified most frequently by employers as being critical were also identified on average by 30% of those employers as being a deficiency in employees and applicants.

The traits 804 Effective Problem-solver and 503 Strong Work Ethic were mentioned most frequently, at 40% and 37% respectively.



The chart below displays the most critical personal traits and the percentage of employers who claimed they had deficiencies in those traits among employees and applicants.

As shown, at least one in five employers observed problems in these areas. Of those who said 804 Effective Problem-solver was a critical trait, 44% also said that their employee base had deficiencies in this area.



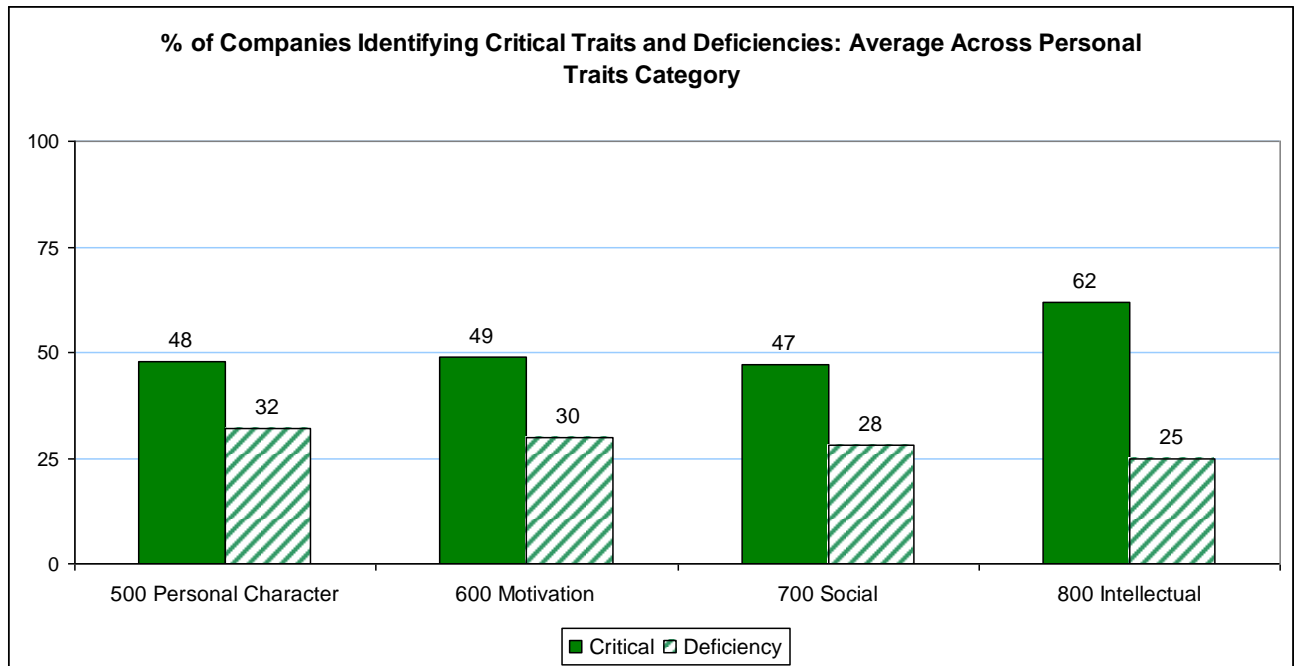
Critical Personal Traits and Deficiencies Across Traits Categories

The average responses for the classification of personal traits as being critical and the incidence of deficiency were calculated across the four personal traits categories. The results are shown in the chart below.

Traits in the 800 Intellectual category were generally rated as critical more frequently than those traits in the other categories, at an average of 62%.

Skills in the other three groups were each rated on average as critical by just under 50% of the employers.

The frequency with which employers identified deficiencies in traits was slightly higher for the 500 Personal Character and 600 Motivation categories versus the other two groupings.



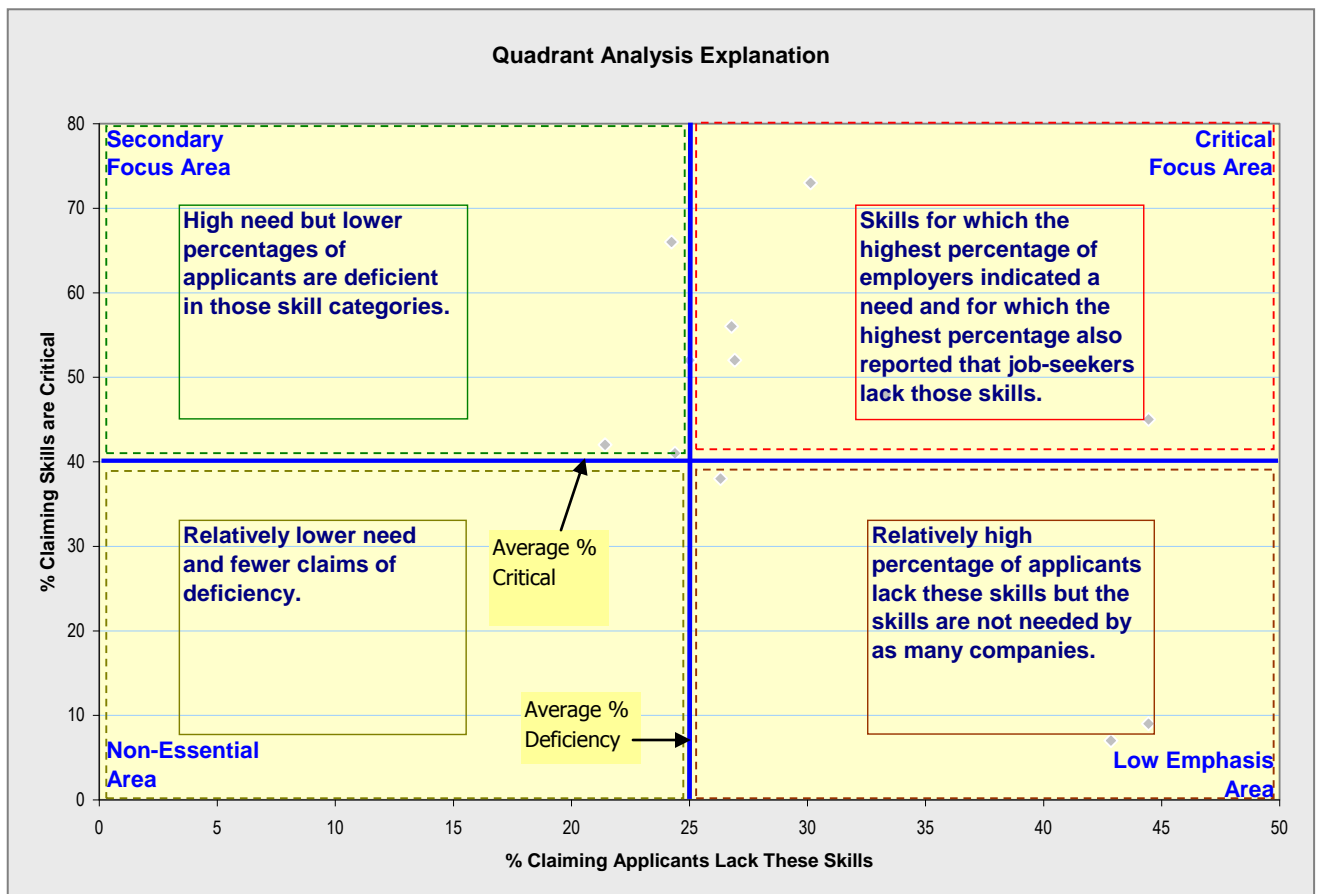
Quadrant Analysis: Skills and Traits Needs and Deficiencies

Introduction

The skill and personal traits data were further analyzed to help EKCEP identify those areas in which resources can best be utilized. The primary tool used in this analysis is the Quadrant Analysis.

A Quadrant Analysis shows the relationship between needs and deficiencies. Four areas of focus are:

Critical Focus	The skills for which the highest percentage of employers indicated a need and for which the highest percentage also reported that job-seekers lack those skills.
Secondary Focus	High need but lower percentages of applicants are deficient in those skill categories.
Low Emphasis	Relatively high percentage of applicants lacks these skills but the skills are not needed by as many companies.
Non-essential	Relatively lower need and fewer claims of deficiency.



In the graphical presentation, the vertical blue line represents the mean frequency of skills and traits being identified as deficient by the respondents. Because the values fluctuate by category and by employee group being analyzed, this line will “shift” left to right in each chart.

The horizontal blue line represents the mean frequency of skills and traits being identified as critical deficient by the employers. This line will move left to right in each chart to reflect changing means for each category and employee group.

The standard range used in the charts for the vertical axis is zero to 80%, and the standard range for the horizontal axis is zero to 60%. The upper end of each range may shift depending on the values being analyzed for a particular employee group.

On the pages that follow, quadrant analyses are presented for the total sample and for all line workers across all industries in the study. The Appendix includes quadrant analyses for each job category and for each industry.

Quadrant Analysis: Total Sample, All Job Types Combined

A quadrant analysis for the total sample was performed on the data. Eight analysis graphs (one for each of the four job skill categories and one for each of the personal traits categories) were produced and these are shown on the next four pages.

A review of the data suggests the following:

In each category, there are clearly defined areas in which EKCEP can work with client organizations and end users to provide training and improvement.

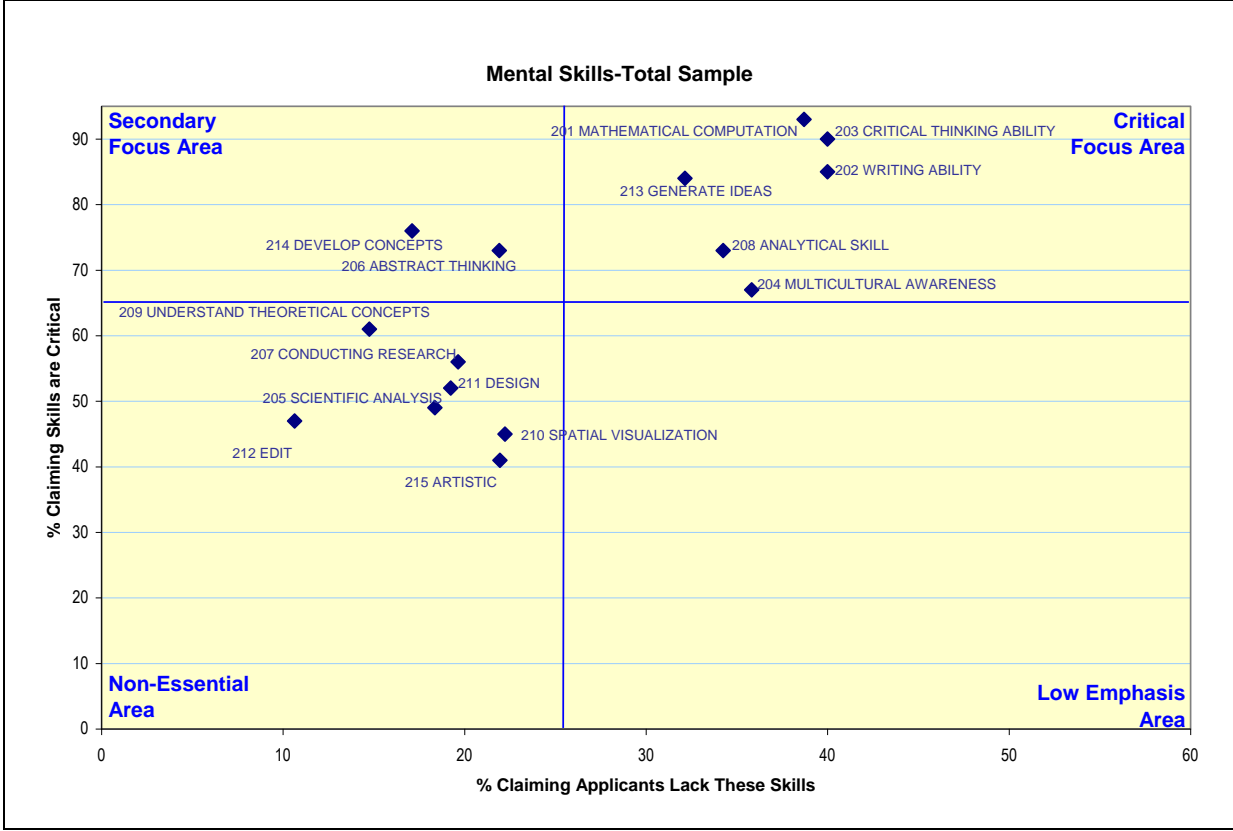
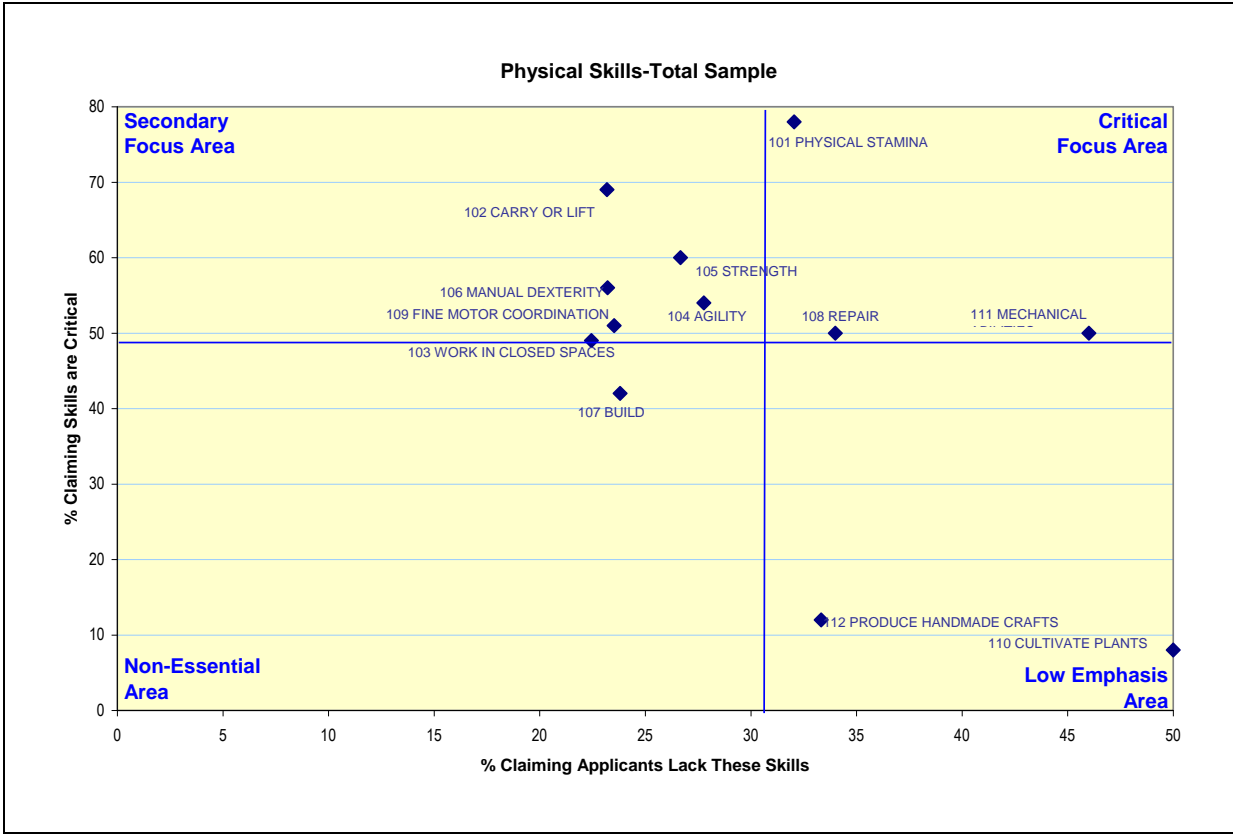
The Traditional Skills and Social Skills areas each had relatively high frequency of criticality for the individual job skills. The quadrant analysis helps to identify those needing a high degree focus.

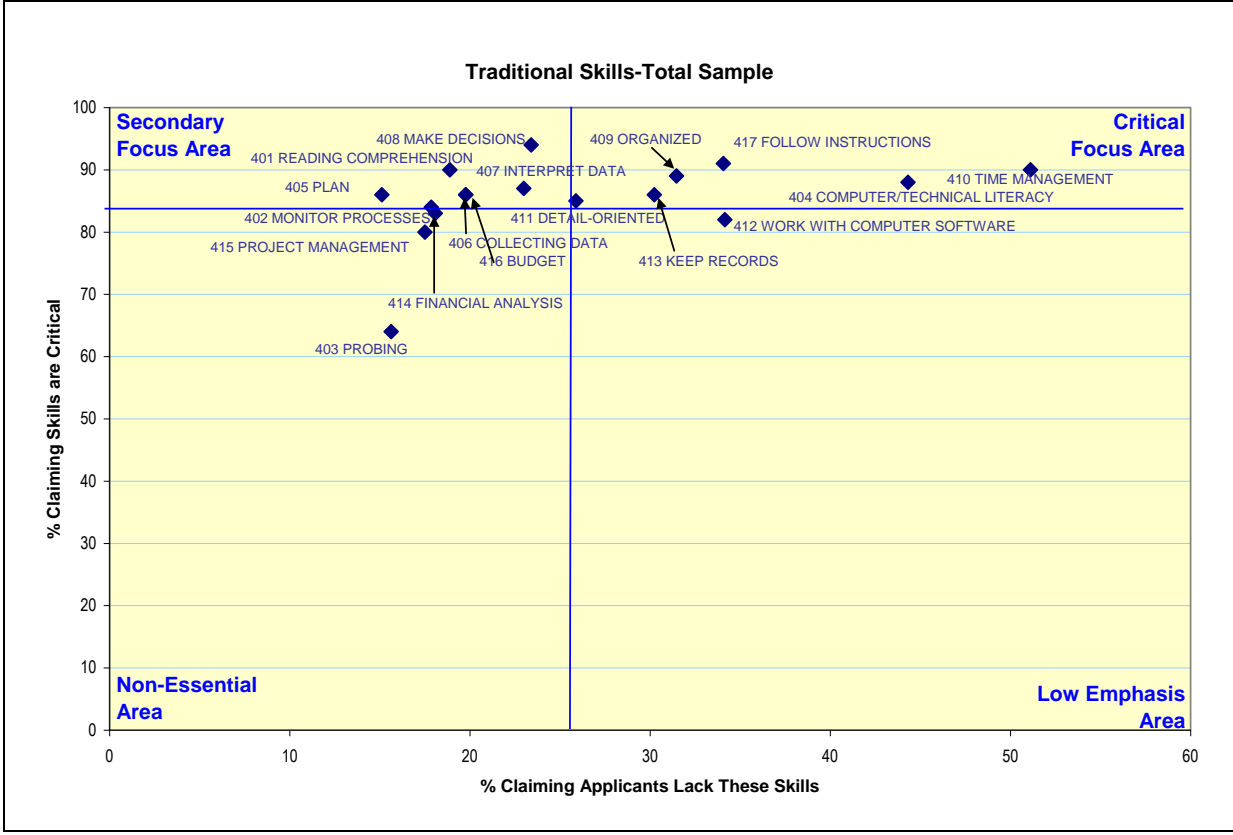
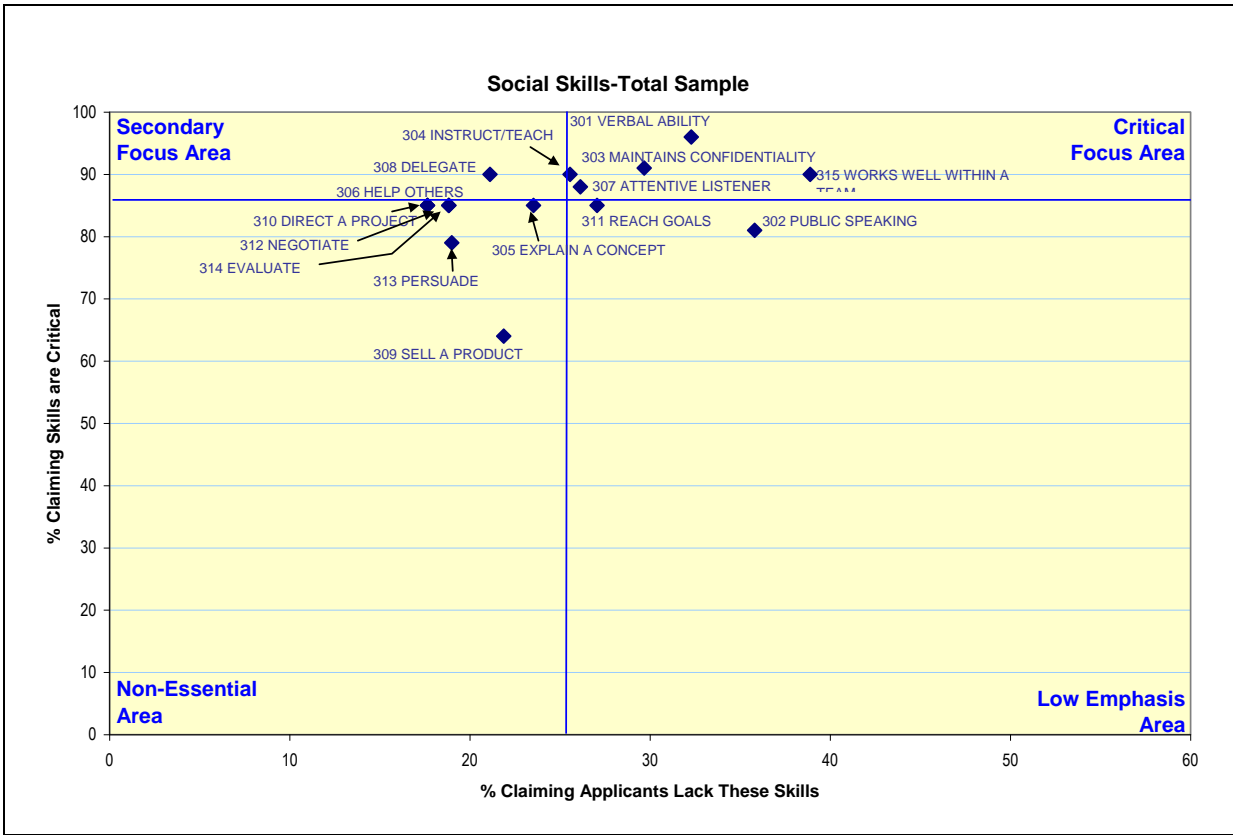
The data show that the following job skill areas are in need of attention among employees at all levels:

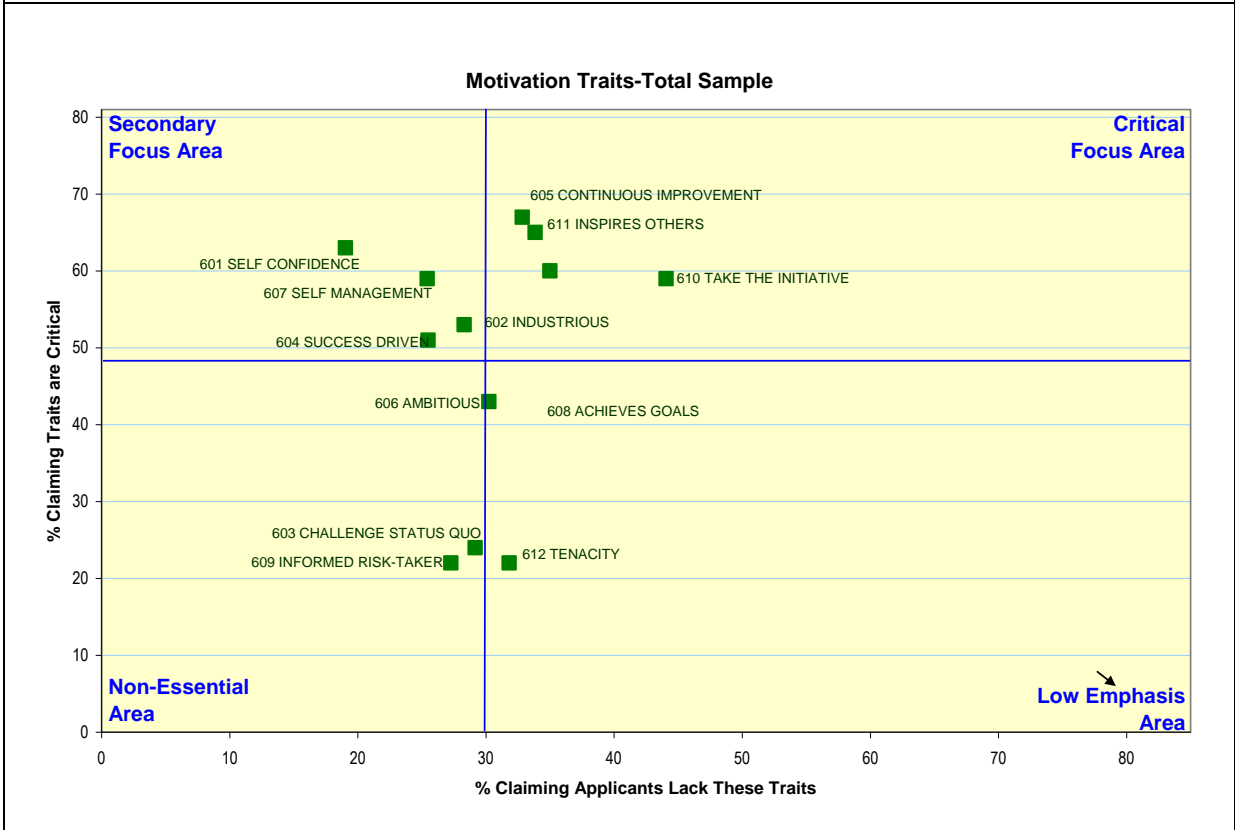
- Physical stamina
- Repair and mechanical skills
- Mathematical skills
- Analytical, critical thinking, and ideation skills
- Multicultural awareness
- Teamwork
- Listening and verbal skills
- Maintaining confidentiality
- Following instructions
- Organization and time management
- Detail focus and record keeping
- Computer skills

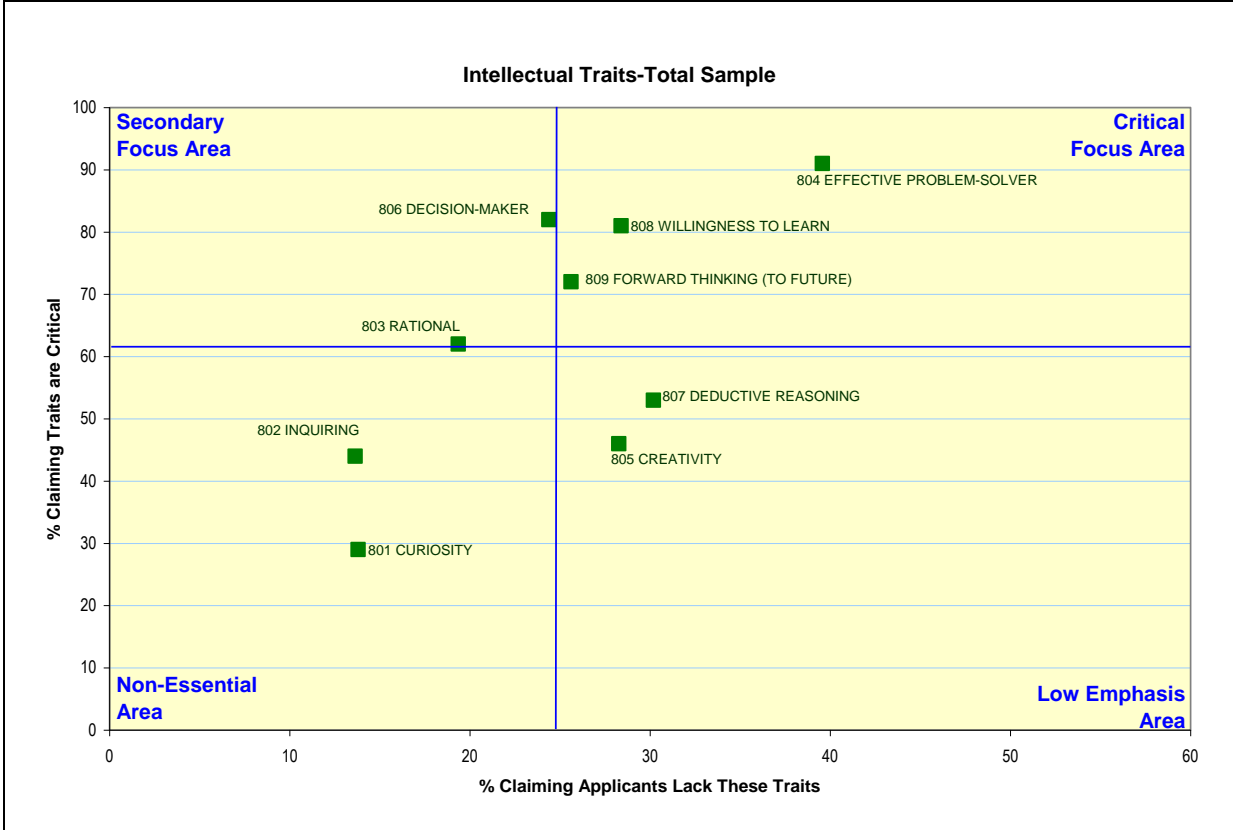
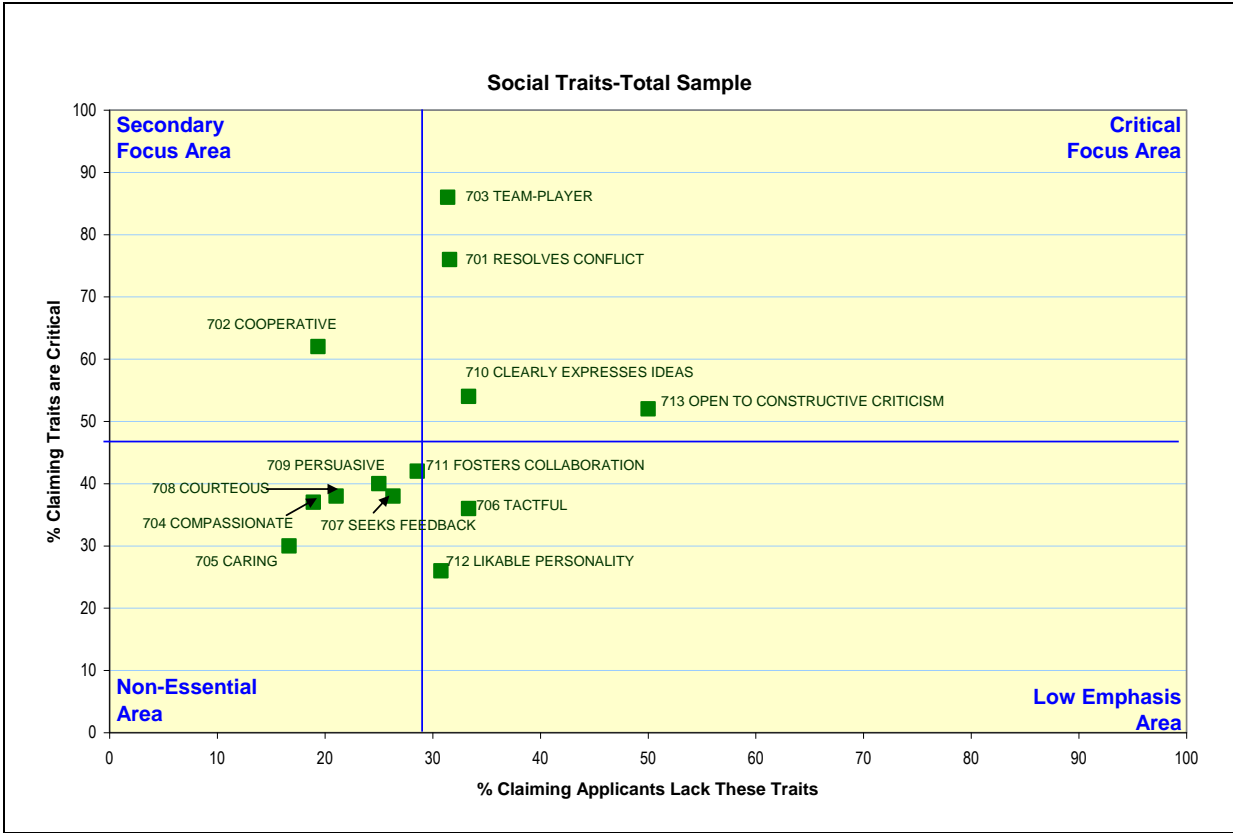
The data indicate that the following personal traits areas are in need of attention among employees at all levels:

- Work ethic
- Reliability
- Continuous improvement
- Inspiring others
- Industriousness and achieving goals
- Being a team player
- Being open to constructive criticism
- Clearly expressing ideas
- Being an effective problem solver
- Willingness to learn
- Forward thinking











Quadrant Analysis: Associates/Line Workers, Total Sample

As indicated earlier, Associates/Line Workers represent approximately 85% of the employees in Eastern Kentucky. Therefore, it is important to evaluate the job skills and personal traits needed for this part of the workforce. The quadrant analysis for this employee constituency, across all industries, is shown on the following four pages.

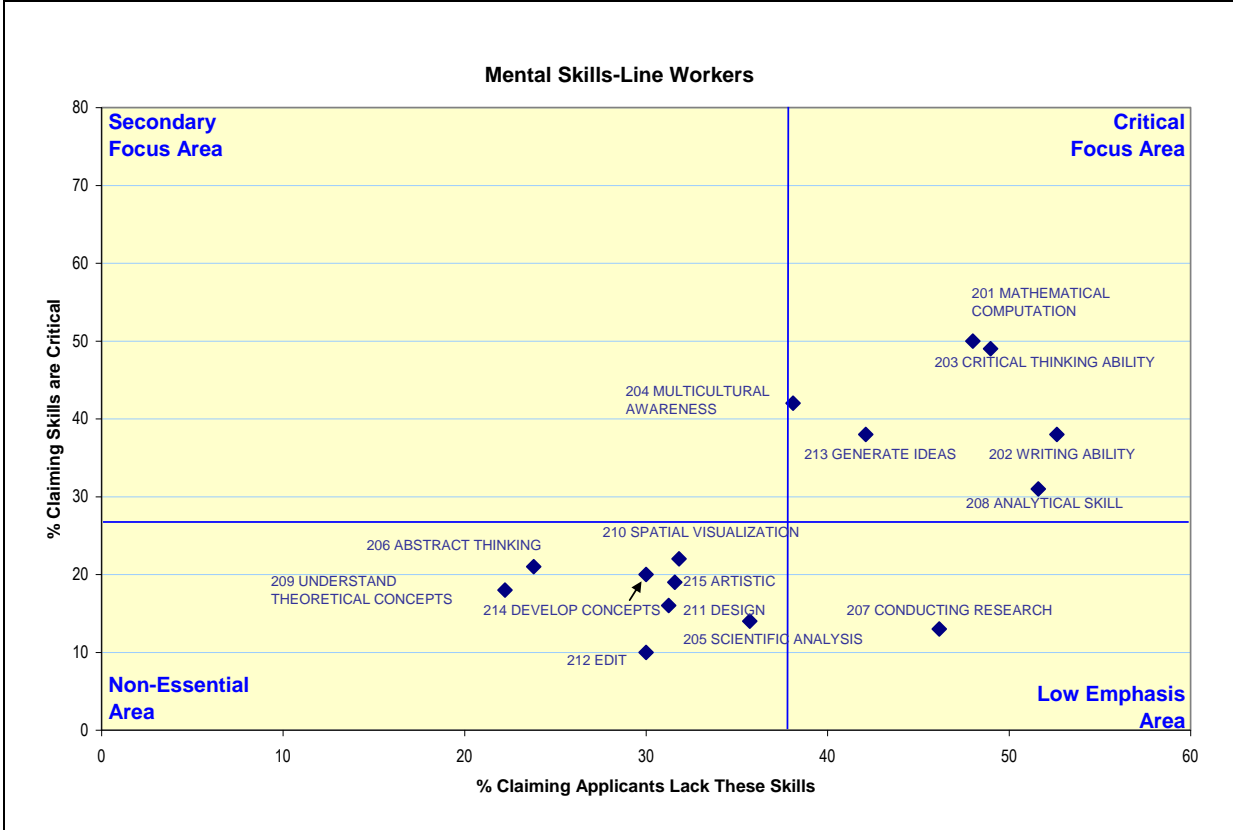
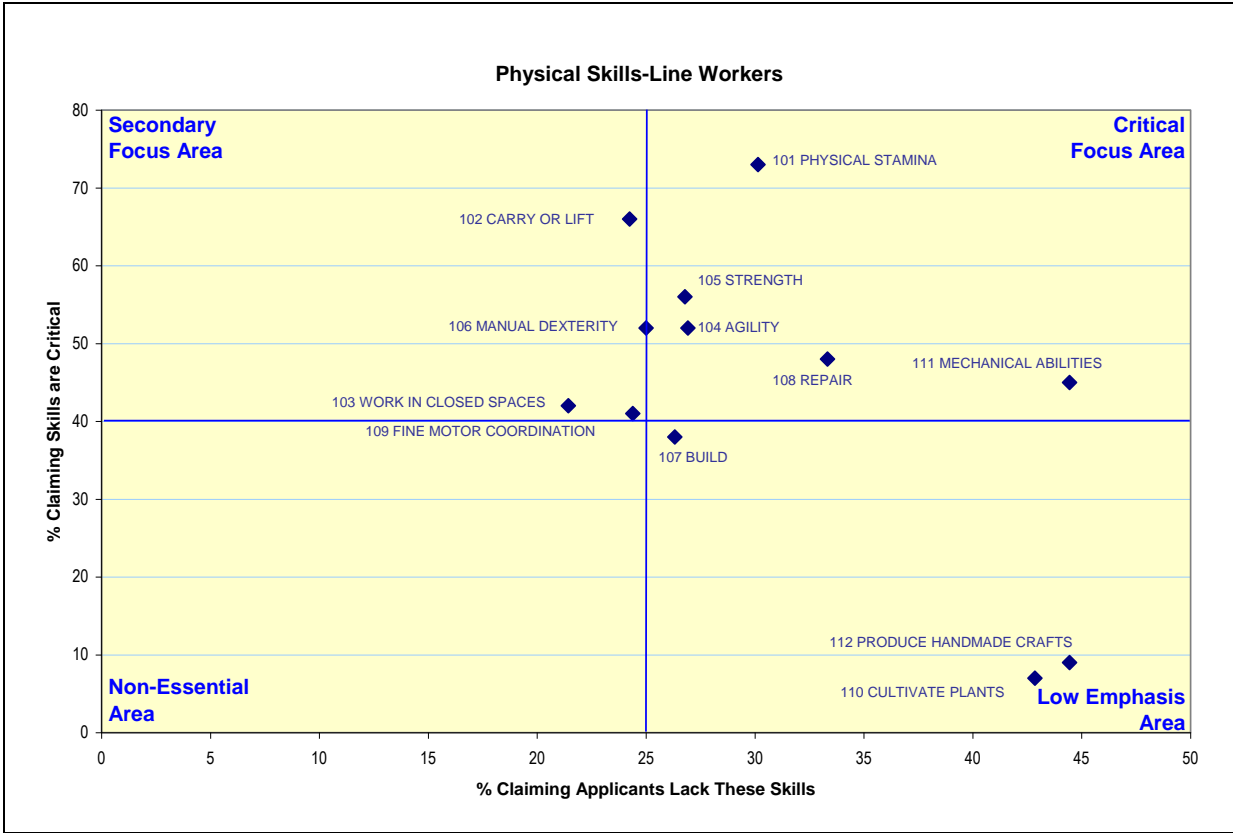
The data show that the following job skill areas are in need of attention:

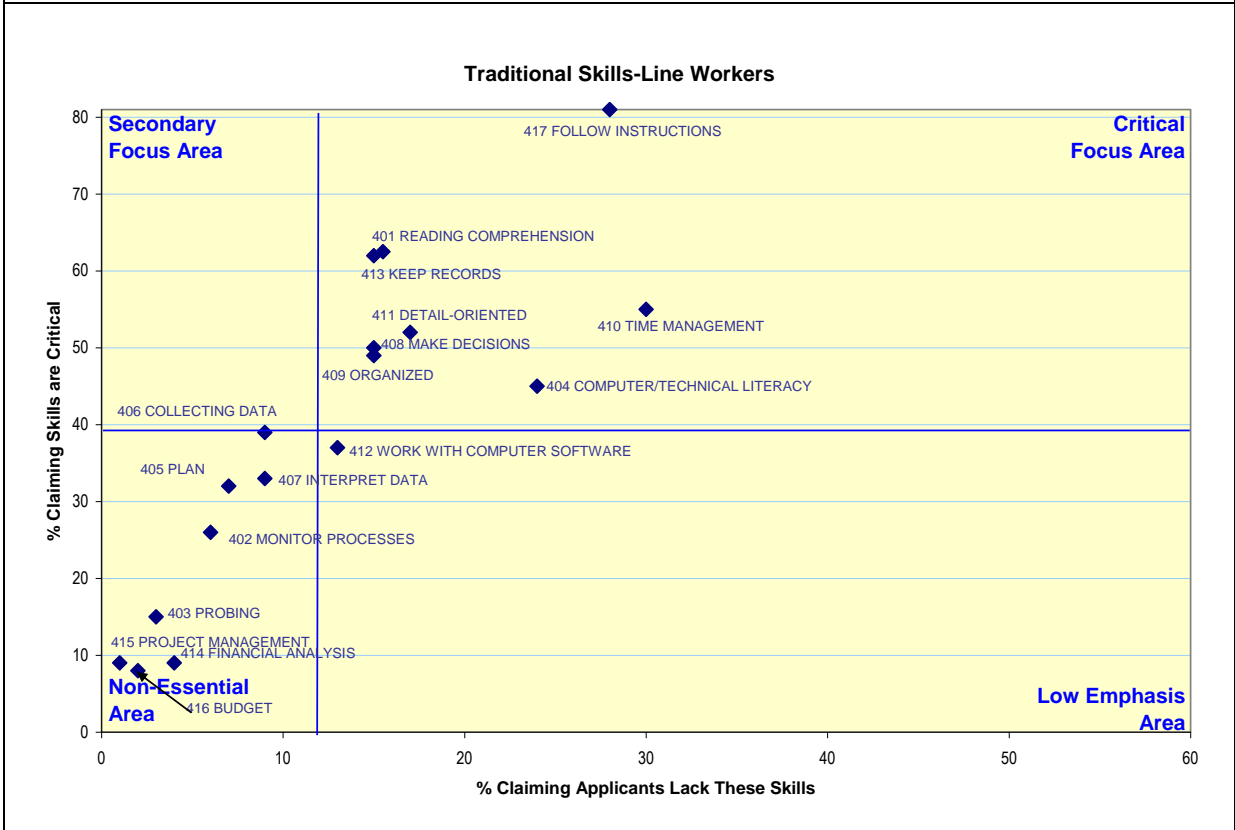
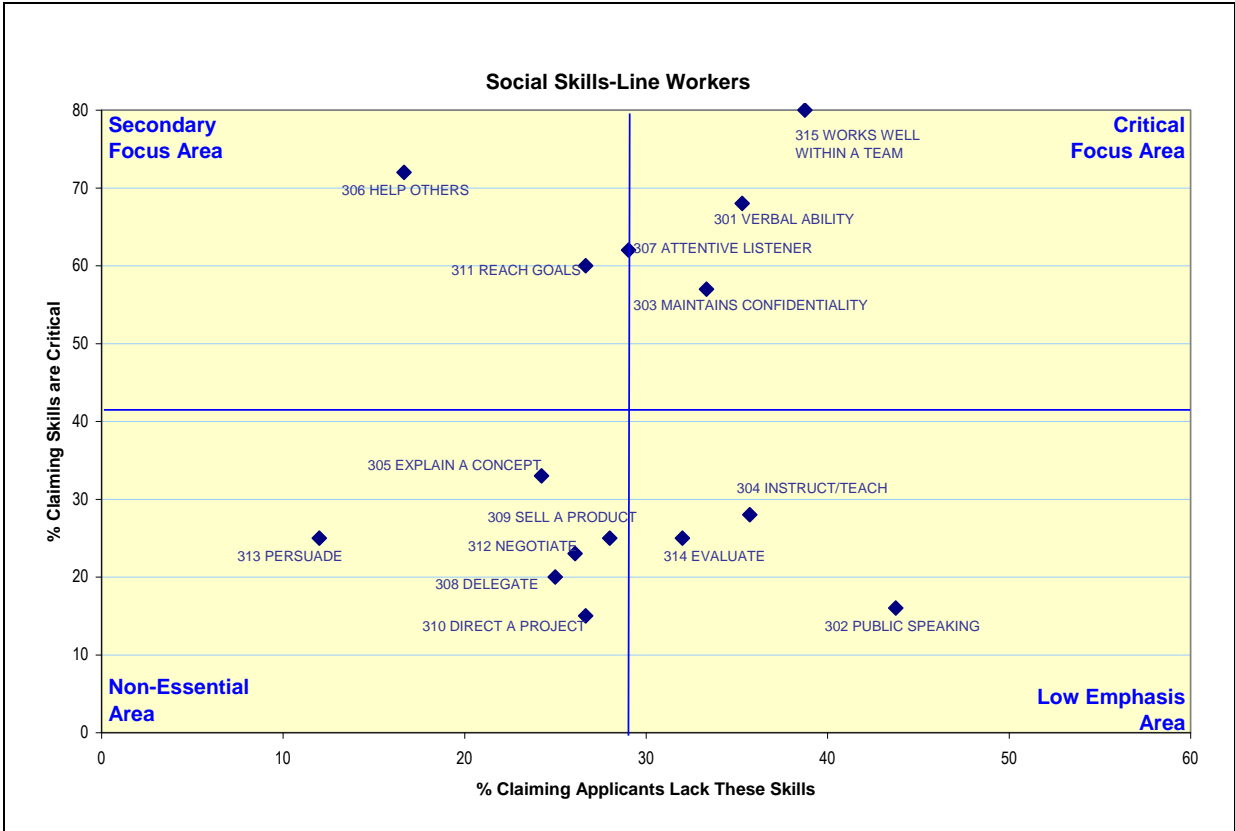
- Skills requiring strength and fitness, such as stamina, strength, and agility
- Repair and mechanical skills
- Mathematical skills
- Analytical, critical thinking, and ideation skills
- Teamwork
- Listening and verbal skills
- Following instructions
- Organization and time management
- Detail focus and record keeping
- Reading comprehension

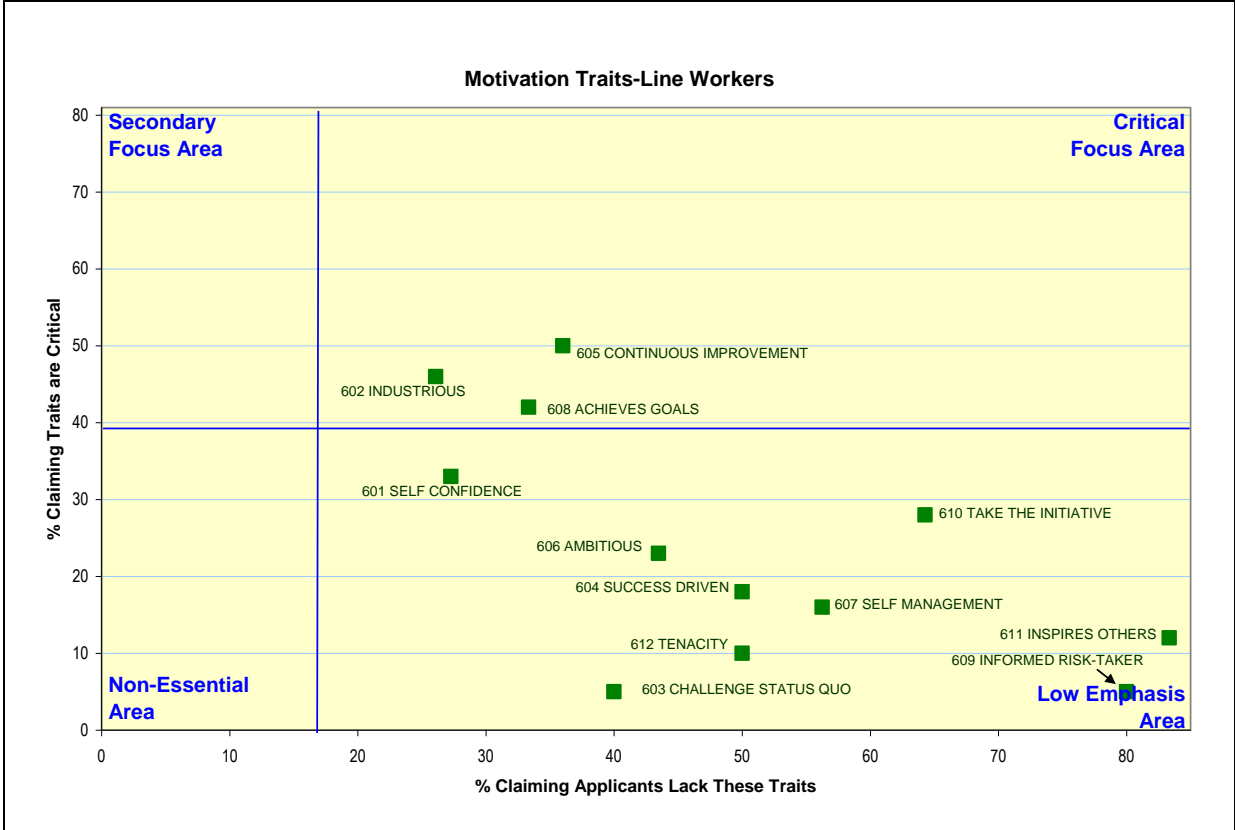
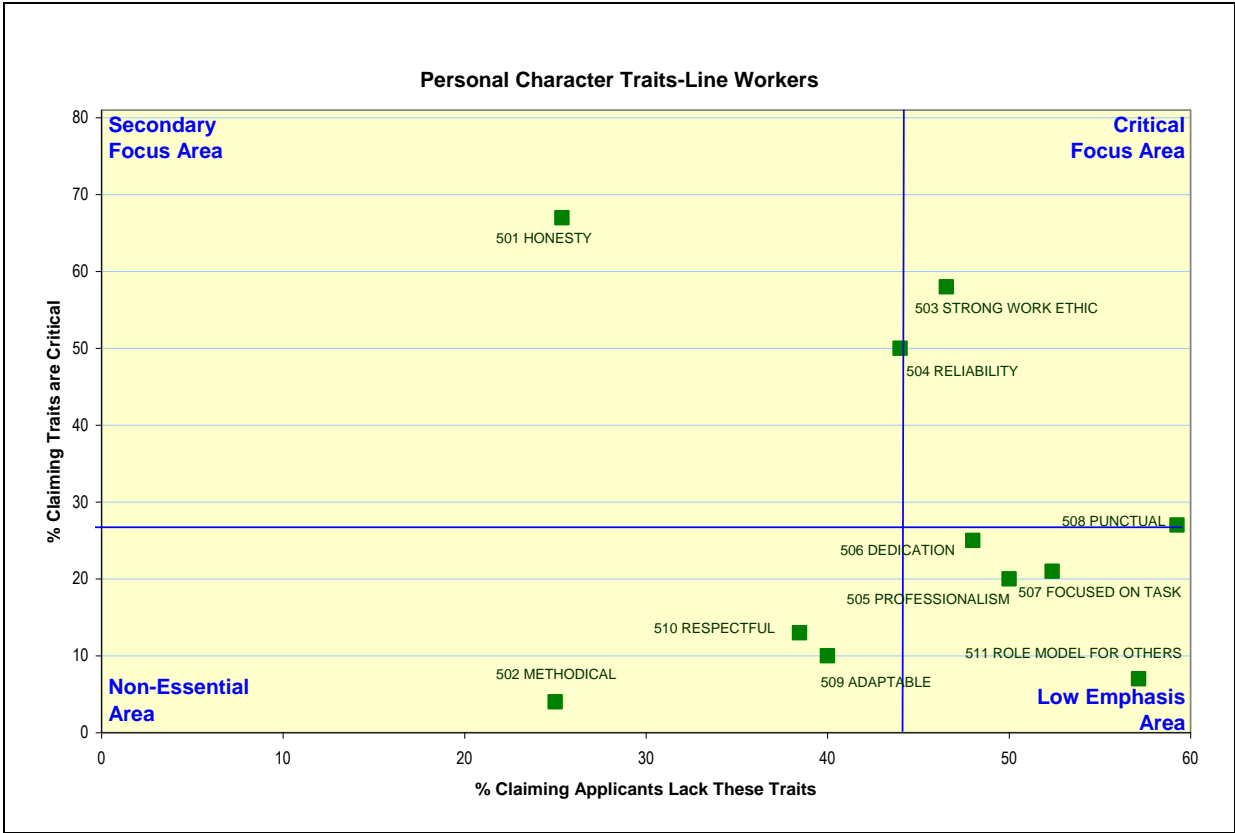
- Computer skills

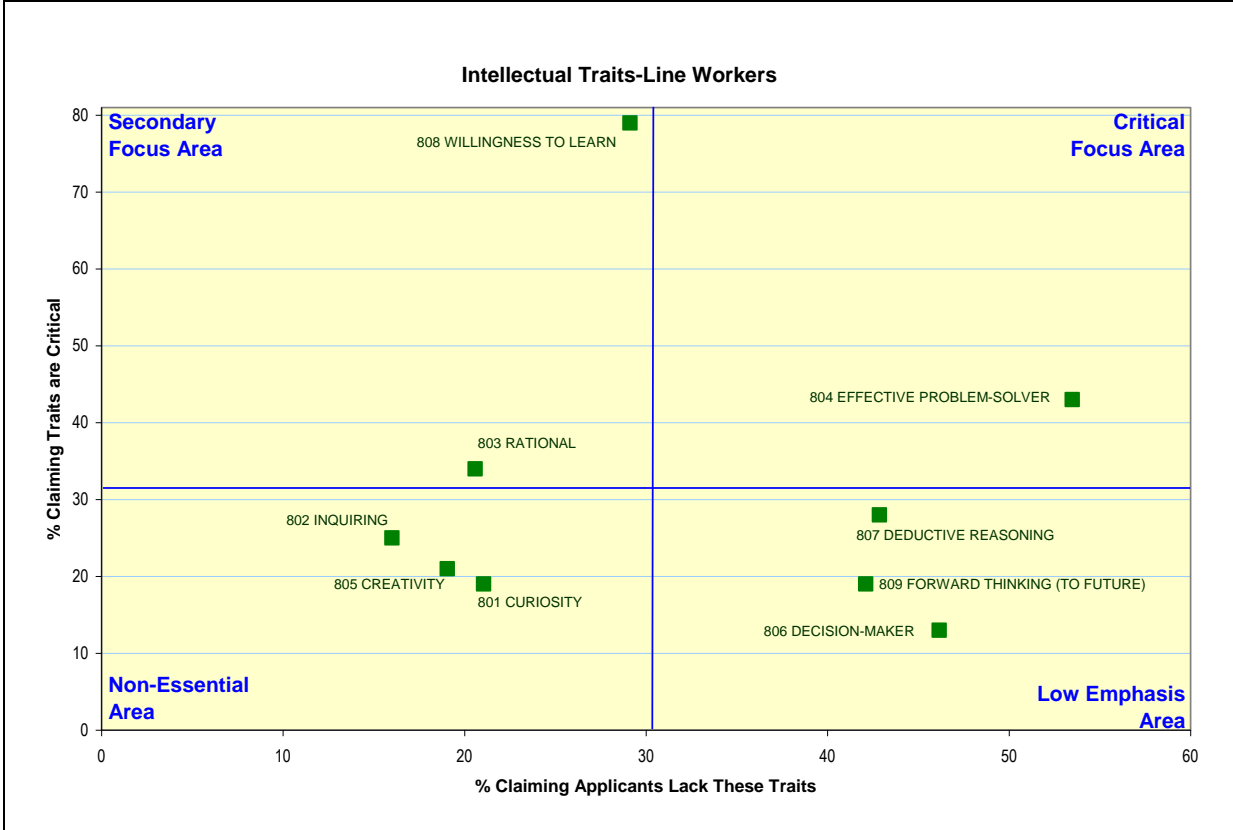
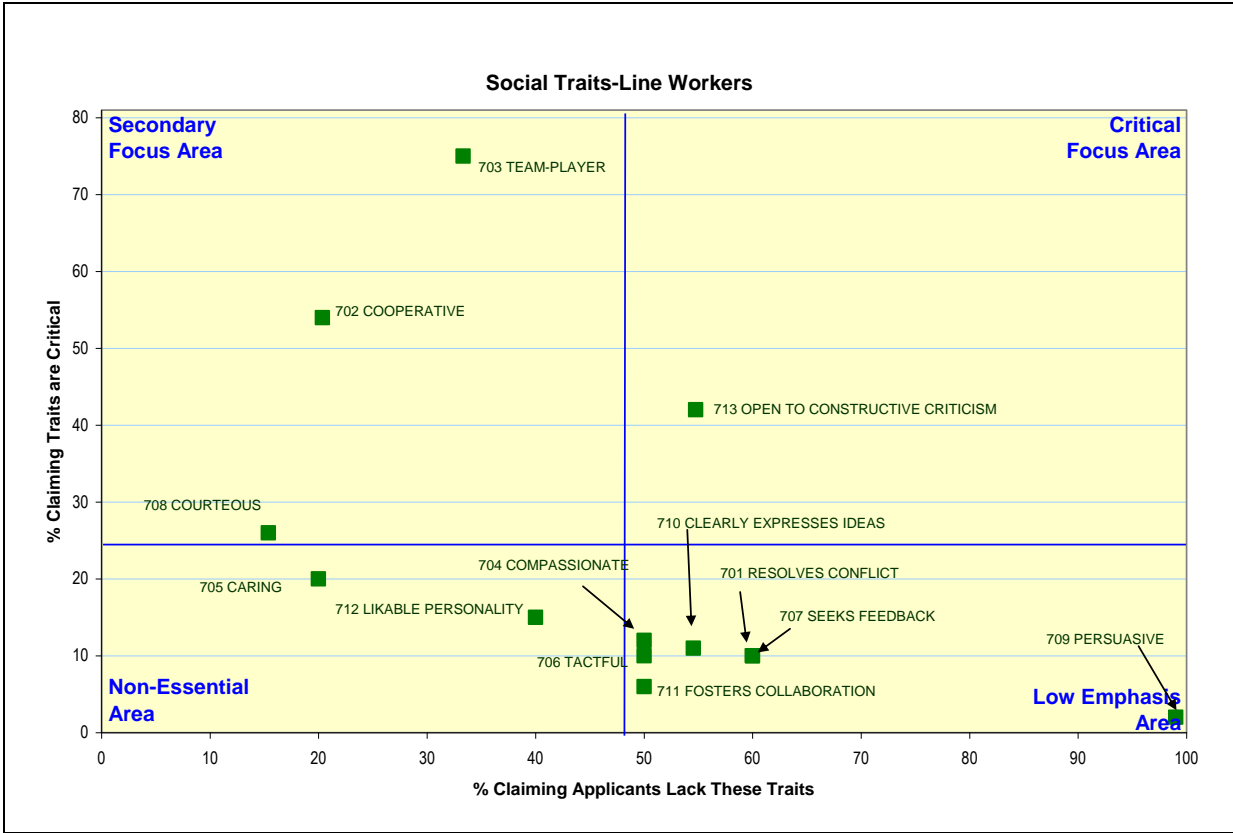
The data indicate that the following personal traits areas are in need of attention:

- Work ethic
- Continuous improvement
- Industriousness and achieving goals
- Being open to constructive criticism
- Being an effective problem solver









Summary of Job Skills and Personal Traits Needed for Current Jobs: Healthcare Sector

Introduction

In this section of the report, the responses for employers in the healthcare sector are summarized:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

Critical Job Skills Needed for Current Healthcare Employees

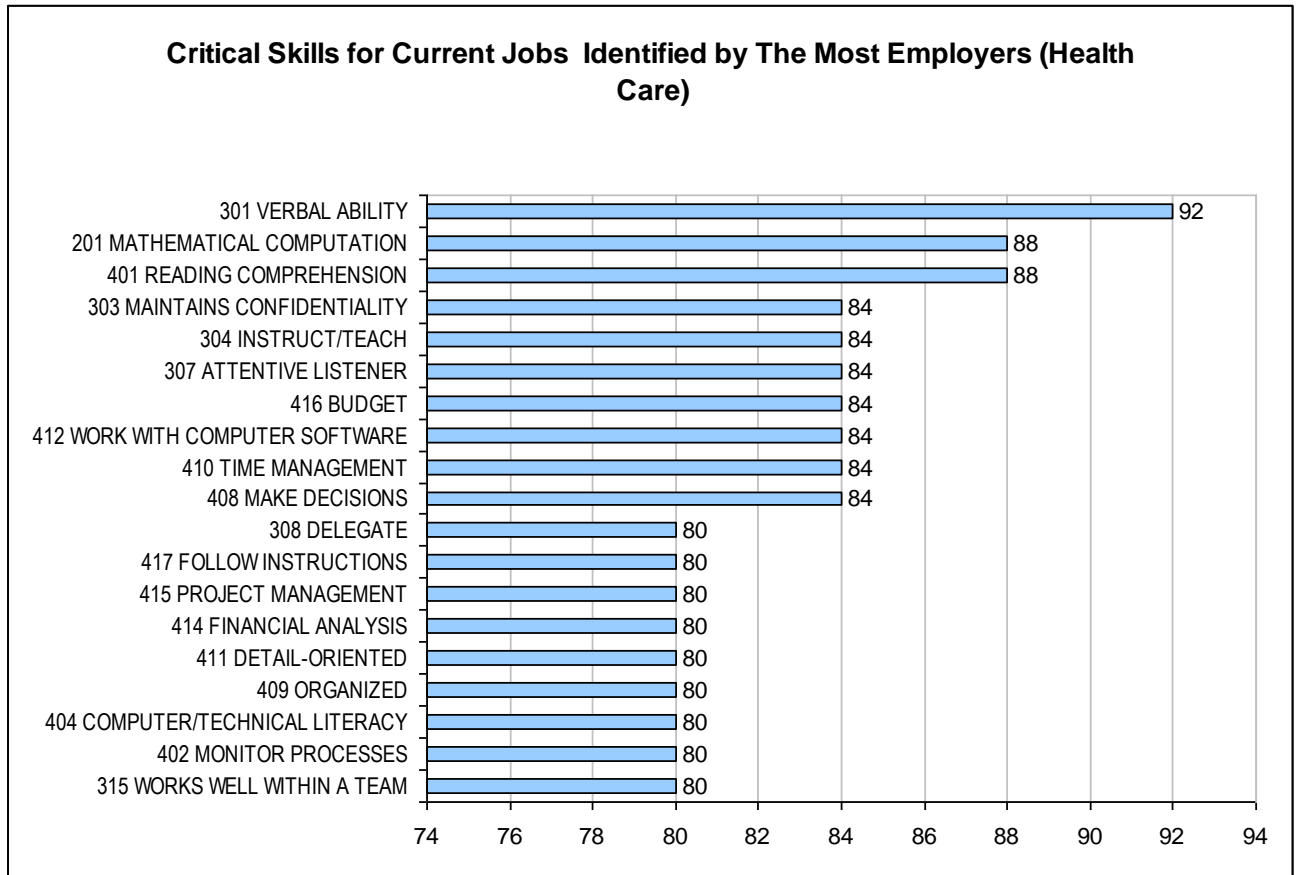
The table to the right shows the percentage of employers which identified each job skill as being critical.

On average, the skills in the Social and Traditional skills categories were much more important and a minimum emphasis was placed on items in the Physical skills category.

The 301 Verbal Ability was identified by 92% of the employers and was the only skill indicated by over 90%.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	Healthcare
	n= 25
	%
101 PHYSICAL STAMINA	68
106 MANUAL DEXTERITY	56
102 CARRY OR LIFT	52
104 AGILITY	48
105 STRENGTH	44
109 FINE MOTOR COORDINATION	44
103 WORK IN CLOSED SPACES	36
108 REPAIR	20
111 MECHANICAL ABILITIES	20
107 BUILD	12
112 PRODUCE HANDMADE CRAFTS	8
110 CULTIVATE PLANTS	0
201 MATHEMATICAL COMPUTATION	88
203 CRITICAL THINKING ABILITY	80
202 WRITING ABILITY	76
213 GENERATE IDEAS	72
206 ABSTRACT THINKING	72
214 DEVELOP CONCEPTS	68
208 ANALYTICAL SKILL	68
204 MULTICULTURAL AWARENESS	68
209 UNDERSTAND THEORETICAL CONCEPTS	64
205 SCIENTIFIC ANALYSIS	60
207 CONDUCTING RESEARCH	52
211 DESIGN	44
212 EDIT	40
210 SPATIAL VISUALIZATION	40
215 ARTISTIC	32
301 VERBAL ABILITY	92
303 MAINTAINS CONFIDENTIALITY	84
304 INSTRUCT/TEACH	84
307 ATTENTIVE LISTENER	84
308 DELEGATE	80
315 WORKS WELL WITHIN A TEAM	80
305 EXPLAIN A CONCEPT	80
302 PUBLIC SPEAKING	80
306 HELP OTHERS	76
310 DIRECT A PROJECT	76
311 REACH GOALS	76
312 NEGOTIATE	76
314 EVALUATE	76
313 PERSUADE	64
309 SELL A PRODUCT	48
401 READING COMPREHENSION	88
408 MAKE DECISIONS	84
410 TIME MANAGEMENT	84
416 BUDGET	84
412 WORK WITH COMPUTER SOFTWARE	84
417 FOLLOW INSTRUCTIONS	80
409 ORGANIZED	80
404 COMPUTER/TECHNICAL LITERACY	80
411 DETAIL-ORIENTED	80
414 FINANCIAL ANALYSIS	80
402 MONITOR PROCESSES	80
415 PROJECT MANAGEMENT	80
407 INTERPRET DATA	76
405 PLAN	76
406 COLLECTING DATA	76
413 KEEP RECORDS	76
403 PROBING	64

The job skills most frequently indicated as being critical are shown in the chart below. As indicated earlier, the skills most critical to healthcare employers tended to be in the Social and Traditional skills categories.



Deficiencies in Job Skills Identified in Healthcare Employees

The table to the right shows the percentage of healthcare employers who indicated that they observed deficiencies in each job skill among employees and applicants.

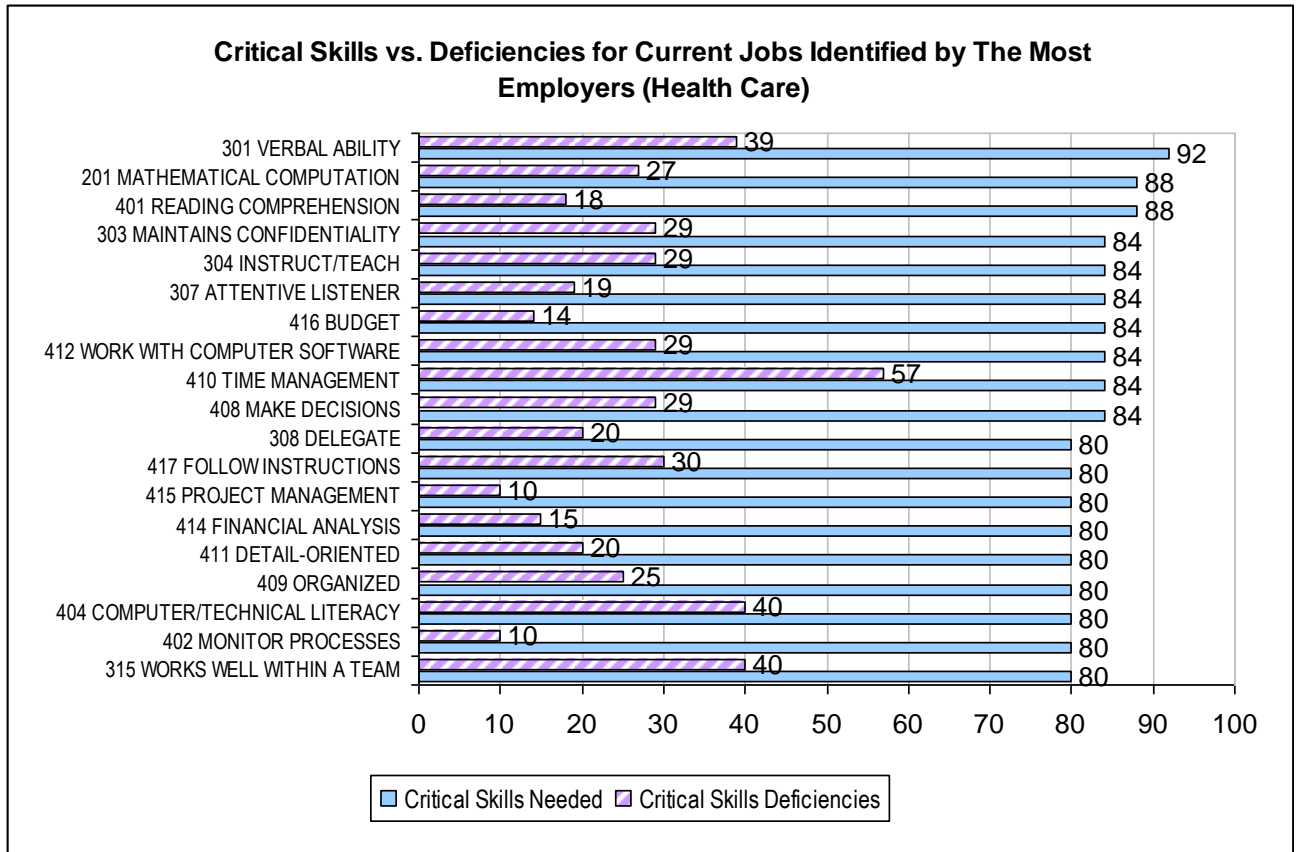
As indicated, a fairly broad range of values are represented among the various job skills measured.

Two job skills were identified by more than 50% of the healthcare employers as being deficient:

- 410 Time Management
- 107 Build

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	Healthcare n= 25 %
107 BUILD	67
111 MECHANICAL ABILITIES	40
108 REPAIR	40
104 AGILITY	33
109 FINE MOTOR COORDINATION	27
103 WORK IN CLOSED SPACES	22
105 STRENGTH	18
101 PHYSICAL STAMINA	18
102 CARRY OR LIFT	15
106 MANUAL DEXTERITY	14
112 PRODUCE HANDMADE CRAFTS	0
110 CULTIVATE PLANTS	0
202 WRITING ABILITY	42
204 MULTICULTURAL AWARENESS	41
208 ANALYTICAL SKILL	41
203 CRITICAL THINKING ABILITY	40
201 MATHEMATICAL COMPUTATION	27
215 ARTISTIC	25
213 GENERATE IDEAS	22
205 SCIENTIFIC ANALYSIS	20
211 DESIGN	18
209 UNDERSTAND THEORETICAL CONCEPTS	13
206 ABSTRACT THINKING	11
210 SPATIAL VISUALIZATION	10
207 CONDUCTING RESEARCH	8
214 DEVELOP CONCEPTS	0
212 EDIT	0
315 WORKS WELL WITHIN A TEAM	40
302 PUBLIC SPEAKING	40
301 VERBAL ABILITY	39
312 NEGOTIATE	32
303 MAINTAINS CONFIDENTIALITY	29
304 INSTRUCT/TEACH	29
306 HELP OTHERS	21
305 EXPLAIN A CONCEPT	20
308 DELEGATE	20
307 ATTENTIVE LISTENER	19
313 PERSUADE	19
311 REACH GOALS	16
310 DIRECT A PROJECT	11
314 EVALUATE	11
309 SELL A PRODUCT	8
410 TIME MANAGEMENT	57
404 COMPUTER/TECHNICAL LITERACY	40
417 FOLLOW INSTRUCTIONS	30
412 WORK WITH COMPUTER SOFTWARE	29
408 MAKE DECISIONS	29
407 INTERPRET DATA	26
409 ORGANIZED	25
411 DETAIL-ORIENTED	20
403 PROBING	19
401 READING COMPREHENSION	18
413 KEEP RECORDS	16
414 FINANCIAL ANALYSIS	15
416 BUDGET	14
406 COLLECTING DATA	11
402 MONITOR PROCESSES	10
415 PROJECT MANAGEMENT	10
405 PLAN	11

The deficiency scores for the most critical job skills are plotted in the chart below. As the data suggest, there are numerous areas in which focused improvement is needed. The 410 Time Management job skill was observed as deficient by nearly 50% of all employers.



*Critical Personal Traits Needed
for Current Healthcare
Employees*

The table to the right shows the percentage of healthcare employers which identified each personal trait as being critical for its workforce.

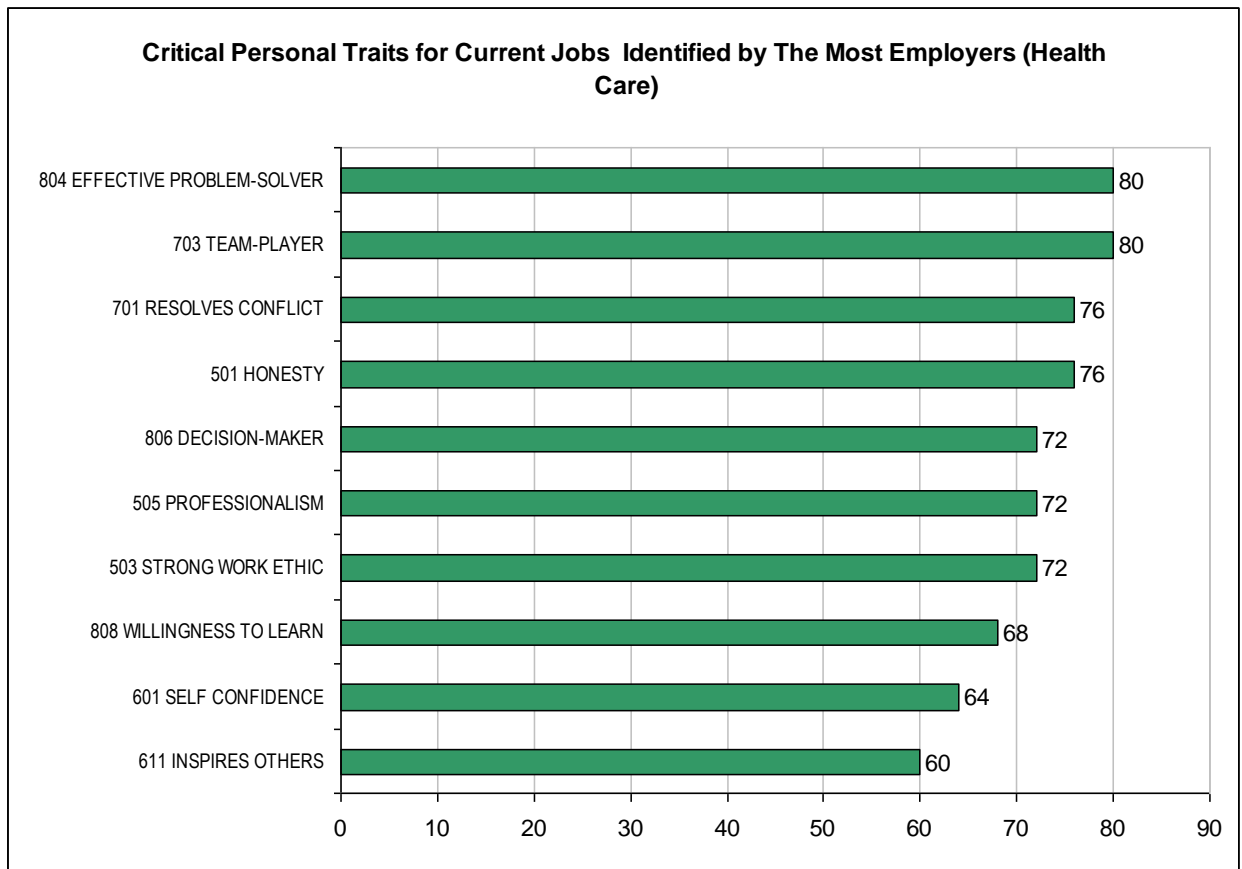
On average, the traits in the 800 Intellectual skills group were slightly more important than those in the other three categories.

Four personal traits were identified as being critical by at least 75% of the employers:

- 804 Effective Problem-Solver
- 703 Team Player
- 701 Resolves Conflict
- 501 Honesty

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs		Healthcare
	n=	25
		%
501 HONESTY		76
503 STRONG WORK ETHIC		72
505 PROFESSIONALISM		72
504 RELIABILITY		44
511 ROLE MODEL FOR OTHERS		40
506 DEDICATION		36
507 FOCUSED ON TASK		32
508 PUNCTUAL		24
509 ADAPTABLE		24
510 RESPECTFUL		16
502 METHODOICAL		8
<hr/>		
601 SELF CONFIDENCE		64
611 INSPIRES OTHERS		60
610 TAKE THE INITIATIVE		60
607 SELF MANAGEMENT		56
605 CONTINUOUS IMPROVEMENT		52
608 ACHIEVES GOALS		52
604 SUCCESS DRIVEN		40
602 INDUSTRIOUS		36
606 AMBITIOUS		24
612 TENACITY		16
609 INFORMED RISK-TAKER		12
603 CHALLENGE STATUS QUO		8
<hr/>		
703 TEAM-PLAYER		80
701 RESOLVES CONFLICT		76
710 CLEARLY EXPRESSES IDEAS		56
711 FOSTERS COLLABORATION		48
702 COOPERATIVE		44
713 OPEN TO CONSTRUCTIVE CRITICISM		40
704 COMPASSIONATE		32
705 CARING		32
708 COURTEOUS		28
709 PERSUASIVE		24
712 LIKABLE PERSONALITY		24
706 TACTFUL		20
707 SEEKS FEEDBACK		12
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		80
806 DECISION-MAKER		72
808 WILLINGNESS TO LEARN		68
809 FORWARD THINKING (TO FUTURE)		60
803 RATIONAL		60
802 INQUIRING		36
807 DEDUCTIVE REASONING		32
805 CREATIVITY		28
801 CURIOSITY		20

The ten traits identified most frequently by healthcare employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits Identified in Healthcare Employees

The table to the right shows the percentage of healthcare employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

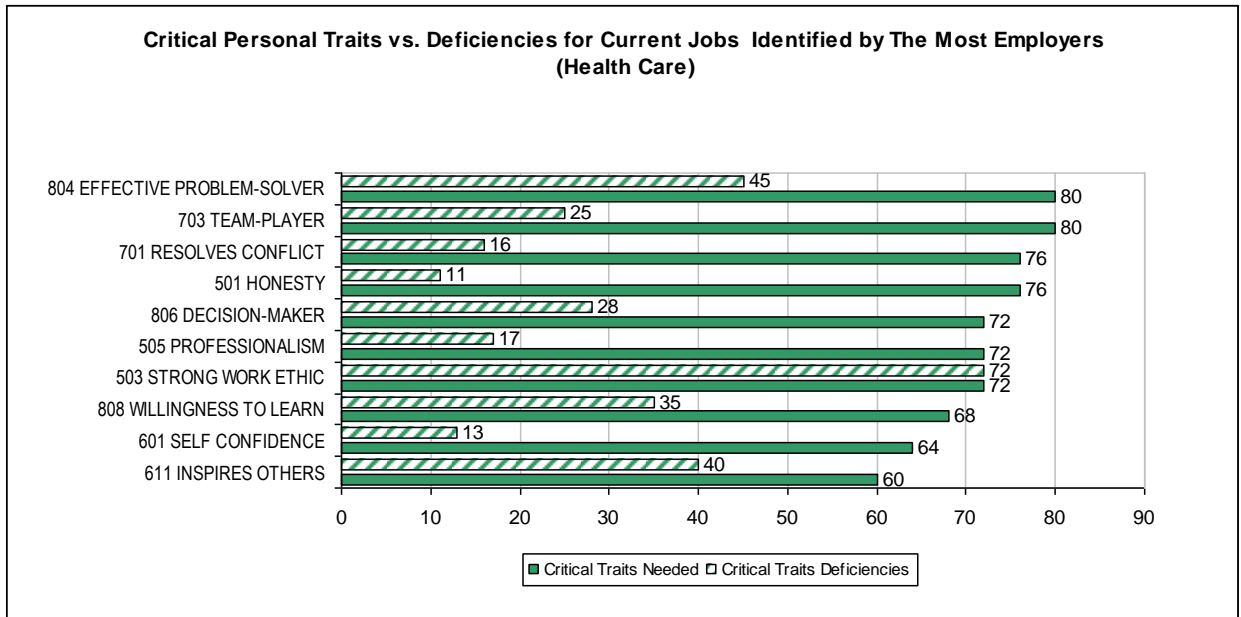
Three traits were identified by at least 67% of the healthcare employers as being deficient:

- 503 Strong Work Ethic
- 612 Tenacity
- 707 Seeks Feedback

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants		Healthcare
(Base: Employers Needing Each Traits)	n=	25
		%
503 STRONG WORK ETHIC		72
502 METHODICAL		50
507 FOCUSED ON TASK		38
508 PUNCTUAL		33
509 ADAPTABLE		33
504 RELIABILITY		27
505 PROFESSIONALISM		17
506 DEDICATION		11
501 HONESTY		11
511 ROLE MODEL FOR OTHERS		10
510 RESPECTFUL		0
612 TENACITY		75
610 TAKE THE INITIATIVE		53
602 INDUSTRIOUS		44
611 INSPIRES OTHERS		40
606 AMBITIOUS		33
608 ACHIEVES GOALS		31
605 CONTINUOUS IMPROVEMENT		23
607 SELF MANAGEMENT		21
604 SUCCESS DRIVEN		20
601 SELF CONFIDENCE		13
603 CHALLENGE STATUS QUO		0
609 INFORMED RISK-TAKER		0
707 SEEKS FEEDBACK		67
713 OPEN TO CONSTRUCTIVE CRITICISM		50
712 LIKABLE PERSONALITY		50
704 COMPASSIONATE		50
706 TACTFUL		40
711 FOSTERS COLLABORATION		33
703 TEAM-PLAYER		25
702 COOPERATIVE		18
701 RESOLVES CONFLICT		16
710 CLEARLY EXPRESSES IDEAS		14
708 COURTEOUS		14
705 CARING		13
709 PERSUASIVE		0
804 EFFECTIVE PROBLEM-SOLVER		45
805 CREATIVITY		43
807 DEDUCTIVE REASONING		38
808 WILLINGNESS TO LEARN		35
809 FORWARD THINKING (TO FUTURE)		28
806 DECISION-MAKER		28
803 RATIONAL		27
802 INQUIRING		22
801 CURIOSITY		20

The deficiency scores for the most critical personal traits are shown the following graph. Four of the traits have relatively high percentages of employers which identified the traits as being deficient in the workforce.

The 503 Strong Work Ethic trait was identified as critical and deficient by 72% of all healthcare employers.



Quadrant Analysis: Healthcare Employers

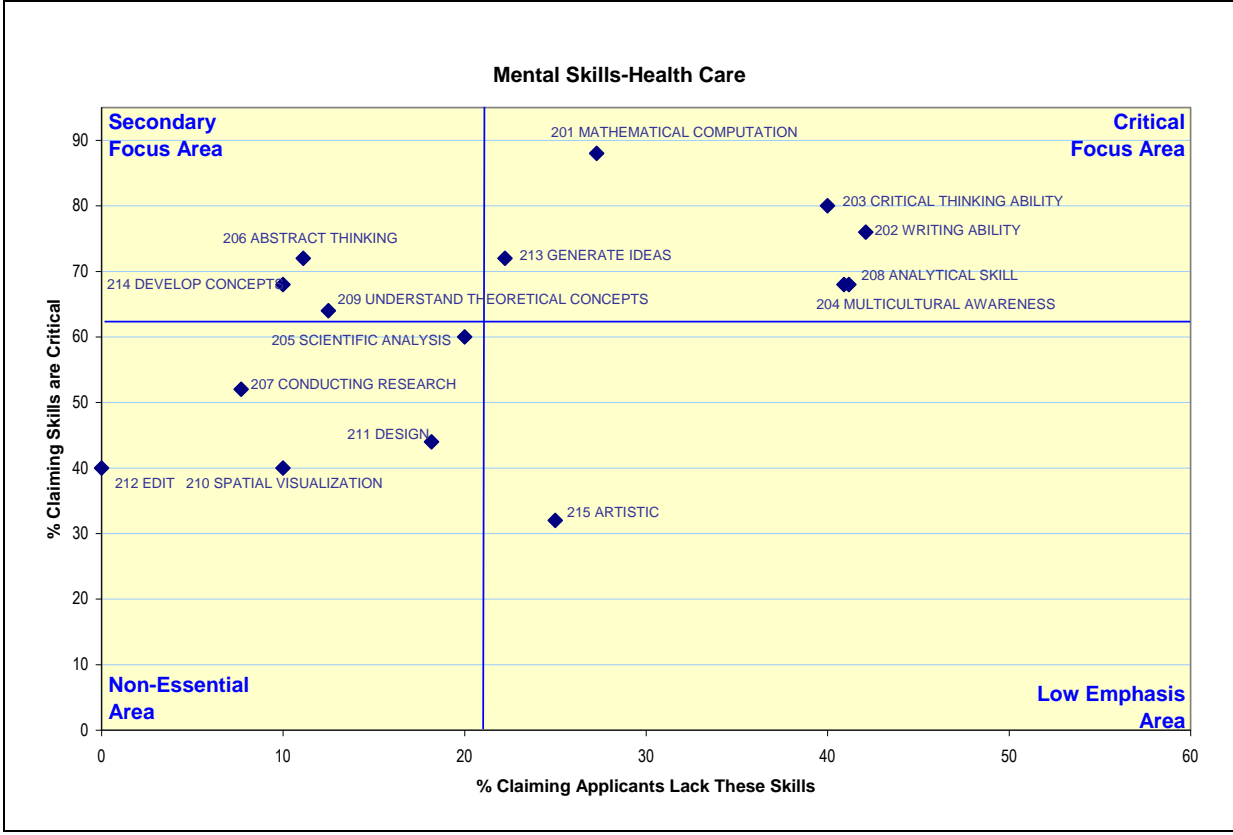
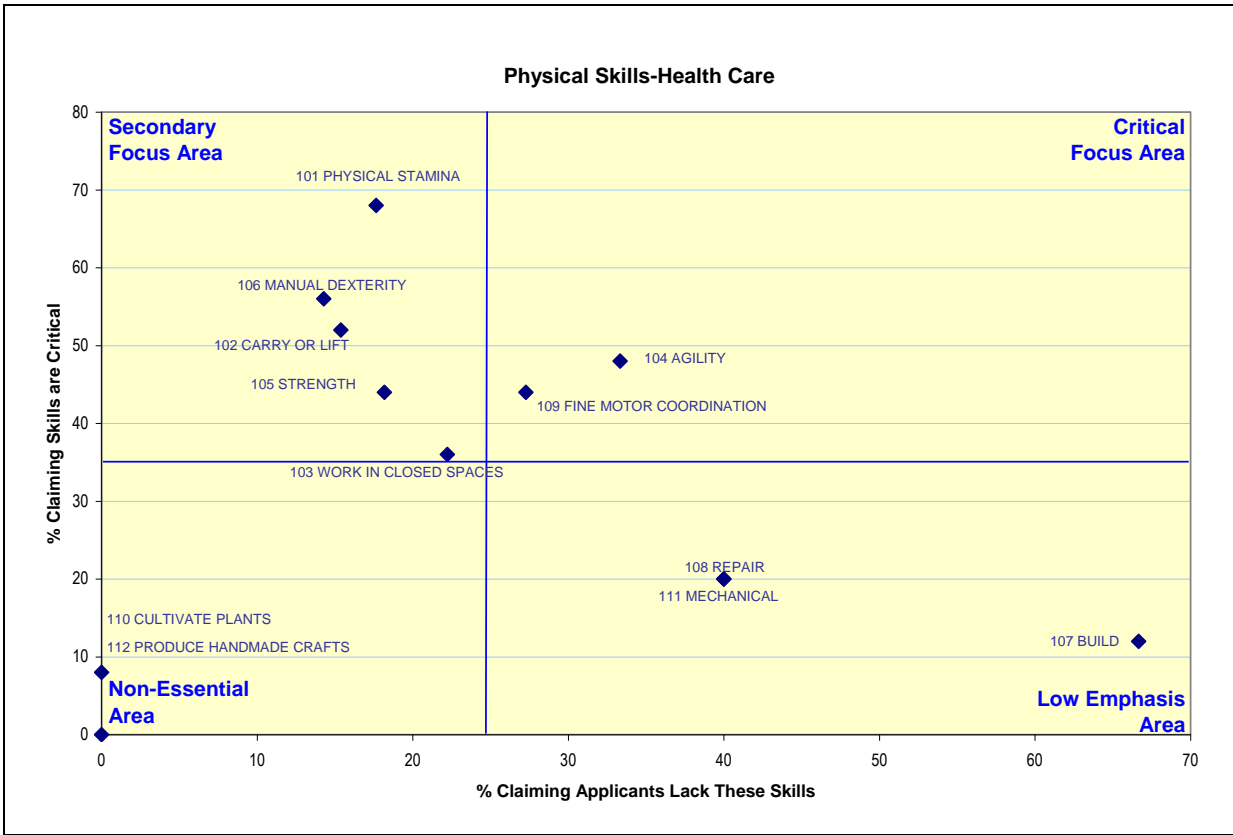
A quadrant analysis for the healthcare sector, for all job categories, is shown on the following four pages.

The data show that the following job skill areas are in need of attention:

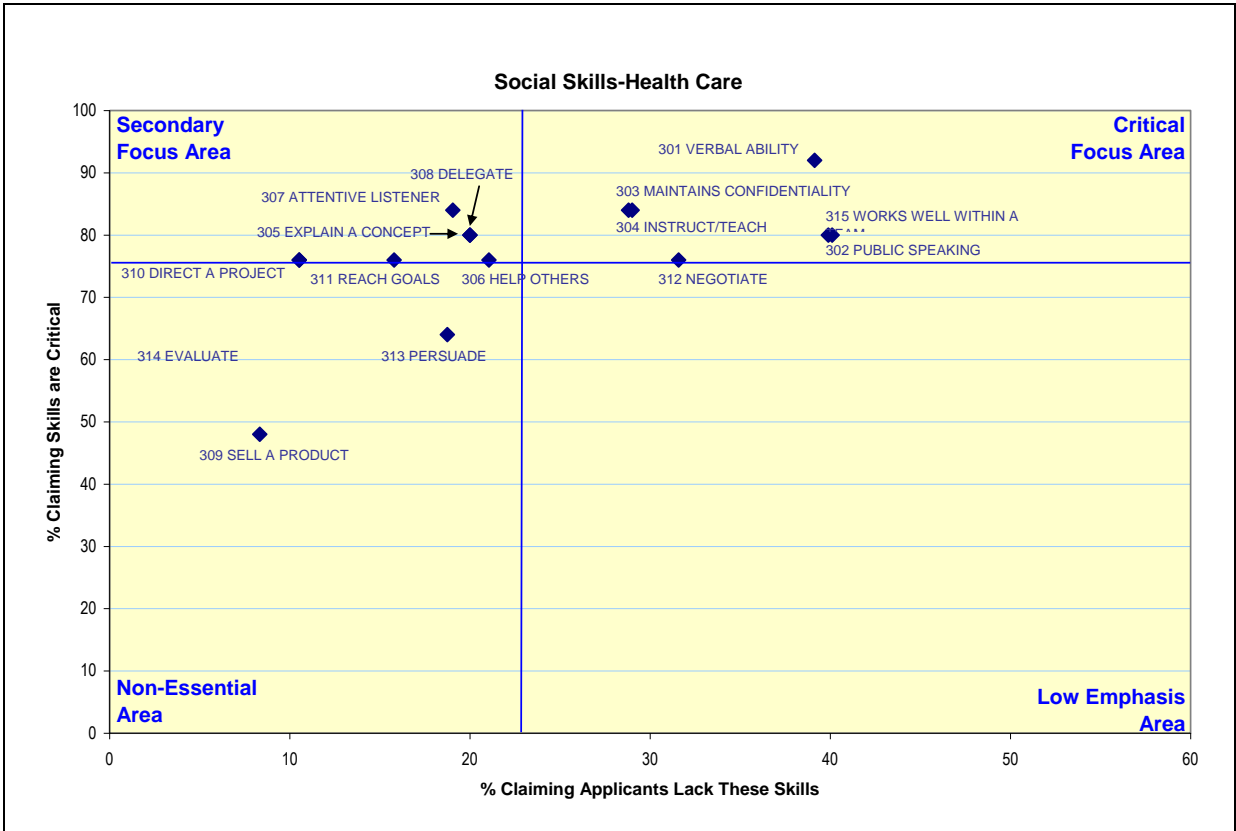
- Mathematics and writing skills
- Analytical, critical thinking, and ideation skills
- Multicultural awareness
- Confidentiality
- Teamwork
- Listening and verbal skills
- Instruction and teaching
- Time management

The data show that the following personal traits areas are in need of attention:

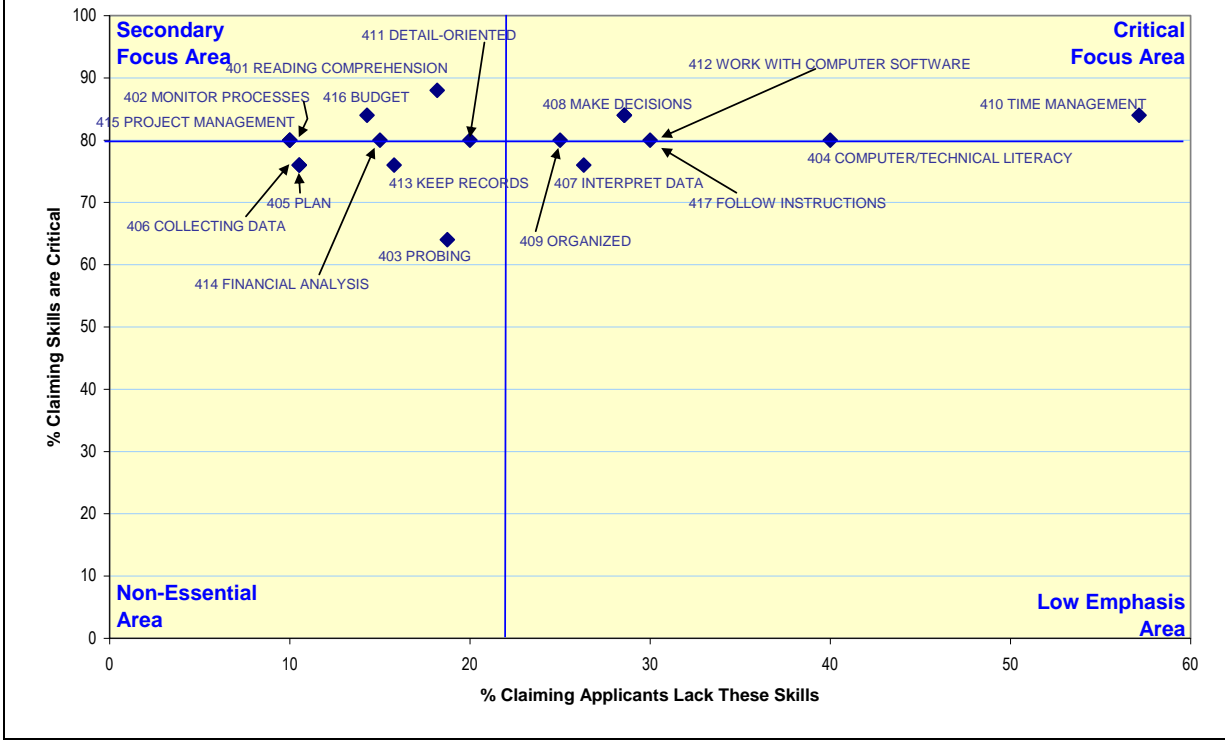
- Work ethic
- Taking initiative
- Inspiring others
- Achieving goals
- Fostering collaboration
- Being an effective problem solver
- Making decisions
- Being willing to learn
- Forward thinking
- Rational

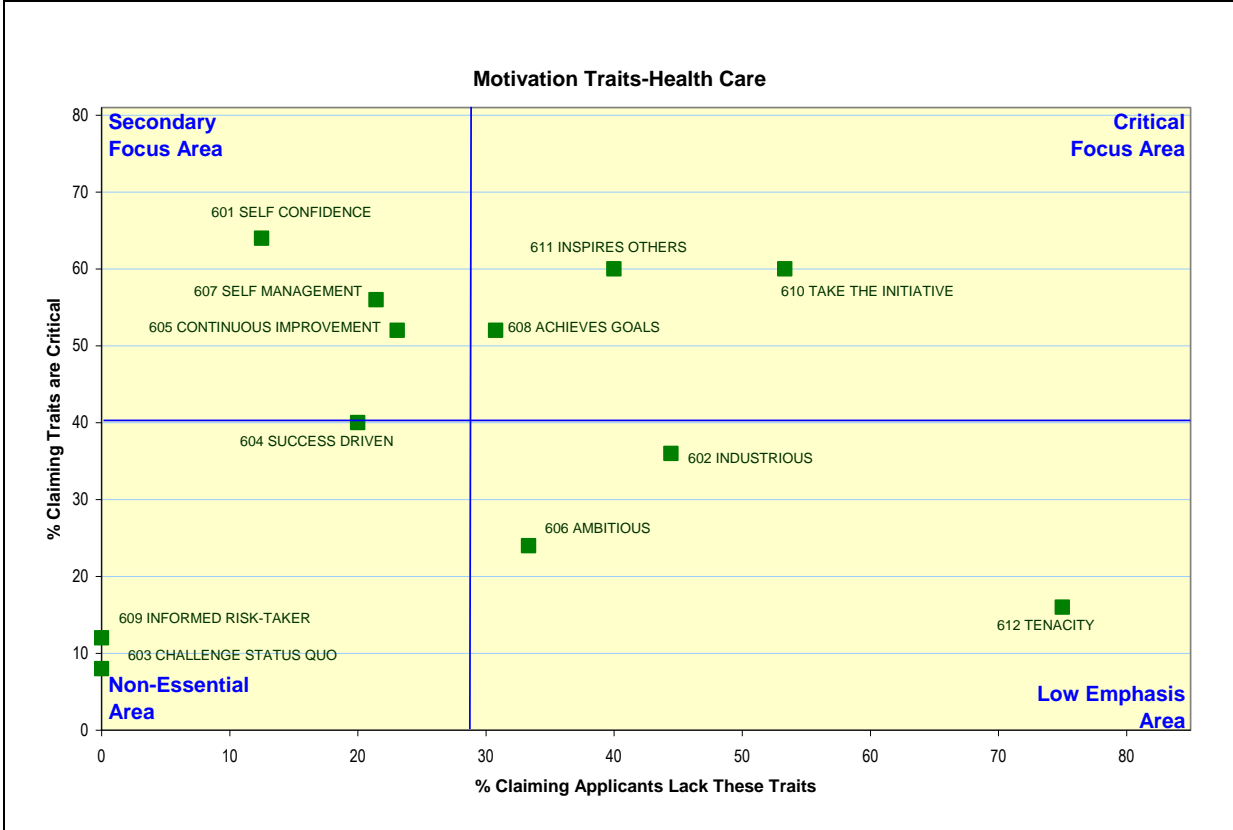
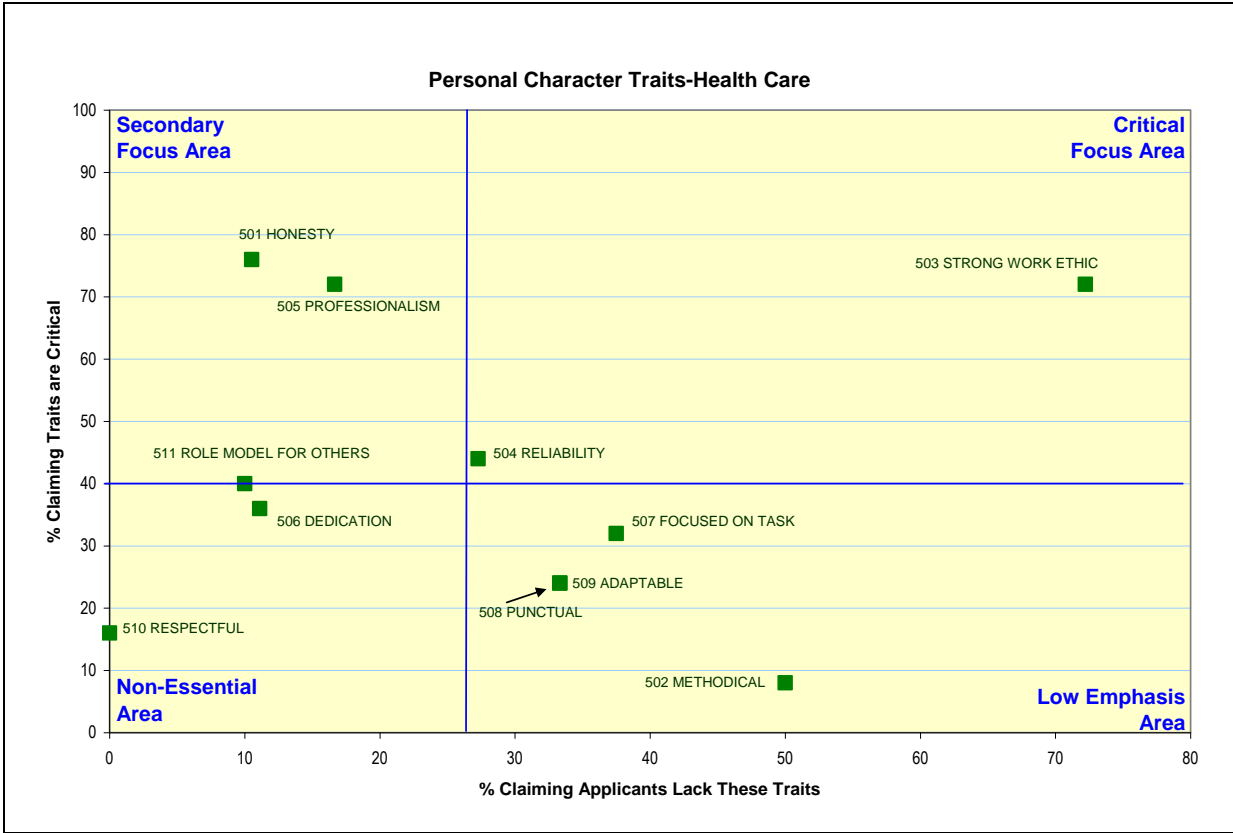


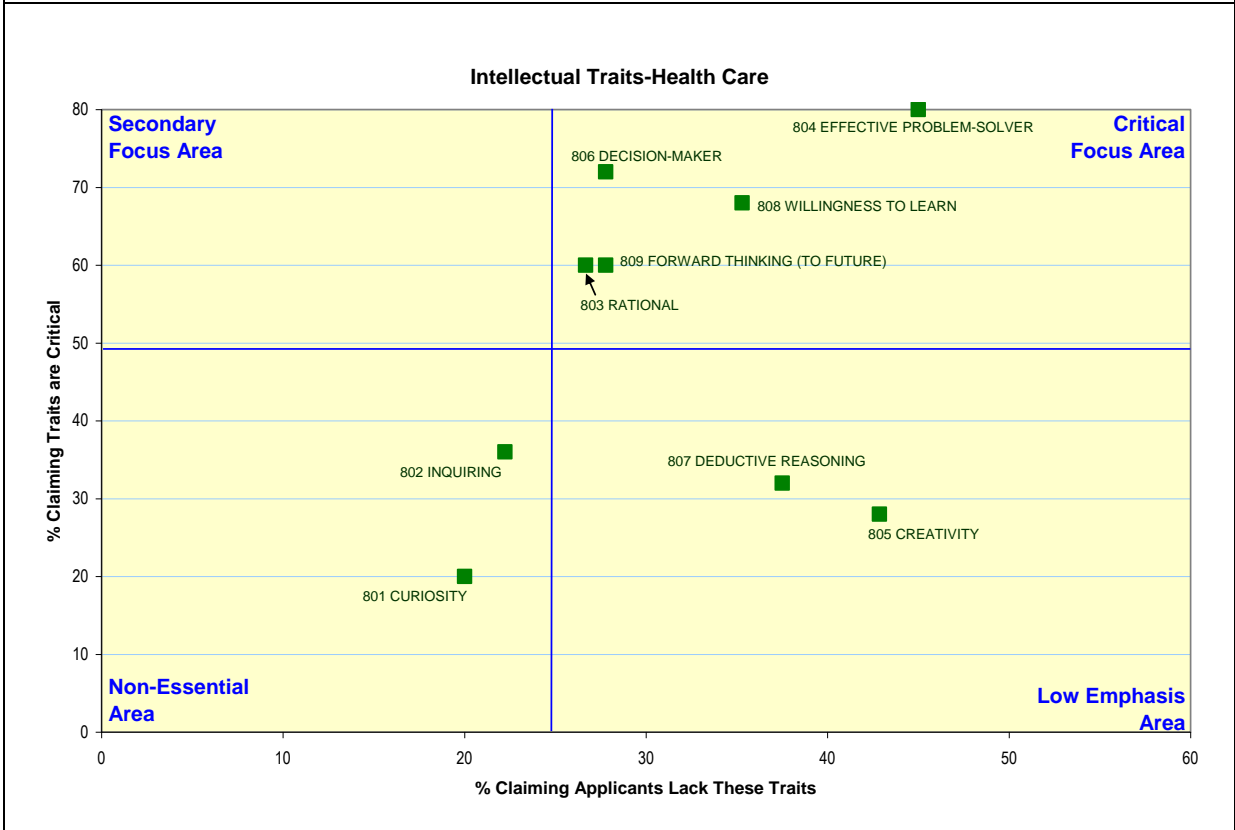
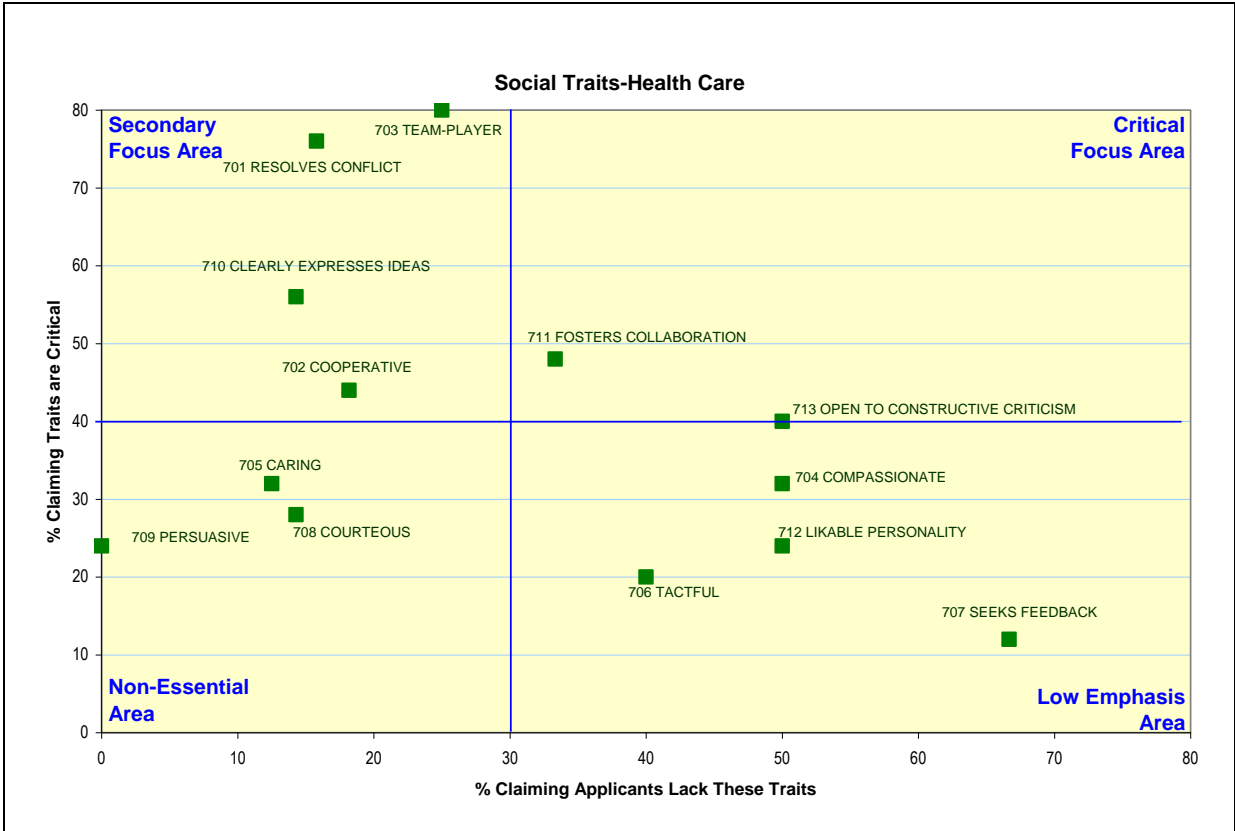
Social Skills-Health Care



Traditional Skills-Health Care







Summary of Job Skills and Personal Traits Needed for Current Jobs: Mining Sector

Introduction

Responses for employers in the mining industry are summarized in this section of the report:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

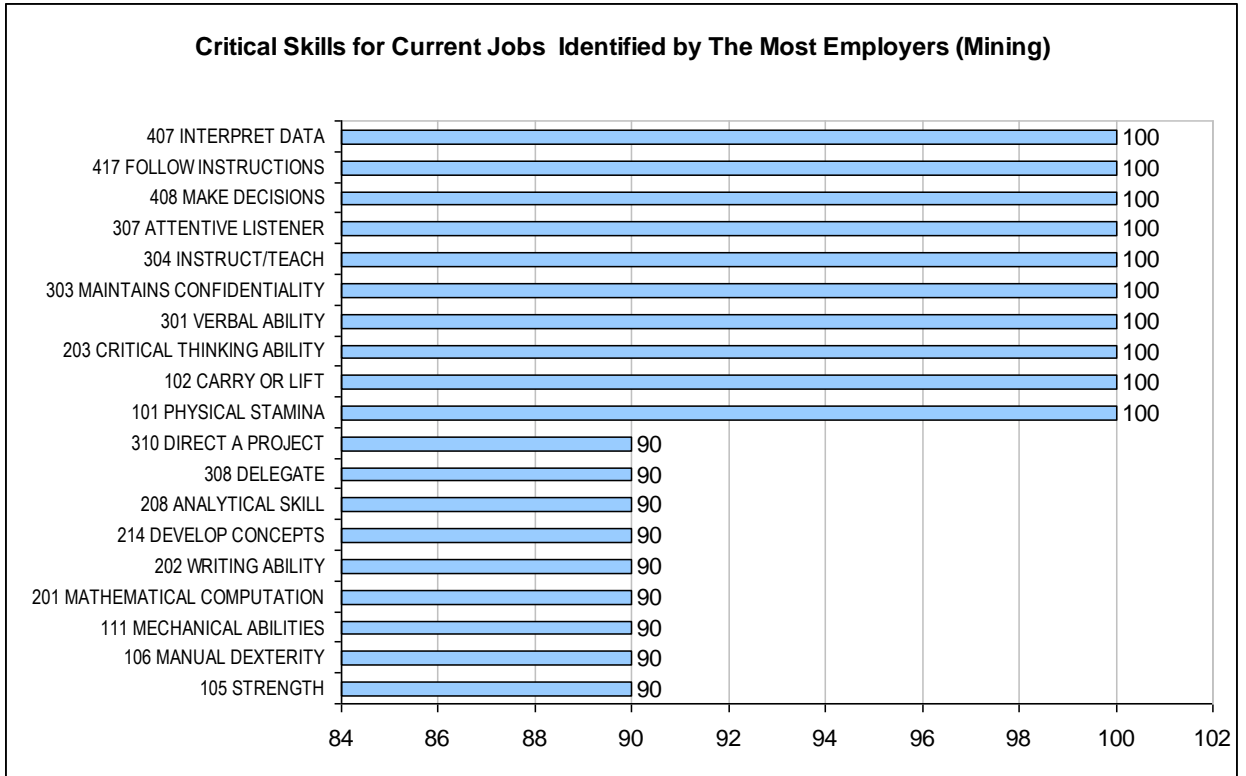
Critical Job Skills Needed for Current Mining Employees

The table to the right shows the percentage of employers which identified each job skill as being critical.

While Physical skills are obviously an important part of the mining workforce profile, the average score for Traditional and Social skills categories were actually higher than the averages for Physical and Mental categories.

Skills Identified (By % of Employers) as Being Critical for Current Jobs		Mining
	n=	%
101 PHYSICAL STAMINA		100
102 CARRY OR LIFT		100
105 STRENGTH		90
106 MANUAL DEXTERITY		90
111 MECHANICAL ABILITIES		90
104 AGILITY		80
108 REPAIR		80
103 WORK IN CLOSED SPACES		80
109 FINE MOTOR COORDINATION		60
107 BUILD		60
112 PRODUCE HANDMADE CRAFTS		0
110 CULTIVATE PLANTS		0
<hr/>		
203 CRITICAL THINKING ABILITY		100
201 MATHEMATICAL COMPUTATION		90
202 WRITING ABILITY		90
214 DEVELOP CONCEPTS		90
208 ANALYTICAL SKILL		90
213 GENERATE IDEAS		80
207 CONDUCTING RESEARCH		80
205 SCIENTIFIC ANALYSIS		80
206 ABSTRACT THINKING		70
204 MULTICULTURAL AWARENESS		70
209 UNDERSTAND THEORETICAL CONCEPTS		70
211 DESIGN		60
212 EDIT		60
210 SPATIAL VISUALIZATION		50
215 ARTISTIC		50
<hr/>		
301 VERBAL ABILITY		100
303 MAINTAINS CONFIDENTIALITY		100
304 INSTRUCT/TEACH		100
307 ATTENTIVE LISTENER		100
308 DELEGATE		90
310 DIRECT A PROJECT		90
311 REACH GOALS		90
312 NEGOTIATE		90
313 PERSUADE		90
315 WORKS WELL WITHIN A TEAM		80
305 EXPLAIN A CONCEPT		80
306 HELP OTHERS		80
314 EVALUATE		80
302 PUBLIC SPEAKING		70
309 SELL A PRODUCT		50
<hr/>		
408 MAKE DECISIONS		100
417 FOLLOW INSTRUCTIONS		100
407 INTERPRET DATA		100
401 READING COMPREHENSION		90
410 TIME MANAGEMENT		90
409 ORGANIZED		90
404 COMPUTER/TECHNICAL LITERACY		90
413 KEEP RECORDS		90
416 BUDGET		90
411 DETAIL-ORIENTED		90
414 FINANCIAL ANALYSIS		90
405 PLAN		80
406 COLLECTING DATA		80
402 MONITOR PROCESSES		80
415 PROJECT MANAGEMENT		70
403 PROBING		70
412 WORK WITH COMPUTER SOFTWARE		60

The job skills most frequently indicated as being critical are shown in the chart below.



Deficiencies in Job Skills Identified in Mining Employees

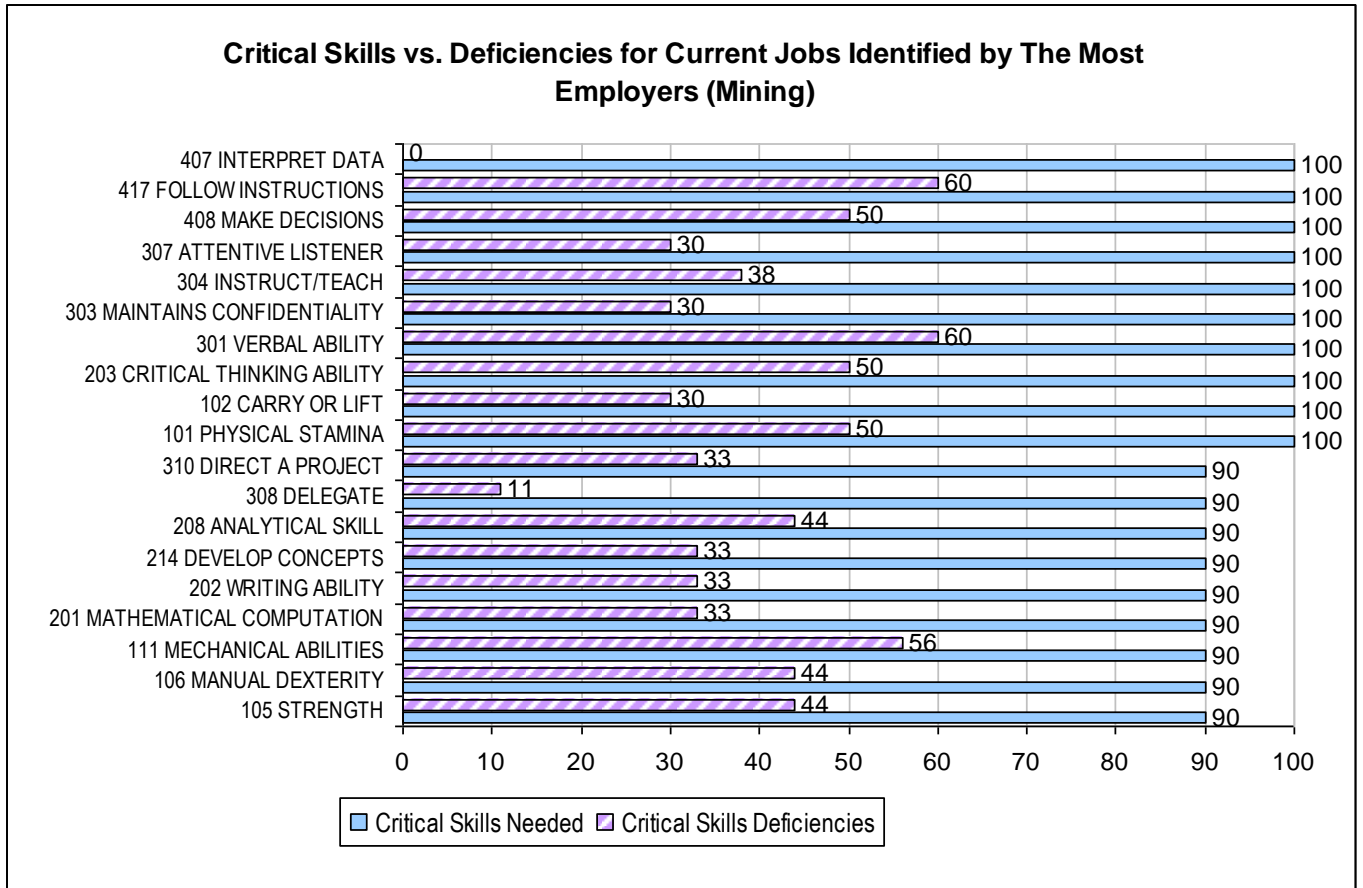
The table to the right shows the percentage of mining employers who indicated that they observed deficiencies in each job skill among employees and applicants.

The job skills were identified by more 60% of the mining employers as being deficient included:

- 213 Generate Ideas
- 301 Verbal Ability
- 404 Computer/Technical Literacy
- 417 Follow Instructions

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants	
(Base: Employers Needing Each Skill)	Mining n= %
111 MECHANICAL ABILITIES	56
101 PHYSICAL STAMINA	50
109 FINE MOTOR COORDINATION	50
105 STRENGTH	44
106 MANUAL DEXTERITY	44
108 REPAIR	38
104 AGILITY	38
103 WORK IN CLOSED SPACES	38
107 BUILD	33
102 CARRY OR LIFT	30
110 CULTIVATE PLANTS	0
112 PRODUCE HANDMADE CRAFTS	0
<hr/>	
213 GENERATE IDEAS	63
203 CRITICAL THINKING ABILITY	50
208 ANALYTICAL SKILL	44
206 ABSTRACT THINKING	43
202 WRITING ABILITY	33
201 MATHEMATICAL COMPUTATION	33
214 DEVELOP CONCEPTS	33
209 UNDERSTAND THEORETICAL CONCEPTS	29
207 CONDUCTING RESEARCH	25
205 SCIENTIFIC ANALYSIS	25
210 SPATIAL VISUALIZATION	20
215 ARTISTIC	20
211 DESIGN	17
204 MULTICULTURAL AWARENESS	14
212 EDIT	0
<hr/>	
301 VERBAL ABILITY	60
302 PUBLIC SPEAKING	57
315 WORKS WELL WITHIN A TEAM	50
304 INSTRUCT/TEACH	50
305 EXPLAIN A CONCEPT	38
306 HELP OTHERS	38
311 REACH GOALS	33
313 PERSUADE	33
310 DIRECT A PROJECT	33
303 MAINTAINS CONFIDENTIALITY	30
307 ATTENTIVE LISTENER	30
312 NEGOTIATE	22
314 EVALUATE	13
308 DELEGATE	11
309 SELL A PRODUCT	0
<hr/>	
404 COMPUTER/TECHNICAL LITERACY	67
417 FOLLOW INSTRUCTIONS	60
412 WORK WITH COMPUTER SOFTWARE	50
408 MAKE DECISIONS	50
410 TIME MANAGEMENT	44
401 READING COMPREHENSION	33
414 FINANCIAL ANALYSIS	33
406 COLLECTING DATA	25
409 ORGANIZED	22
416 BUDGET	22
402 MONITOR PROCESSES	13
405 PLAN	13
413 KEEP RECORDS	11
411 DETAIL-ORIENTED	11
407 INTERPRET DATA	0
415 PROJECT MANAGEMENT	0
403 PROBING	0

The deficiency scores for the most critical job skills are plotted in the chart below. Among these job skills, six were identified as being deficient by at least 50% of the employers who also rated them as critical.



Critical Personal Traits Needed for Current Mining Employees

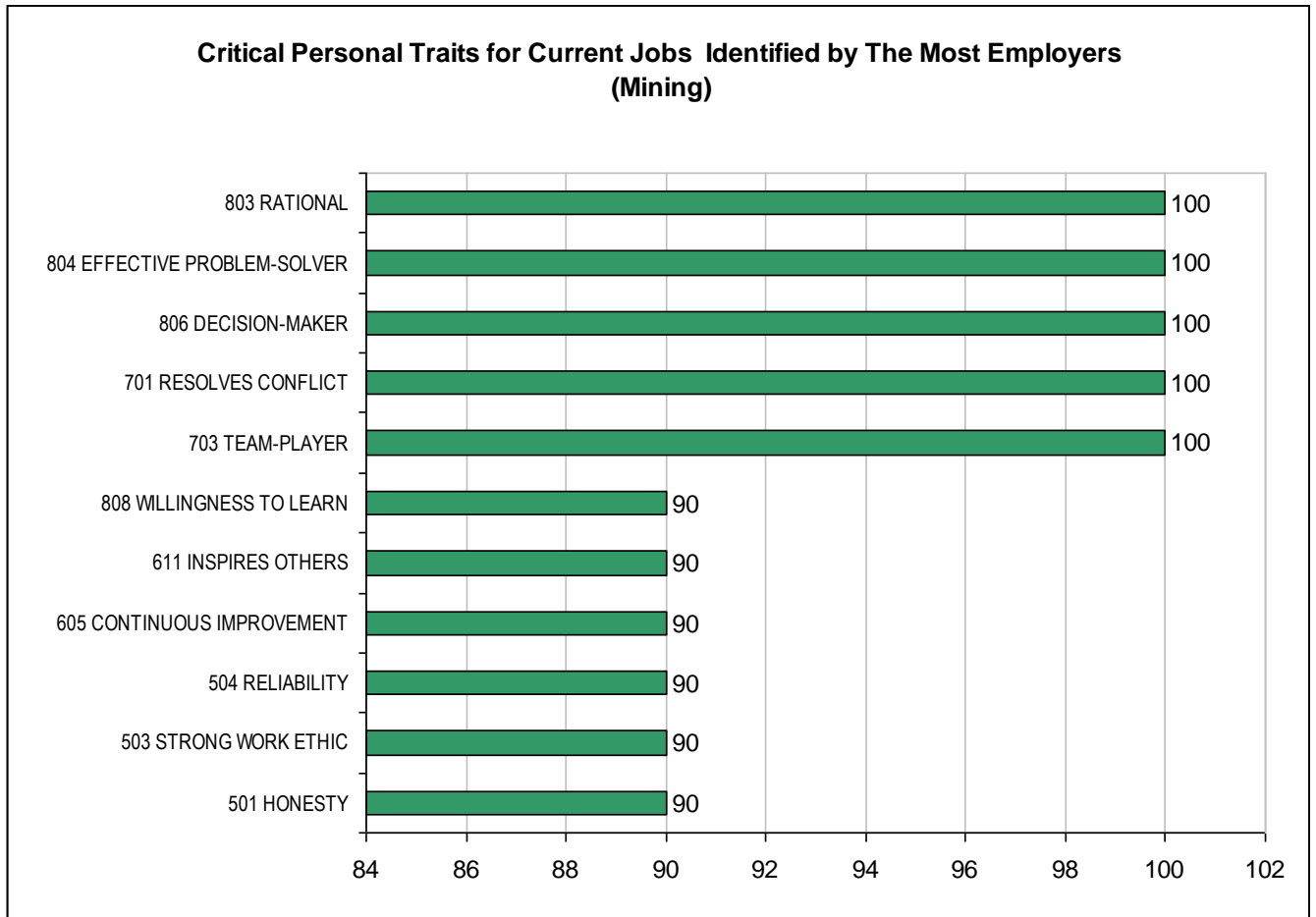
The table to the right shows the percentage of mining employers which identified each personal trait as being critical for its workforce.

Traits in the 800 Intellectual skills group were, on average, slightly more important than those in the other three categories.

As indicated here, many traits were identified as being critical and five were identified by all employers as such.

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs		<u>Mining</u>
	n=	10
		%
501 HONESTY		90
503 STRONG WORK ETHIC		90
504 RELIABILITY		90
505 PROFESSIONALISM		70
506 DEDICATION		60
511 ROLE MODEL FOR OTHERS		60
507 FOCUSED ON TASK		40
508 PUNCTUAL		40
510 RESPECTFUL		40
502 METHODOICAL		30
509 ADAPTABLE		20
<hr/>		
605 CONTINUOUS IMPROVEMENT		90
611 INSPIRES OTHERS		90
608 ACHIEVES GOALS		80
607 SELF MANAGEMENT		80
610 TAKE THE INITIATIVE		80
602 INDUSTRIOUS		80
601 SELF CONFIDENCE		70
606 AMBITIOUS		70
604 SUCCESS DRIVEN		50
603 CHALLENGE STATUS QUO		40
612 TENACITY		30
609 INFORMED RISK-TAKER		10
<hr/>		
703 TEAM-PLAYER		100
701 RESOLVES CONFLICT		100
702 COOPERATIVE		70
710 CLEARLY EXPRESSES IDEAS		70
711 FOSTERS COLLABORATION		70
709 PERSUASIVE		70
707 SEEKS FEEDBACK		60
706 TACTFUL		50
713 OPEN TO CONSTRUCTIVE CRITICISM		40
705 CARING		40
708 COURTEOUS		30
704 COMPASSIONATE		30
712 LIKABLE PERSONALITY		10
<hr/>		
806 DECISION-MAKER		100
804 EFFECTIVE PROBLEM-SOLVER		100
803 RATIONAL		100
808 WILLINGNESS TO LEARN		90
809 FORWARD THINKING (TO FUTURE)		70
807 DEDUCTIVE REASONING		70
805 CREATIVITY		70
802 INQUIRING		70
801 CURIOSITY		50

The eleven traits identified most frequently by mining employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits
Identified in Mining Employees

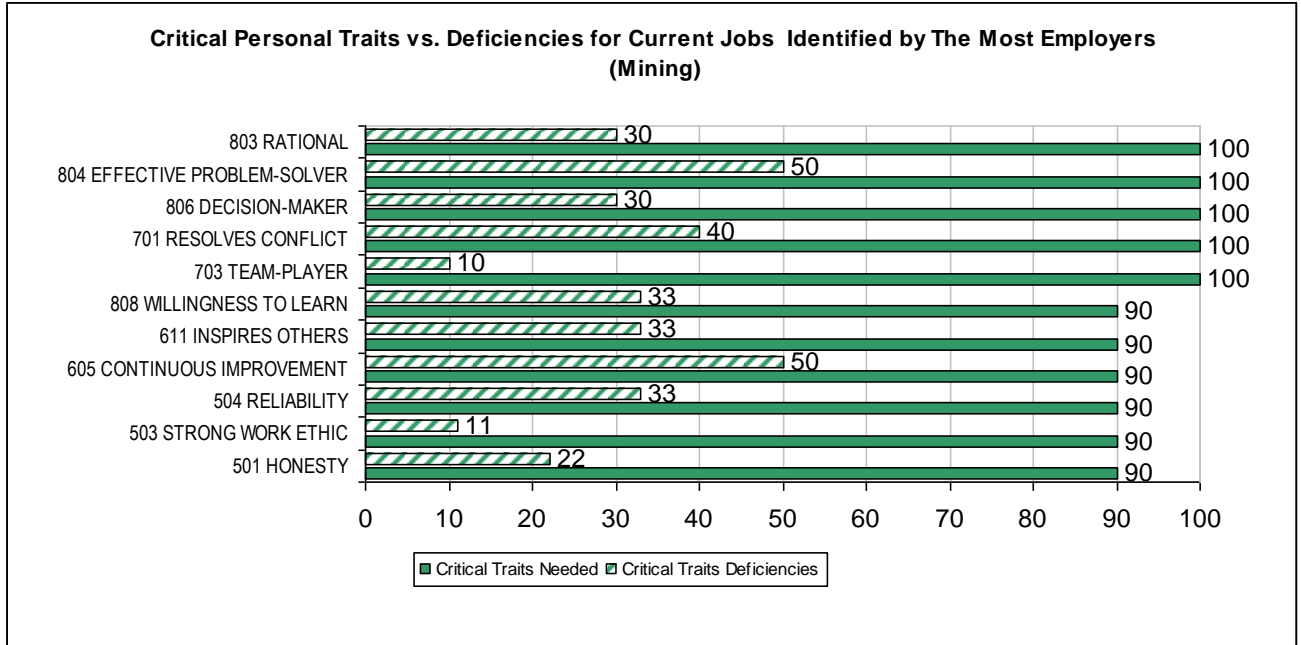
The table to the right shows the percentage of mining employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

Five traits were identified by at least 67% of the Mining employers as being deficient:

- 508 Punctual
- 510 Respectful of Others
- 511 Role Model for Others
- 609 Informed Risk Taker
- 712 Likeable Personality

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants	Mining
(Base: Employers Needing Each Traits)	n= 10 %
508 PUNCTUAL	75
510 RESPECTFUL	75
511 ROLE MODEL FOR OTHERS	67
505 PROFESSIONALISM	57
507 FOCUSED ON TASK	50
506 DEDICATION	50
504 RELIABILITY	33
502 METHODOICAL	33
501 HONESTY	22
503 STRONG WORK ETHIC	11
509 ADAPTABLE	0
<hr/>	
609 INFORMED RISK-TAKER	100
605 CONTINUOUS IMPROVEMENT	56
608 ACHIEVES GOALS	50
603 CHALLENGE STATUS QUO	50
606 AMBITIOUS	43
610 TAKE THE INITIATIVE	38
607 SELF MANAGEMENT	38
611 INSPIRES OTHERS	33
612 TENACITY	33
601 SELF CONFIDENCE	29
602 INDUSTRIOUS	25
604 SUCCESS DRIVEN	20
<hr/>	
712 LIKABLE PERSONALITY	100
706 TACTFUL	60
710 CLEARLY EXPRESSES IDEAS	57
713 OPEN TO CONSTRUCTIVE CRITICISM	50
707 SEEKS FEEDBACK	50
709 PERSUASIVE	43
701 RESOLVES CONFLICT	40
704 COMPASSIONATE	33
702 COOPERATIVE	29
705 CARING	25
711 FOSTERS COLLABORATION	14
703 TEAM-PLAYER	10
708 COURTEOUS	0
<hr/>	
804 EFFECTIVE PROBLEM-SOLVER	50
808 WILLINGNESS TO LEARN	33
809 FORWARD THINKING (TO FUTURE)	30
806 DECISION-MAKER	30
803 RATIONAL	30
805 CREATIVITY	14
802 INQUIRING	14
807 DEDUCTIVE REASONING	0
801 CURIOSITY	0

The deficiency scores for the most critical personal traits are shown in the following graph. Two of the traits listed had at least 50% of the employers identifying them as both critical and deficient.



Quadrant Analysis: Mining Employers

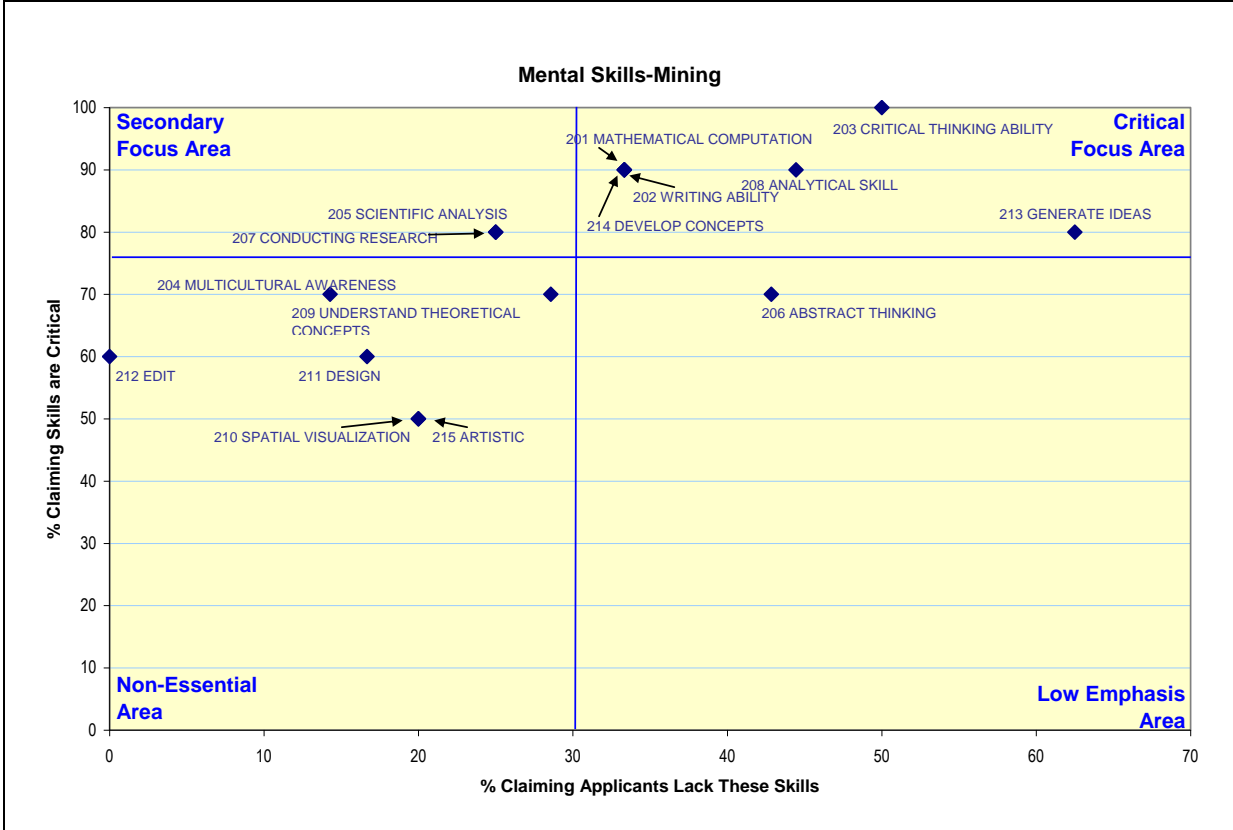
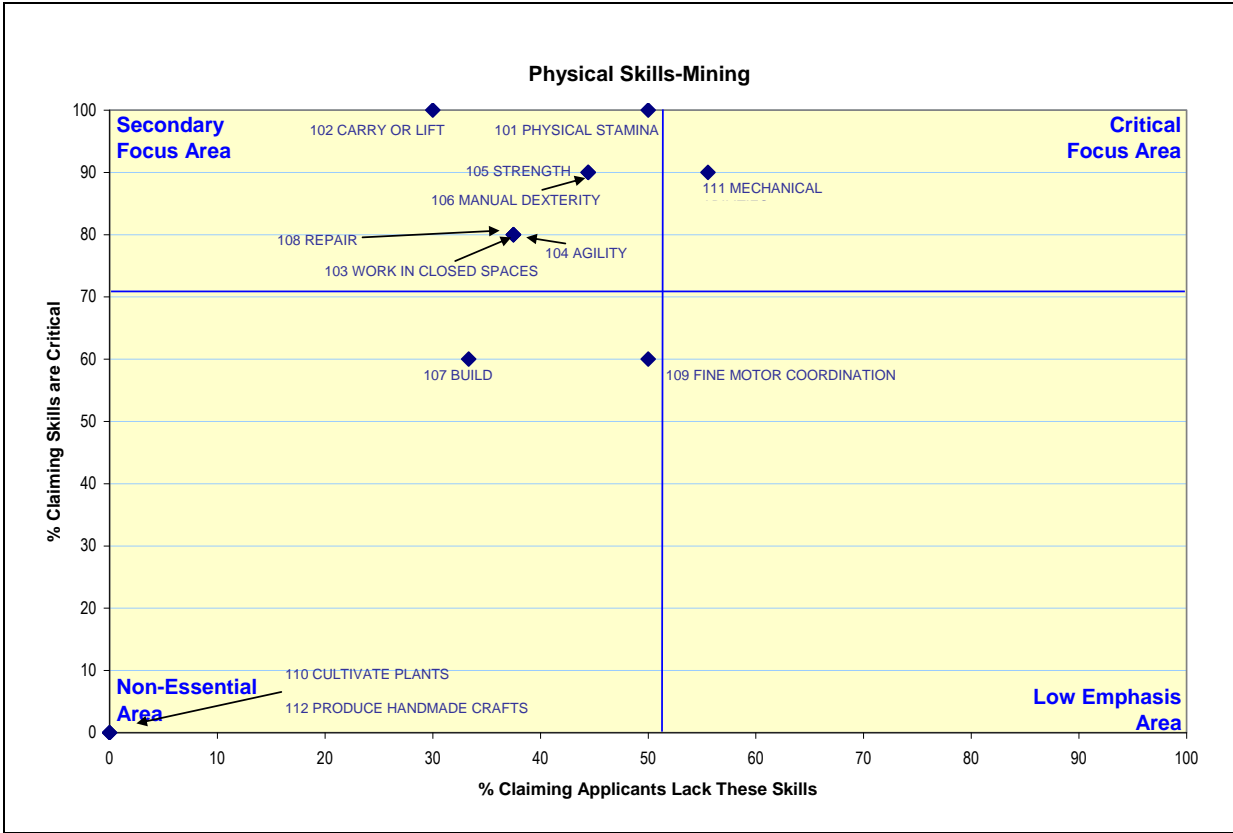
A quadrant analysis for the mining industry, for all job categories, is shown on the following four pages.

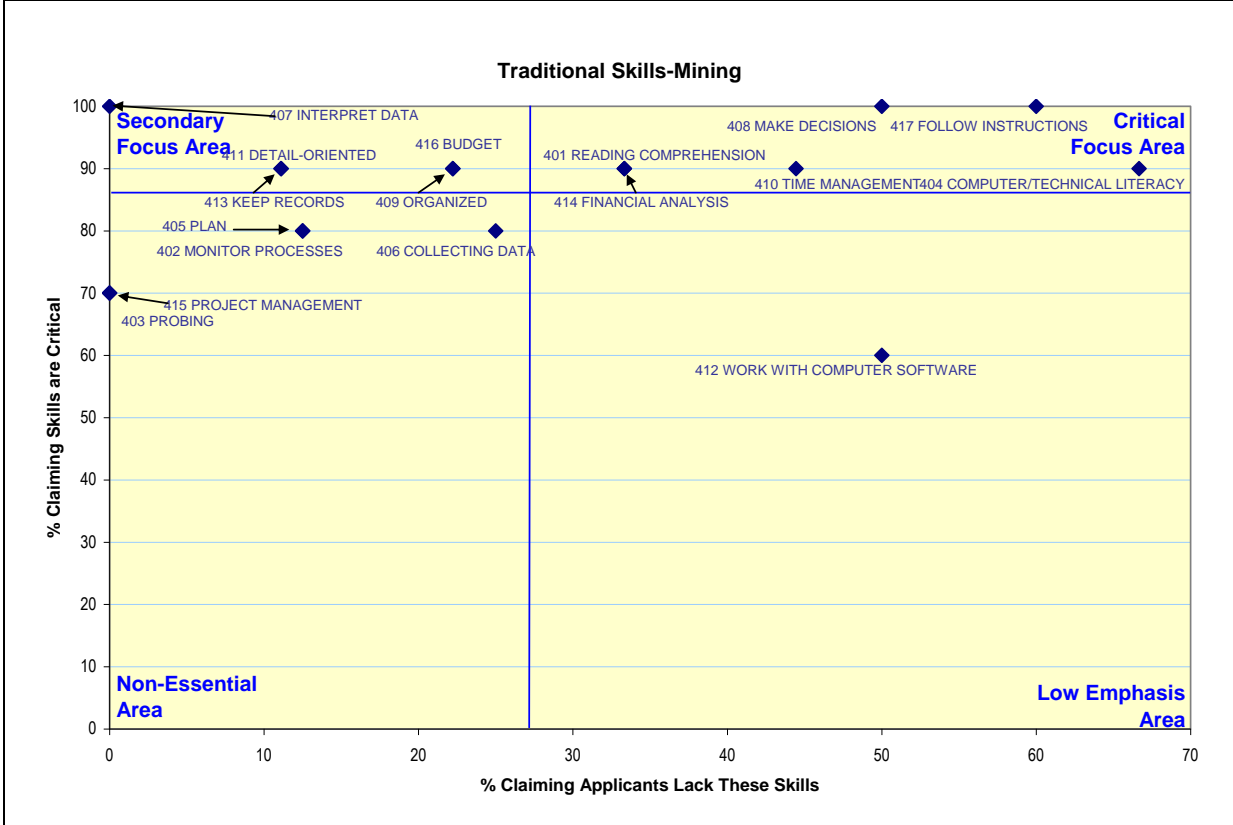
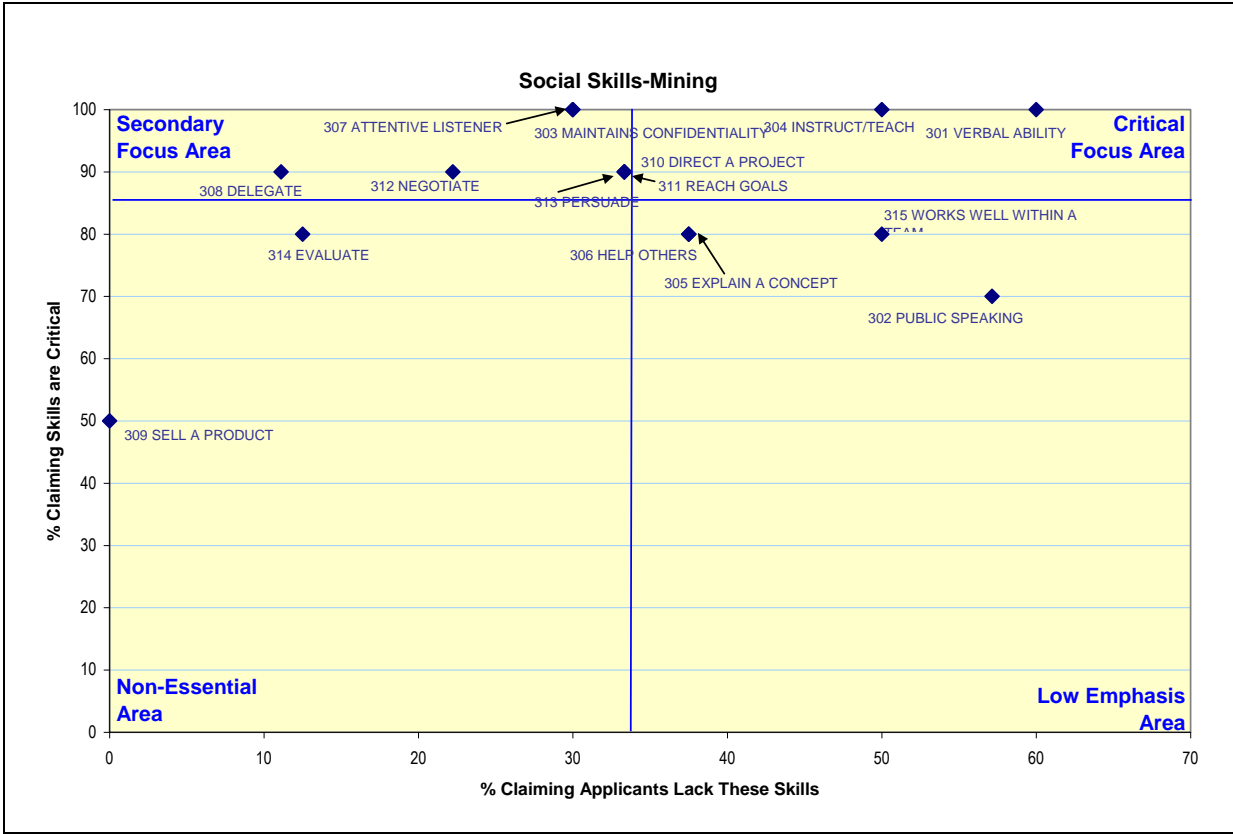
The data show that the following job skill areas are in need of attention:

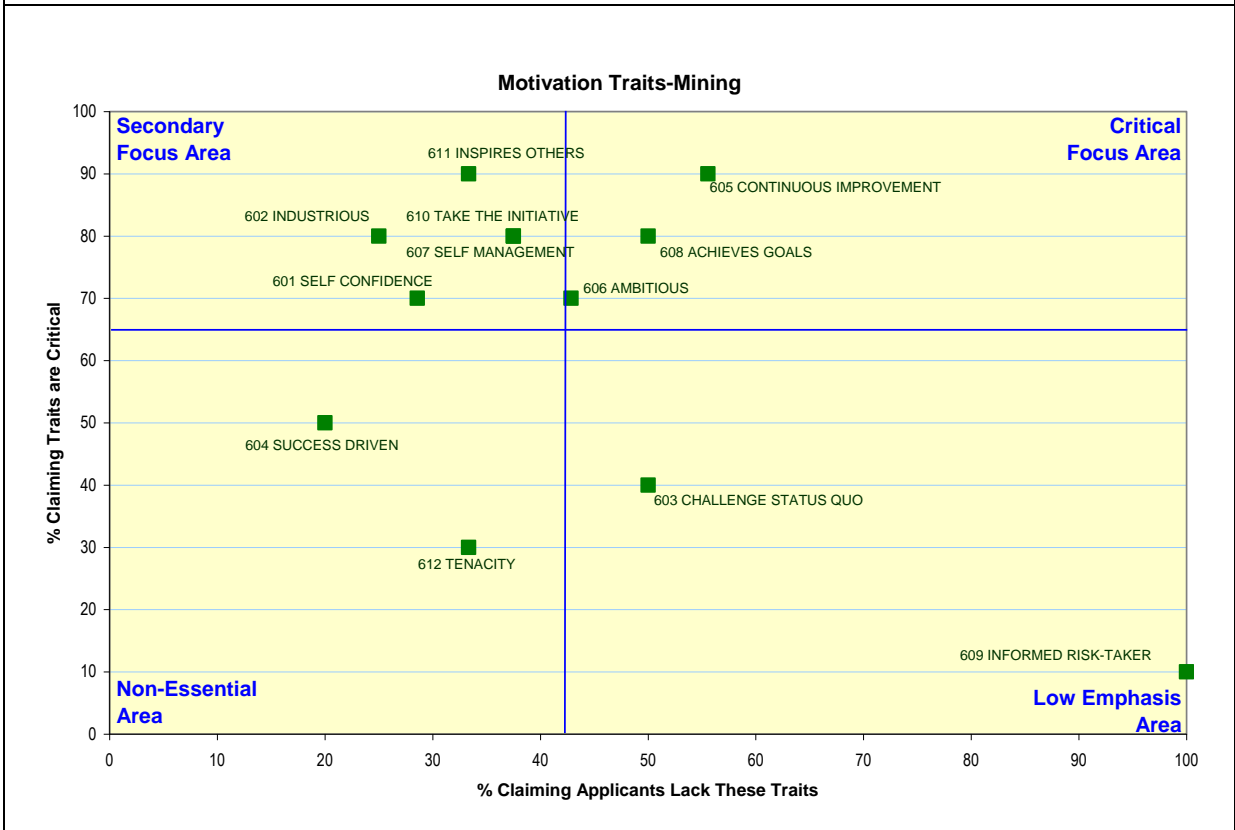
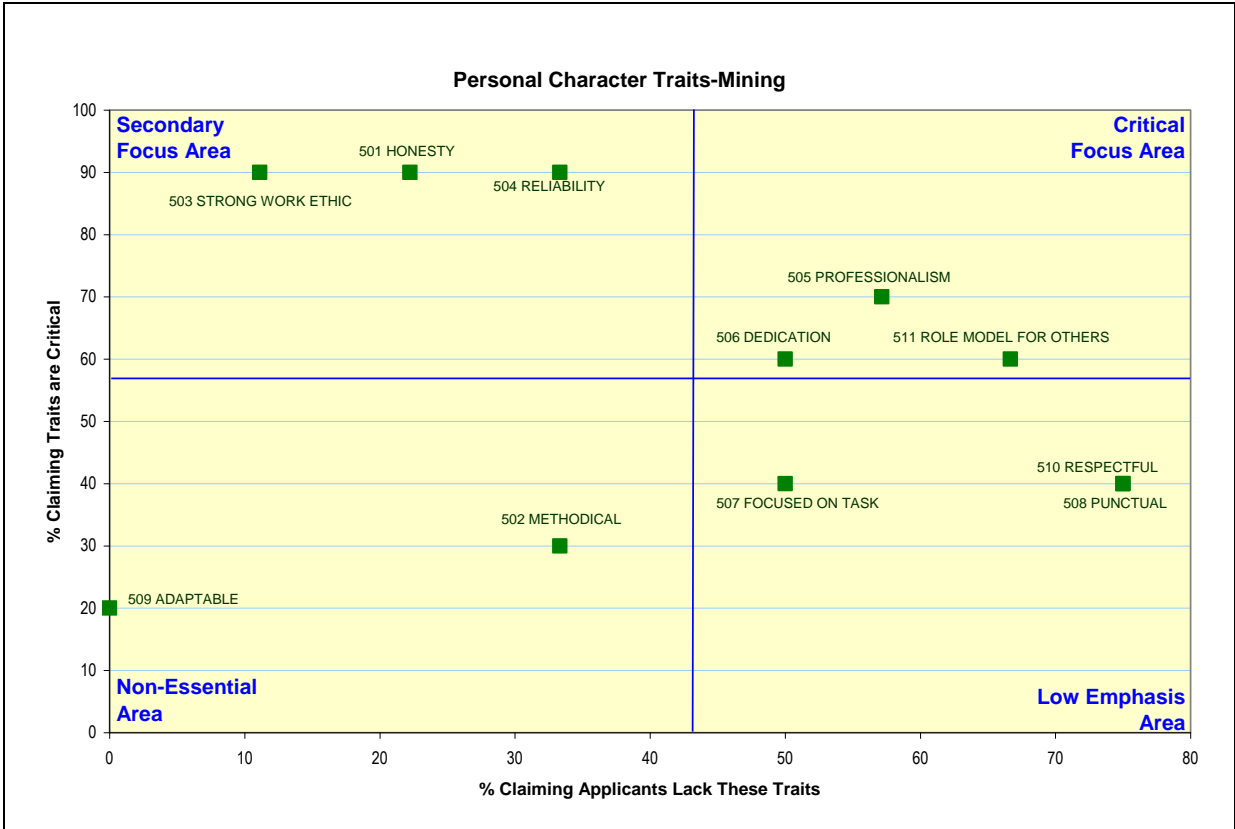
- Mechanical skills
- Analytical, critical thinking, and ideation skills
- Mathematics and writing
- Listening and verbal skills
- Instruction and teaching
- Making decisions
- Following instruction
- Time management
- Computer literacy
- Reading comprehension

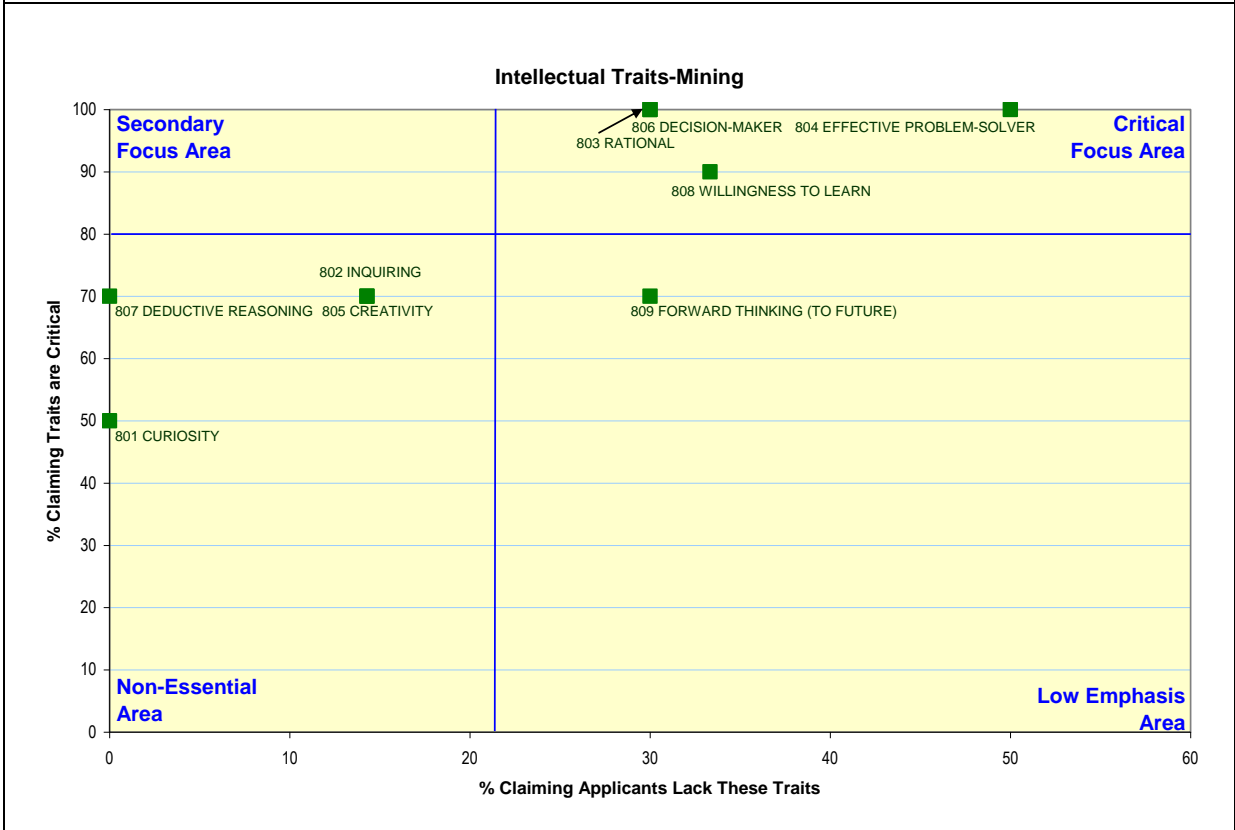
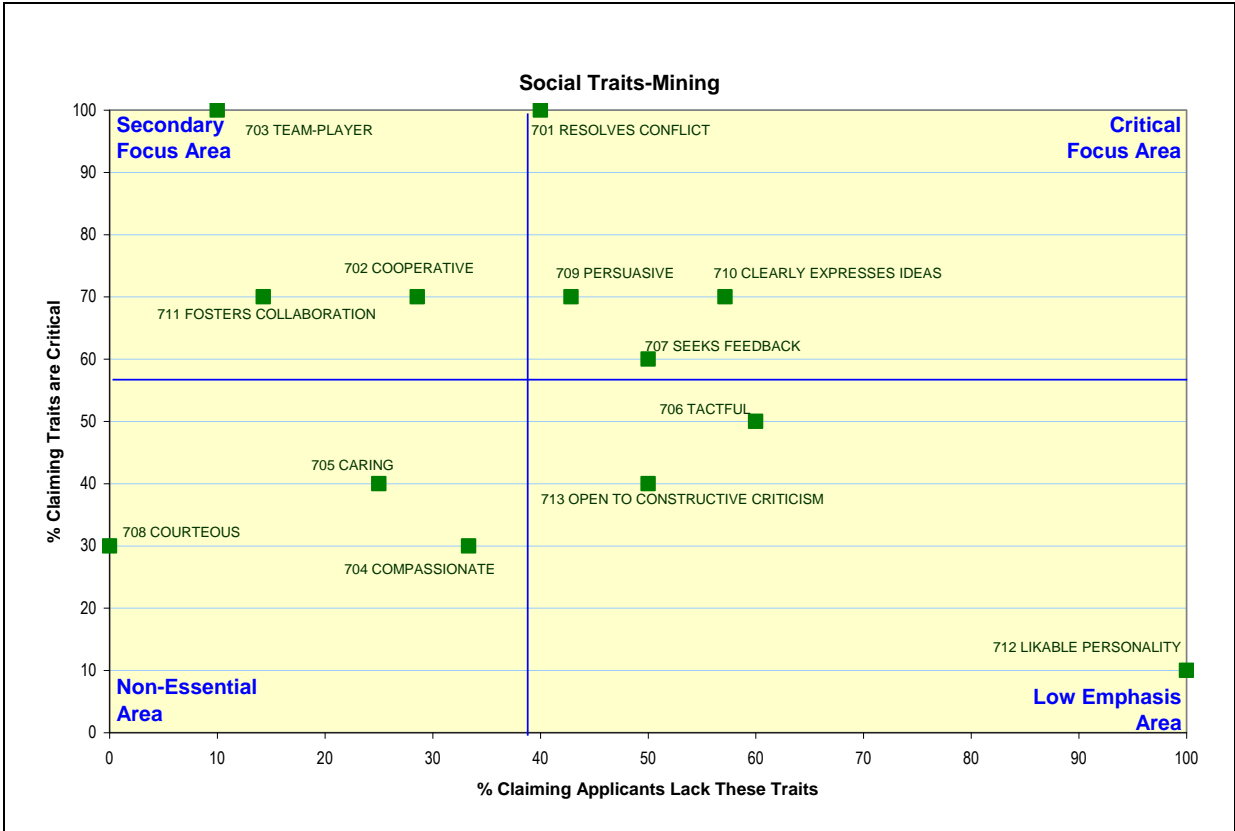
The data show that the following personal traits areas are in need of attention:

- Professionalism
- Dedication
- Role model for others
- Work ethic
- Achieving goals
- Continuous improvement
- Clearly expressing ideas
- Resolving conflict
- Persuasive
- Decision-maker
- Effective problem solver
- Being willing to learn









Summary of Job Skills and Personal Traits Needed for Current Jobs: Construction Sector

Introduction

In this section of the report, the responses for employers in the construction industry are summarized:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

Critical Job Skills Needed for Current Construction Employees

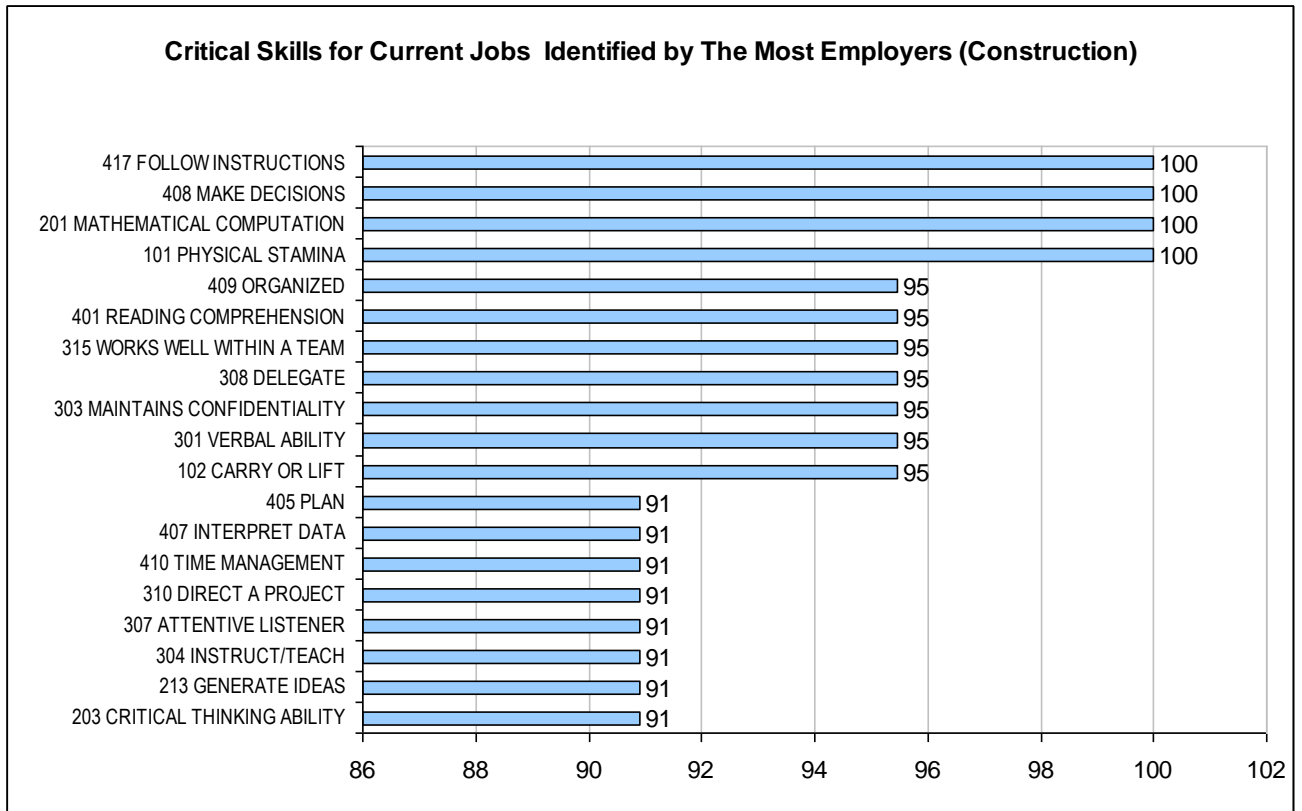
The table to the right shows the percentage of employers which identified each job skill as being critical.

As with healthcare and mining, the skills in the Social and Traditional skills categories were on average more important than skills in the Physical and Mental categories.

Of the job skills measured, 29 were identified as being critical by more than 85% of the construction respondents.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	Construction
	n= 22
	%
101 PHYSICAL STAMINA	100
102 CARRY OR LIFT	95
105 STRENGTH	86
104 AGILITY	86
108 REPAIR	82
107 BUILD	82
111 MECHANICAL ABILITIES	77
106 MANUAL DEXTERITY	73
109 FINE MOTOR COORDINATION	73
103 WORK IN CLOSED SPACES	55
112 PRODUCE HANDMADE CRAFTS	14
110 CULTIVATE PLANTS	9
201 MATHEMATICAL COMPUTATION	100
203 CRITICAL THINKING ABILITY	91
213 GENERATE IDEAS	91
202 WRITING ABILITY	82
214 DEVELOP CONCEPTS	73
211 DESIGN	68
206 ABSTRACT THINKING	64
208 ANALYTICAL SKILL	59
209 UNDERSTAND THEORETICAL CONCEPTS	59
204 MULTICULTURAL AWARENESS	55
210 SPATIAL VISUALIZATION	50
215 ARTISTIC	50
212 EDIT	45
207 CONDUCTING RESEARCH	41
205 SCIENTIFIC ANALYSIS	36
301 VERBAL ABILITY	95
303 MAINTAINS CONFIDENTIALITY	95
308 DELEGATE	95
315 WORKS WELL WITHIN A TEAM	95
304 INSTRUCT/TEACH	91
307 ATTENTIVE LISTENER	91
310 DIRECT A PROJECT	91
305 EXPLAIN A CONCEPT	86
306 HELP OTHERS	86
312 NEGOTIATE	86
314 EVALUATE	86
311 REACH GOALS	82
302 PUBLIC SPEAKING	82
313 PERSUADE	82
309 SELL A PRODUCT	68
408 MAKE DECISIONS	100
417 FOLLOW INSTRUCTIONS	100
401 READING COMPREHENSION	95
409 ORGANIZED	95
410 TIME MANAGEMENT	91
407 INTERPRET DATA	91
405 PLAN	91
406 COLLECTING DATA	91
413 KEEP RECORDS	91
411 DETAIL-ORIENTED	91
416 BUDGET	86
404 COMPUTER/TECHNICAL LITERACY	82
415 PROJECT MANAGEMENT	82
414 FINANCIAL ANALYSIS	77
402 MONITOR PROCESSES	77
412 WORK WITH COMPUTER SOFTWARE	73
403 PROBING	59

The job skills most frequently indicated as being critical are shown in the chart below. As indicated above, there were a large number of skills deemed critical. These were the top 19 and were all over 90%.



Deficiencies in Job Skills Identified in Construction Employees

The table to the right shows the percentage of construction employers who indicated that they observed deficiencies in each job skill among employees and applicants.

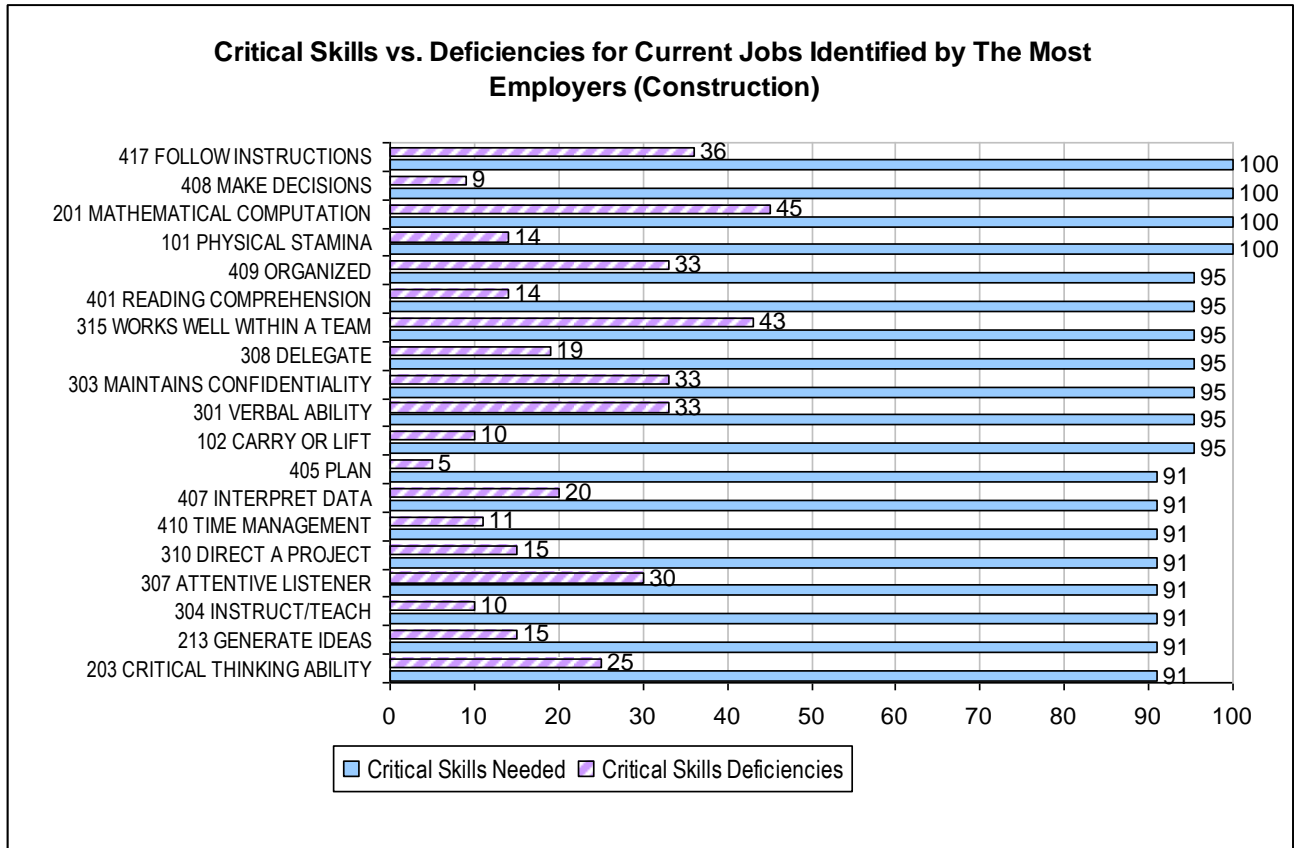
As indicated above, construction employers identified a fairly broad range of skills as being critical. The degree to which these critical skills were observed as being deficient was not as high and was fairly well distributed across the various job skills. None of the job skills were rated as being deficient by more than 50% of the employers who rated them as being critical.

The job skills identified by more than 40% of the employers as being deficient were:

- 111 Mechanical Abilities
- 201 Mathematical Computation
- 201 Multicultural Awareness
- 315 Works Well Within a Team
- 410 Time Management
- 413 Keep Records
- 404 Computer/Technical Literacy

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	Construction
	n= 22
	%
111 MECHANICAL ABILITIES	41
108 REPAIR	33
104 AGILITY	21
107 BUILD	17
101 PHYSICAL STAMINA	14
109 FINE MOTOR COORDINATION	13
105 STRENGTH	11
102 CARRY OR LIFT	10
103 WORK IN CLOSED SPACES	8
106 MANUAL DEXTERITY	6
110 CULTIVATE PLANTS	0
112 PRODUCE HANDMADE CRAFTS	0
201 MATHEMATICAL COMPUTATION	45
204 MULTICULTURAL AWARENESS	42
202 WRITING ABILITY	39
208 ANALYTICAL SKILL	38
210 SPATIAL VISUALIZATION	27
211 DESIGN	27
203 CRITICAL THINKING ABILITY	25
207 CONDUCTING RESEARCH	22
206 ABSTRACT THINKING	21
212 EDIT	20
209 UNDERSTAND THEORETICAL CONCEPTS	15
213 GENERATE IDEAS	15
205 SCIENTIFIC ANALYSIS	13
214 DEVELOP CONCEPTS	13
215 ARTISTIC	9
315 WORKS WELL WITHIN A TEAM	43
302 PUBLIC SPEAKING	33
301 VERBAL ABILITY	33
303 MAINTAINS CONFIDENTIALITY	33
307 ATTENTIVE LISTENER	30
311 REACH GOALS	28
309 SELL A PRODUCT	27
305 EXPLAIN A CONCEPT	21
308 DELEGATE	19
313 PERSUADE	17
310 DIRECT A PROJECT	15
306 HELP OTHERS	11
312 NEGOTIATE	11
314 EVALUATE	11
304 INSTRUCT/TEACH	10
410 TIME MANAGEMENT	45
413 KEEP RECORDS	45
404 COMPUTER/TECHNICAL LITERACY	44
417 FOLLOW INSTRUCTIONS	36
409 ORGANIZED	33
412 WORK WITH COMPUTER SOFTWARE	31
411 DETAIL-ORIENTED	25
407 INTERPRET DATA	20
406 COLLECTING DATA	20
416 BUDGET	16
401 READING COMPREHENSION	14
402 MONITOR PROCESSES	12
414 FINANCIAL ANALYSIS	12
415 PROJECT MANAGEMENT	11
408 MAKE DECISIONS	9
403 PROBING	8
405 PLAN	5

The deficiency scores for the most critical job skills are plotted in the chart below. 201 Mathematical Computation and 315 Works Well Within a Team appear to need focus.



*Critical Personal Traits Needed
for Current Construction
Employees*

The table to the right shows the percentage of construction employers which identified each personal trait as being critical for its workforce.

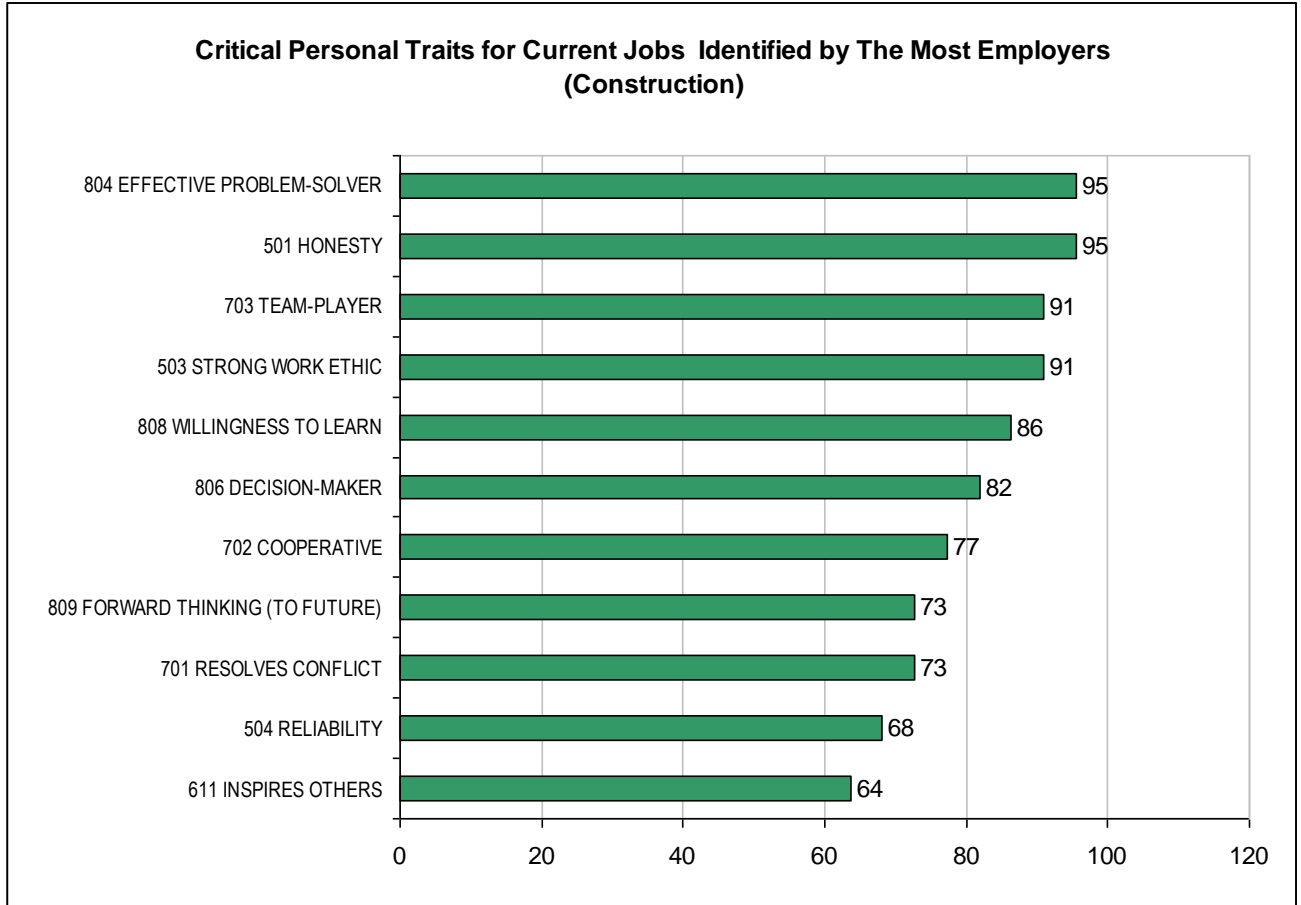
The degree to which Construction employers found the various traits to be critical was fairly well distributed across the four categories. The traits in the 800 Intellectual skills group were slightly more important than those in the other three categories.

These personal traits were identified as being critical by at least 75% of the employers:

- 501 Honesty
- 503 Strong Work Ethic
- 703 Team Player
- 702 Cooperative
- 804 Effective Problem Solver
- 808 Willingness To Learn
- 806 Decision-Maker

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs		Construction
	n=	22
		%
501 HONESTY		95
503 STRONG WORK ETHIC		91
504 RELIABILITY		68
505 PROFESSIONALISM		59
506 DEDICATION		50
511 ROLE MODEL FOR OTHERS		36
507 FOCUSED ON TASK		36
508 PUNCTUAL		27
509 ADAPTABLE		27
502 METHODICAL		27
510 RESPECTFUL		14
<hr/>		
611 INSPIRES OTHERS		64
601 SELF CONFIDENCE		64
608 ACHIEVES GOALS		64
610 TAKE THE INITIATIVE		64
602 INDUSTRIOUS		64
605 CONTINUOUS IMPROVEMENT		59
606 AMBITIOUS		55
607 SELF MANAGEMENT		50
604 SUCCESS DRIVEN		50
603 CHALLENGE STATUS QUO		32
609 INFORMED RISK-TAKER		23
612 TENACITY		18
<hr/>		
703 TEAM-PLAYER		91
702 COOPERATIVE		77
701 RESOLVES CONFLICT		73
713 OPEN TO CONSTRUCTIVE CRITICISM		64
708 COURTEOUS		55
710 CLEARLY EXPRESSES IDEAS		45
707 SEEKS FEEDBACK		45
706 TACTFUL		45
712 LIKABLE PERSONALITY		36
711 FOSTERS COLLABORATION		27
709 PERSUASIVE		27
704 COMPASSIONATE		27
705 CARING		18
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		95
808 WILLINGNESS TO LEARN		86
806 DECISION-MAKER		82
809 FORWARD THINKING (TO FUTURE)		73
807 DEDUCTIVE REASONING		64
803 RATIONAL		55
802 INQUIRING		45
805 CREATIVITY		36
801 CURIOSITY		23

The traits identified most frequently by construction employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits Identified in Construction Employees

The table to the right shows the percentage of Construction employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

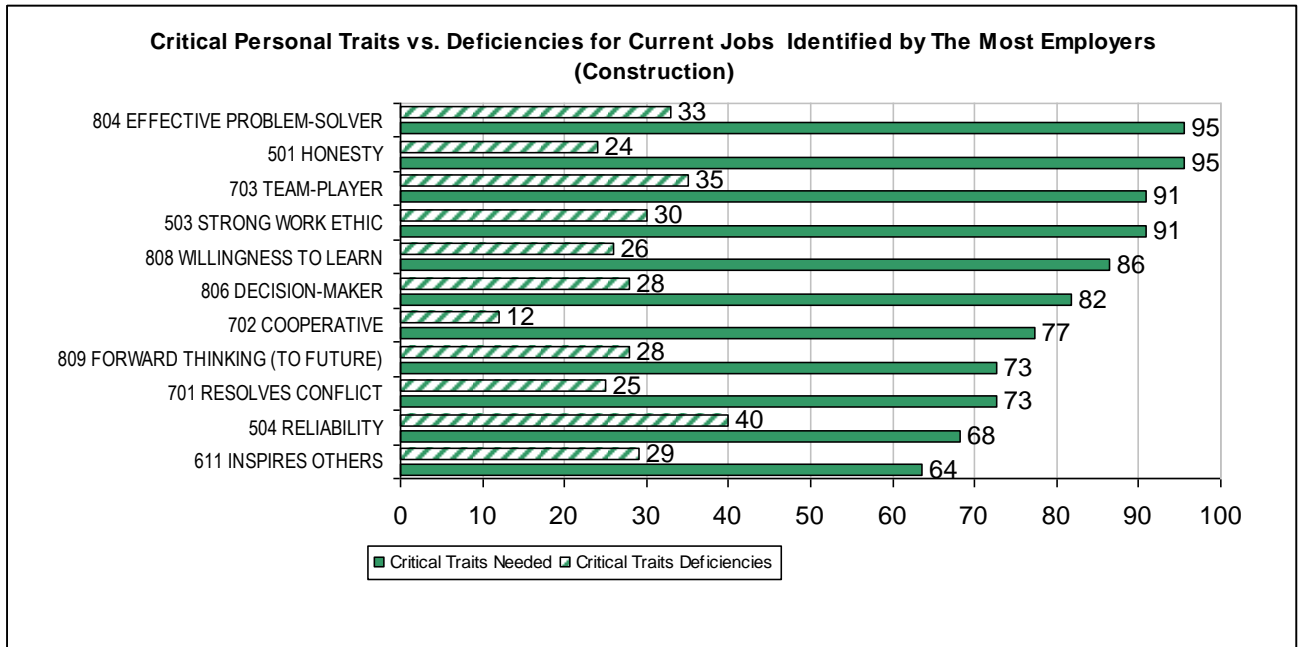
Only one trait was identified as being deficient by at least 50% of the employers:

- 507 Focused on Task

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants		Construction
(Base: Employers Needing Each Traits)		n= 22
		%
507 FOCUSED ON TASK		50
504 RELIABILITY		40
508 PUNCTUAL		33
509 ADAPTABLE		33
505 PROFESSIONALISM		31
503 STRONG WORK ETHIC		30
506 DEDICATION		27
501 HONESTY		24
511 ROLE MODEL FOR OTHERS		13
502 METHODICAL		0
510 RESPECTFUL		0
<hr/>		
605 CONTINUOUS IMPROVEMENT		46
606 AMBITIOUS		33
610 TAKE THE INITIATIVE		29
608 ACHIEVES GOALS		29
611 INSPIRES OTHERS		29
607 SELF MANAGEMENT		27
612 TENACITY		25
602 INDUSTRIOUS		21
601 SELF CONFIDENCE		21
604 SUCCESS DRIVEN		18
603 CHALLENGE STATUS QUO		14
609 INFORMED RISK-TAKER		0
<hr/>		
713 OPEN TO CONSTRUCTIVE CRITICISM		43
710 CLEARLY EXPRESSES IDEAS		40
703 TEAM-PLAYER		35
711 FOSTERS COLLABORATION		33
701 RESOLVES CONFLICT		25
709 PERSUASIVE		17
712 LIKABLE PERSONALITY		13
702 COOPERATIVE		12
708 COURTEOUS		8
706 TACTFUL		0
707 SEEKS FEEDBACK		0
704 COMPASSIONATE		0
705 CARING		0
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		33
807 DEDUCTIVE REASONING		29
809 FORWARD THINKING (TO FUTURE)		28
806 DECISION-MAKER		28
808 WILLINGNESS TO LEARN		26
805 CREATIVITY		13
803 RATIONAL		8
801 CURIOSITY		0
802 INQUIRING		0

The deficiency scores for the most critical personal traits are shown in the following graph.

The 504 Reliability trait was identified as deficient by 67% of those who indicated it was a critical trait.



Quadrant Analysis: Construction Employers

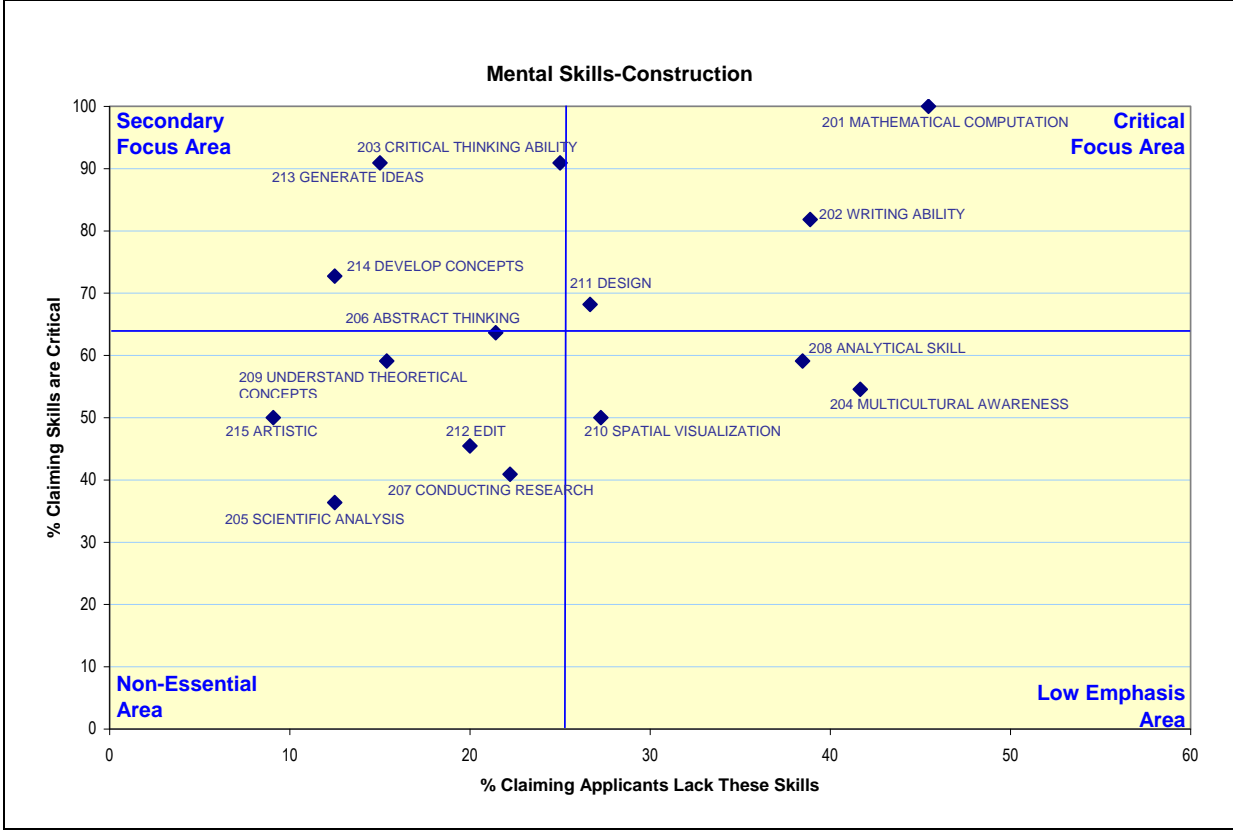
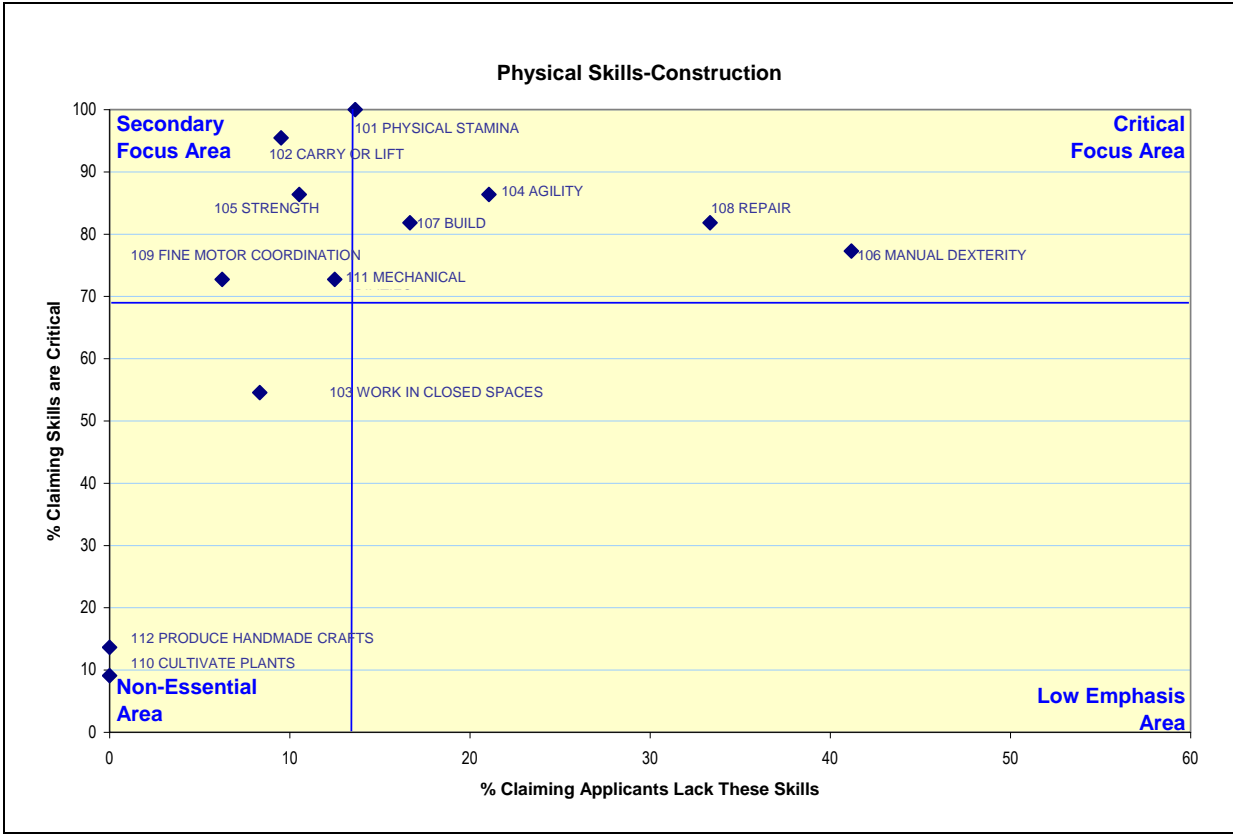
A quadrant analysis for the construction industry, for all job categories, is shown on the following four pages.

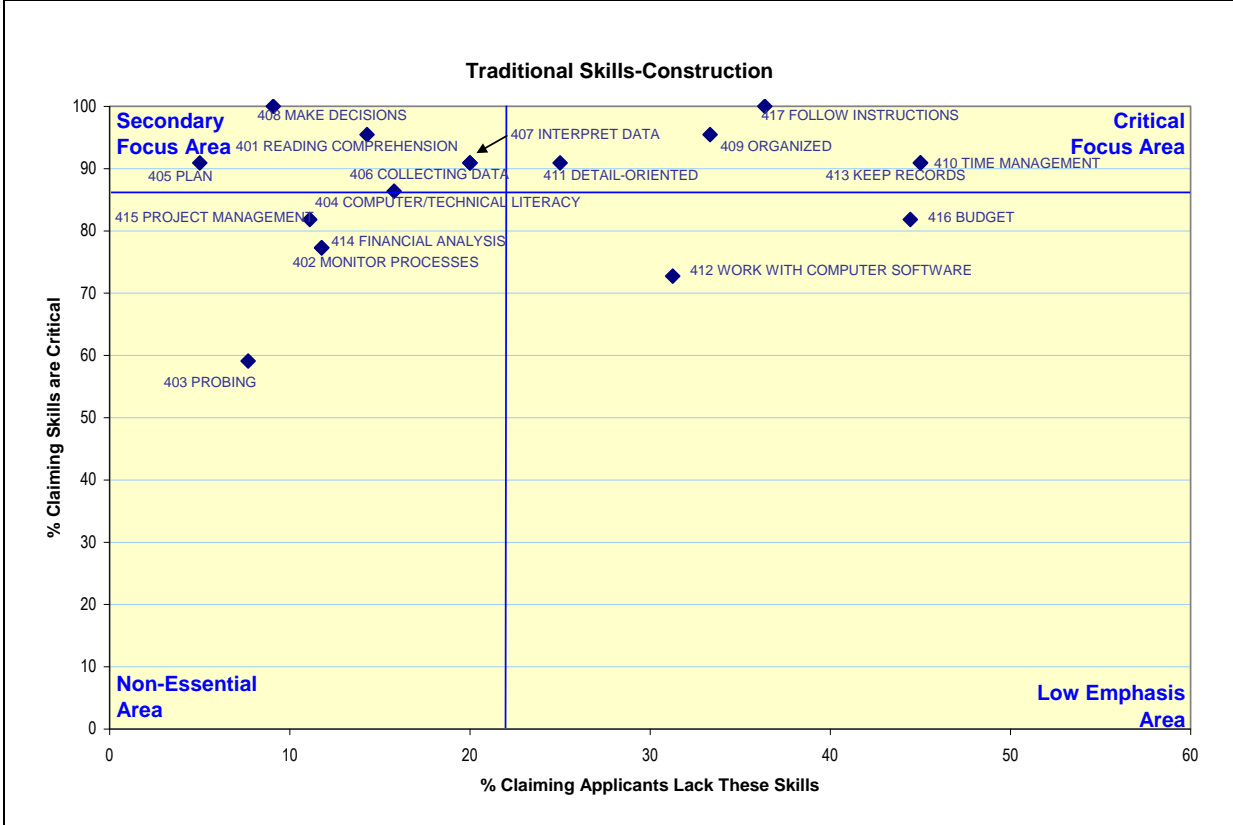
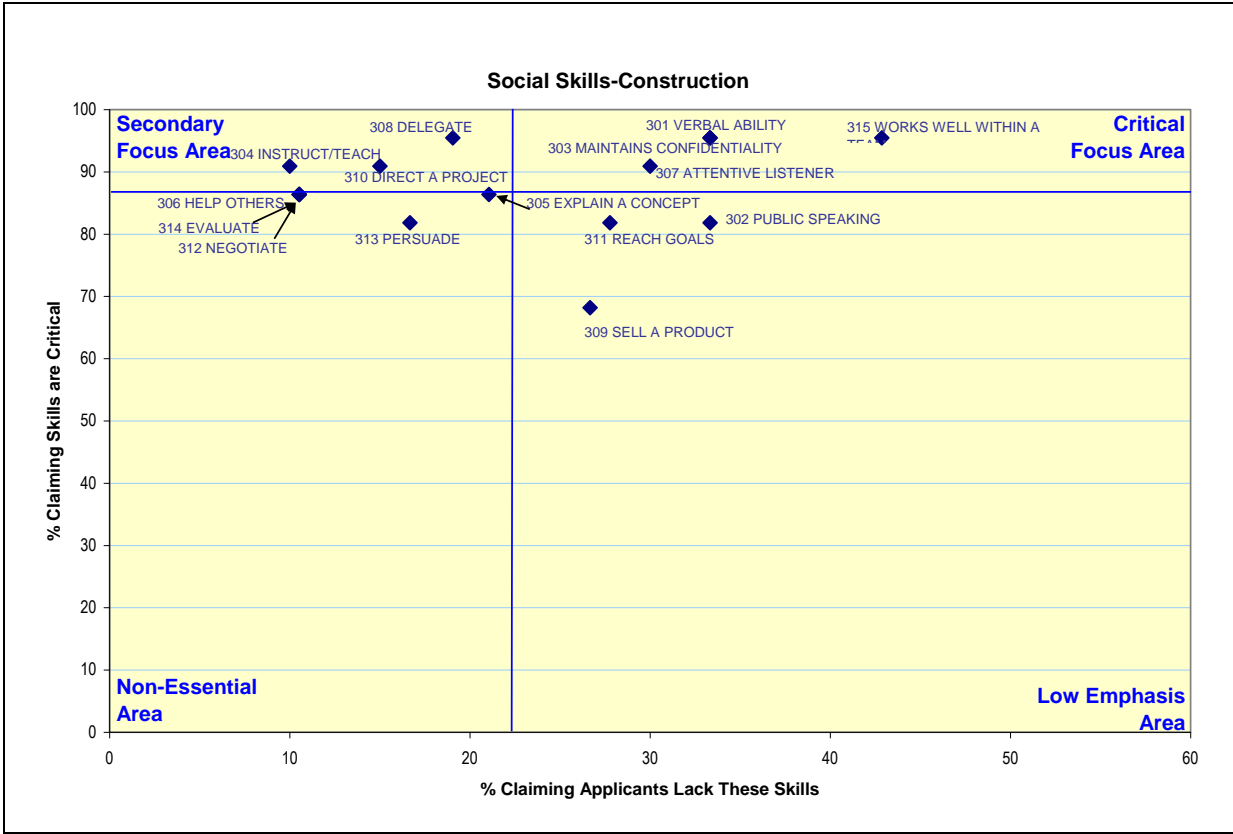
The data show that the following job skill areas are in need of attention:

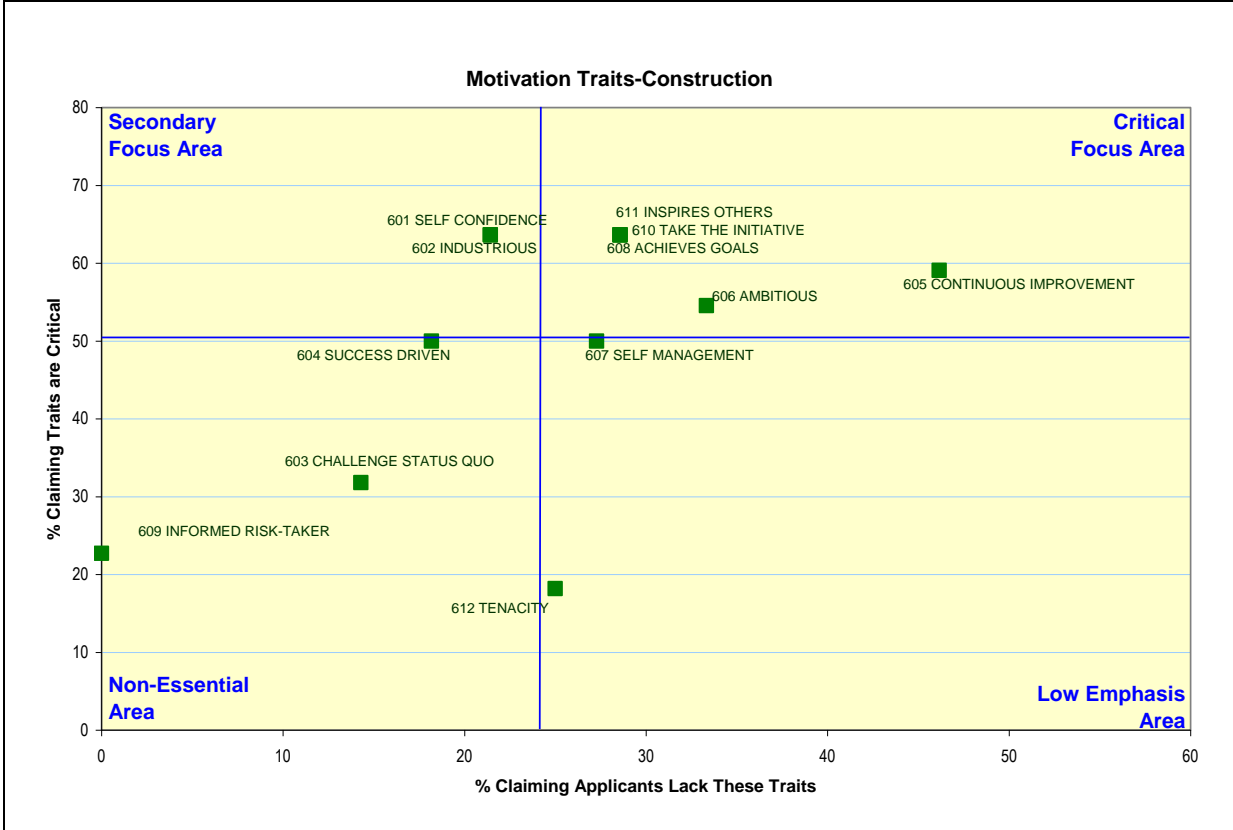
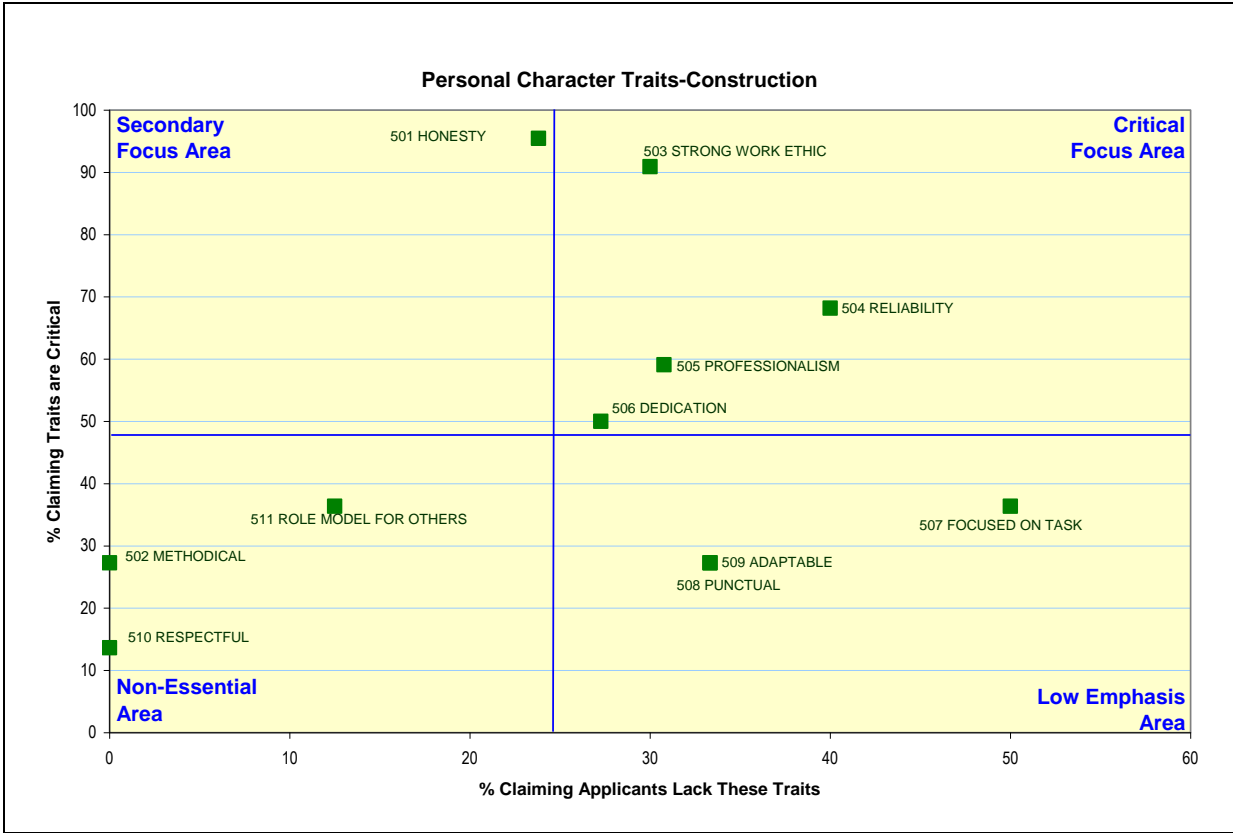
- Physical stamina and agility
- Build and repair, manual dexterity
- Mathematics and writing skills
- Listening and verbal skills
- Maintains confidentiality
- Multicultural awareness
- Teamwork
- Time management
- Record keeping, details, and organization

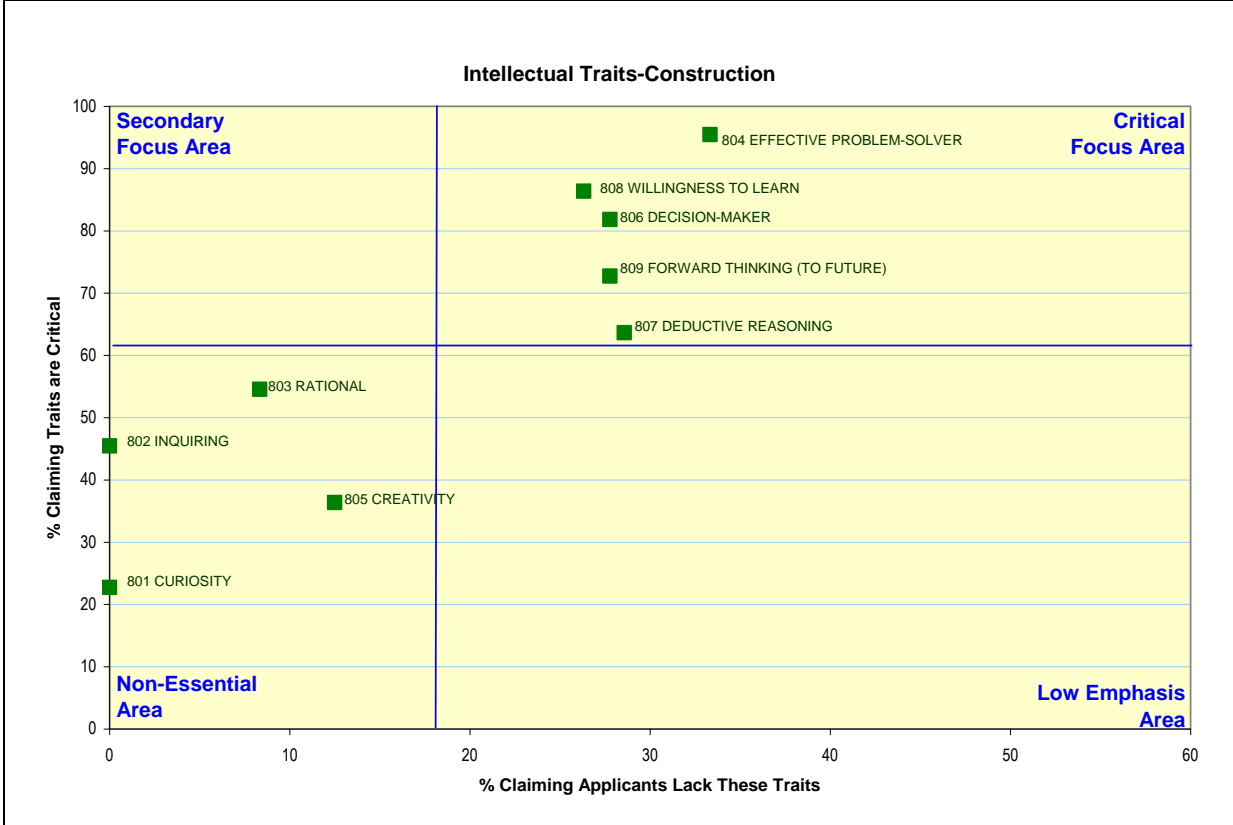
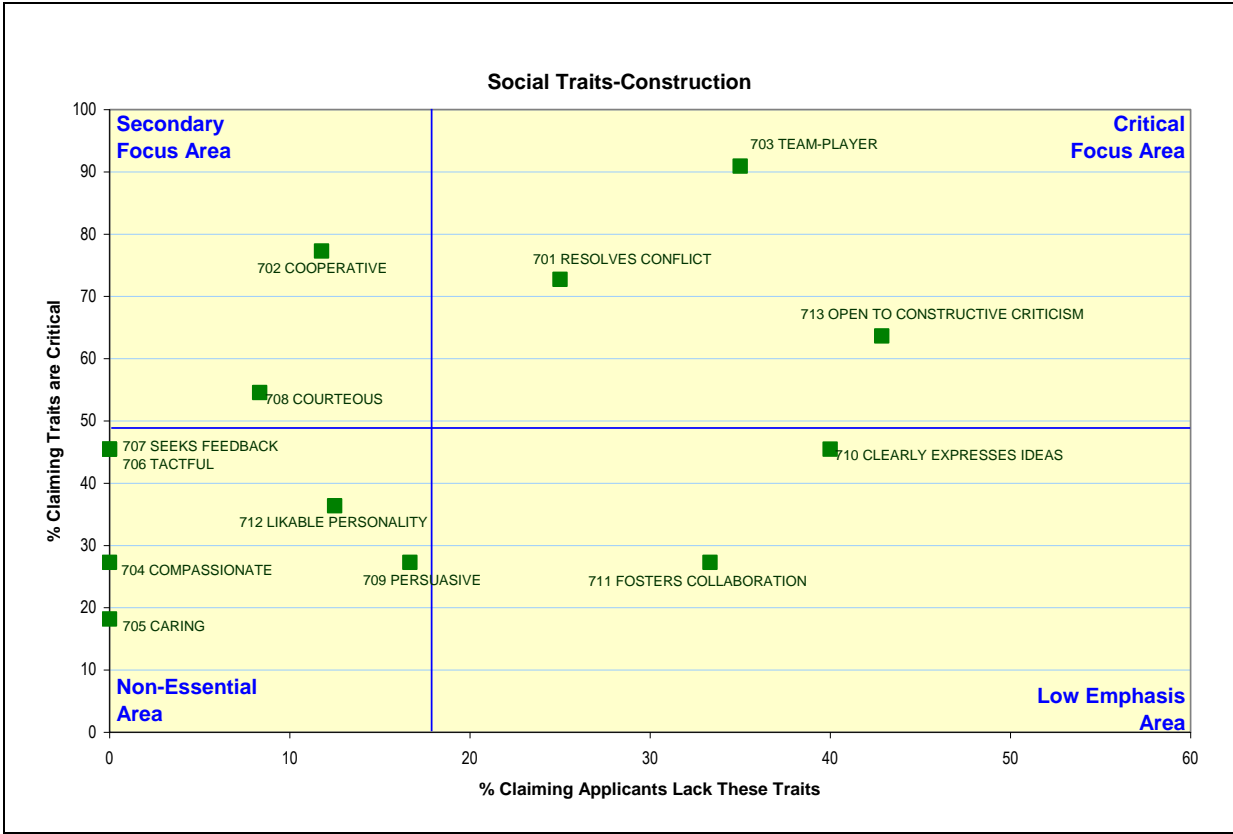
The data show that the following personal traits areas are in need of attention:

- Work ethic, reliability, and dedication
- Professionalism
- Taking initiative
- Inspiring others
- Achieving goals and ambitious
- Fostering collaboration
- Open to criticism
- Team player
- Resolving conflict
- Being an effective problem solver and deductive reasoning
- Making decisions
- Being willing to learn
- Forward thinking









Summary of Job Skills and Personal Traits Needed for Current Jobs: General Business Sector

Introduction

In this section of the report, the responses for employers in the general business category are summarized:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

Critical Job Skills Needed for Current General Business Employees

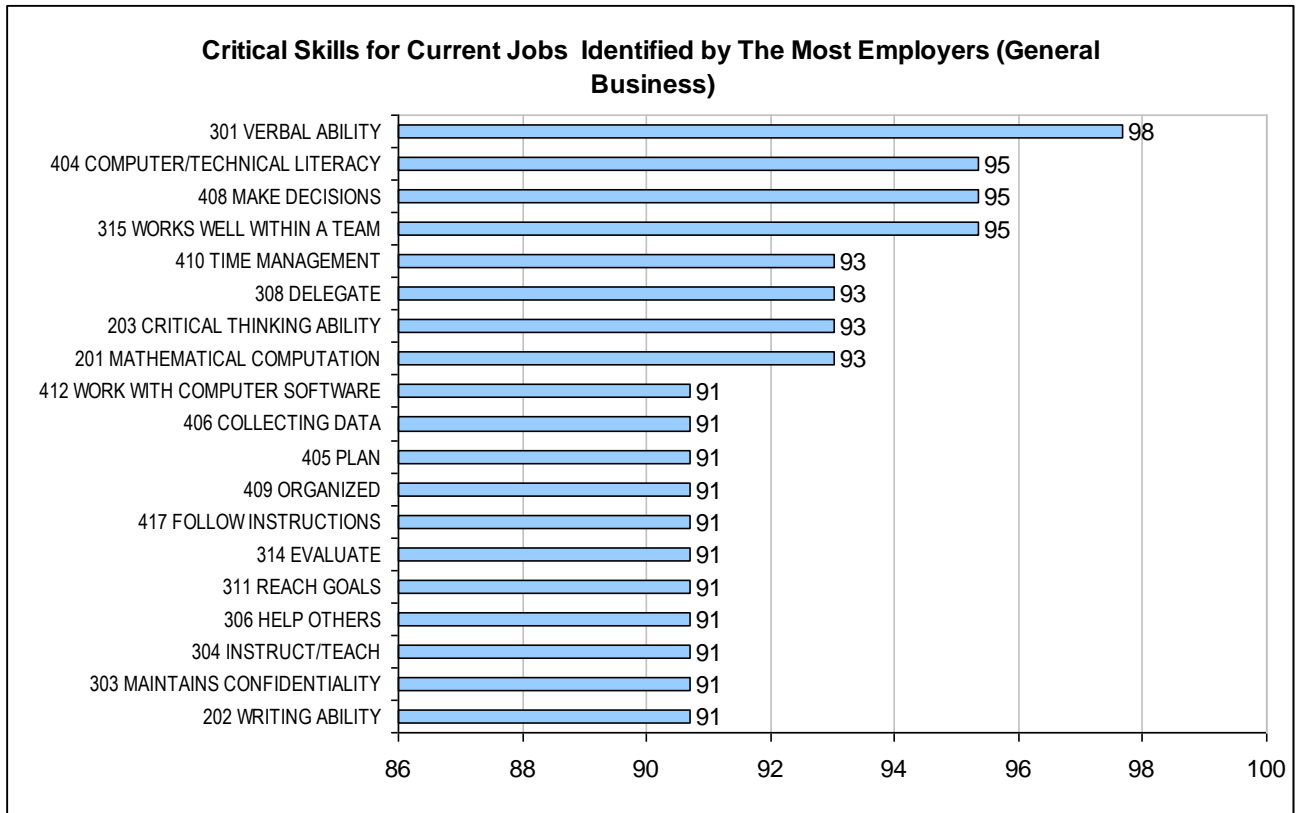
The table to the right shows the percentage of employers which identified each job skill as being critical.

Employers in the general business category, like in the other sectors reported earlier, placed more emphasis on job skills in the Social and Intellectual categories.

There were a total of 19 job skills that were rated as critical by over 90% of the employers.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	General Business
	n= 43
	%
101 PHYSICAL STAMINA	67
102 CARRY OR LIFT	58
105 STRENGTH	49
103 WORK IN CLOSED SPACES	47
108 REPAIR	44
111 MECHANICAL ABILITIES	44
109 FINE MOTOR COORDINATION	42
106 MANUAL DEXTERITY	40
104 AGILITY	35
107 BUILD	35
112 PRODUCE HANDMADE CRAFTS	14
110 CULTIVATE PLANTS	12
201 MATHEMATICAL COMPUTATION	93
203 CRITICAL THINKING ABILITY	93
202 WRITING ABILITY	91
213 GENERATE IDEAS	88
214 DEVELOP CONCEPTS	79
206 ABSTRACT THINKING	79
208 ANALYTICAL SKILL	79
204 MULTICULTURAL AWARENESS	72
207 CONDUCTING RESEARCH	60
209 UNDERSTAND THEORETICAL CONCEPTS	58
212 EDIT	49
211 DESIGN	47
210 SPATIAL VISUALIZATION	44
205 SCIENTIFIC ANALYSIS	42
215 ARTISTIC	40
301 VERBAL ABILITY	98
315 WORKS WELL WITHIN A TEAM	95
308 DELEGATE	93
303 MAINTAINS CONFIDENTIALITY	91
304 INSTRUCT/TEACH	91
306 HELP OTHERS	91
311 REACH GOALS	91
314 EVALUATE	91
305 EXPLAIN A CONCEPT	88
312 NEGOTIATE	88
307 ATTENTIVE LISTENER	86
310 DIRECT A PROJECT	86
302 PUBLIC SPEAKING	84
313 PERSUADE	84
309 SELL A PRODUCT	74
408 MAKE DECISIONS	95
404 COMPUTER/TECHNICAL LITERACY	95
410 TIME MANAGEMENT	93
417 FOLLOW INSTRUCTIONS	91
409 ORGANIZED	91
405 PLAN	91
406 COLLECTING DATA	91
412 WORK WITH COMPUTER SOFTWARE	91
401 READING COMPREHENSION	88
407 INTERPRET DATA	88
413 KEEP RECORDS	88
414 FINANCIAL ANALYSIS	88
402 MONITOR PROCESSES	88
416 BUDGET	86
411 DETAIL-ORIENTED	84
415 PROJECT MANAGEMENT	81
403 PROBING	65

The job skills most frequently indicated as being critical are shown in the chart below. Note that most of the job skills listed are from the Social and Traditional skills categories. Just three are from the Mental category and none are from the Physical skills category.



*Deficiencies in Job Skills
Identified in General Business
Employees*

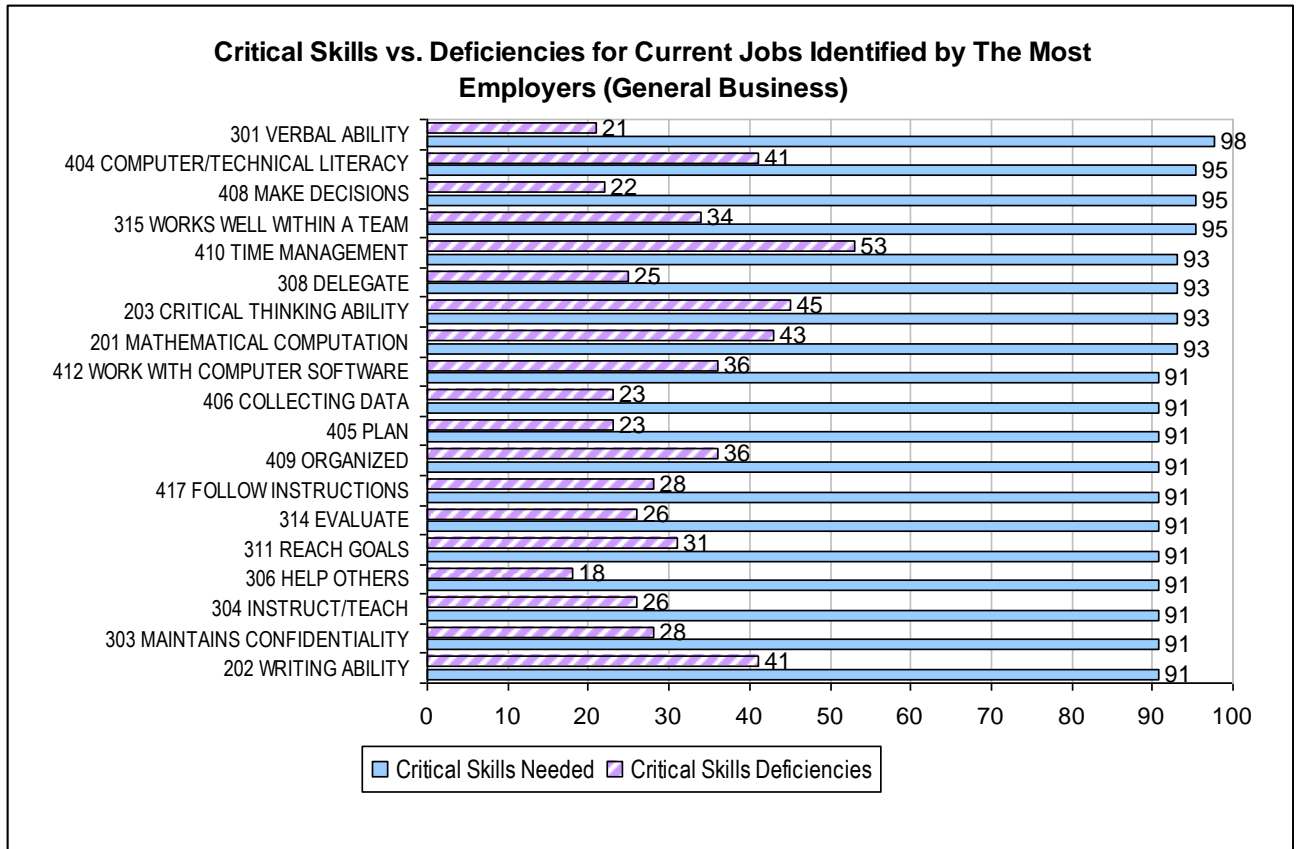
The table to the right shows the percentage of general business employers who indicated that they observed deficiencies in each job skill among employees and applicants.

One job skill was identified by more than 50% of the employers as one that was deficient in employees and applicants:

- 410 Time Management

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants	<u>General Business</u>
(Base: Employers Needing Each Skill)	n= 43 %
101 PHYSICAL STAMINA	48
111 MECHANICAL ABILITIES	47
110 CULTIVATE PLANTS	40
105 STRENGTH	38
102 CARRY OR LIFT	36
106 MANUAL DEXTERITY	35
108 REPAIR	32
104 AGILITY	27
103 WORK IN CLOSED SPACES	25
109 FINE MOTOR COORDINATION	22
107 BUILD	20
112 PRODUCE HANDMADE CRAFTS	17
<hr/>	
203 CRITICAL THINKING ABILITY	45
201 MATHEMATICAL COMPUTATION	43
202 WRITING ABILITY	41
213 GENERATE IDEAS	39
204 MULTICULTURAL AWARENESS	35
215 ARTISTIC	29
208 ANALYTICAL SKILL	26
210 SPATIAL VISUALIZATION	26
214 DEVELOP CONCEPTS	24
206 ABSTRACT THINKING	24
207 CONDUCTING RESEARCH	23
205 SCIENTIFIC ANALYSIS	17
211 DESIGN	15
212 EDIT	14
209 UNDERSTAND THEORETICAL CONCEPTS	12
<hr/>	
315 WORKS WELL WITHIN A TEAM	34
311 REACH GOALS	31
302 PUBLIC SPEAKING	31
303 MAINTAINS CONFIDENTIALITY	28
309 SELL A PRODUCT	28
307 ATTENTIVE LISTENER	27
304 INSTRUCT/TEACH	26
314 EVALUATE	26
308 DELEGATE	25
305 EXPLAIN A CONCEPT	24
310 DIRECT A PROJECT	22
301 VERBAL ABILITY	21
306 HELP OTHERS	18
313 PERSUADE	17
312 NEGOTIATE	13
<hr/>	
410 TIME MANAGEMENT	53
404 COMPUTER/TECHNICAL LITERACY	41
412 WORK WITH COMPUTER SOFTWARE	36
409 ORGANIZED	36
413 KEEP RECORDS	34
411 DETAIL-ORIENTED	33
407 INTERPRET DATA	29
415 PROJECT MANAGEMENT	29
417 FOLLOW INSTRUCTIONS	28
402 MONITOR PROCESSES	26
416 BUDGET	24
406 COLLECTING DATA	23
405 PLAN	23
408 MAKE DECISIONS	22
403 PROBING	21
401 READING COMPREHENSION	18
414 FINANCIAL ANALYSIS	18

The deficiency scores for the most critical job skills are plotted in the chart below. A total of eight of these job skills were rated as deficient by more than 33% of the employers.



*Critical Personal Traits Needed
for Current General Business
Employees*

The table to the right shows the percentage of general business employers which identified each personal trait as being critical for its workforce.

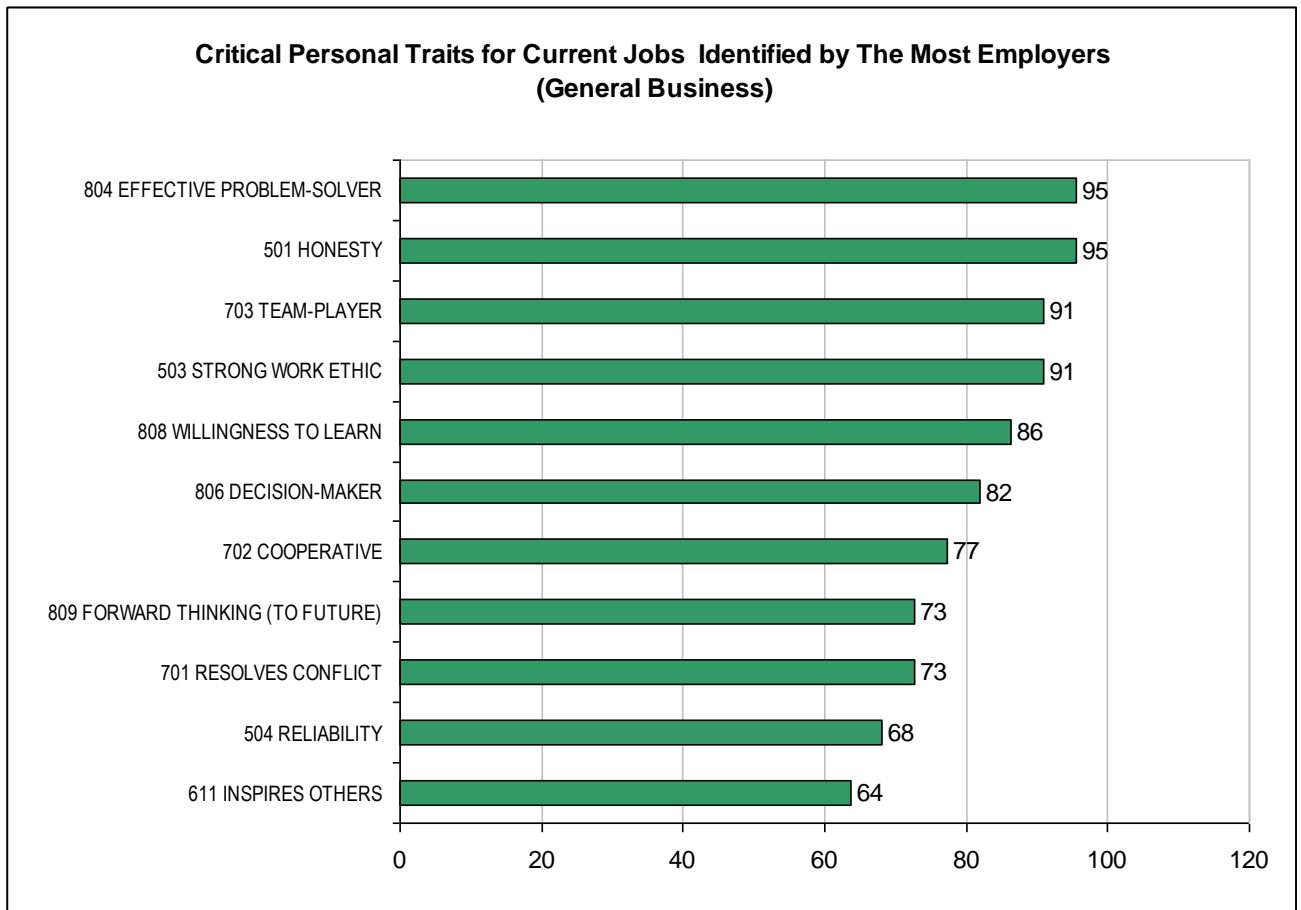
As with the other three industry groupings, general business employers were likely to identify the traits in the 800 Intellectual skills group as critical more frequently than traits in the other three categories.

Seven personal traits were identified as being critical by at least 75% of the employers:

- 804 Effective Problem-Solver
- 808 Willingness to Learn
- 806 Decision Maker
- 703 Team Player
- 702 Cooperative
- 501 Honesty
- 503 Strong Work Ethic

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs	General Business
	n= 43
	%
501 HONESTY	95
503 STRONG WORK ETHIC	91
504 RELIABILITY	68
505 PROFESSIONALISM	59
506 DEDICATION	50
511 ROLE MODEL FOR OTHERS	36
507 FOCUSED ON TASK	36
508 PUNCTUAL	27
509 ADAPTABLE	27
502 METHODICAL	27
510 RESPECTFUL	14
611 INSPIRES OTHERS	64
601 SELF CONFIDENCE	64
608 ACHIEVES GOALS	64
610 TAKE THE INITIATIVE	64
602 INDUSTRIOUS	64
605 CONTINUOUS IMPROVEMENT	59
606 AMBITIOUS	55
607 SELF MANAGEMENT	50
604 SUCCESS DRIVEN	50
603 CHALLENGE STATUS QUO	32
609 INFORMED RISK-TAKER	23
612 TENACITY	18
703 TEAM-PLAYER	91
702 COOPERATIVE	77
701 RESOLVES CONFLICT	73
713 OPEN TO CONSTRUCTIVE CRITICISM	64
708 COURTEOUS	55
710 CLEARLY EXPRESSES IDEAS	45
707 SEEKS FEEDBACK	45
706 TACTFUL	45
712 LIKABLE PERSONALITY	36
711 FOSTERS COLLABORATION	27
709 PERSUASIVE	27
704 COMPASSIONATE	27
705 CARING	18
804 EFFECTIVE PROBLEM-SOLVER	95
808 WILLINGNESS TO LEARN	86
806 DECISION-MAKER	82
809 FORWARD THINKING (TO FUTURE)	73
807 DEDUCTIVE REASONING	64
803 RATIONAL	55
802 INQUIRING	45
805 CREATIVITY	36
801 CURIOSITY	23

The eleven traits identified most frequently by general business employers as being critical for their current employees are shown in the chart below.



*Deficiencies in Personal
Traits Identified in General
Business Employees*

The table to the right shows the percentage of general business employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

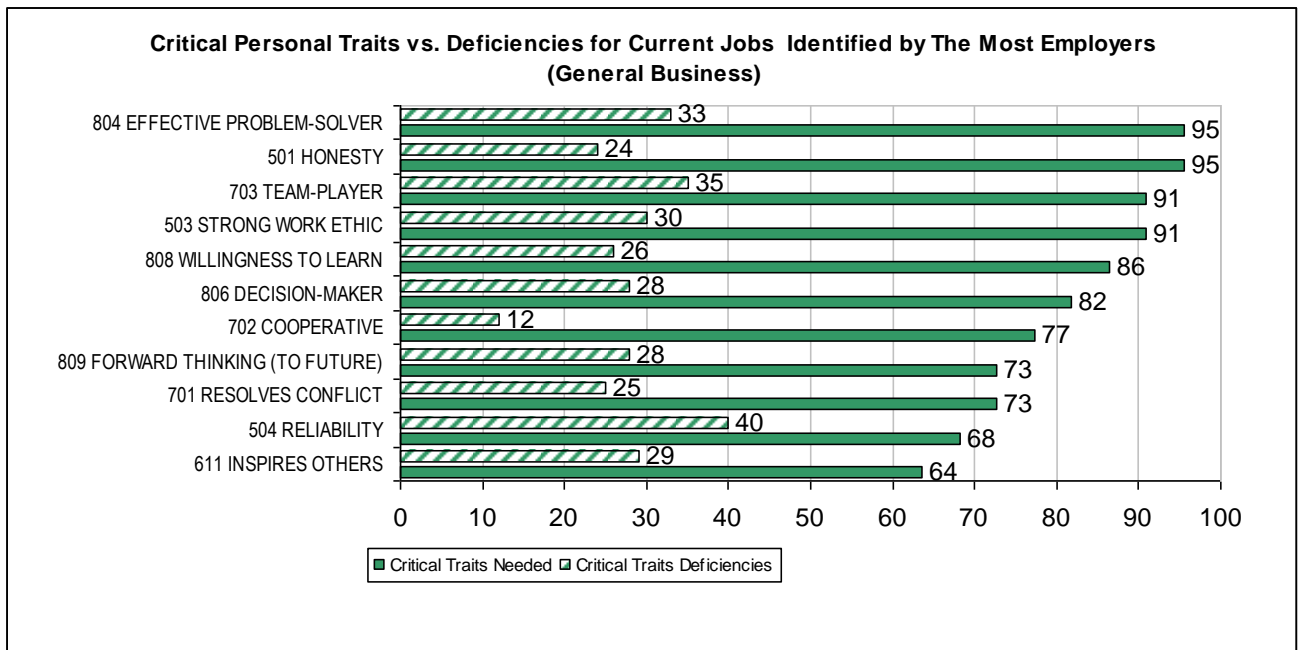
One trait was identified by 50% of the employers as being deficient:

- 507 Focused on Task

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants	General Business
(Base: Employers Needing Each Traits)	n= 43 %
507 FOCUSED ON TASK	50
504 RELIABILITY	40
508 PUNCTUAL	33
509 ADAPTABLE	33
505 PROFESSIONALISM	31
503 STRONG WORK ETHIC	30
506 DEDICATION	27
501 HONESTY	24
511 ROLE MODEL FOR OTHERS	13
502 METHODOCAL	0
510 RESPECTFUL	0
<hr/>	
605 CONTINUOUS IMPROVEMENT	46
606 AMBITIOUS	33
610 TAKE THE INITIATIVE	29
608 ACHIEVES GOALS	29
611 INSPIRES OTHERS	29
607 SELF MANAGEMENT	27
612 TENACITY	25
602 INDUSTRIOUS	21
601 SELF CONFIDENCE	21
604 SUCCESS DRIVEN	18
603 CHALLENGE STATUS QUO	14
609 INFORMED RISK-TAKER	0
<hr/>	
713 OPEN TO CONSTRUCTIVE CRITICISM	43
710 CLEARLY EXPRESSES IDEAS	40
703 TEAM-PLAYER	35
711 FOSTERS COLLABORATION	33
701 RESOLVES CONFLICT	25
709 PERSUASIVE	17
712 LIKABLE PERSONALITY	13
702 COOPERATIVE	12
708 COURTEOUS	8
706 TACTFUL	0
707 SEEKS FEEDBACK	0
704 COMPASSIONATE	0
705 CARING	0
<hr/>	
804 EFFECTIVE PROBLEM-SOLVER	33
807 DEDUCTIVE REASONING	29
809 FORWARD THINKING (TO FUTURE)	28
806 DECISION-MAKER	28
808 WILLINGNESS TO LEARN	26
805 CREATIVITY	13
803 RATIONAL	8
801 CURIOSITY	0
802 INQUIRING	0

The deficiency scores for the most critical personal traits are shown in the following graph. Four of the traits have relatively high percentages of employers which identified the traits as being deficient in the workforce.

A relatively high percentage of those who said the 504 Reliability trait was critical also indicated that it was deficient among its workforce.



Quadrant Analysis: General Business Employers

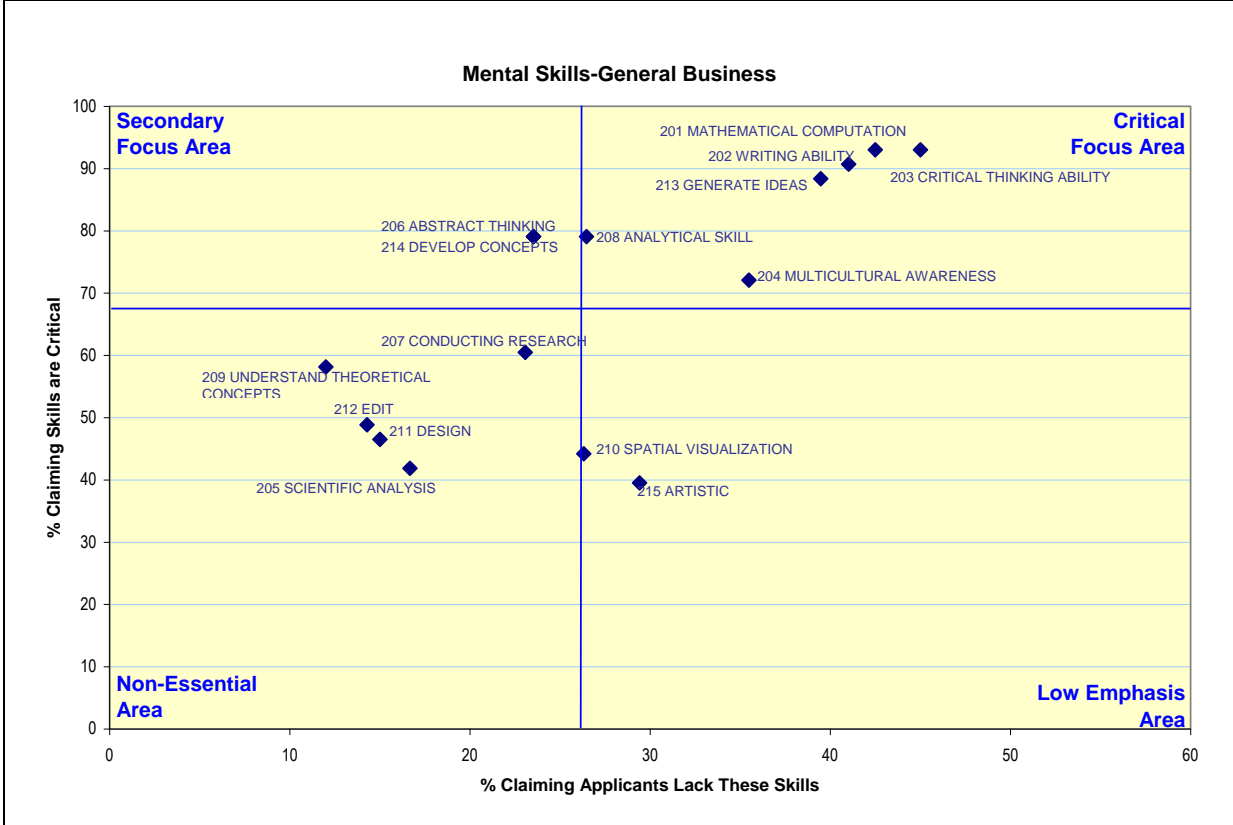
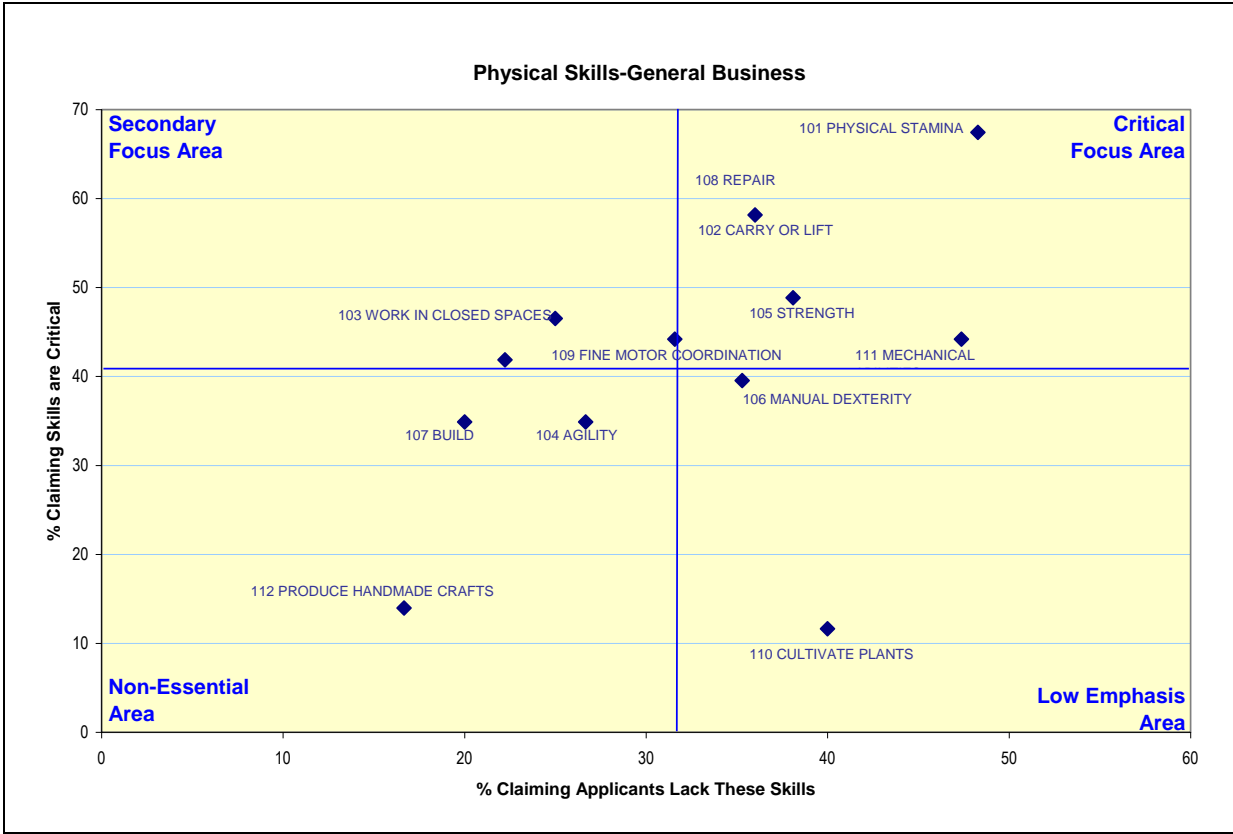
A quadrant analysis for the healthcare sector, for all job categories, is shown on the following four pages.

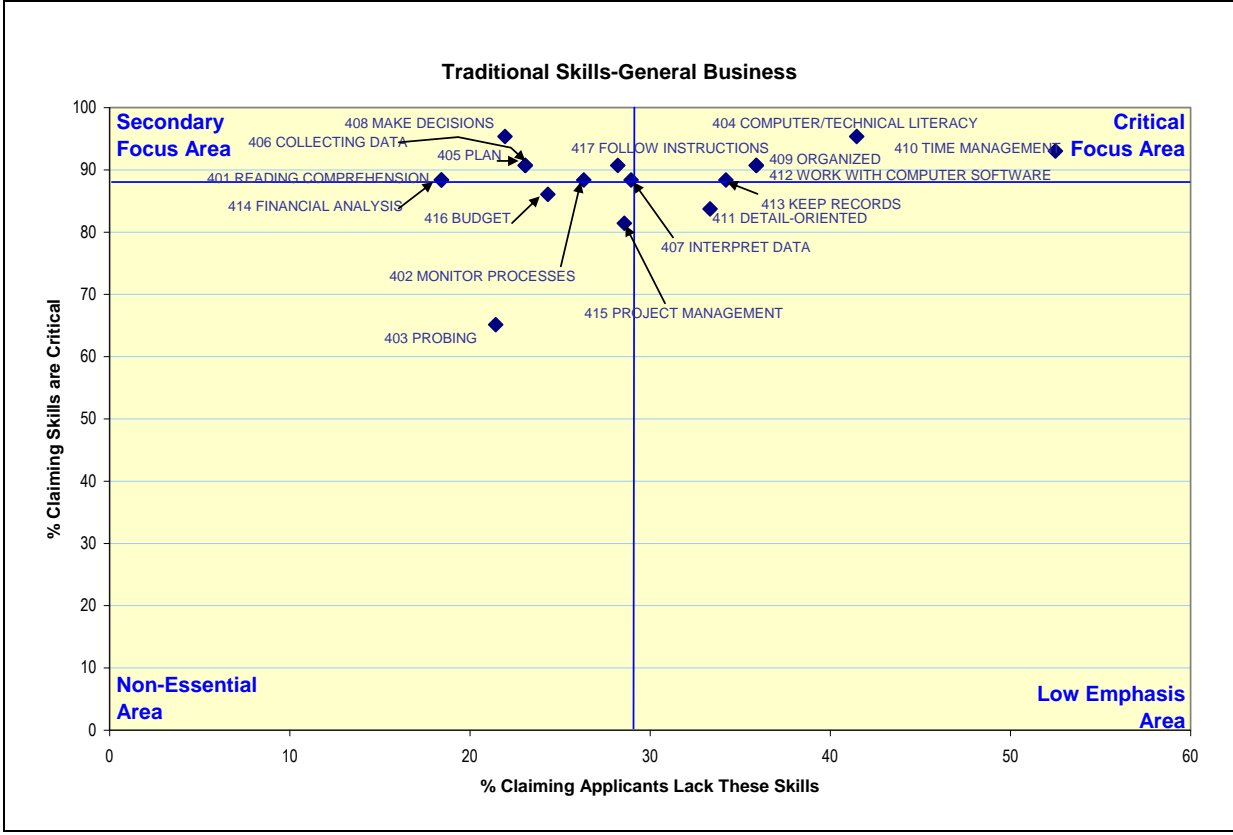
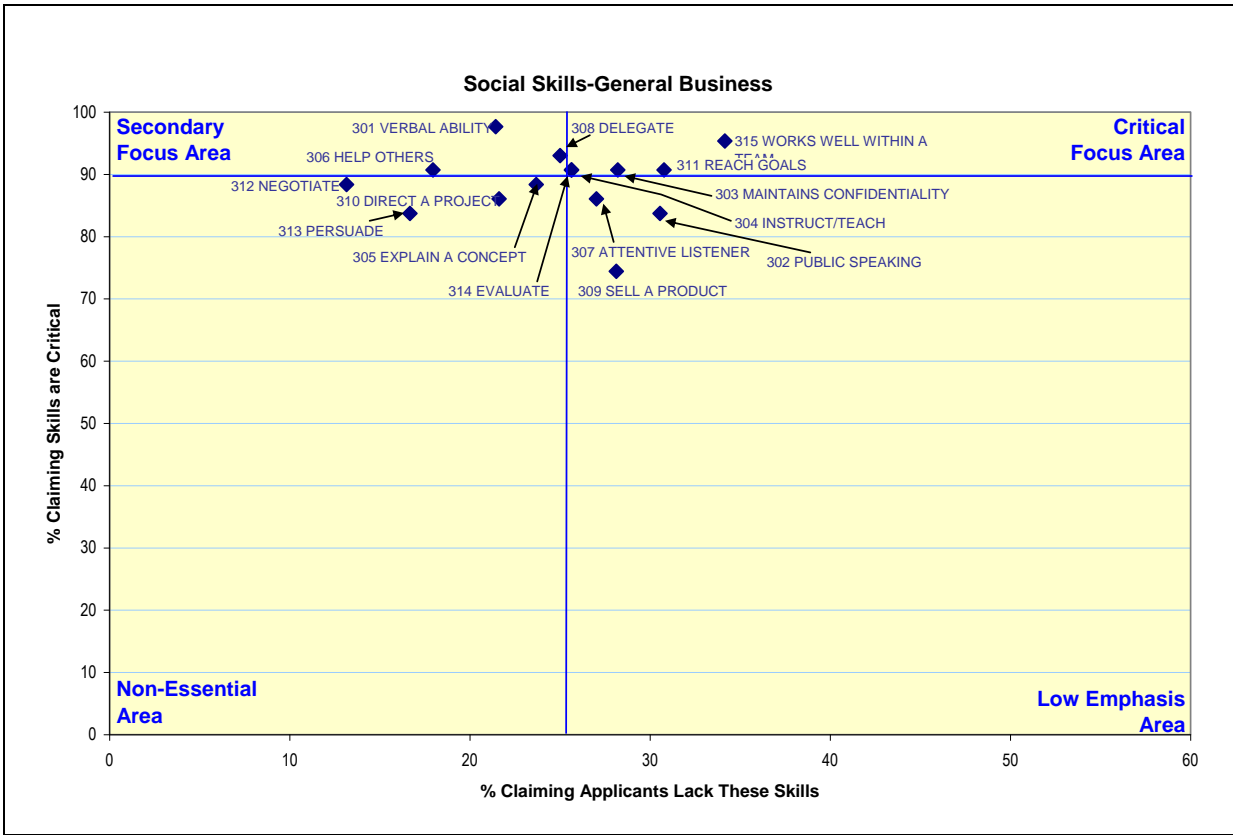
The data show that the following job skill areas are in need of attention:

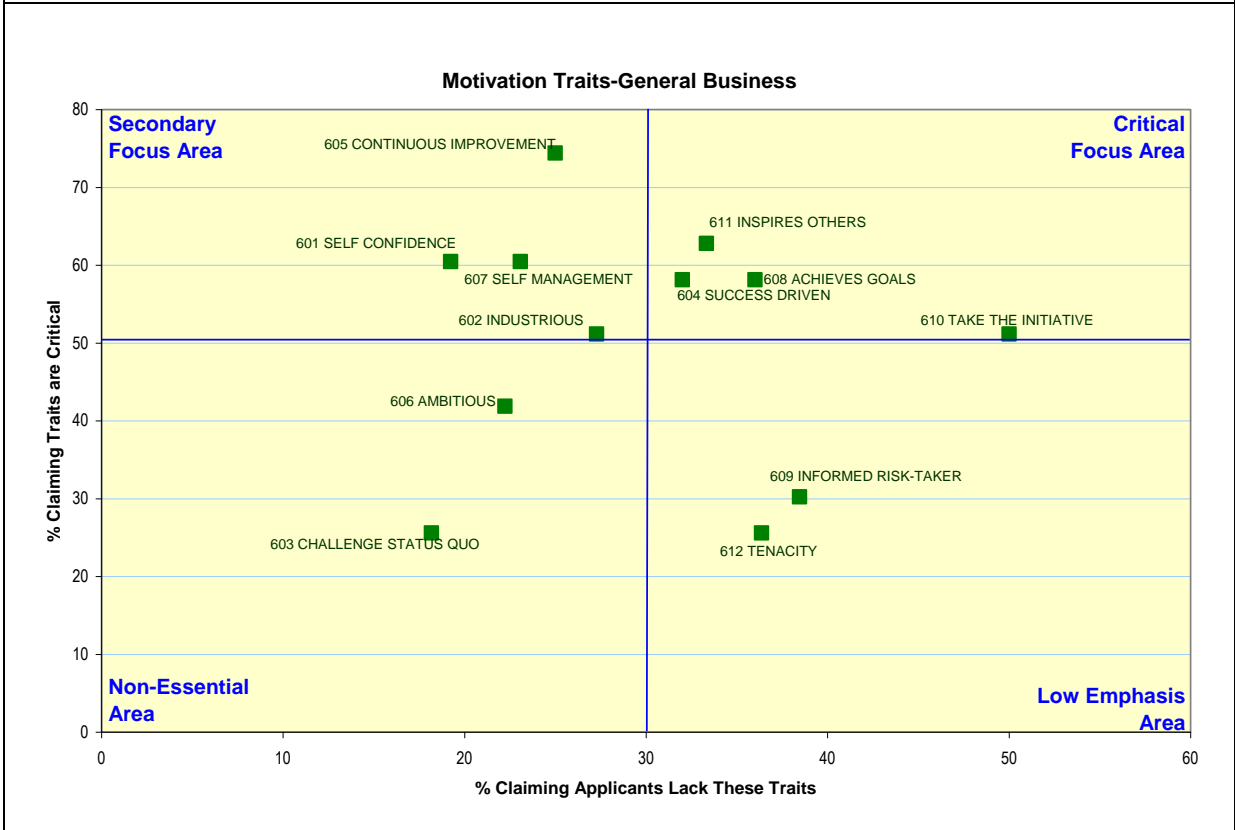
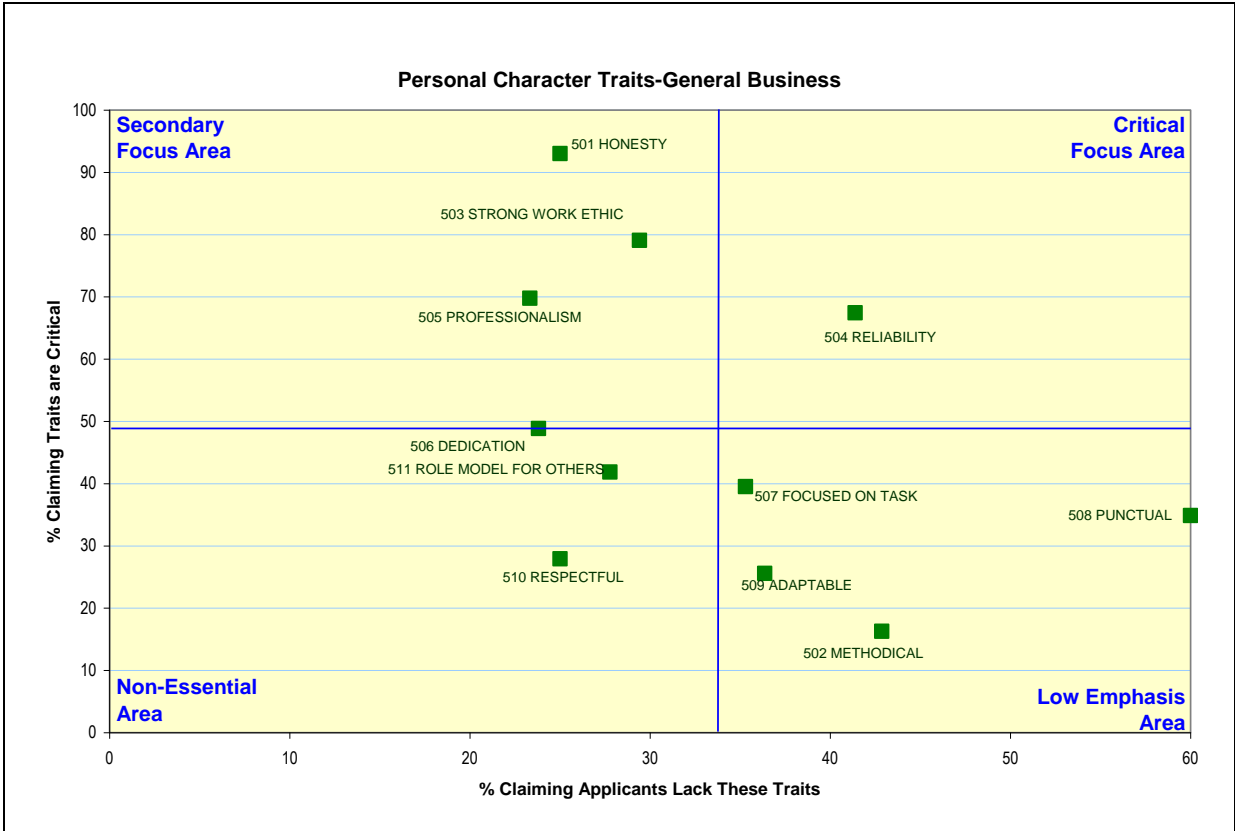
- Stamina, strength, able to carry and lift
- Mechanical and repair abilities
- Mathematics and writing skills
- Analytical, critical thinking, and ideation skills
- Multicultural awareness
- Work well with a team
- Organized and time management
- Computer and technical skills

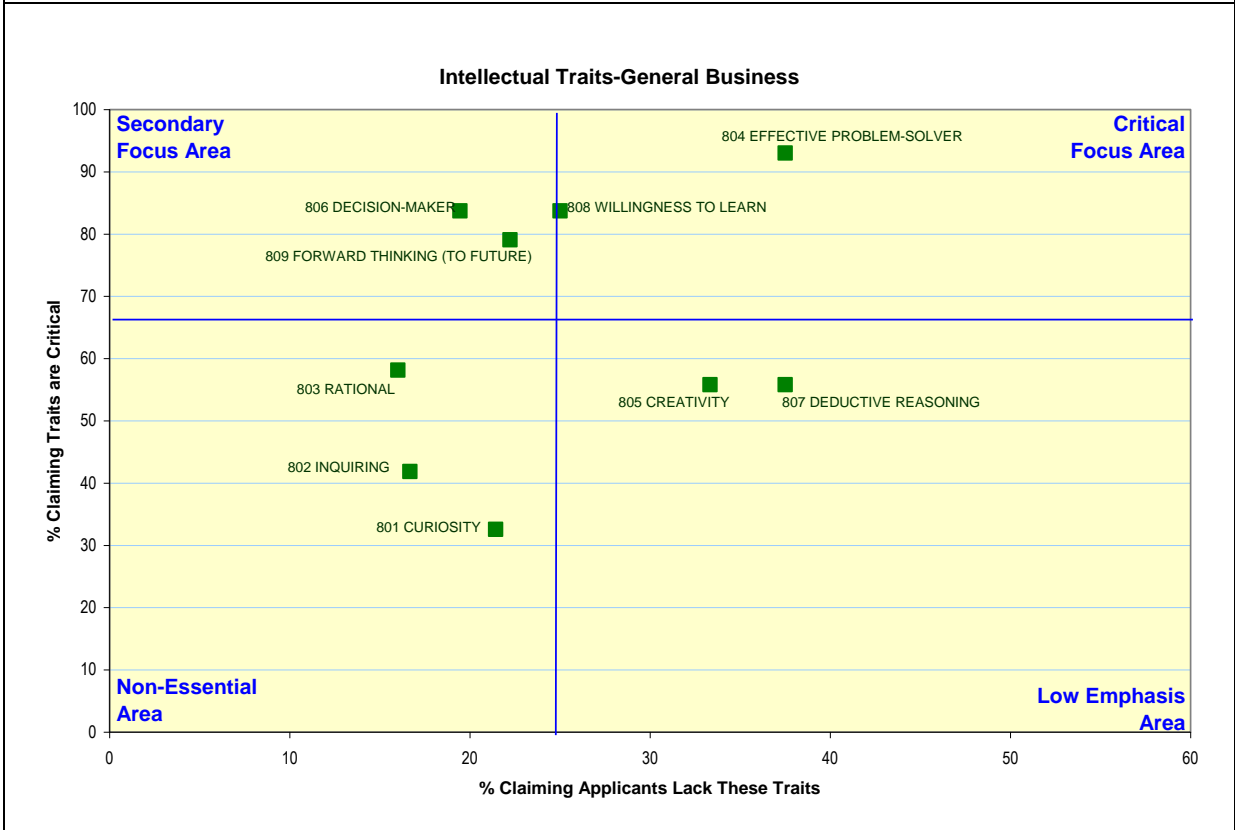
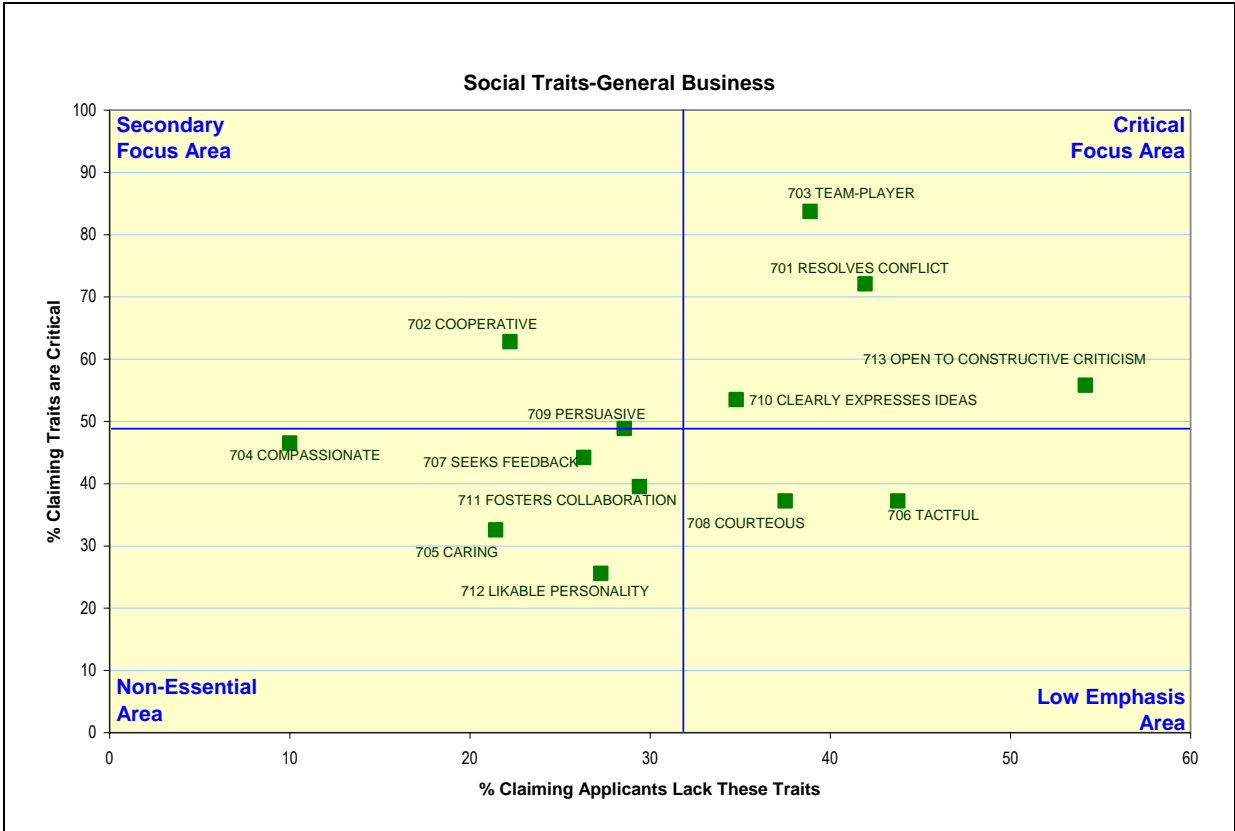
The data show that the following personal traits areas are in need of attention:

- Reliability
- Taking initiative
- Inspiring others
- Success driven and achieving goals
- Team Player
- Listens to others
- Resolves conflict
- Open to constructive criticism
- Being an effective problem solver









Critical Job Skills Identified By Employers for Planned Jobs for Next Five Years

In the face to face interview, employers were asked to consider the new jobs planned for the next five years and to identify the job skills required that were not already required for current jobs:

"You mentioned that you planned to hire ___ employees in the next 5 years in the (Job Group). Based on your needs, what are the important skills needed in your company for (Job Group) that are not currently needed? (HAND CARD 1) In other words, what skills will be needed for these new hires that are different than those you mentioned earlier?"

As indicated, employers were given a card as an aide. The card provided a list of all job skills for consideration.

The table on the next page shows the percentage of employers who indicated that each job skill was critical for planned jobs over the next five years. As a reminder, the base of respondents for these data was those who planned on hiring new jobs over the five years.

As indicated in the table, many of the skills deemed critical for planned jobs were also identified as being critical for current jobs.

The job skills most frequently identified as being critical for planned jobs include:

- 111 Mechanical Abilities
- 108 Repair
- 404 Computer/Technical Literacy

Skills Identified (By % of Employers) as Being Critical for Planned Jobs	Total Sample n=	Employer Type			
		Healthcare	Mining	Construction	General Business
		%	%	%	%
	42	11	5	12	14
	%	%	%	%	%
111 MECHANICAL ABILITIES	70	80	25	100	78
108 REPAIR	50	60	75	-	44
105 STRENGTH	40	20	75	-	44
101 PHYSICAL STAMINA	35	20	50	-	44
104 AGILITY	35	40	50	-	33
106 MANUAL DEXTERITY	35	20	50	-	44
107 BUILD	35	40	50	-	33
109 FINE MOTOR COORDINATION	35	20	50	-	44
102 CARRY OR LIFT	30	20	50	-	33
103 WORK IN CLOSED SPACES	15	20	25	-	11
110 CULTIVATE PLANTS	10	20	25	-	-
112 PRODUCE HANDMADE CRAFTS	10	20	25	-	-
202 WRITING ABILITY	39	33	40	43	42
201 MATHEMATICAL COMPUTATION	36	22	40	43	42
203 CRITICAL THINKING ABILITY	36	22	40	14	58
213 GENERATE IDEAS	33	22	60	14	42
206 ABSTRACT THINKING	27	11	40	14	42
214 DEVELOP CONCEPTS	27	44	20	-	33
204 MULTICULTURAL AWARENESS	24	11	40	-	42
207 CONDUCTING RESEARCH	24	22	-	29	33
205 SCIENTIFIC ANALYSIS	18	22	-	-	33
209 UNDERSTAND THEORETICAL CONCEPTS	15	-	40	-	25
215 ARTISTIC	15	22	-	-	25
208 ANALYTICAL SKILL	12	-	-	14	25
210 SPATIAL VISUALIZATION	9	-	-	14	17
211 DESIGN	9	-	-	14	17
212 EDIT	9	11	-	-	17
301 VERBAL ABILITY	38	17	40	50	55
315 WORKS WELL WITHIN A TEAM	38	17	80	-	55
310 DIRECT A PROJECT	34	33	20	-	55
311 REACH GOALS	31	33	20	-	45
304 INSTRUCT/TEACH	28	17	40	25	36
307 ATTENTIVE LISTENER	28	17	40	-	45
302 PUBLIC SPEAKING	25	17	20	25	36
303 MAINTAINS CONFIDENTIALITY	25	-	20	50	45
305 EXPLAIN A CONCEPT	22	8	40	-	36
313 PERSUADE	22	17	20	-	36
314 EVALUATE	22	8	-	-	55
306 HELP OTHERS	19	8	20	-	36
308 DELEGATE	16	8	-	-	36
309 SELL A PRODUCT	16	25	-	-	18
312 NEGOTIATE	16	8	-	25	27
404 COMPUTER/TECHNICAL LITERACY	51	55	50	43	53
412 WORK WITH COMPUTER SOFTWARE	41	18	50	57	47
410 TIME MANAGEMENT	37	27	33	29	47
409 ORGANIZED	29	9	33	29	41
415 PROJECT MANAGEMENT	29	18	50	29	29
402 MONITOR PROCESSES	24	18	33	-	35
411 DETAIL-ORIENTED	24	18	17	-	41
407 INTERPRET DATA	22	18	17	43	18
408 MAKE DECISIONS	22	18	17	-	35
413 KEEP RECORDS	22	18	-	-	41
401 READING COMPREHENSION	20	18	17	14	24
405 PLAN	20	18	33	-	24
416 BUDGET	20	9	-	29	29
417 FOLLOW INSTRUCTIONS	20	9	50	-	24
403 PROBING	15	9	-	14	24
406 COLLECTING DATA	15	18	-	14	18
414 FINANCIAL ANALYSIS	15	18	-	14	18

Critical Personal Traits Identified By Employers for Planned Jobs for Next Five Years

In the face to face interview, employers were to identify the personal traits required for planned jobs:

"Thinking again about the hiring of ___ employees in the next 5 years, what are the important traits needed in your company for that (Job Group) that are not currently needed? (HAND CARD 2) In other words, what traits will be needed for these new hires that are different than those you mentioned earlier?"

The table on the next page shows the percentage of employers who indicated that each trait was critical for planned jobs over the next five years. Again, the base of employers for these data was those who planned on hiring new jobs over the five years.

The personal traits most frequently identified as being critical for planned jobs include:

- 503 Strong Work Ethic
- 506 Dedication
- 605 Continuous Improvement
- 713 Open to Constructive Criticism
- 809 Forward Thinking
- 808 Willingness to Learn

Personal Traits Identified (By % of Employers) as Being Critical for Planned Jobs	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample				Business
	n= 42	11	5	12	14
	%	%	%	%	%
503 STRONG WORK ETHIC	49	42	80	-	63
506 DEDICATION	49	50	80	17	50
504 RELIABILITY	44	33	80	33	44
509 ADAPTABLE	44	33	60	17	56
505 PROFESSIONALISM	41	25	60	33	50
511 ROLE MODEL FOR OTHERS	38	25	60	50	38
508 PUNCTUAL	33	8	100	-	44
507 FOCUSED ON TASK	26	17	60	17	25
510 RESPECTFUL	26	8	60	-	38
501 HONESTY	18	17	40	-	19
502 METHODICAL	13	-	20	-	25
605 CONTINUOUS IMPROVEMENT	50	50	80	50	40
608 ACHIEVES GOALS	38	14	40	67	47
601 SELF CONFIDENCE	35	21	60	-	53
607 SELF MANAGEMENT	35	21	40	17	53
610 TAKE THE INITIATIVE	33	21	60	17	40
611 INSPIRES OTHERS	30	29	40	17	33
606 AMBITIOUS	28	7	80	-	40
604 SUCCESS DRIVEN	20	7	20	17	33
602 INDUSTRIOUS	18	14	-	17	27
603 CHALLENGE STATUS QUO	13	7	20	-	20
612 TENACITY	13	7	20	-	20
609 INFORMED RISK-TAKER	10	7	-	-	20
713 OPEN TO CONSTRUCTIVE CRITICISM	47	64	75	60	25
703 TEAM-PLAYER	42	27	75	20	50
708 COURTEOUS	39	36	50	-	50
711 FOSTERS COLLABORATION	36	27	75	20	38
712 LIKABLE PERSONALITY	36	27	25	-	56
701 RESOLVES CONFLICT	31	27	50	-	38
704 COMPASSIONATE	31	45	75	-	19
706 TACTFUL	31	27	50	20	31
702 COOPERATIVE	28	18	25	20	38
707 SEEKS FEEDBACK	22	27	25	-	25
709 PERSUASIVE	22	18	25	-	31
710 CLEARLY EXPRESSES IDEAS	22	9	25	40	25
705 CARING	19	27	25	-	19
809 FORWARD THINKING (TO FUTURE)	56	50	80	67	50
808 WILLINGNESS TO LEARN	50	50	40	33	57
804 EFFECTIVE PROBLEM-SOLVER	44	30	20	67	57
802 INQUIRING	28	20	40	-	36
805 CREATIVITY	28	30	20	-	36
803 RATIONAL	25	10	40	-	36
807 DEDUCTIVE REASONING	22	20	-	33	29
801 CURIOSITY	19	-	20	33	29
806 DECISION-MAKER	16	20	20	-	14

Training / Education Needed By Employers for Planned Jobs for Next Five Years

The 68 employers who indicated that they planned for new jobs in the next five years were asked to indicate which education and/or training needs applied to those jobs.

The responses are shown in the tables over the next several pages. The values in each table reflect the percentages of employers who planned to hire over the next five years and who indicated that the specified training was needed.

The responses are grouped by the level of education and training required, in ascending order by complexity/difficulty:

- Vocational Training
- Associate Degree
- Bachelor Degree
- Graduate Degree / Professional

As indicated, a wide variety of education and training needs are identified.

Healthcare

Employers in this sector were likely to indicate a wide variety of education and training needed for planned jobs. Healthcare related activities were obviously well represented and employers also identified a broad array of business and technology areas.

Mining

These employers identified a much narrower array of education and training needs than employers in other industries. Selections were geared toward engineering, mining technology, and other technology.

Construction

Employers in the construction field were focused on mechanical systems training, engineering, and technology. These employers were the least likely to identify areas requiring graduate studies.

General Business

These employers, by nature of the sample, identified a wide variety of training

needed. Areas generating relatively higher response included truck driving, mechanical systems, computer-related, and business studies.

Education / Training Needed for Planned Jobs (Base: Those planning jobs in the next five years)	Total Sample	Employer Type				General Business
		Healthcare	Mining	Construction		
<i>Vocational Training</i>	n= 68	20	7	16	25	
121 WELDING	18	0	57	25	16	
101 CERTIFIED NURSING ASSISTANT	16	50	0	0	4	
109 ELECTRONICS	16	5	43	13	20	
120 TRUCK DRIVING/CDL	16	0	0	31	24	
103 BLDG. MAINTENANCE/TECH	15	10	0	19	20	
113 HVAC	12	10	0	13	16	
107 CONSTRUCTION MANAGEMENT	7	0	0	25	4	
112 HOSPITALITY/RESTAURANT MGT.	6	5	0	6	8	
118 TELECOMMUNICATIONS TECHNICIAN	6	10	0	6	4	
105 CERTIFIED PERSONAL TRAINING	3	5	0	0	4	
104 CALL CENTER MANAGEMENT	1	5	0	0	0	
106 CHILD DAY CARE MANAGEMENT	1	0	0	0	4	
108 CULINARY ARTS	1	0	0	0	4	
110 FIRE SCIENCE	1	0	14	0	0	
114 JEWELRY DESIGN & REPAIR	1	0	0	0	4	
115 LANDSCAPE DESIGN	1	0	0	0	4	
116 LOCKSMITH	1	0	0	6	0	

Education / Training Needed for Planned Jobs (Base: Those planning jobs in the next five years)	Total Sample	Employer Type				General Business
		Healthcare	Mining	Construction		
<i>Associate Degree</i>	n= 68	20	7	16	25	
206 BUSINESS STUDIES	18	20	14	13	20	
209 COMPUTER INFORMATION SYSTEMS	16	10	0	19	24	
231 MEDICAL RECORDS ADMINISTRATION	10	35	0	0	0	
232 MINING TECHNOLOGY	9	0	43	13	4	
210 CONSTRUCTION TECHNOLOGY	7	5	0	25	0	
228 LICENSED PRACTICAL NURSING	7	20	0	0	4	
229 MANUFACTURING INDUSTRIAL TECHNOLOGY	7	20	0	0	4	
208 COMPUTER GRAPHICS	6	5	0	13	4	
221 HEALTH AND WELLNESS TECHNOLOGY	6	15	0	0	4	
224 HUMAN SERVICES	6	15	0	0	4	
238 RESPIRATORY THERAPY	6	15	0	0	4	
203 AUTOMOTIVE TECHNOLOGY	4	0	0	0	12	
207 CIVIL ENGINEERING TECHNOLOGY	4	0	29	6	0	
230 MASONRY	4	5	0	6	4	
237 RADIOLOGY TECHNOLOGY	4	15	0	0	0	
214 DIAGNOSTIC MEDICAL SONOGRAPHY	3	10	0	0	0	
215 DRAFTING TECHNOLOGY	3	0	0	13	0	
216 EMERGENCY MEDICAL TECHNOLOGY	3	0	14	6	0	
217 ENVIRONMENTAL STUDIES	3	0	14	6	0	
219 FIRE PROTECTION AND SAFETY TECHNOLOGY	3	0	14	0	4	
226 INFORMATION TECHNOLOGY	3	10	0	0	0	
233 PARALEGAL STUDIES	3	10	0	0	0	
235 PLUMBING TECHNOLOGY	3	0	0	6	4	
236 QUALITY MANAGEMENT SYSTEMS	3	0	0	0	8	
239 ROOFING	3	0	0	6	4	
241 SURVEYING AND MAPPING TECHNOLOGY	3	0	29	0	0	
204 AVIATION MAINTENANCE	1	0	0	0	4	
212 DENTAL HYGIENE	1	0	0	0	4	
213 DESKTOP PUBLISHING	1	5	0	0	0	
225 INDUSTRIAL CHEMICAL TECHNOLOGY	1	0	0	0	4	
234 PARAMEDIC TECHNOLOGY	1	5	0	0	0	
240 SURGICAL TECHNOLOGY	1	0	0	6	0	

Education / Training Needed for Planned Jobs	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
(Base: Those planning jobs in the next five years)	n= 68	20	7	16	25
<i>Bachelor Degree (Part 1)</i>					
359 NURSING	13	45	0	0	0
301 ACCOUNTING	12	15	14	13	8
309 BUSINESS	12	0	0	19	20
354 MARKETING	7	15	0	0	8
331 FINANCE	6	0	0	6	12
333 FOOD AND NUTRITION STUDIES	6	15	0	0	4
344 HUMAN RESOURCES MANAGEMENT	6	15	0	0	4
302 ADVERTISING	4	5	0	6	4
315 COMPUTER PROGRAMMING	4	5	0	6	4
319 DIETETICS	4	10	0	0	4
326 ELECTRICAL ENGINEERING	4	5	14	6	0
339 HEALTHCARE ADMINISTRATION	4	15	0	0	0
307 BIOLOGY	3	5	0	0	4
312 CIVIL ENGINEERING	3	0	29	0	0
313 CLINICAL/MEDICAL LABORATORY TECHNOLOGY	3	10	0	0	0
317 CONSTRUCTION MANAGEMENT	3	0	0	13	0
321 EARLY CHILDHOOD EDUCATION	3	0	0	0	8
325 ECONOMICS	3	0	0	6	4
342 HOSPITALITY ADMINISTRATION & MANAGEMENT	3	5	0	0	4
346 INDUSTRIAL ENGINEERING	3	0	0	0	8
347 INFORMATION SYSTEMS	3	0	0	0	8
350 LIBERAL ARTS	3	0	0	6	4
352 MANAGEMENT INFORMATION SYSTEMS	3	5	0	0	4

Education / Training Needed for Planned Jobs	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
(Base: Those planning jobs in the next five years)	n= 68	20	7	16	25
<i>Bachelor Degree (Part 2)</i>					
357 MECHANICAL ENGINEERING	3	0	14	0	4
366 PUBLIC RELATIONS	3	10	0	0	0
371 SOCIAL WORK	3	10	0	0	0
306 ATHLETIC TRAINING	1	0	0	0	4
308 BIOTECHNOLOGY	1	5	0	0	0
310 CHEMICAL ENGINEERING	1	0	0	0	4
311 CHEMISTRY	1	0	0	0	4
316 COMPUTER SCIENCE	1	0	0	0	4
318 CULINARY ARTS	1	0	0	0	4
328 ENGLISH	1	0	0	6	0
337 GEOGRAPHY	1	0	0	0	4
343 HUMAN DEVELOPMENT AND FAMILY STUDIES	1	5	0	0	0
345 HUMAN SERVICES	1	0	0	0	4
348 INFORMATION TECHNOLOGY	1	0	0	0	4
353 MATERIALS ENGINEERING	1	0	0	0	4
356 MATHEMATICS	1	5	0	0	0
363 PSYCHOLOGY	1	5	0	0	0
365 PUBLIC ADMINISTRATION	1	0	0	6	0
367 REAL ESTATE	1	0	0	6	0
369 SCIENCE	1	5	0	0	0
372 SOFTWARE ENGINEERING	1	0	0	0	4
382 COMMUNICATIONS	1	5	0	0	0

Education / Training Needed for Planned Jobs	Total	Employer Type				
		Sample	Healthcare	Mining	Construction	General Business
(Base: Those planning jobs in the next five years)	n=	68	20	7	16	25
<i>Master/PHD/Professional Degree</i>						
401 BUSINESS ADMINISTRATION	10	15	14	6	8	
409 INFORMATION SYSTEMS	6	20	0	0	0	
403 ENGINEERING	4	0	14	6	4	
405 FINANCE	4	5	14	0	4	
407 HUMAN RESOURCES	4	10	14	0	0	
410 NURSING	4	15	0	0	0	
402 EDUCATION	3	5	0	0	4	
406 HEALTHCARE MANAGEMENT	3	10	0	0	0	
411 OCCUPATIONAL THERAPY	3	10	0	0	0	
412 PHYSICAL THERAPY	3	10	0	0	0	
414 PSYCHOLOGY	3	10	0	0	0	
417 SOCIAL WORK	3	10	0	0	0	
418 COUNSELING	3	5	0	0	4	
408 HUMAN SERVICES	1	5	0	0	0	
413 PHYSICIAN ASSISTANT	1	5	0	0	0	
416 SPEECH PATHOLOGY	1	0	0	0	4	
501 EDUCATION	1	0	0	0	4	
601 ACCOUNTING	1	0	0	0	4	
604 EDUCATION	1	0	0	0	4	

Summary of Research Findings

Overview

This section of the report provides a summary of the most pertinent findings.

- Employer Profiles
- Jobs Outlook for the Next Five Years
- Job Skills and Personal Traits Needed for Current Jobs
- Deficiencies in Job Skills and Personal Traits Observed in Current Employees and Applicants
- Job Skills and Personal Traits Needed for New Jobs Planned for the Next Five Years
- Education and Training Needed for New Jobs Planned for the Next Five Years
- Employer Responses to Market Outlook Questions

More detail can be found in the appendix. Cross-tabulation reports which provide detailed responses for each survey question may be requested from EKCEP.

Employer Profile

The survey respondents were responsible for the staffing decisions at their respective organizations. As such, they tended to be older, more senior executives. The average age among respondents was 49 years, and 60% were over age 50.

The respondents also tended to be industry veterans, with an average of nearly 21 years in their respective industries.

More than 40% of respondents had earned at least a Bachelor degree, and an additional 18% held a graduate degree.

The table below provides a summary of the respondents by industry.

Respondent Profile	Total	Employer Type			
		Sample	Healthcare	Mining	Construction
n=	100	25	10	22	43
	%	%	%	%	%
<u>Respondent Sex</u>					
Male	57	28	70	59	69
Female	43	72	30	41	31
<u>Respondent Age</u>					
34 and Under	7	8	--	9	7
35 to 49	33	42	--	18	43
50 or Older	60	50	100	73	50
Average Age	49.0	46.8	54.3	51.3	48.0
<u>Respondent Education</u>					
High School or Less	10	--	10	23	9
Associate Degree	8	16	20	---	5
Technical/Vocational School	5	4	--	13	2
Some College	15	20	20	18	9
Bachelor Degree	44	48	20	41	49
Masters Degree	16	12	30	5	21
Doctoral/PHD Degree	2	--	--	--	5
<u>Respondent Tenure</u>					
Average Years in Industry	20.6	20.0	27.6	23.3	18.2
Average Years with Company	16.7	15.0	18.2	20.1	15.7
Average Years in Current Position	12.4	12.7	6.8	17.5	10.8

Profile of Employer Companies

The employer companies included in the study were likely to be involved in a variety of industry trade groups and other business organizations, as shown in the table below.

Employer Profile	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
	%	%	%	%	%
<u>Industry Type</u>					
Healthcare	25	100			
Mining	10		100		
Construction	22			100	
General Business	43				100
<u>Professional Organization Membership</u>					
BBB	30	47	17	30	21
Local Chamber	72	68	17	80	83
KY Chamber	45	32	83	40	48
Other (Trade Groups, etc)	39	32	17	50	45
<u>Use of Selected Programs/Tools</u>					
Employee Manual	87	100	100	62	88
Employee Orientation	94	96	100	86	95
Professional Development Opportunities	78	92	80	57	79
Diversity Program	61	67	60	60	59

Employer Jobs Profile

Employers were asked to indicate the number of employees at their location in each of the following categories:

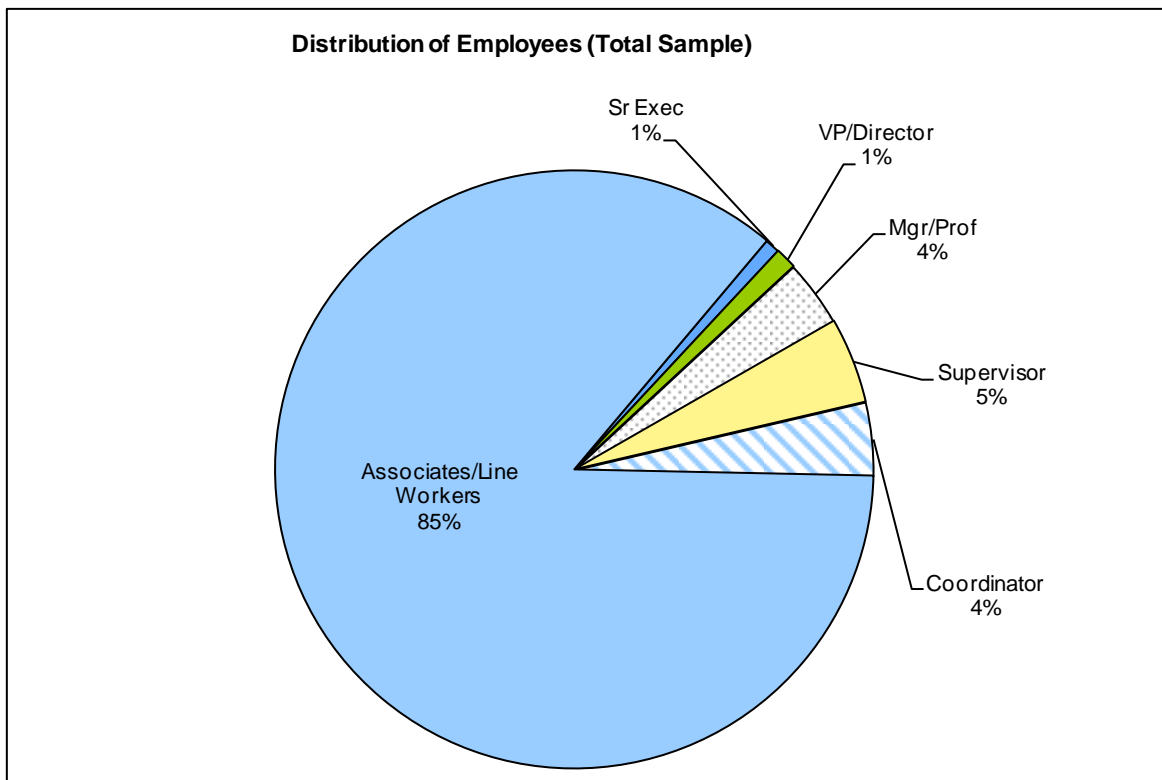
Senior Executive	Top level authority in a company, such as an owner, president, principal, or officer.
Vice President / Director	Controls, manages, and directs staff and resources while reporting directly to a senior level executive.
Manager / Professional	Manages and oversees staff or reports directly to more senior employees

Supervisor	Supervises department and staff while reporting directly to the manager. Mid-level.
Coordinator	Coordinates and completes assigned projects while reporting directly to departmental manager. May not manage others.
Associate / Line Worker	Staff that complete assignments and responsibilities while reporting to their designated supervisor.

Average Employment. The table below shows the average number of employees by industry group. As indicated, the mining and healthcare sectors employ many more employees on average than do those in the other sectors represented.

Employer Job Counts (Average by Job Type)	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
Senior Executives	1.3	1.0	0.9	1.5	1.4
Vice President/Director	1.9	2.4	1.9	1.3	2.0
Manager/Professional	5.9	8.8	7.9	2.6	5.4
Supervisor	7.6	5.1	27.8	5.5	5.4
Coordinator	6.5	7.5	15.0	1.2	6.8
Associate/Line Worker	<u>140.0</u>	<u>259.2</u>	<u>346.5</u>	<u>55.4</u>	<u>66.0</u>
Total Average Employees	168.0	303.0	400.0	67.4	87.1

Distribution of Employees by Job Type. Associates/Line Workers account for 85% of all employees represented by employers surveyed.



Employee Tenure. Senior Executives averaged just over 13 years employment with their company. Associates/Line Workers in the Mining category were likely to be employed with their current company far longer than those in other industries.

Employee Tenure (Average Years by Job Type)	Employer Type				
	<u>Total</u>				<u>General</u>
	<u>Sample</u>	<u>Healthcare</u>	<u>Mining</u>	<u>Construction</u>	<u>Business</u>
n=	100	25	10	22	43
Senior Executives	13.3	11.2	14.6	15.7	12.9
Vice President/Director	6.9	7.4	5.6	5.8	7.2
Manager/Professional	7.8	8.3	13.0	3.4	8.7
Supervisor	5.9	4.6	9.7	3.1	7.2
Coordinator	6.8	6.7	9.2	6.4	6.1
Associate/Line Worker	6.4	6.7	10.5	6.5	5.2

Employee Pay. Employers were asked to provide average wage and salary information for each job type within their organizations. The responses were converted to hourly wage rates for comparative purposes and are shown in the table below.

Employee Pay (Average Hourly Rate by Job Type)	Employer Type				
	<u>Total</u>				<u>General</u>
	<u>Sample</u>	<u>Healthcare</u>	<u>Mining</u>	<u>Construction</u>	<u>Business</u>
n=	100	25	10	22	43
Senior Executives	\$52	\$64	\$74	\$37	\$55
Vice President/Director	\$36	\$37	\$64	\$27	\$32
Manager/Professional	\$26	\$23	\$42	\$23	\$25
Supervisor	\$22	\$18	\$40	\$20	\$20
Coordinator	\$21	\$16	\$37	\$16	\$19
Associate/Line Worker	\$14	\$12	\$25	\$13	\$13

Note: The averages shown in the table above should be used with caution. Some employers were unwilling to provide wage and salary information for all positions, especially for those in executive and ownership positions.

Employee Education. Employers indicated the level of education needed for each job category. Note that the percentages add to greater than 100% because of the varying levels of education needed within each job category. For example, one position in the Associates/Line Worker category might only require a high school education while another might require an Associate degree.

As might be expected, positions in the Healthcare field were likely to require higher levels of education. However, as indicated in the table below, respondents across the board reported rather high incidences of need for college degrees.

Education Levels Needed for Current Jobs	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
<i>Total Sample</i>	n= 100	25	10	22	43
High School diploma or GED	80	76	80	82	81
Vocational/Technical Certification	50	56	70	68	33
Associate degree	42	60	40	18	44
Bachelor degree	67	72	80	50	70
Master degree	32	44	10	27	33
PHD/Doctoral degree	9	24			7
Professional degree	17	40	30	9	5
Other	5		10	5	7

The data were analyzed separately for Associates/Line Workers and for all other employee groups. This is shown in the table on the next page.

For Associates/Line Workers, 74% of employers indicated that high school diplomas were needed, and 48% said that some Vocational/Technical training or Associate Degree was needed.

The majority of advanced degree needs were expressed for higher level jobs.

Education Levels Needed for Current Jobs	<u>Total</u> Sample	<u>Employer Type</u>			
		<u>Healthcare</u>	<u>Mining</u>	<u>Construction</u>	<u>General Business</u>
<i>n=</i>	100	25	10	22	43
<u>Line Workers</u>					
High School diploma or GED	74	68	80	77	74
Vocational/Technical Certification	36	44	30	55	23
Associate degree	12	28			12
Bachelor degree	7	12			9
Master degree	2	4			2
PHD/Doctoral degree					
Professional degree	3	8			2
Other	4		10	5	5
<u>All Positions Other Than Line Workers</u>					
High School diploma or GED	43	9	5	9	20
Vocational/Technical Certification	29	5	6	11	7
Associate degree	38	13	4	4	17
Bachelor degree	67	18	8	11	30
Master degree	31	10	1	6	14
PHD/Doctoral degree	9	6	-	-	3
Professional degree	17	10	3	2	2
Other	2		1	1	3

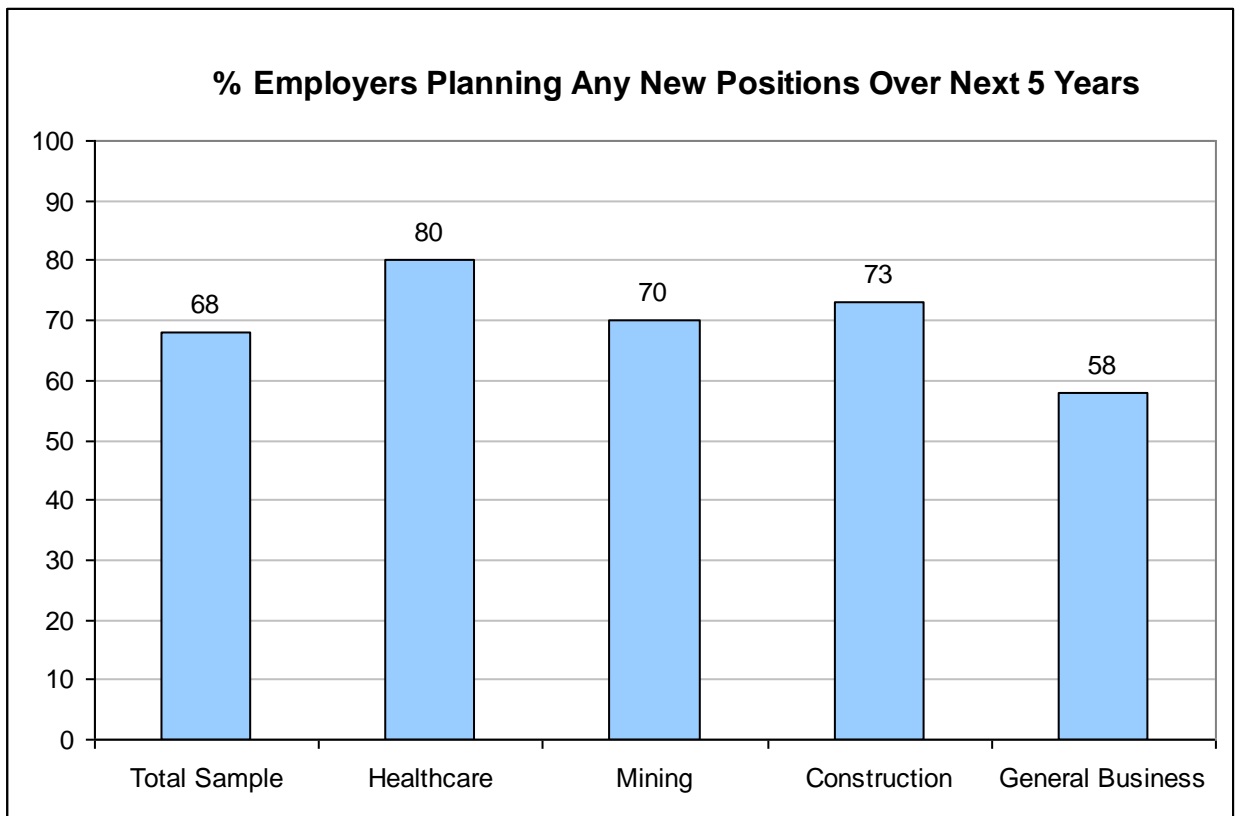
Employment Outlook for Next Five Years

Employer Plans to Add Jobs in the Next Five Years

Employers were asked to indicate the likelihood of creating new positions in each job category over the next five years:

"In the next five (5) years, do you expect the number of employees in each category to increase, remain stable, or decrease?"

Overall, 63% of employers indicated that they planned to increase the number of jobs in their companies over the next five years. Those representing Healthcare companies were more likely to say that their companies planned to add jobs.



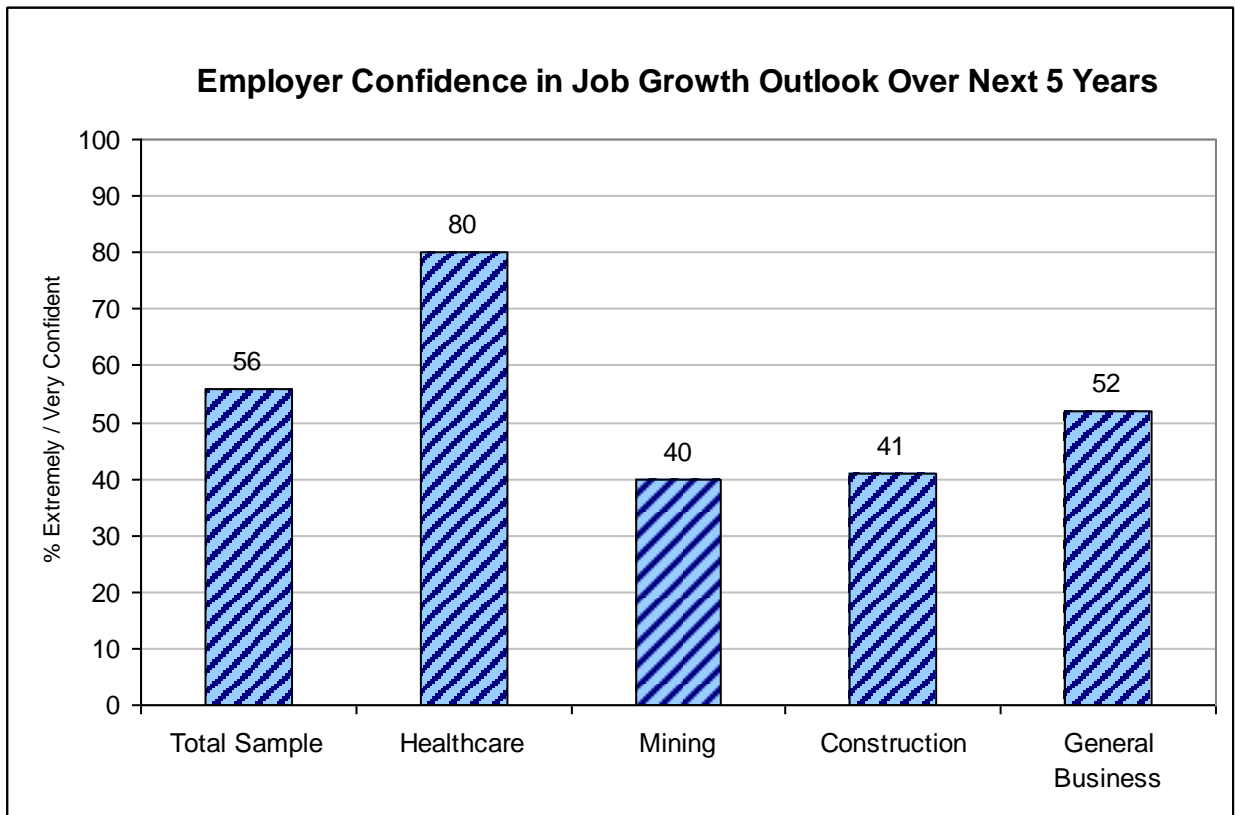
Employer Confidence in Five Year Jobs Outlook

To provide context for the stated hiring plans, employers were asked to indicate the level of confidence they had in the projection. Given the current economic and political situation facing the U.S. in general and the particularly hard-hit economy of Eastern Kentucky, it might be expected that projections might be made with some degree of caution.

The following five-point scale was used:

- Extremely Confident
- Very Confident
- Somewhat Confident
- Not Very Confident
- Not At All Confident

The chart below shows the percentage of Extremely or Very Confident responses by industry. With the exception of Healthcare (80%), these are not particularly high values. Anecdotally, many employers in eastern Kentucky have indicated that they are waiting to see what happens with the economy and/or legislation before taking steps to grow. This is especially true for those in the Mining sector.

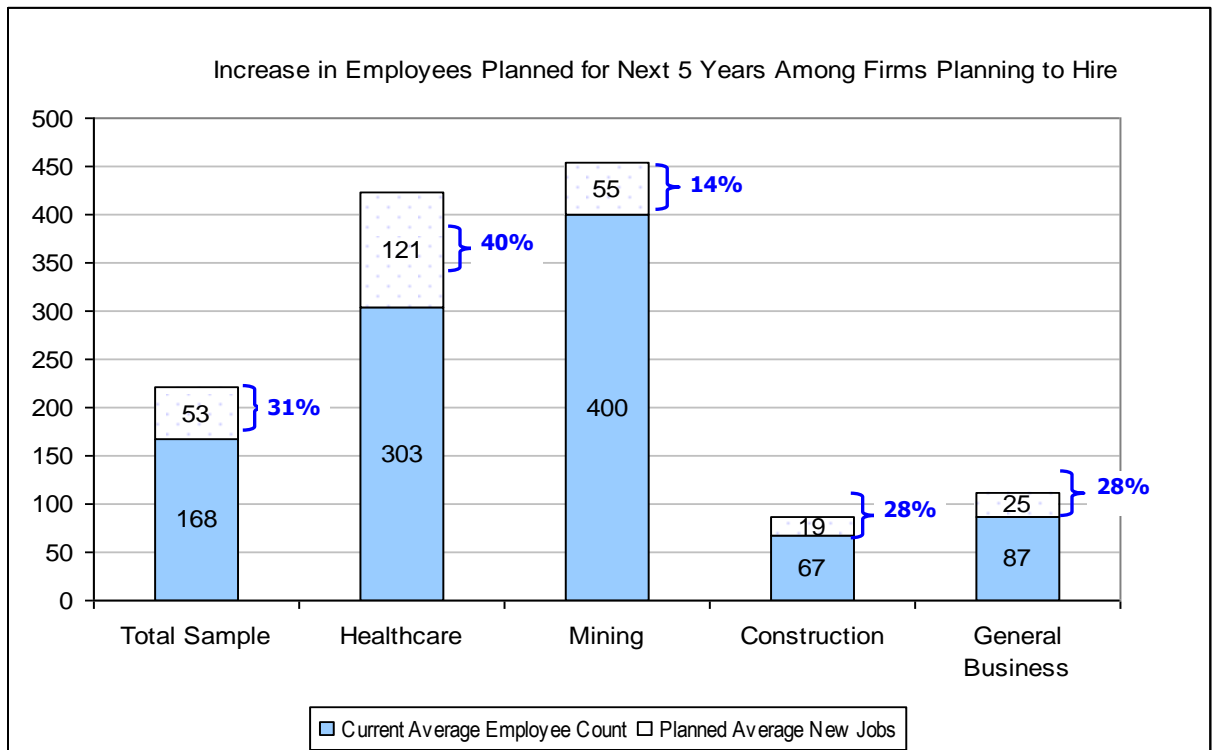


Number of Jobs Planned for Next Five Years

Those who indicated that they plan to add jobs over the next five years were asked to project the number of new positions planned. For those planning to hire, the number of new positions averaged 53. This was driven largely by Healthcare, which averaged 121 new positions. Again, caution should be used when interpreting these projections due to the relative weak confidence expressed by employers.

Average Number of New Jobs Planned Over Next 5 years	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
Average Number of New Jobs Planned (All Levels) Among Firms Planning to Hire	52.9	120.8	54.5	18.6	24.8
Average Number of New Jobs Planned (All Levels) Among All Firms	23.4	55.4	34.4	10.0	9.0

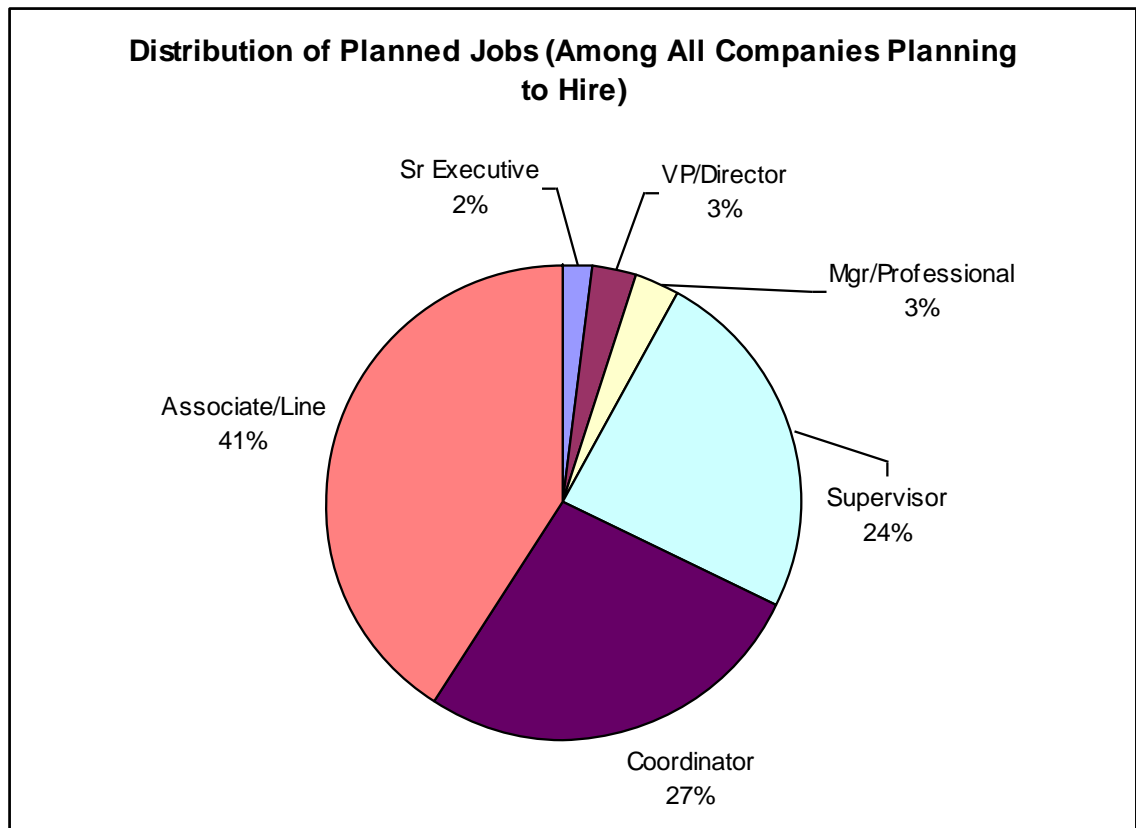
The chart below shows the projected increase in jobs, on average, for those companies planning to hire over the next five years. As indicated, the employer projections represent a 31% growth in jobs (if fully implemented).



The job growth projection data were analyzed by position. The table below shows the averages for those who planned to hire in each given position as well as among the total sample.

Average Number of New Jobs Planned Over Next 5 years	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
n=	100	25	10	22	43
Among Firms with Planned Hiring					
Senior Executives	1.5	3.0	1.0	1.0	1.0
Vice President/Director	2.1	2.5	1.0	0.0	2.3
Manager/Professional	2.2	2.5	1.0	2.3	2.3
Supervisor	17.3	59.8	7.3	2.3	3.4
Coordinator	19.2	53.3	3.5	1.7	6.3
Associate/Line Worker	29.7	52.9	44.3	13.1	15.8
Among All Firms					
Senior Executives	0.1	0.2	0.2	0.0	0.1
Vice President/Director	0.2	0.2	0.1	0.0	0.2
Manager/Professional	0.4	0.4	0.2	0.4	0.3
Supervisor	4.3	14.4	2.9	0.6	0.7
Coordinator	0.1	0.2	0.2	0.0	0.1
Associate/Line Worker	18.4	40.2	31.0	8.9	7.7

As indicated, planned growth is focused on Associates/Line Workers, Coordinators, and Supervisors.



Employee Skills Needed for Current Jobs

Employers were asked to indicate the critical job skills needed by position within their organizations.

*"In this section of the questionnaire, we'd like you to consider what skills are needed for the positions you currently have in your organization. In the lists below, simply check those skills that are **most critical** to you when hiring an employee in that category. If a particular skill is not important (or not a priority) for that category of employee, simply leave it unchecked."*

The questionnaire included all of the job skills being measured and employers were free to check as many or as few that applied to each position. See the example questionnaire in the Appendix for more detail.

Job Skills Measured in the Survey

The job skills included in the survey were presented in four categories, as shown in the table below.

100 Physical Skills / Primarily Using Tools	200 Mental Skills / Primarily Using Ideas	300 Social Skills / Primarily Using Relational Abilities	400 Traditional Workplace Skills / Primarily Using Data & Information
101 Physical stamina	201 Mathematical computation	301 Verbal ability	401 Reading Comprehension
102 Carry or lift	202 Writing ability	302 Public Speaking	402 Monitor Processes
103 Work in closed spaces	203 Critical thinking ability	303 Maintains confidentiality	403 Probing
104 Agility	204 Multicultural Awareness	304 Instruct/Teach	404 Computer/Technical literacy
105 Strength	205 Scientific analysis	305 Explain a concept	405 Plan
106 Manual dexterity	206 Abstract thinking	306 Help others	406 Collecting data
107 Build	207 Conducting research	307 Attentive Listener	407 Interpret data
108 Repair	208 Analytical skill	308 Delegate	408 Make decisions
109 Fine motor coordination	209 Understand theoretical concepts	309 Sell a product	409 Organized
110 Cultivate plants	210 Spatial visualization	310 Direct a project	410 Time management
111 Mechanical abilities	211 Design	311 Reach goals	411 Detail-oriented
112 Produce handmade crafts	212 Edit	312 Negotiate	412 Work with computer software
	213 Generate ideas	313 Persuade	413 Keep records
	214 Develop concepts	314 Evaluate	414 Financial analysis
	215 Artistic	315 Works well within a team	415 Project management
			416 Budget

Critical Job Skills Needed By Employers for Current Jobs

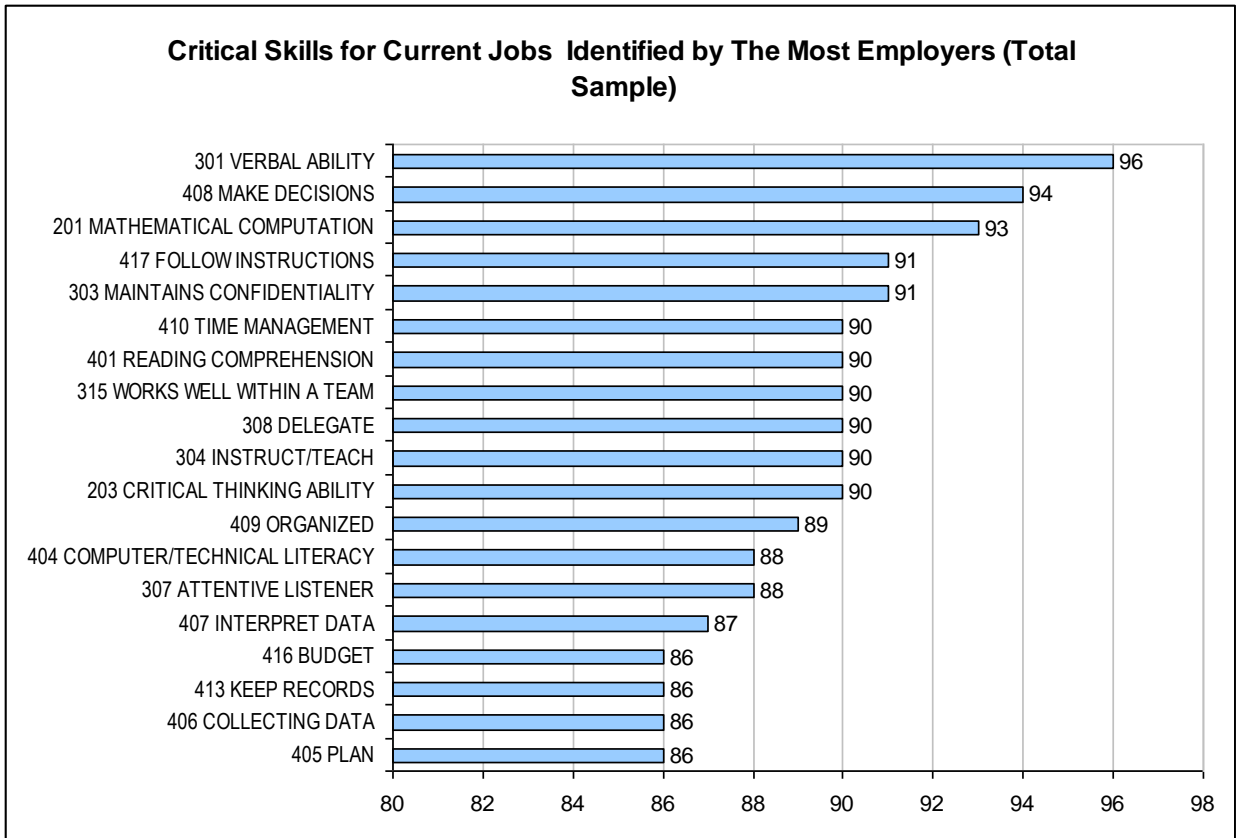
The table on the next page shows the percentage of companies which indicated a need for each job skill for all job levels combined. (Note: breakdowns of critical job skills by job type and industry grouping are provided later in this report.)

The table is organized by skill category (i.e., Physical, Mental, Social, Traditional) and in descending order within each category.

While there were some differences in the absolute percentages expressed by employers in each industry sector, certain skills tended to be important across all industry categories.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample n=	100	25	10	22
	%	%	%	%	%
101 PHYSICAL STAMINA	78	68	100	100	67
102 CARRY OR LIFT	69	52	100	95	58
105 STRENGTH	60	44	90	86	49
106 MANUAL DEXTERITY	56	56	90	73	40
104 AGILITY	54	48	80	86	35
109 FINE MOTOR COORDINATION	51	44	60	73	42
108 REPAIR	50	20	80	82	44
111 MECHANICAL ABILITIES	50	20	90	77	44
103 WORK IN CLOSED SPACES	49	36	80	55	47
107 BUILD	42	12	60	82	35
112 PRODUCE HANDMADE CRAFTS	11	8	--	14	14
110 CULTIVATE PLANTS	7	-	--	9	12
201 MATHEMATICAL COMPUTATION	93	88	90	100	93
203 CRITICAL THINKING ABILITY	90	80	100	91	93
202 WRITING ABILITY	85	76	90	82	91
213 GENERATE IDEAS	84	72	80	91	88
214 DEVELOP CONCEPTS	76	68	90	73	79
206 ABSTRACT THINKING	73	72	70	64	79
208 ANALYTICAL SKILL	73	68	90	59	79
204 MULTICULTURAL AWARENESS	67	68	70	55	72
209 UNDERSTAND THEORETICAL CONCEPTS	61	64	70	59	58
207 CONDUCTING RESEARCH	56	52	80	41	60
211 DESIGN	52	44	60	68	47
205 SCIENTIFIC ANALYSIS	49	60	80	36	42
212 EDIT	47	40	60	45	49
210 SPATIAL VISUALIZATION	45	40	50	50	44
215 ARTISTIC	41	32	50	50	40
301 VERBAL ABILITY	96	92	100	95	98
303 MAINTAINS CONFIDENTIALITY	91	84	100	95	91
304 INSTRUCT/TEACH	90	84	100	91	91
308 DELEGATE	90	80	90	95	93
315 WORKS WELL WITHIN A TEAM	90	80	80	95	95
307 ATTENTIVE LISTENER	88	84	100	91	86
305 EXPLAIN A CONCEPT	85	80	80	86	88
306 HELP OTHERS	85	76	80	86	91
310 DIRECT A PROJECT	85	76	90	91	86
311 REACH GOALS	85	76	90	82	91
312 NEGOTIATE	85	76	90	86	88
314 EVALUATE	85	76	80	86	91
302 PUBLIC SPEAKING	81	80	70	82	84
313 PERSUADE	79	64	90	82	84
309 SELL A PRODUCT	64	48	50	68	74
408 MAKE DECISIONS	94	84	100	100	95
417 FOLLOW INSTRUCTIONS	91	80	100	100	91
401 READING COMPREHENSION	90	88	90	95	88
410 TIME MANAGEMENT	90	84	90	91	93
409 ORGANIZED	89	80	90	95	91
404 COMPUTER/TECHNICAL LITERACY	88	80	90	82	95
407 INTERPRET DATA	87	76	100	91	88
405 PLAN	86	76	80	91	91
406 COLLECTING DATA	86	76	80	91	91
413 KEEP RECORDS	86	76	90	91	88
416 BUDGET	86	84	90	86	86
411 DETAIL-ORIENTED	85	80	90	91	84
414 FINANCIAL ANALYSIS	84	80	90	77	88
402 MONITOR PROCESSES	83	80	80	77	88
412 WORK WITH COMPUTER SOFTWARE	82	84	60	73	91
415 PROJECT MANAGEMENT	80	80	70	82	81
403 PROBING	64	64	70	59	65

Among all categories, the job skills identified as being critical by the highest percentage of employers are shown below.



Deficiencies in Critical Job Skills Identified By Employers

Employers were asked to consider the job skills that they deemed critical for each job category and were then asked to indicate those skills that they observed lacking or deficient in employees and candidates for employment. The interviewers reviewed these one by one with the employers on a skill-specific basis:

"Let's review your answers to the questions about the skills needed for your employees. You said that the important skills in the (Skills Category Name) skills category for (Job Group) are (READ ITEMS CHECKED). Do you find that any of those skills are typically deficient or under-developed when hiring or evaluating employees in the (Job Group)? (If Yes) Which ones?"

The table on the next page shows the percentage of employers who A) needed a particular skill and B) indicated that the skill was deficient in employees or candidates.

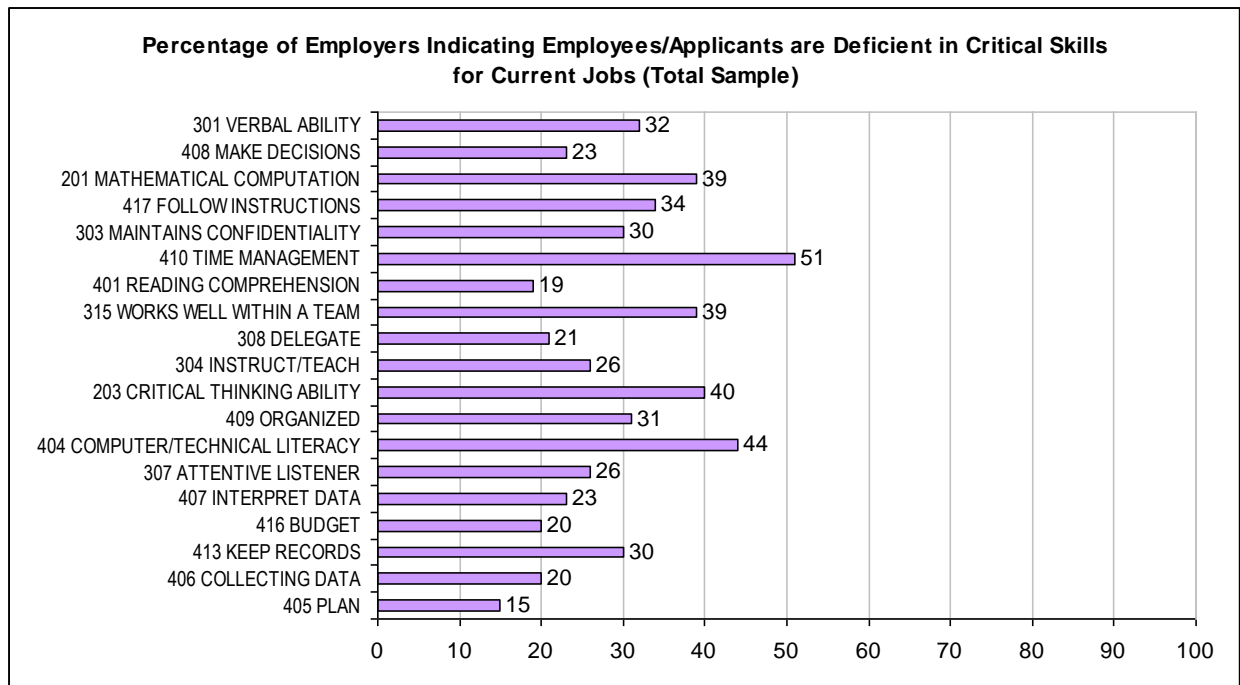
Note that these data are not weighted in any way. For example, job skill 110 Cultivating Plants shows that 50% of employers said this was a deficiency. However, this was the response by those who said that was a skill needed, which was 8% of the total sample. The analysis that follows the next table will address the weighting issue by focusing on those skills that were indicated as critical by higher percentages of employers.

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	n=	Employer Type				
		Total	Healthcare	Mining	Construction	General
		Sample				Business
	100	25	10	22	43	
	%	%	%	%	%	
110 CULTIVATE PLANTS	43	-	--	-	40	
111 MECHANICAL ABILITIES	46	40	56	41	47	
108 REPAIR	34	40	38	33	32	
112 PRODUCE HANDMADE CRAFTS	7	--	--	-	17	
101 PHYSICAL STAMINA	32	18	50	14	48	
104 AGILITY	28	33	38	21	27	
105 STRENGTH	27	18	44	11	38	
107 BUILD	24	67	33	17	20	
109 FINE MOTOR COORDINATION	24	27	50	13	22	
106 MANUAL DEXTERITY	23	14	44	6	35	
102 CARRY OR LIFT	23	15	30	10	36	
103 WORK IN CLOSED SPACES	22	22	38	8	25	
202 WRITING ABILITY	40	42	33	39	41	
203 CRITICAL THINKING ABILITY	40	40	50	25	45	
201 MATHEMATICAL COMPUTATION	39	27	33	45	43	
204 MULTICULTURAL AWARENESS	36	41	14	42	35	
208 ANALYTICAL SKILL	34	41	44	38	26	
213 GENERATE IDEAS	32	22	63	15	39	
210 SPATIAL VISUALIZATION	22	10	20	27	26	
215 ARTISTIC	22	25	20	9	29	
206 ABSTRACT THINKING	22	11	43	21	24	
207 CONDUCTING RESEARCH	20	8	25	22	23	
211 DESIGN	19	18	17	27	15	
205 SCIENTIFIC ANALYSIS	18	20	25	13	17	
214 DEVELOP CONCEPTS	17	-	33	13	24	
209 UNDERSTAND THEORETICAL CONCEPTS	15	13	29	15	12	
212 EDIT	11	-	-	20	14	
315 WORKS WELL WITHIN A TEAM	39	40	50	43	34	
302 PUBLIC SPEAKING	36	40	57	33	31	
301 VERBAL ABILITY	32	39	60	33	21	
303 MAINTAINS CONFIDENTIALITY	30	29	30	33	28	
311 REACH GOALS	27	16	33	28	31	
307 ATTENTIVE LISTENER	26	19	30	30	27	
304 INSTRUCT/TEACH	26	29	50	10	26	
305 EXPLAIN A CONCEPT	24	20	38	21	24	
309 SELL A PRODUCT	22	8	-	27	28	
308 DELEGATE	21	20	11	19	25	
313 PERSUADE	19	19	33	17	17	
306 HELP OTHERS	19	21	38	11	18	
310 DIRECT A PROJECT	19	11	33	15	22	
312 NEGOTIATE	18	32	22	11	13	
314 EVALUATE	18	11	13	11	26	
410 TIME MANAGEMENT	51	57	44	45	53	
404 COMPUTER/TECHNICAL LITERACY	44	40	67	44	41	
412 WORK WITH COMPUTER SOFTWARE	34	29	50	31	36	
417 FOLLOW INSTRUCTIONS	34	30	60	36	28	
409 ORGANIZED	31	25	22	33	36	
413 KEEP RECORDS	30	16	11	45	34	
411 DETAIL-ORIENTED	26	20	11	25	33	
408 MAKE DECISIONS	23	29	50	9	22	
407 INTERPRET DATA	23	26	-	20	29	
406 COLLECTING DATA	20	11	25	20	23	
416 BUDGET	20	14	22	16	24	
401 READING COMPREHENSION	19	18	33	14	18	
402 MONITOR PROCESSES	18	10	13	12	26	
414 FINANCIAL ANALYSIS	18	15	33	12	18	
415 PROJECT MANAGEMENT	18	10	-	11	29	
403 PROBING	16	19	-	8	21	
405 PLAN	15	11	13	5	23	

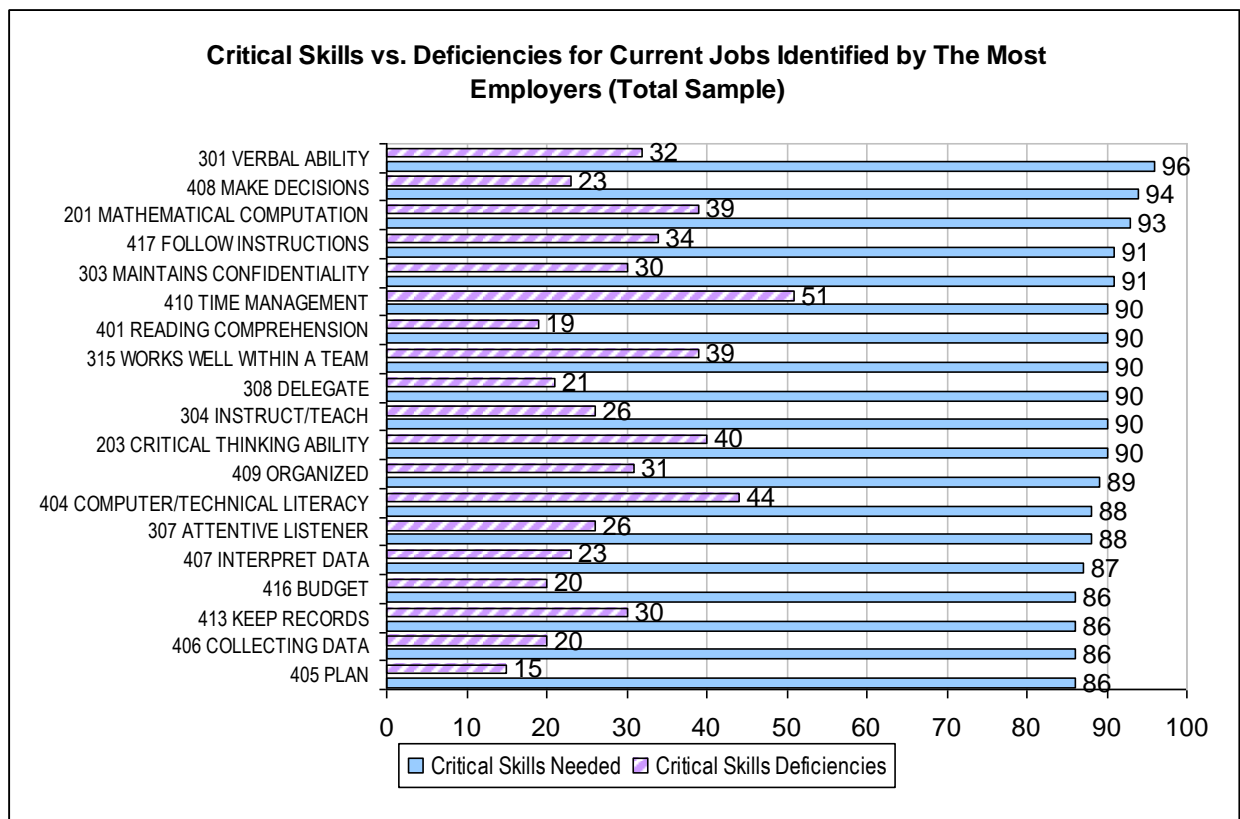
The chart below shows the deficiency results for the most critical job skills. The values indicate the percentage of employers who said the skill was critical and also said they observed a deficiency in that skill among applicants or employees.

As shown here, 51% of the employers who said that 410 Time Management was a critical skill also said that they observed deficiencies in their applicants or employees in this area. Of the 19 most critical job skills identified by employers, six were identified by more than 33% of employers as being a deficiency:

- 201 Mathematical Computation
- 417 Follows Instructions
- 401 Time Management
- 315 Works Well Within a Team
- 203 Critical Thinking Ability
- 404 Computer/Technical Literacy



In the chart below, the most critical skills are plotted with their associated deficiency scores. As indicated, there are specified areas of needed improvement in today's workforce and a plethora of training opportunities to increase their current skills.



The table on the next page includes projections of the percentage of employers who have employees lacking or deficient in each skill measured. This was calculated by multiplying the percentage response for each skill as critical for employees at any level by the percentage response (among those employers) in claiming that there was a deficiency in that skill among employees or applicants.

Example: 101 Physical Stamina (78% Critical x 32% Deficient = 25%)

While these projections are theoretical, they do provide EKCEP with a tool that can help focus resources in providing job skills training for employers.

Estimated Percentage of E KY Employers With Workforce Lacking Critical Skill (Base: Employers Needing Each Skill)	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample				Business
n=	100	25	10	22	43
	%	%	%	%	%
101 PHYSICAL STAMINA	25	12	50	14	33
102 CARRY OR LIFT	16	8	30	9	21
103 WORK IN CLOSED SPACES	11	8	30	5	12
104 AGILITY	15	16	30	18	9
105 STRENGTH	16	8	40	9	19
106 MANUAL DEXTERITY	13	8	40	5	14
107 BUILD	10	8	20	14	7
108 REPAIR	17	8	30	27	14
109 FINE MOTOR COORDINATION	12	12	30	9	9
110 CULTIVATE PLANTS	4	0	10	0	5
111 MECHANICAL ABILITIES	23	8	50	32	21
112 PRODUCE HANDMADE CRAFTS	4	8	10	0	2
201 MATHEMATICAL COMPUTATION	36	24	30	45	40
202 WRITING ABILITY	34	32	30	32	37
203 CRITICAL THINKING ABILITY	36	32	50	23	42
204 MULTICULTURAL AWARENESS	24	28	10	23	26
205 SCIENTIFIC ANALYSIS	9	12	20	5	7
206 ABSTRACT THINKING	16	8	30	14	19
207 CONDUCTING RESEARCH	11	4	20	9	14
208 ANALYTICAL SKILL	25	28	40	23	21
209 UNDERSTAND THEORETICAL CONCEPTS	9	8	20	9	7
210 SPATIAL VISUALIZATION	10	4	10	14	12
211 DESIGN	10	8	10	18	7
212 EDIT	5	0	0	9	7
213 GENERATE IDEAS	27	16	50	14	35
214 DEVELOP CONCEPTS	13	0	30	9	19
215 ARTISTIC	9	8	10	5	12
301 VERBAL ABILITY	31	36	60	32	21
302 PUBLIC SPEAKING	29	32	40	27	26
303 MAINTAINS CONFIDENTIALITY	27	24	30	32	26
304 INSTRUCT/TEACH	23	24	50	9	23
305 EXPLAIN A CONCEPT	20	16	30	18	21
306 HELP OTHERS	16	16	30	9	16
307 ATTENTIVE LISTENER	23	16	30	27	23
308 DELEGATE	19	16	10	18	23
309 SELL A PRODUCT	14	4	0	18	21
310 DIRECT A PROJECT	16	8	30	14	19
311 REACH GOALS	23	12	30	23	28
312 NEGOTIATE	15	24	20	9	12
313 PERSUADE	15	12	30	14	14
314 EVALUATE	15	8	10	9	23
315 WORKS WELL WITHIN A TEAM	35	32	40	41	33
401 READING COMPREHENSION	17	16	30	14	16
402 MONITOR PROCESSES	15	8	10	9	23
403 PROBING	10	12	0	5	14
404 COMPUTER/TECHNICAL LITERACY	39	32	60	36	40
405 PLAN	13	8	10	5	21
406 COLLECTING DATA	17	8	20	18	21
407 INTERPRET DATA	20	20	0	18	26
408 MAKE DECISIONS	22	24	50	9	21
409 ORGANIZED	28	20	20	32	33
410 TIME MANAGEMENT	46	48	40	41	49
411 DETAIL-ORIENTED	22	16	10	23	28
412 WORK WITH COMPUTER SOFTWARE	28	24	30	23	33
413 KEEP RECORDS	26	12	10	41	30
414 FINANCIAL ANALYSIS	15	12	30	9	16
415 PROJECT MANAGEMENT	14	8	0	9	23
416 BUDGET	17	12	20	14	21
417 FOLLOW INSTRUCTIONS	31	24	60	36	26

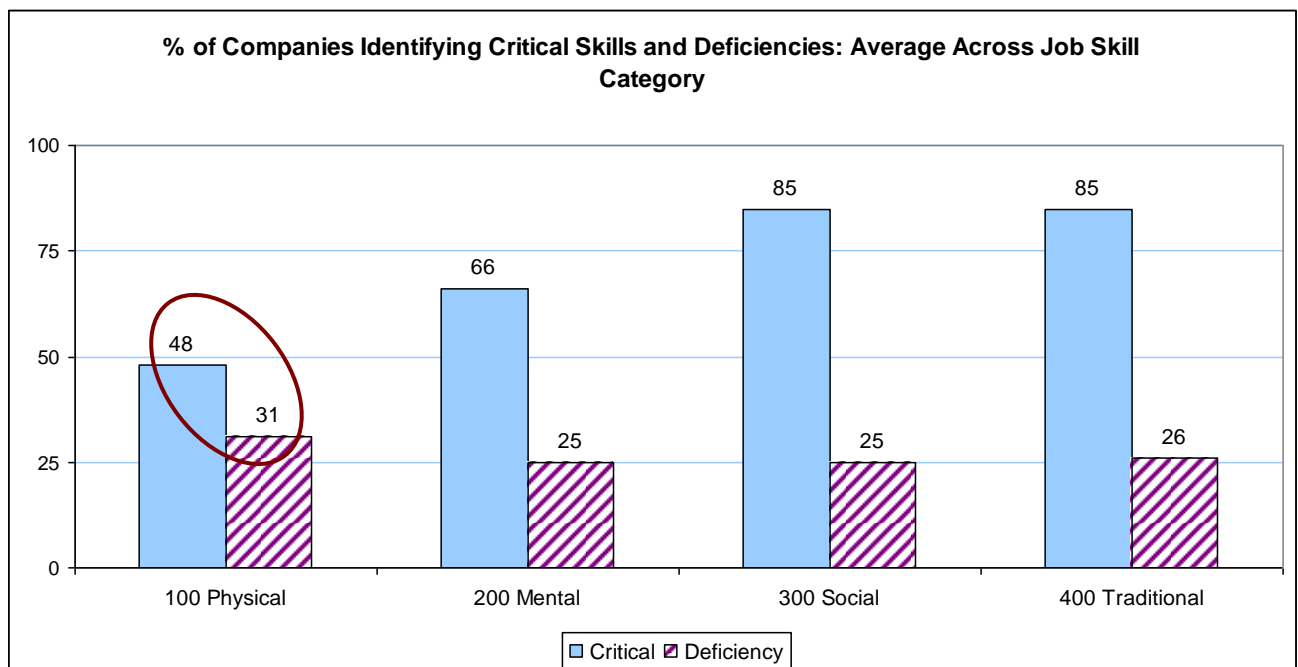
Critical Job Skills and Deficiencies Across Skill Categories

The average responses for identification as a critical job skill and deficiency were calculated across the four job skills categories. The results are shown in the following chart.

Skills in the 300 Social and 400 Traditional groups appear to be, on average, more critical than those in other categories.

The degree to which employers identified deficiencies in skills was roughly equal across all four job skill categories.

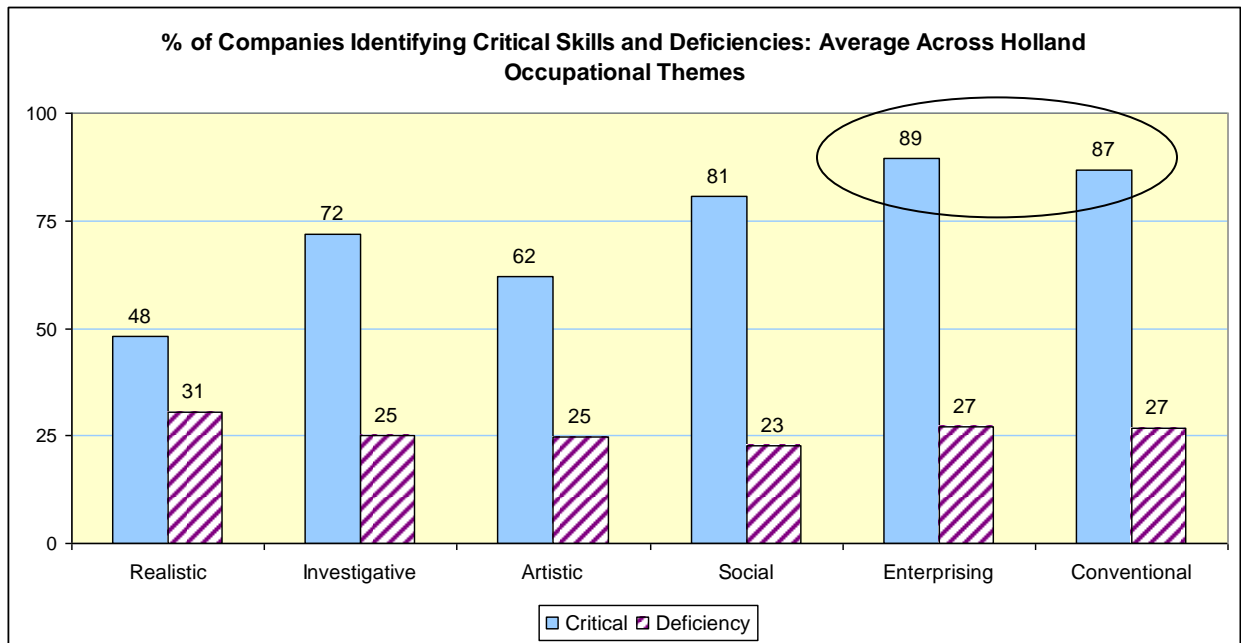
The graph suggests that while the skills in the 100 Physical group were not as critical as other groups of skills, a higher proportion of employers needing people with those skills are observing deficiencies. Among jobs requiring physical skills, the gap between supply and demand for prepared workers can be interpreted to be “more severe” than for other jobs.



Critical Job Skills and Deficiencies By Holland's Occupational Themes

The average responses for identification as a critical job skill and deficiency were also calculated across the six Holland occupational themes described on pages 12-15.

Skills in the Enterprising and Conventional themes were generally identified by higher percentages of employers as being critical for employees.



Employee Traits Needed for Current Jobs

Employers were asked to indicate the personal traits which were critical for employment in their companies.

"Next, please consider personality and character traits required for employees at the various levels in your company. In the lists below, check the three (3) most important traits when hiring an employee in that category. Be sure to prioritize for each category of employee and just choose the top three for each employee group in each of the four categories of traits."

The questionnaire included all of the job skills being measured. In this section of the questionnaire, employers were directed to choose only the three most critical traits needed for each job category. The responses were limited to three to force prioritization of many desirable traits. See the example questionnaire in the Appendix for more detail.

Employee Traits Measured in the Survey

The personal traits included in the survey were presented in four categories, as shown in the table below.

500 Personal Character Traits	600 Motivation Traits	700 Social Traits	800 Intellectual Traits
501 Honesty	601 Self confidence	701 Resolves conflict	801 Curiosity
502 Methodical	602 Industrious	702 Cooperative	802 Inquiring
503 Strong work ethic	603 Challenge status quo	703 Team-player	803 Rational
504 Reliability	604 Success driven	704 Compassionate	804 Effective problem-solver
505 Professionalism	605 Continuous improvement	705 Caring	805 Creativity
506 Dedication	606 Ambitious	706 Tactful	806 Decision-maker
507 Focused on task	607 Self management	707 Seeks feedback	807 Deductive reasoning
508 Punctual	608 Achieves goals	708 Courteous	808 Willingness to learn
509 Adaptable	609 Informed risk-taker	709 Persuasive	809 Forward Thinking (to future)
510 Respectful	610 Take the initiative	710 Clearly expresses ideas	
511 Role model for others	611 Inspires others	711 Fosters Collaboration	
	612 Tenacity	712 Likable Personality	
		713 Open to constructive criticism	

Critical Personal Traits Needed By Employers for Current Jobs

The table on the next page shows the percentage of companies which indicated a need for each personal trait for all job levels combined. (Note: breakdowns of critical personal traits by job type and industry grouping are provided later in this report.)

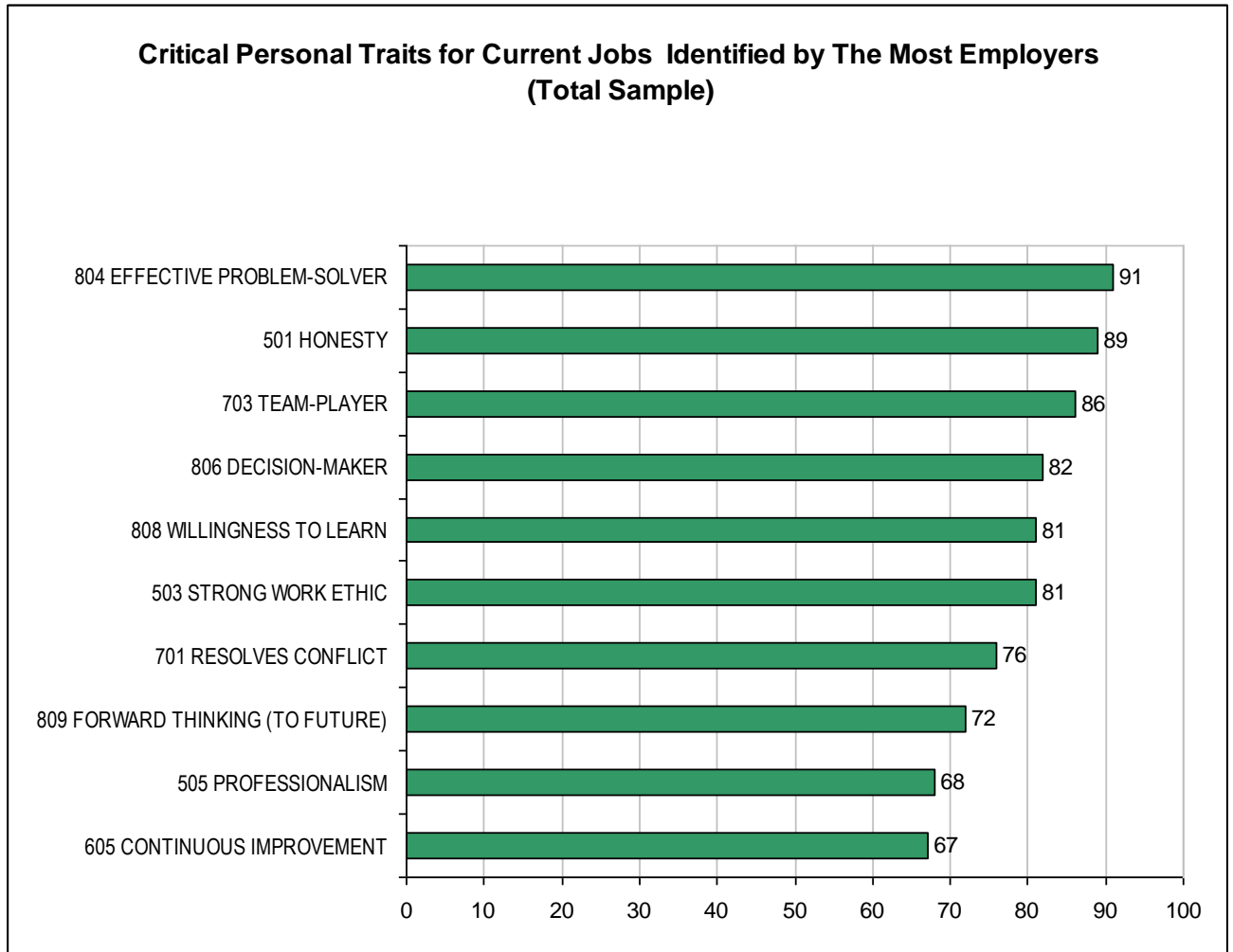
The table is categorized by trait grouping (i.e., Personal Character, Motivation, Social, Intellectual) in descending order within each category.

There is a clear distinction between the personal traits considered most critical and those selected by fewer employers.

Of the 45 personal traits measured, just 15 were identified as critical by 60% or more of the employers. Six traits were selected by 80% or more of the sample. The average percentage response for each trait was approximately 50%.

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample				Business
n=	100	25	10	22	43
	%	%	%	%	%
501 HONESTY	89	76	90	95	93
503 STRONG WORK ETHIC	81	72	90	91	79
505 PROFESSIONALISM	68	72	70	59	70
504 RELIABILITY	64	44	90	68	67
506 DEDICATION	47	36	60	50	49
511 ROLE MODEL FOR OTHERS	42	40	60	36	42
507 FOCUSED ON TASK	37	32	40	36	40
508 PUNCTUAL	31	24	40	27	35
509 ADAPTABLE	25	24	20	27	26
510 RESPECTFUL	23	16	40	14	28
502 METHODOICAL	18	8	30	27	16
605 CONTINUOUS IMPROVEMENT	67	52	90	59	74
611 INSPIRES OTHERS	65	60	90	64	63
601 SELF CONFIDENCE	63	64	70	64	60
608 ACHIEVES GOALS	60	52	80	64	58
607 SELF MANAGEMENT	59	56	80	50	60
610 TAKE THE INITIATIVE	59	60	80	64	51
602 INDUSTRIOUS	53	36	80	64	51
604 SUCCESS DRIVEN	51	40	50	50	58
606 AMBITIOUS	43	24	70	55	42
603 CHALLENGE STATUS QUO	24	8	40	32	26
609 INFORMED RISK-TAKER	22	12	10	23	30
612 TENACITY	22	16	30	18	26
703 TEAM-PLAYER	86	80	100	91	84
701 RESOLVES CONFLICT	76	76	100	73	72
702 COOPERATIVE	62	44	70	77	63
710 CLEARLY EXPRESSES IDEAS	54	56	70	45	53
713 OPEN TO CONSTRUCTIVE CRITICISM	52	40	40	64	56
711 FOSTERS COLLABORATION	42	48	70	27	40
709 PERSUASIVE	40	24	70	27	49
707 SEEKS FEEDBACK	38	12	60	45	44
708 COURTEOUS	38	28	30	55	37
704 COMPASSIONATE	37	32	30	27	47
706 TACTFUL	36	20	50	45	37
705 CARING	30	32	40	18	33
712 LIKABLE PERSONALITY	26	24	10	36	26
804 EFFECTIVE PROBLEM-SOLVER	91	80	100	95	93
806 DECISION-MAKER	82	72	100	82	84
808 WILLINGNESS TO LEARN	81	68	90	86	84
809 FORWARD THINKING (TO FUTURE)	72	60	70	73	79
803 RATIONAL	62	60	100	55	58
807 DEDUCTIVE REASONING	53	32	70	64	56
805 CREATIVITY	46	28	70	36	56
802 INQUIRING	44	36	70	45	42
801 CURIOSITY	29	20	50	23	33

The graph below shows the traits most frequently selected by employers as being critical for employees to possess. Note that there are traits from each category represented in this list. The Motivation category had only one item trait in the top 10.



Deficiencies in Critical Personal Traits Identified By Employers

Employers were asked to consider the job skills that they deemed critical for each job category and were then asked to indicate those skills that they observed lacking or deficient in employees and candidates for employment. The interviewers reviewed these one by one with the employers on a skill-specific basis:

"Now let's review your answers to the questions about the personal traits needed for your employees. You said that the important traits in the (Traits Category Name) personal traits category for (Job Group) are (READ ITEMS CHECKED). Do you find that any of those traits are typically deficient or under-developed when hiring or evaluating employees in the (Job Group)? (If Yes) Which ones?"

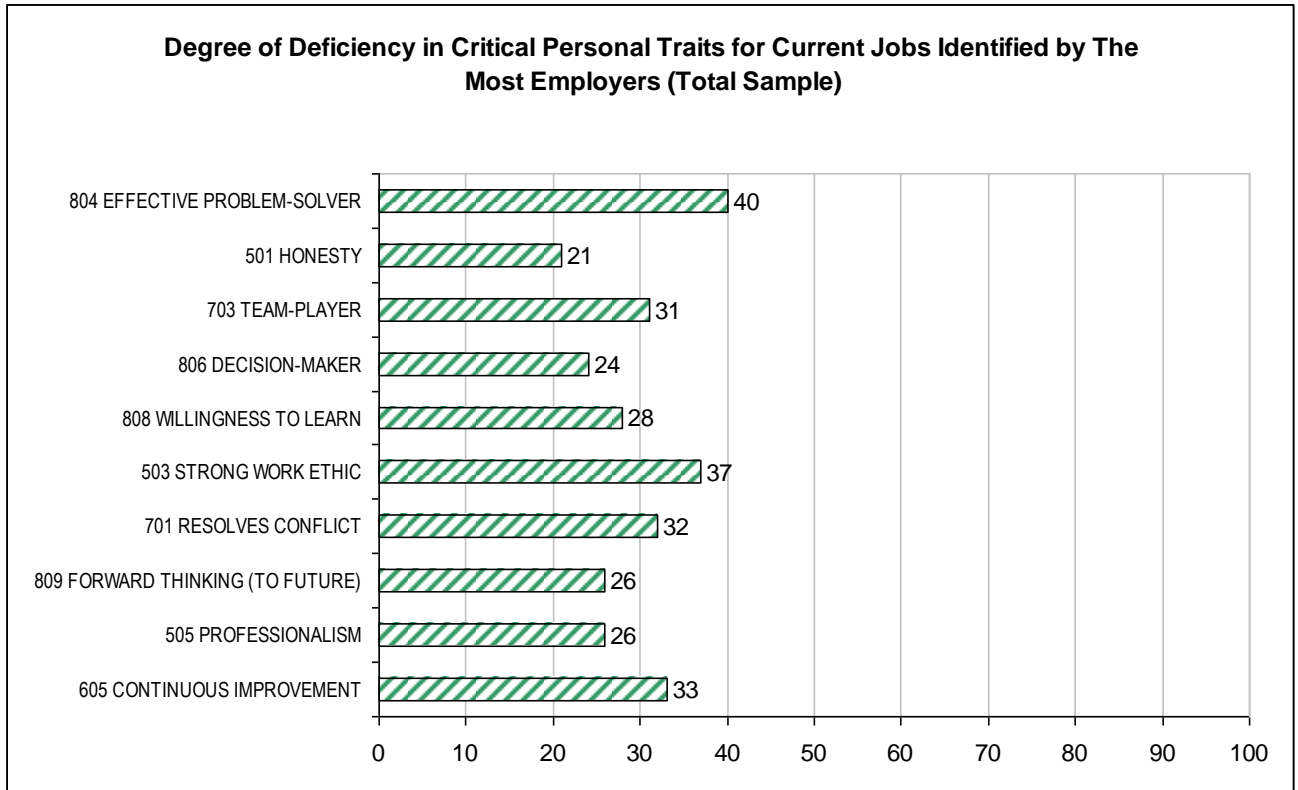
The table on the next page shows the percentage of respondents who A) needed a particular traits and B) indicated that the trait was deficient in employees or candidates.

As with the job skills data presented earlier in this report, these data are not weighted in any way. For example, the data for the 809 Curiosity trait shows that 14% of employers said this was a deficiency. Since just 26% of employers said this trait was critical, the actual proportion of employers for whom this trait is a deficiency is far less than 14%.

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants	Employer Type				
	Total	Healthcare	Mining	Construction	General Business
	Sample				
(Base: Employers Needing Each Traits)	n= 100	25	10	22	43
	%	%	%	%	%
508 PUNCTUAL	52	33	75	33	60
507 FOCUSED ON TASK	41	38	50	50	35
504 RELIABILITY	38	27	33	40	41
503 STRONG WORK ETHIC	37	72	11	30	29
509 ADAPTABLE	32	33	-	33	36
502 METHODICAL	28	50	33	-	43
505 PROFESSIONALISM	26	17	57	31	23
511 ROLE MODEL FOR OTHERS	26	10	67	13	28
510 RESPECTFUL	26	-	75	-	25
506 DEDICATION	26	11	50	27	24
501 HONESTY	21	11	22	24	25
610 TAKE THE INITIATIVE	44	53	38	29	50
608 ACHIEVES GOALS	35	31	50	29	36
611 INSPIRES OTHERS	34	40	33	29	33
605 CONTINUOUS IMPROVEMENT	33	23	56	46	25
612 TENACITY	32	75	33	25	18
606 AMBITIOUS	30	33	43	33	22
603 CHALLENGE STATUS QUO	29	-	50	14	36
602 INDUSTRIOUS	28	44	25	21	27
609 INFORMED RISK-TAKER	27	-	100	-	38
604 SUCCESS DRIVEN	25	20	20	18	32
607 SELF MANAGEMENT	25	21	38	27	23
601 SELF CONFIDENCE	19	13	29	21	19
713 OPEN TO CONSTRUCTIVE CRITICISM	50	50	50	43	54
706 TACTFUL	33	40	60	-	44
710 CLEARLY EXPRESSES IDEAS	33	14	57	40	35
701 RESOLVES CONFLICT	32	16	40	25	42
703 TEAM-PLAYER	31	25	10	35	39
712 LIKABLE PERSONALITY	31	50	100	13	27
711 FOSTERS COLLABORATION	29	33	14	33	29
707 SEEKS FEEDBACK	26	67	50	-	26
709 PERSUASIVE	25	-	43	17	29
708 COURTEOUS	21	14	-	8	38
702 COOPERATIVE	19	18	29	12	22
704 COMPASSIONATE	19	50	33	-	10
705 CARING	17	13	25	-	21
804 EFFECTIVE PROBLEM-SOLVER	40	45	50	33	38
807 DEDUCTIVE REASONING	30	38	-	29	38
808 WILLINGNESS TO LEARN	28	35	33	26	25
805 CREATIVITY	28	43	14	13	33
809 FORWARD THINKING (TO FUTURE)	26	28	30	28	22
806 DECISION-MAKER	24	28	30	28	19
803 RATIONAL	19	27	30	8	16
801 CURIOSITY	14	20	-	-	21
802 INQUIRING	14	22	14	-	17

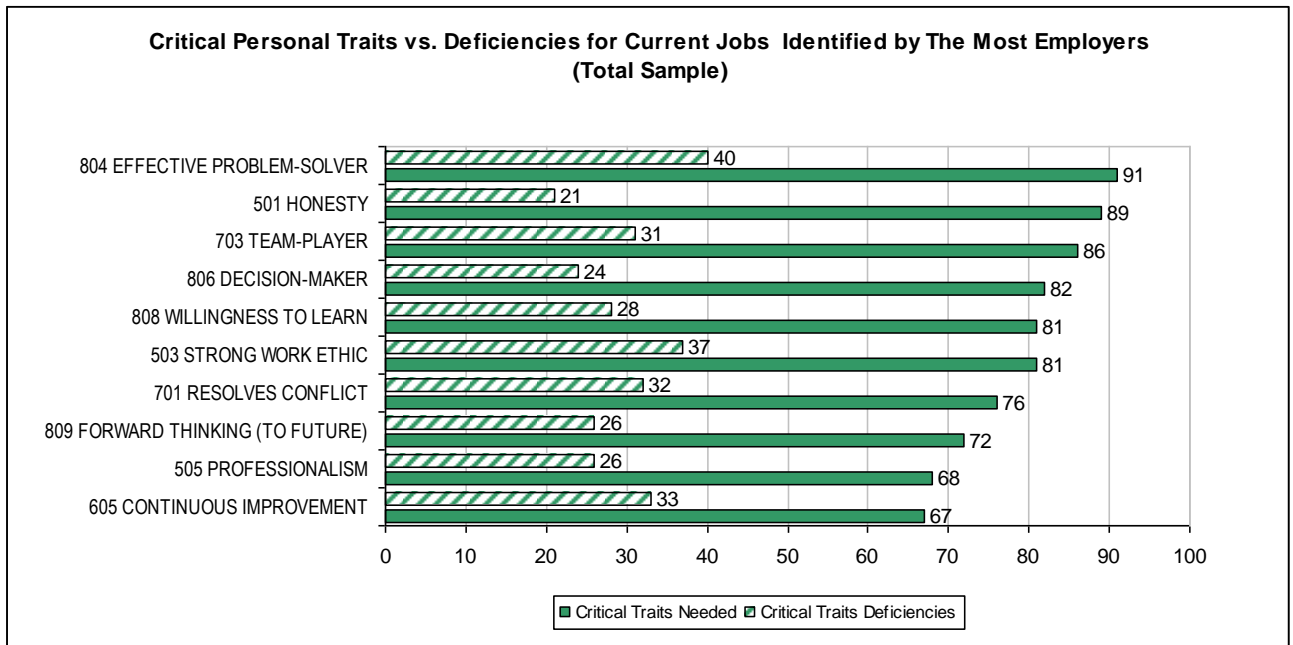
The traits that were identified most frequently by employers as being critical were also identified on average by 30% of those employers as being a deficiency in employees and applicants.

The traits 804 Effective Problem-solver and 503 Strong Work Ethic were mentioned most frequently, at 40% and 37% respectively.



The chart below displays the most critical personal traits and the percentage of employers who claimed they had deficiencies in those traits among employees and applicants.

As shown, at least one in five employers observed problems in these areas. Of those who said 804 Effective Problem-solver was a critical trait, 44% also said that their employee base had deficiencies in this area.



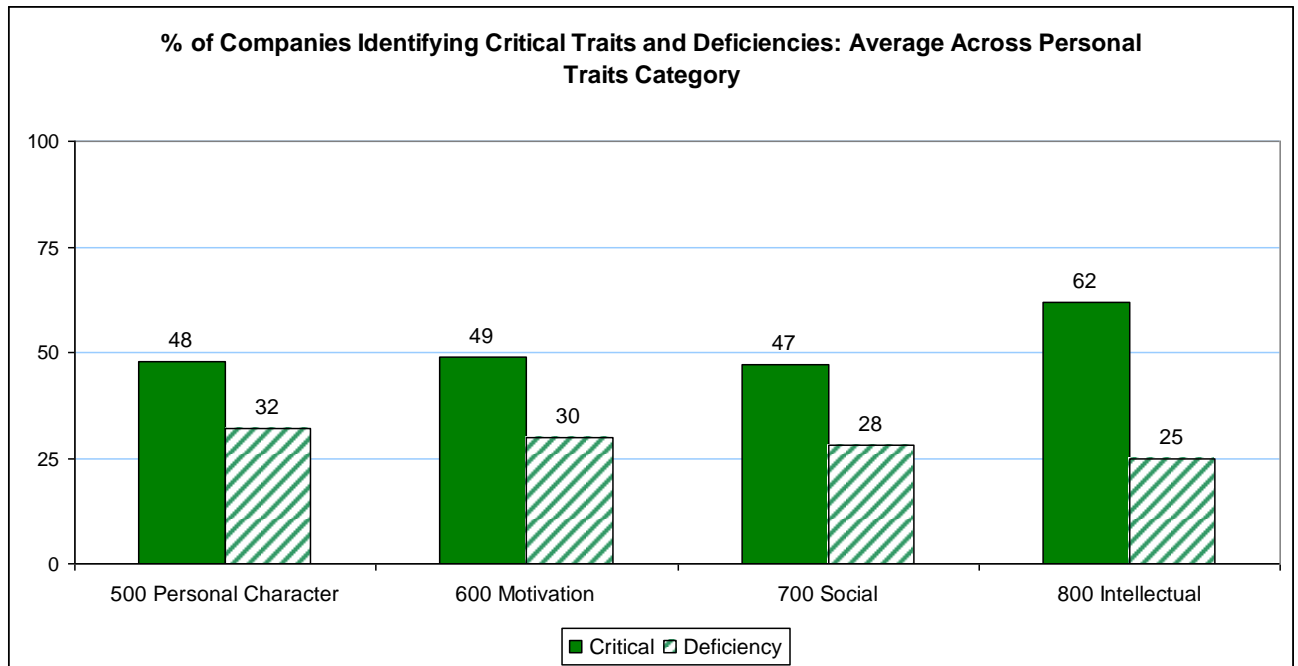
Critical Personal Traits and Deficiencies Across Traits Categories

The average responses for the classification of personal traits as being critical and the incidence of deficiency were calculated across the four personal traits categories. The results are shown in the chart below.

Traits in the 800 Intellectual category were generally rated as critical more frequently than those traits in the other categories, at an average of 62%.

Skills in the other three groups were each rated on average as critical by just under 50% of the employers.

The frequency with which employers identified deficiencies in traits was slightly higher for the 500 Personal Character and 600 Motivation categories versus the other two groupings.



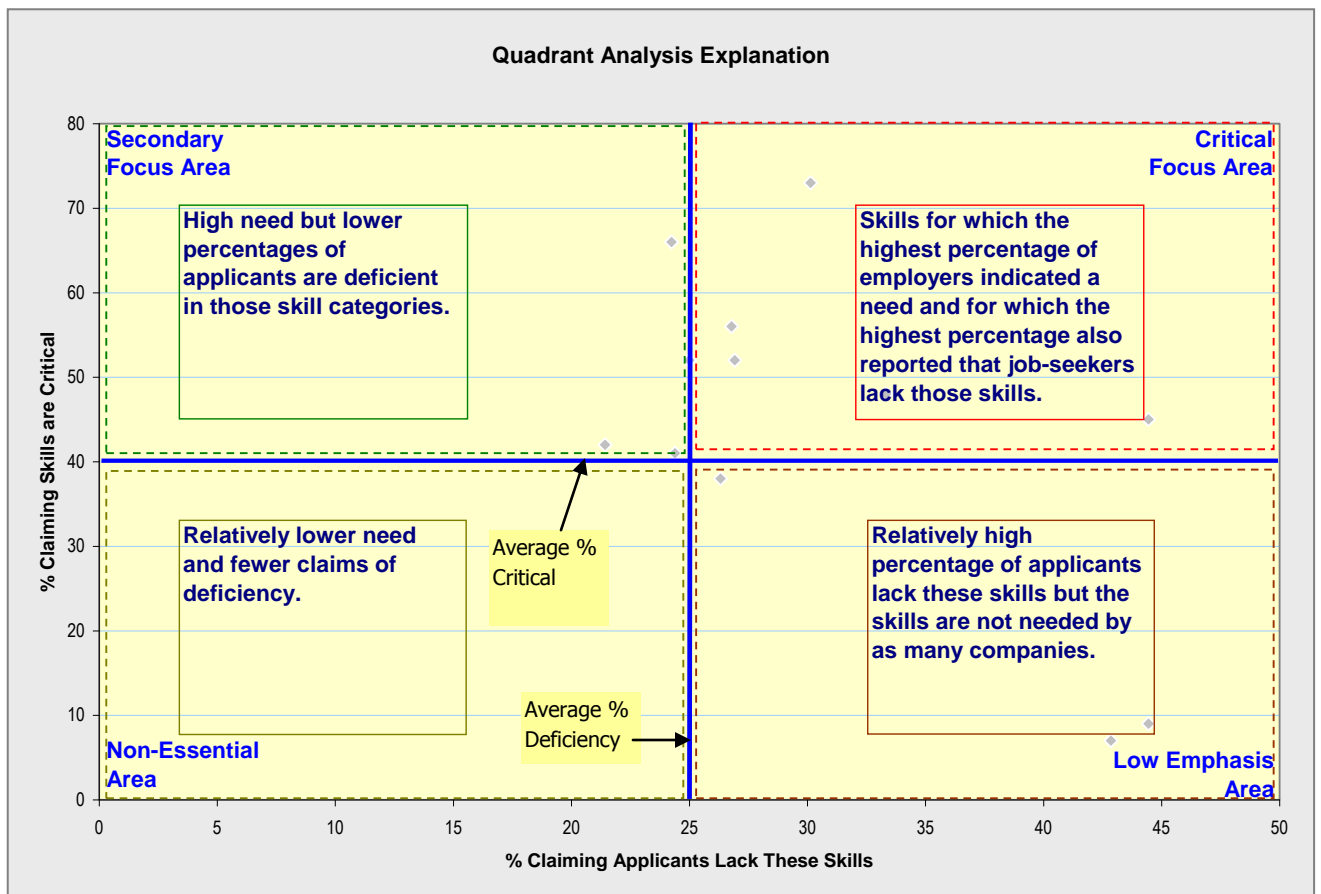
Quadrant Analysis: Skills and Traits Needs and Deficiencies

Introduction

The skill and personal traits data were further analyzed to help EKCEP identify those areas in which resources can best be utilized. The primary tool used in this analysis is the Quadrant Analysis.

A Quadrant Analysis shows the relationship between needs and deficiencies. Four areas of focus are:

Critical Focus	The skills for which the highest percentage of employers indicated a need and for which the highest percentage also reported that job-seekers lack those skills.
Secondary Focus	High need but lower percentages of applicants are deficient in those skill categories.
Low Emphasis	Relatively high percentage of applicants lacks these skills but the skills are not needed by as many companies.
Non-essential	Relatively lower need and fewer claims of deficiency.



In the graphical presentation, the vertical blue line represents the mean frequency of skills and traits being identified as deficient by the respondents. Because the values fluctuate by category and by employee group being analyzed, this line will “shift” left to right in each chart.

The horizontal blue line represents the mean frequency of skills and traits being identified as critical deficient by the employers. This line will move left to right in each chart to reflect changing means for each category and employee group.

The standard range used in the charts for the vertical axis is zero to 80%, and the standard range for the horizontal axis is zero to 60%. The upper end of each range may shift depending on the values being analyzed for a particular employee group.

On the pages that follow, quadrant analyses are presented for the total sample and for all line workers across all industries in the study. The Appendix includes quadrant analyses for each job category and for each industry.

Quadrant Analysis: Total Sample, All Job Types Combined

A quadrant analysis for the total sample was performed on the data. Eight analysis graphs (one for each of the four job skill categories and one for each of the personal traits categories) were produced and these are shown on the next four pages.

A review of the data suggests the following:

In each category, there are clearly defined areas in which EKCEP can work with client organizations and end users to provide training and improvement.

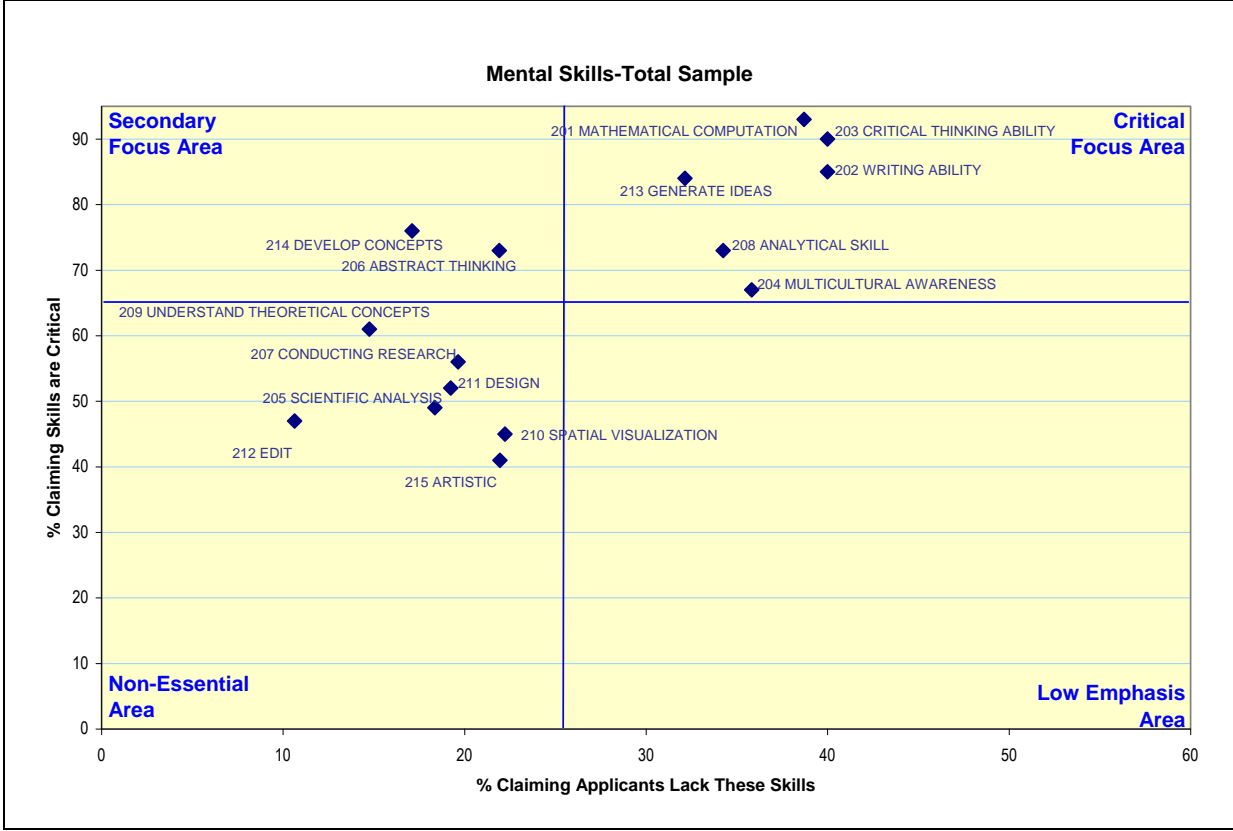
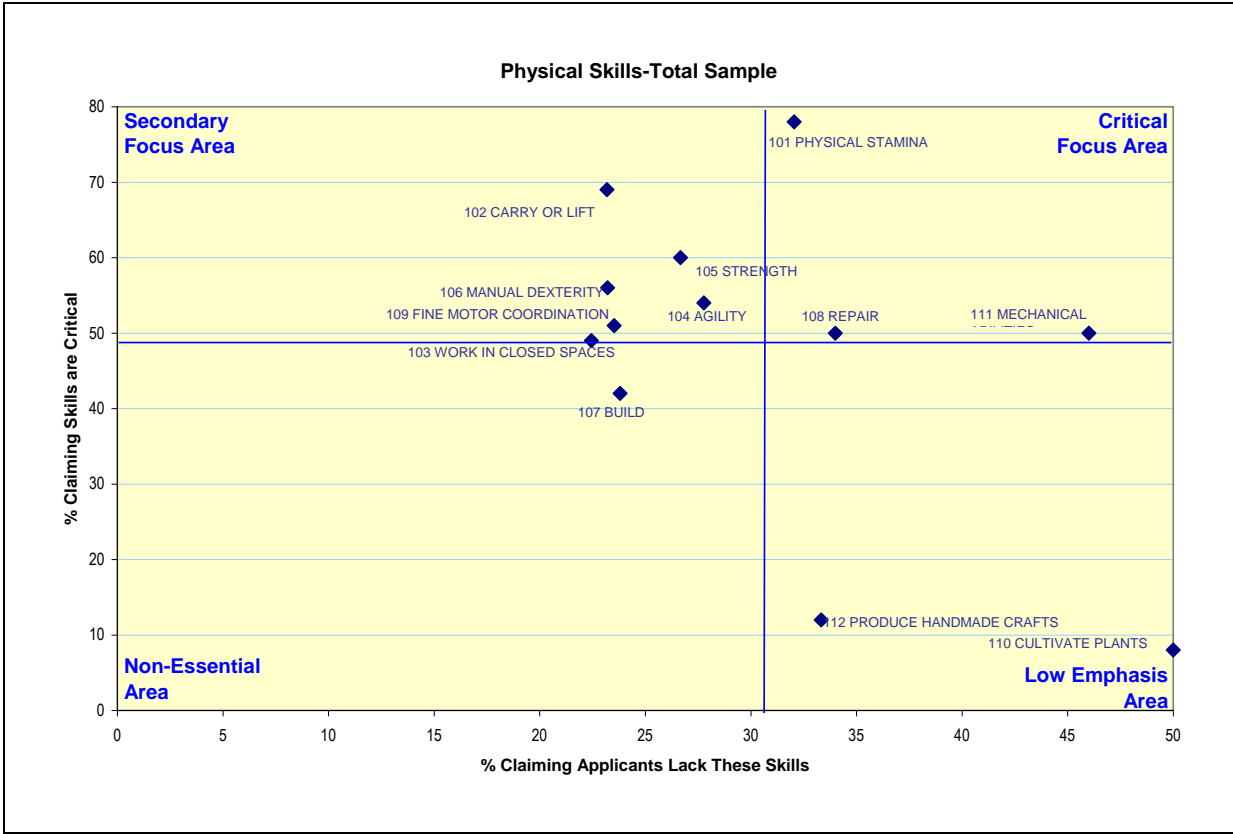
The Traditional Skills and Social Skills areas each had relatively high frequency of criticality for the individual job skills. The quadrant analysis helps to identify those needing a high degree focus.

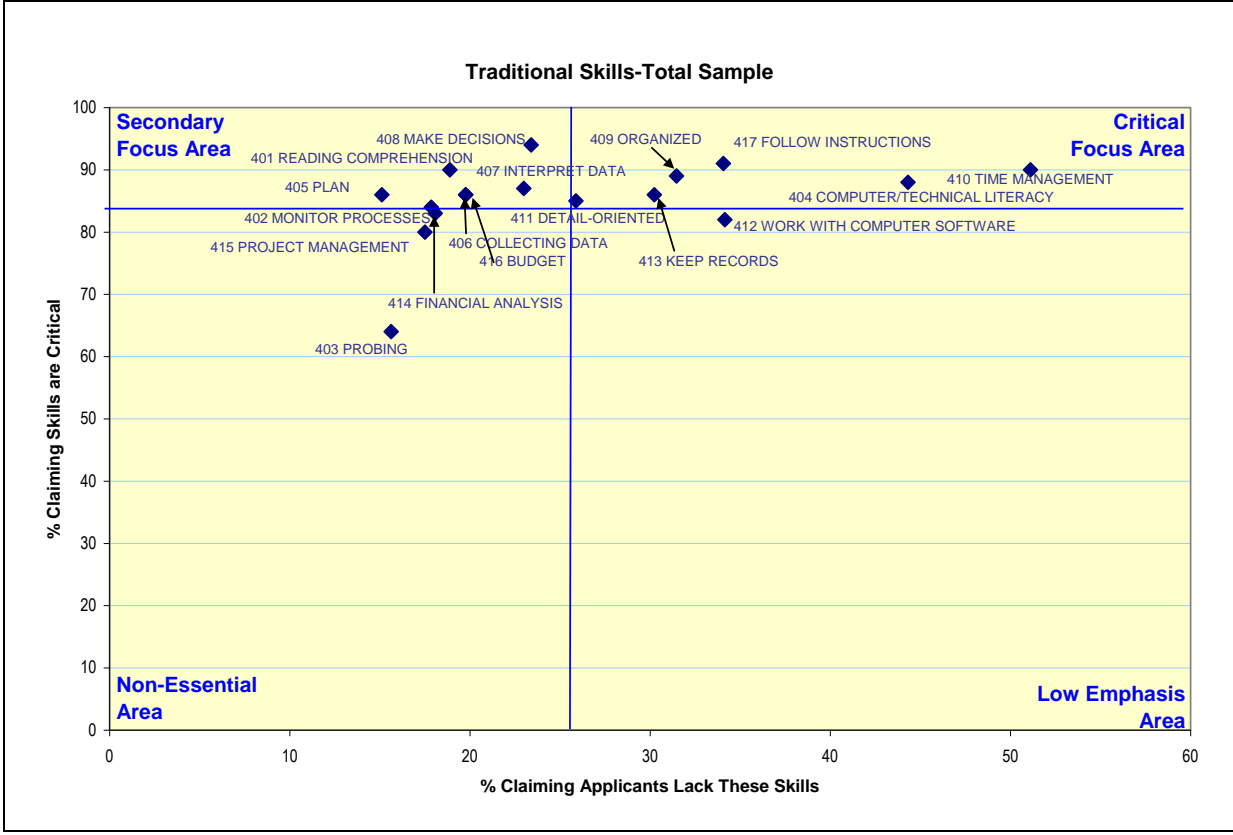
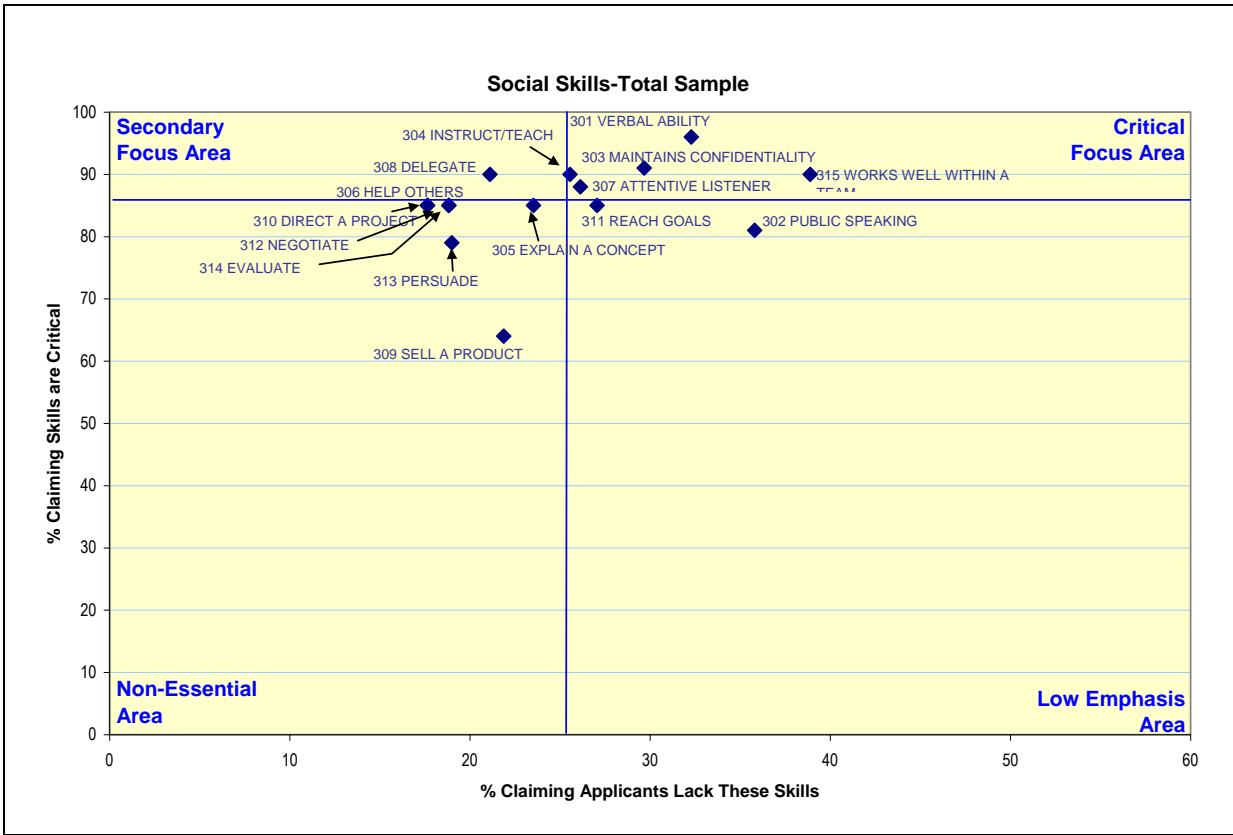
The data show that the following job skill areas are in need of attention among employees at all levels:

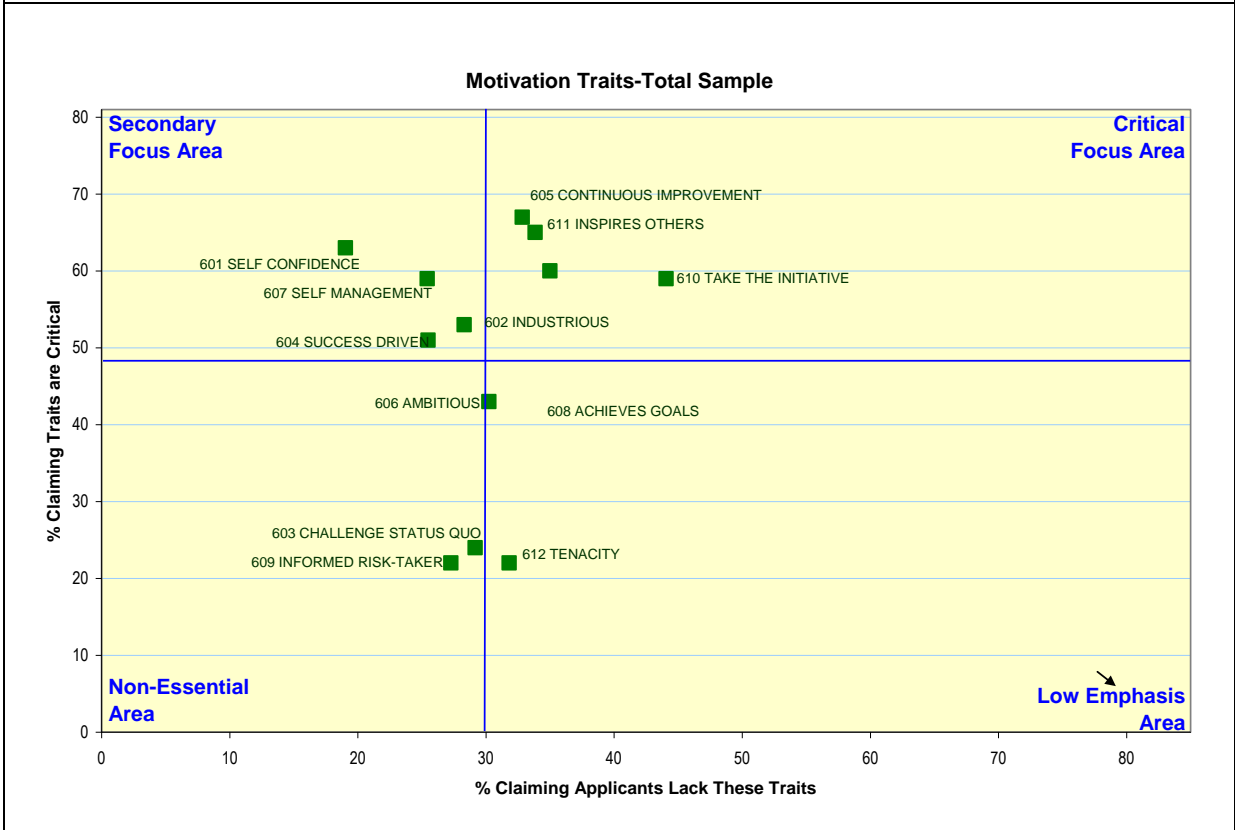
- Physical stamina
- Repair and mechanical skills
- Mathematical skills
- Analytical, critical thinking, and ideation skills
- Multicultural awareness
- Teamwork
- Listening and verbal skills
- Maintaining confidentiality
- Following instructions
- Organization and time management
- Detail focus and record keeping
- Computer skills

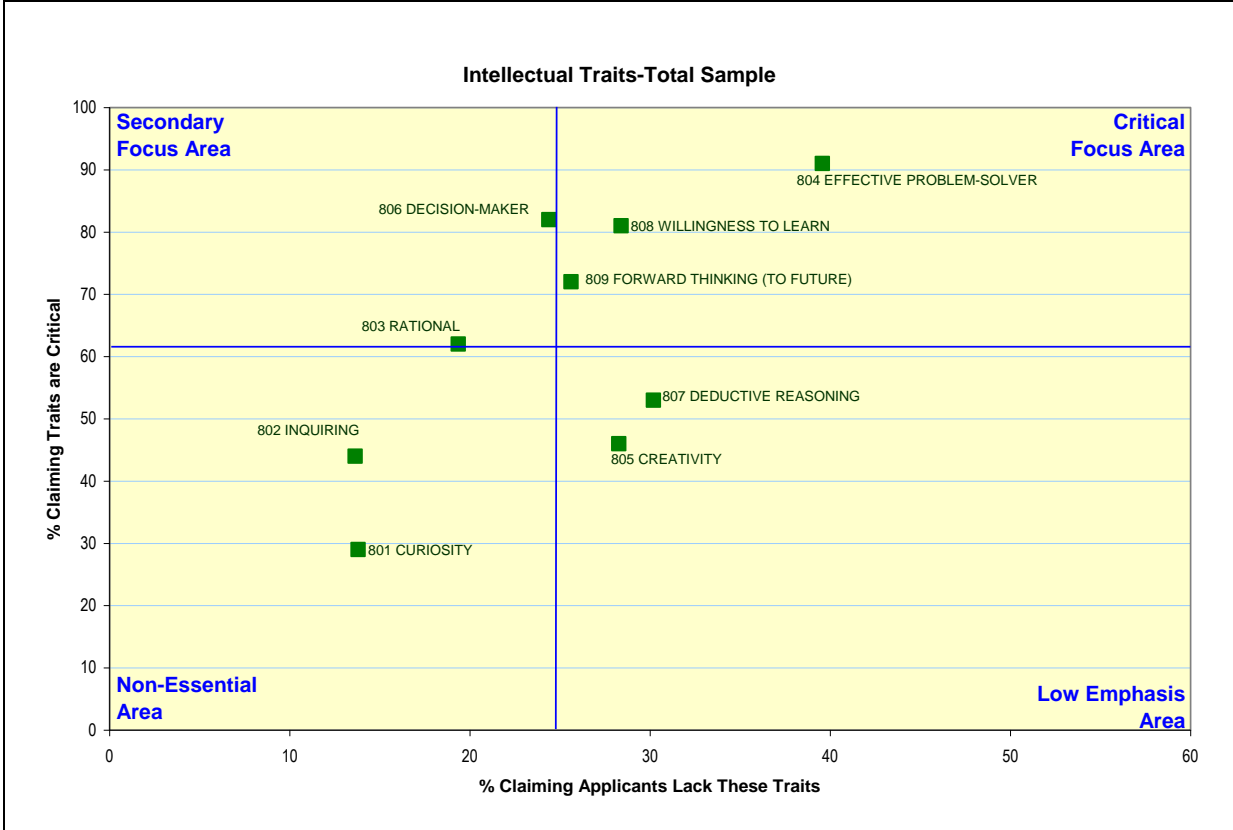
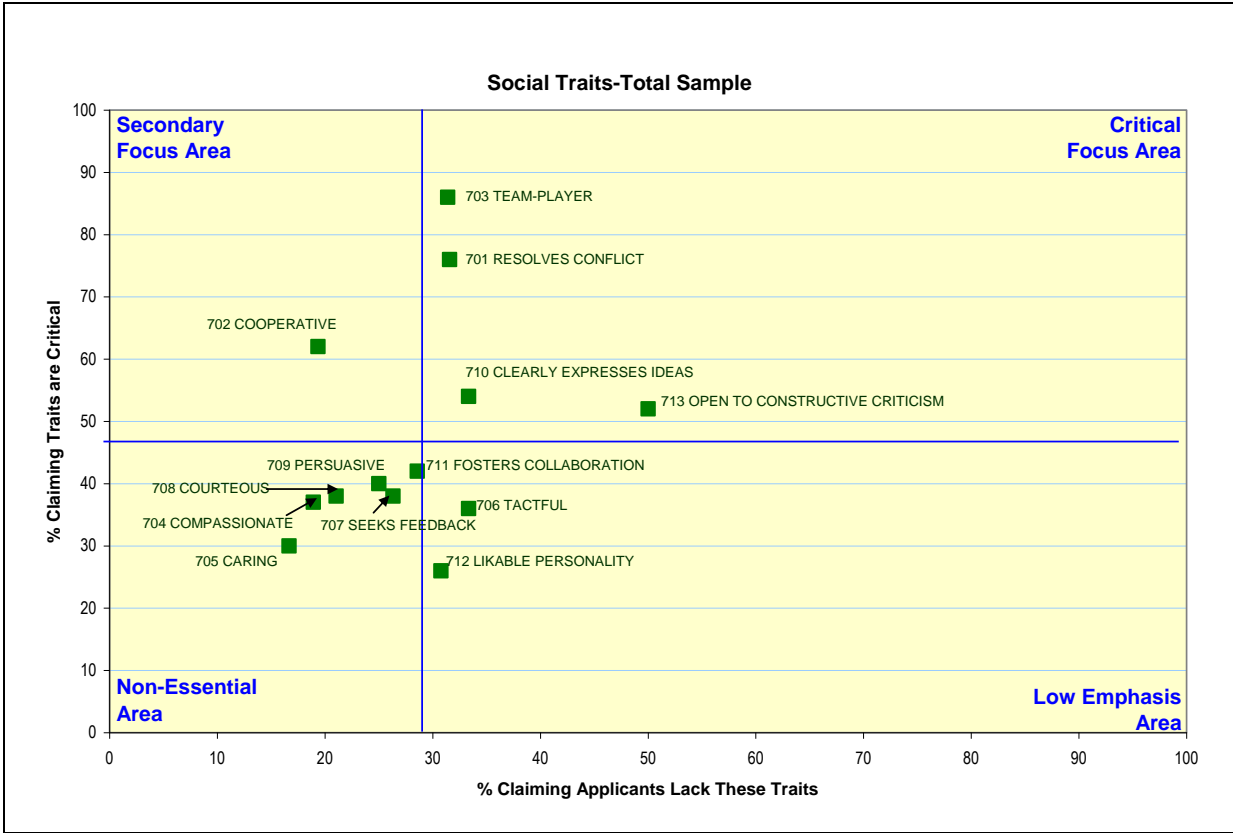
The data indicate that the following personal traits areas are in need of attention among employees at all levels:

- Work ethic
- Reliability
- Continuous improvement
- Inspiring others
- Industriousness and achieving goals
- Being a team player
- Being open to constructive criticism
- Clearly expressing ideas
- Being an effective problem solver
- Willingness to learn
- Forward thinking











Quadrant Analysis: Associates/Line Workers, Total Sample

As indicated earlier, Associates/Line Workers represent approximately 85% of the employees in Eastern Kentucky. Therefore, it is important to evaluate the job skills and personal traits needed for this part of the workforce. The quadrant analysis for this employee constituency, across all industries, is shown on the following four pages.

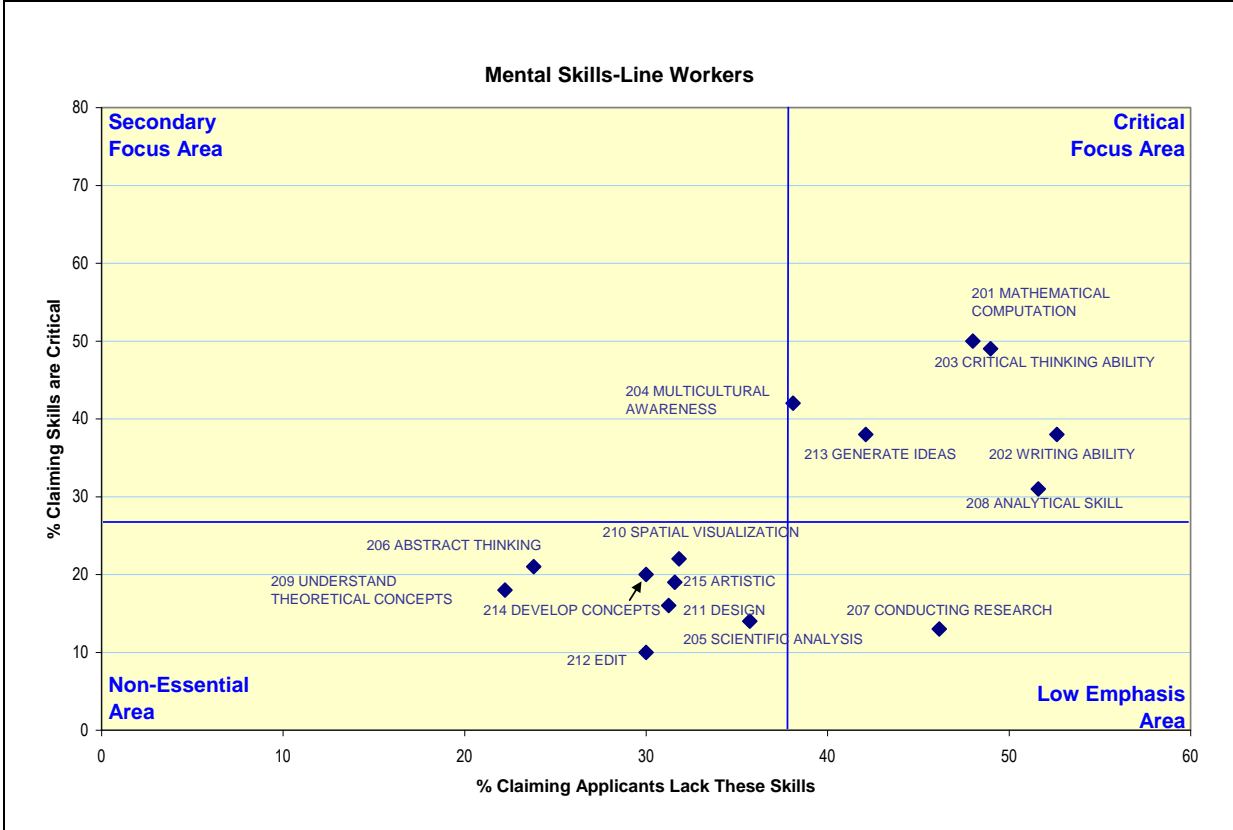
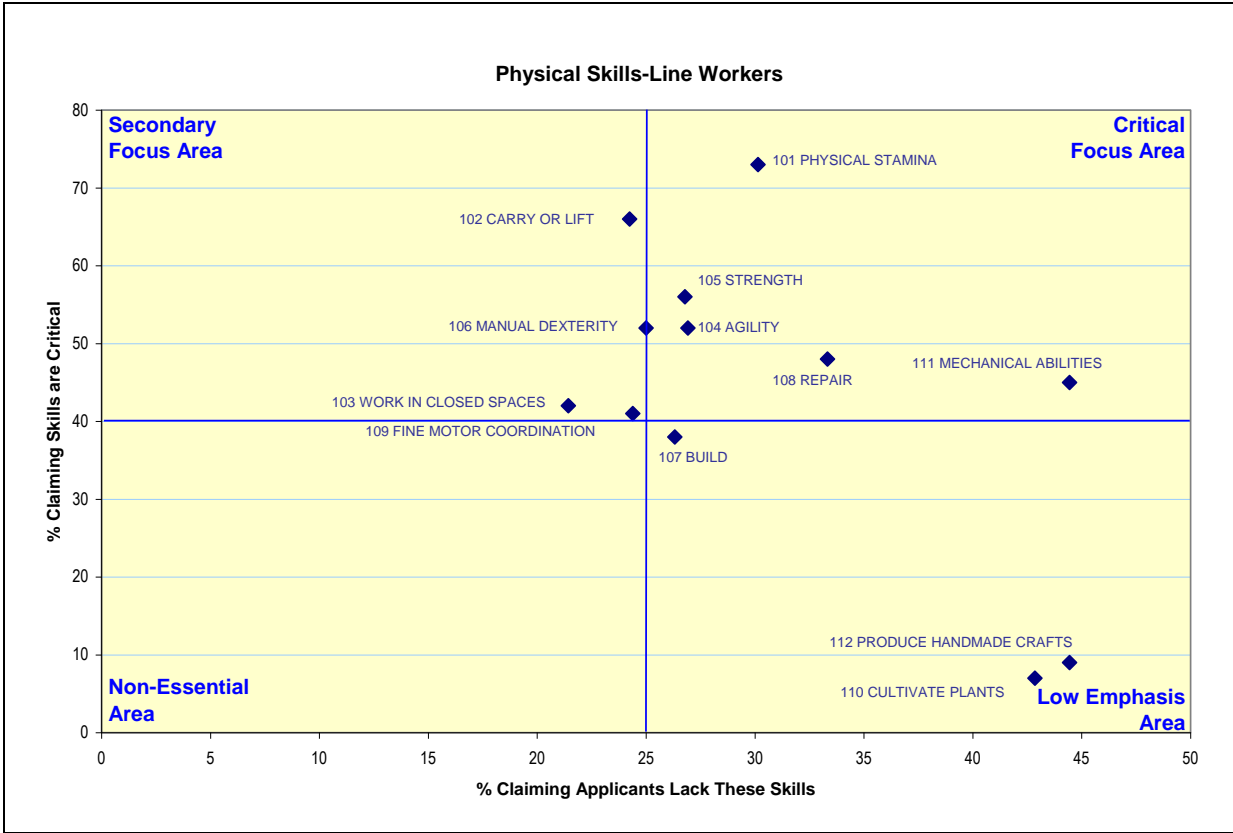
The data show that the following job skill areas are in need of attention:

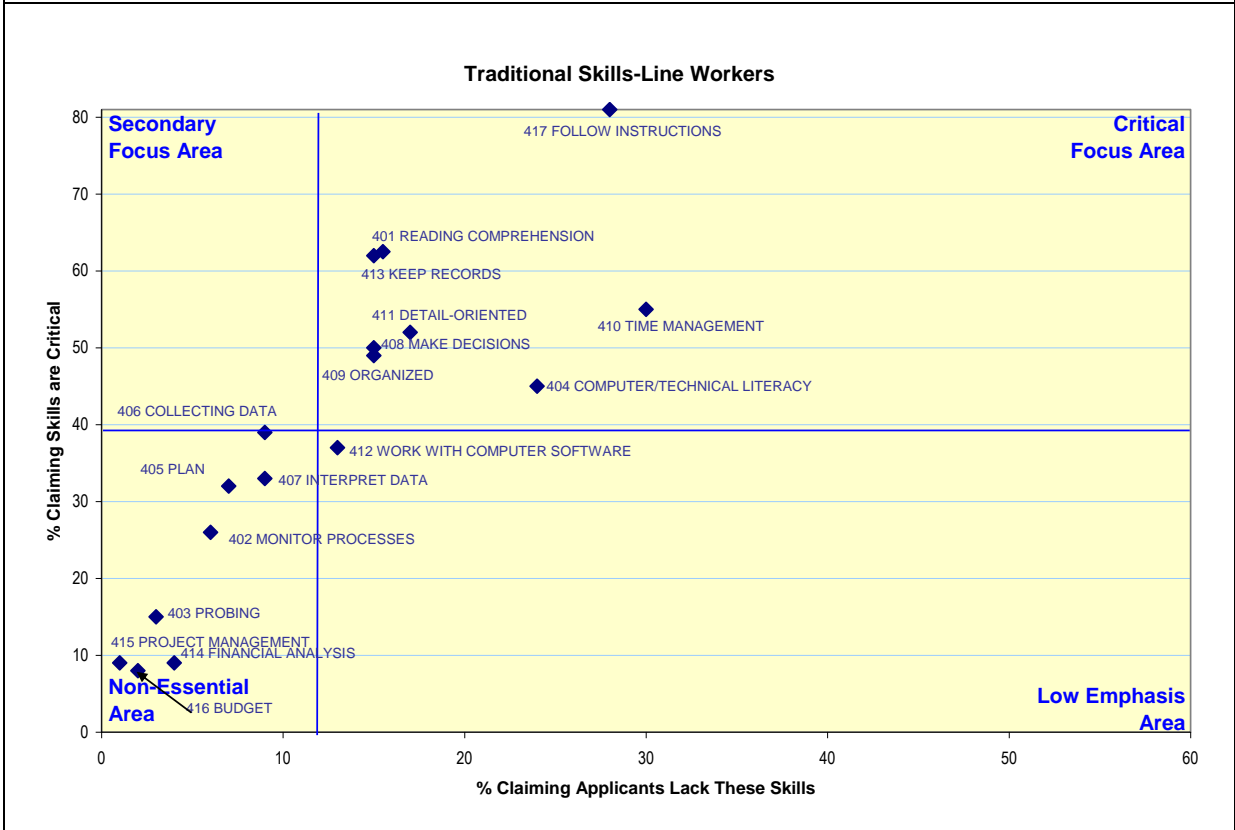
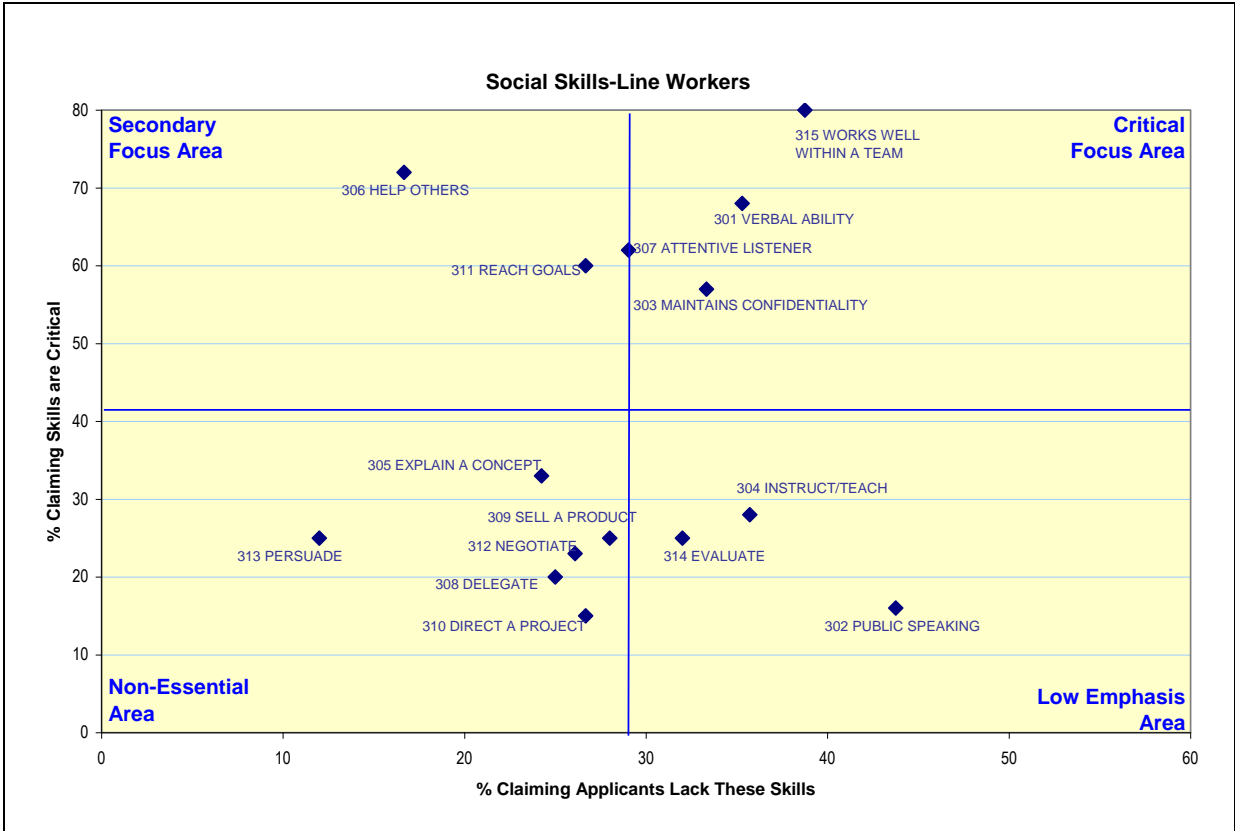
- Skills requiring strength and fitness, such as stamina, strength, and agility
- Repair and mechanical skills
- Mathematical skills
- Analytical, critical thinking, and ideation skills
- Teamwork
- Listening and verbal skills
- Following instructions
- Organization and time management
- Detail focus and record keeping
- Reading comprehension

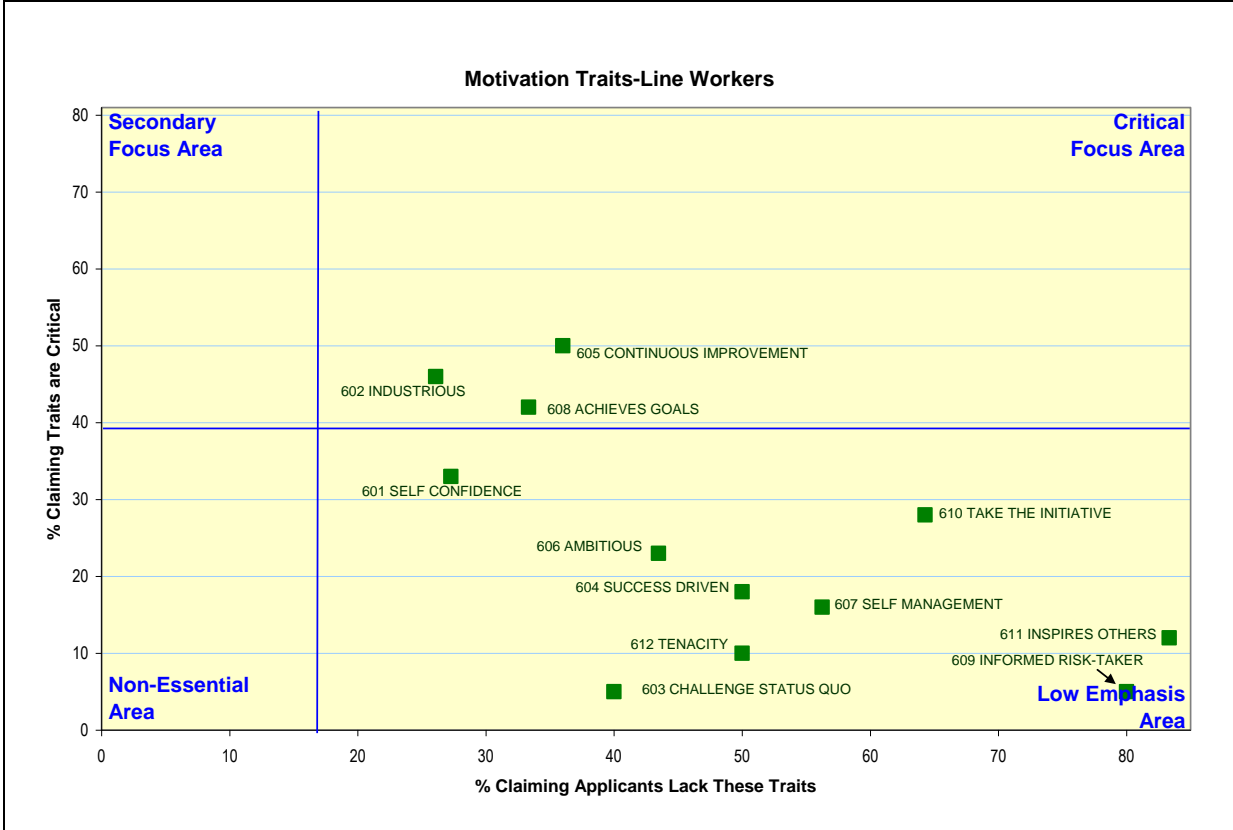
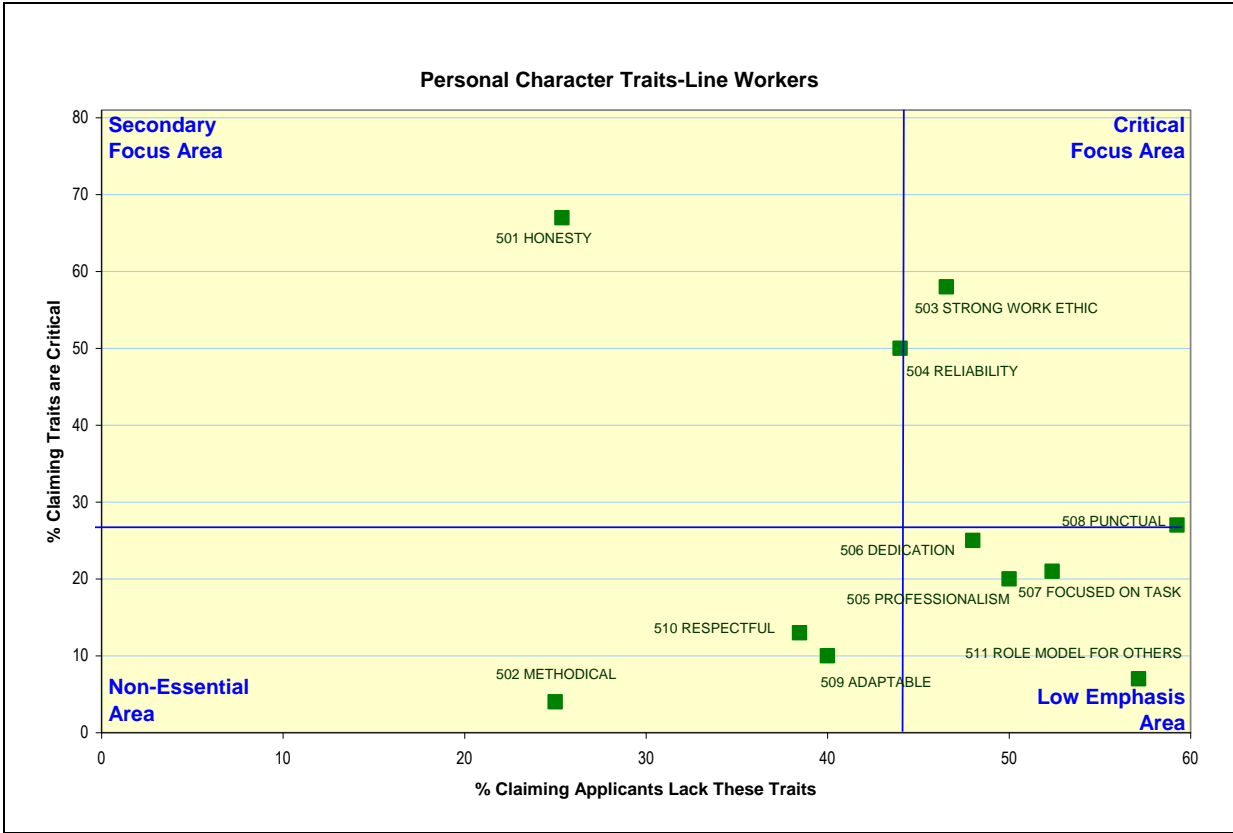
- Computer skills

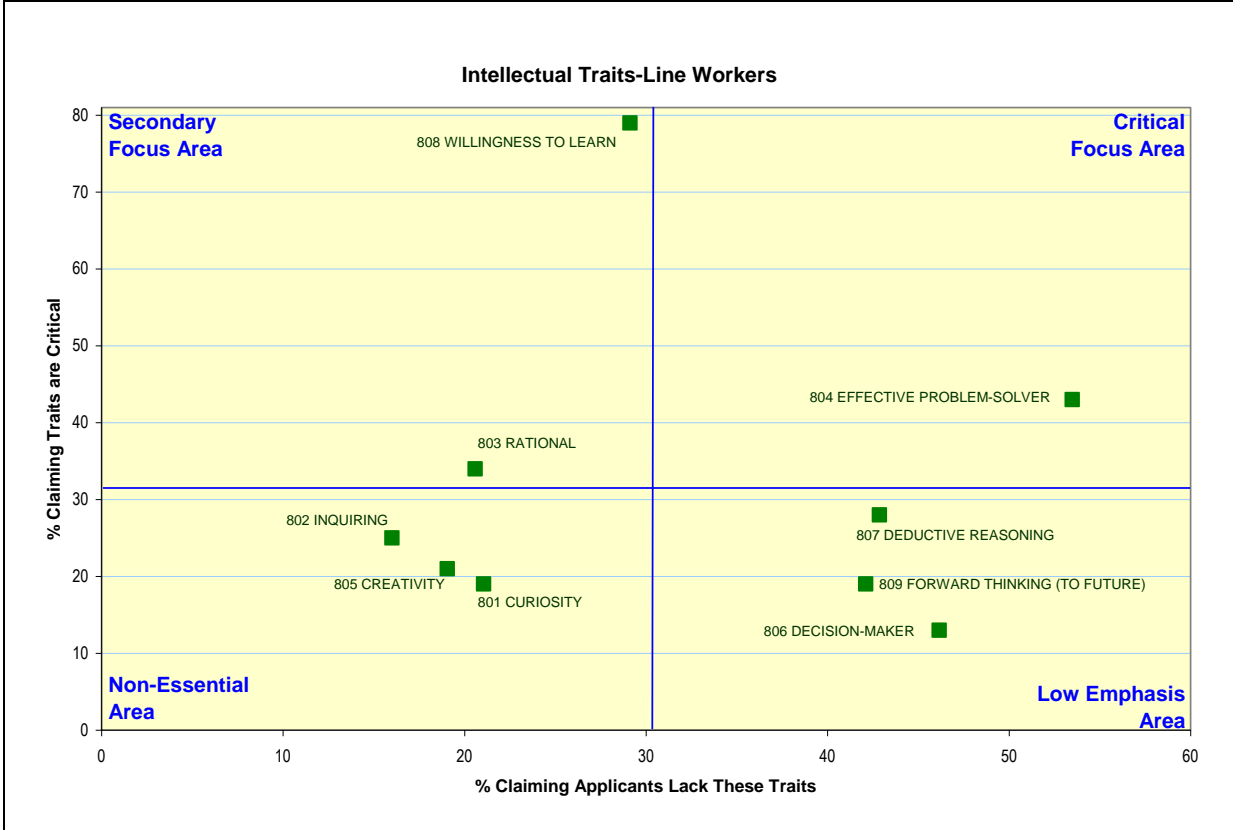
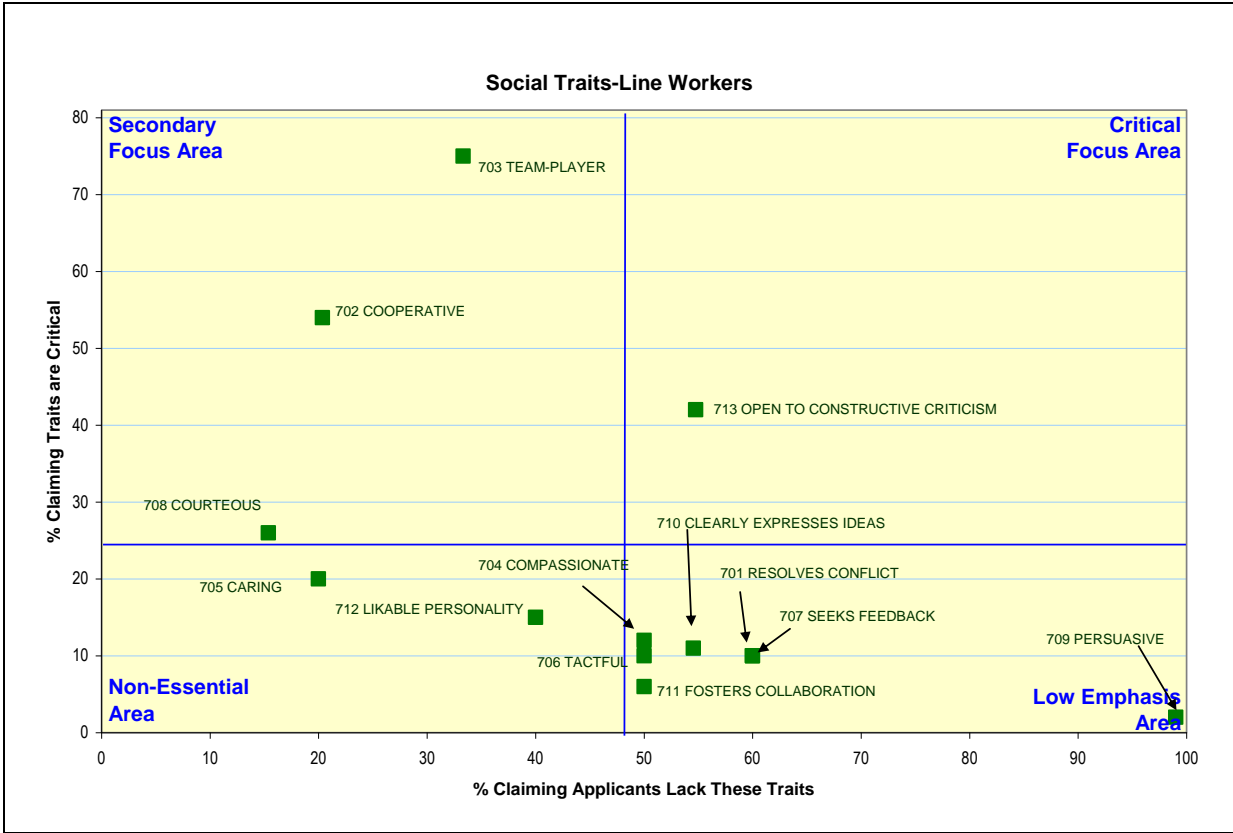
The data indicate that the following personal traits areas are in need of attention:

- Work ethic
- Continuous improvement
- Industriousness and achieving goals
- Being open to constructive criticism
- Being an effective problem solver









Summary of Job Skills and Personal Traits Needed for Current Jobs: Healthcare Sector

Introduction

In this section of the report, the responses for employers in the healthcare sector are summarized:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

Critical Job Skills Needed for Current Healthcare Employees

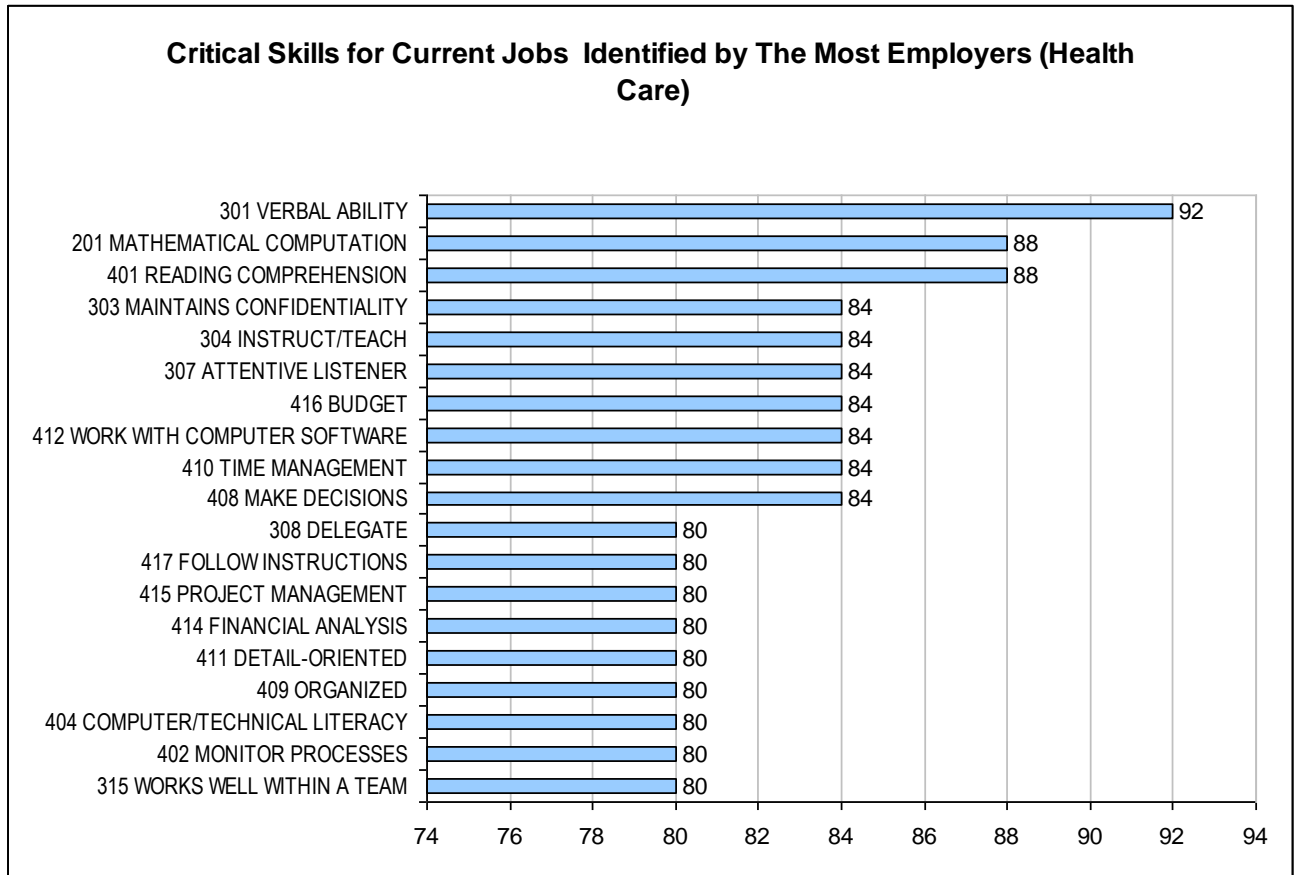
The table to the right shows the percentage of employers which identified each job skill as being critical.

On average, the skills in the Social and Traditional skills categories were much more important and a minimum emphasis was placed on items in the Physical skills category.

The 301 Verbal Ability was identified by 92% of the employers and was the only skill indicated by over 90%.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	Healthcare
	n= 25
	%
101 PHYSICAL STAMINA	68
106 MANUAL DEXTERITY	56
102 CARRY OR LIFT	52
104 AGILITY	48
105 STRENGTH	44
109 FINE MOTOR COORDINATION	44
103 WORK IN CLOSED SPACES	36
108 REPAIR	20
111 MECHANICAL ABILITIES	20
107 BUILD	12
112 PRODUCE HANDMADE CRAFTS	8
110 CULTIVATE PLANTS	0
201 MATHEMATICAL COMPUTATION	88
203 CRITICAL THINKING ABILITY	80
202 WRITING ABILITY	76
213 GENERATE IDEAS	72
206 ABSTRACT THINKING	72
214 DEVELOP CONCEPTS	68
208 ANALYTICAL SKILL	68
204 MULTICULTURAL AWARENESS	68
209 UNDERSTAND THEORETICAL CONCEPTS	64
205 SCIENTIFIC ANALYSIS	60
207 CONDUCTING RESEARCH	52
211 DESIGN	44
212 EDIT	40
210 SPATIAL VISUALIZATION	40
215 ARTISTIC	32
301 VERBAL ABILITY	92
303 MAINTAINS CONFIDENTIALITY	84
304 INSTRUCT/TEACH	84
307 ATTENTIVE LISTENER	84
308 DELEGATE	80
315 WORKS WELL WITHIN A TEAM	80
305 EXPLAIN A CONCEPT	80
302 PUBLIC SPEAKING	80
306 HELP OTHERS	76
310 DIRECT A PROJECT	76
311 REACH GOALS	76
312 NEGOTIATE	76
314 EVALUATE	76
313 PERSUADE	64
309 SELL A PRODUCT	48
401 READING COMPREHENSION	88
408 MAKE DECISIONS	84
410 TIME MANAGEMENT	84
416 BUDGET	84
412 WORK WITH COMPUTER SOFTWARE	84
417 FOLLOW INSTRUCTIONS	80
409 ORGANIZED	80
404 COMPUTER/TECHNICAL LITERACY	80
411 DETAIL-ORIENTED	80
414 FINANCIAL ANALYSIS	80
402 MONITOR PROCESSES	80
415 PROJECT MANAGEMENT	80
407 INTERPRET DATA	76
405 PLAN	76
406 COLLECTING DATA	76
413 KEEP RECORDS	76
403 PROBING	64

The job skills most frequently indicated as being critical are shown in the chart below. As indicated earlier, the skills most critical to healthcare employers tended to be in the Social and Traditional skills categories.



Deficiencies in Job Skills Identified in Healthcare Employees

The table to the right shows the percentage of healthcare employers who indicated that they observed deficiencies in each job skill among employees and applicants.

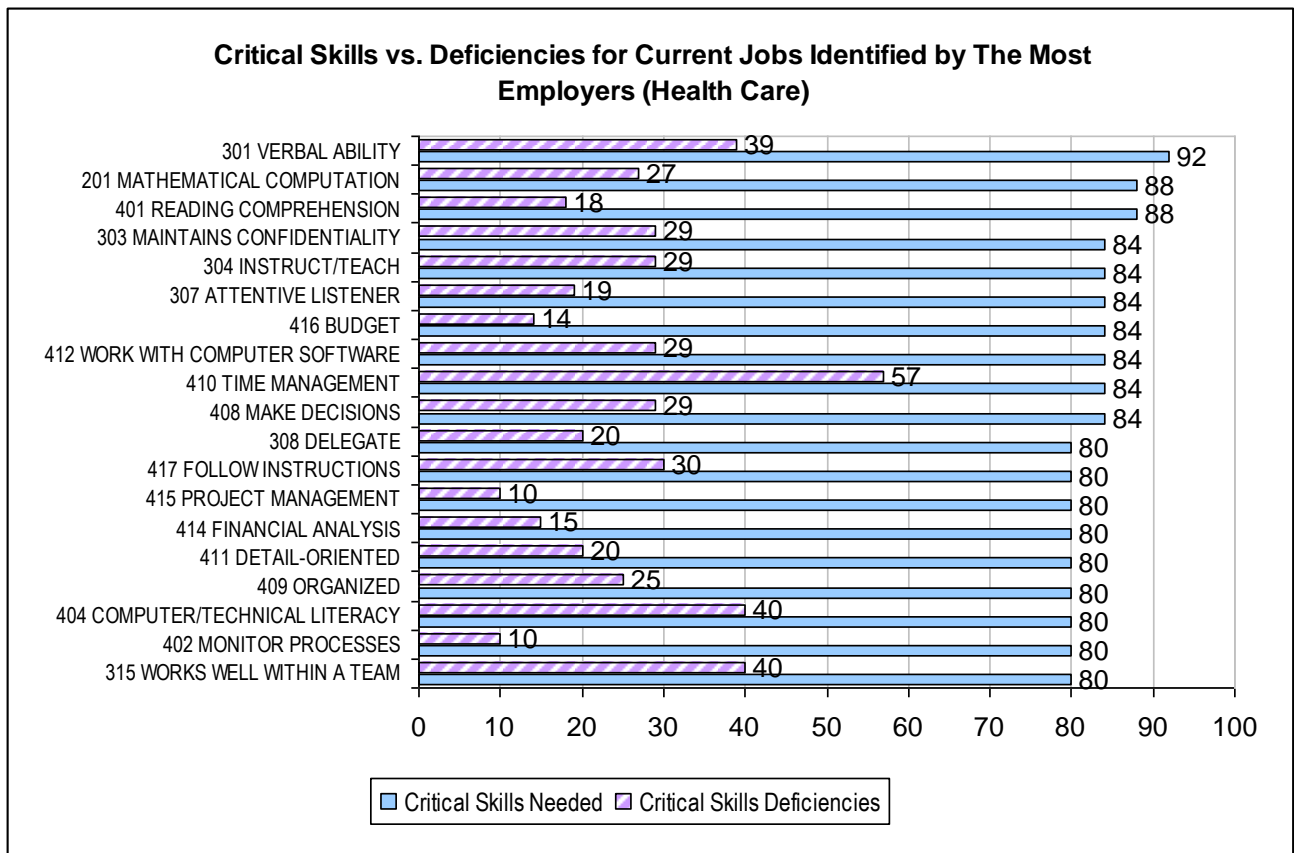
As indicated, a fairly broad range of values are represented among the various job skills measured.

Two job skills were identified by more than 50% of the healthcare employers as being deficient:

- 410 Time Management
- 107 Build

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	Healthcare n= 25 %
107 BUILD	67
111 MECHANICAL ABILITIES	40
108 REPAIR	40
104 AGILITY	33
109 FINE MOTOR COORDINATION	27
103 WORK IN CLOSED SPACES	22
105 STRENGTH	18
101 PHYSICAL STAMINA	18
102 CARRY OR LIFT	15
106 MANUAL DEXTERITY	14
112 PRODUCE HANDMADE CRAFTS	0
110 CULTIVATE PLANTS	0
202 WRITING ABILITY	42
204 MULTICULTURAL AWARENESS	41
208 ANALYTICAL SKILL	41
203 CRITICAL THINKING ABILITY	40
201 MATHEMATICAL COMPUTATION	27
215 ARTISTIC	25
213 GENERATE IDEAS	22
205 SCIENTIFIC ANALYSIS	20
211 DESIGN	18
209 UNDERSTAND THEORETICAL CONCEPTS	13
206 ABSTRACT THINKING	11
210 SPATIAL VISUALIZATION	10
207 CONDUCTING RESEARCH	8
214 DEVELOP CONCEPTS	0
212 EDIT	0
315 WORKS WELL WITHIN A TEAM	40
302 PUBLIC SPEAKING	40
301 VERBAL ABILITY	39
312 NEGOTIATE	32
303 MAINTAINS CONFIDENTIALITY	29
304 INSTRUCT/TEACH	29
306 HELP OTHERS	21
305 EXPLAIN A CONCEPT	20
308 DELEGATE	20
307 ATTENTIVE LISTENER	19
313 PERSUADE	19
311 REACH GOALS	16
310 DIRECT A PROJECT	11
314 EVALUATE	11
309 SELL A PRODUCT	8
410 TIME MANAGEMENT	57
404 COMPUTER/TECHNICAL LITERACY	40
417 FOLLOW INSTRUCTIONS	30
412 WORK WITH COMPUTER SOFTWARE	29
408 MAKE DECISIONS	29
407 INTERPRET DATA	26
409 ORGANIZED	25
411 DETAIL-ORIENTED	20
403 PROBING	19
401 READING COMPREHENSION	18
413 KEEP RECORDS	16
414 FINANCIAL ANALYSIS	15
416 BUDGET	14
406 COLLECTING DATA	11
402 MONITOR PROCESSES	10
415 PROJECT MANAGEMENT	10
405 PLAN	11

The deficiency scores for the most critical job skills are plotted in the chart below. As the data suggest, there are numerous areas in which focused improvement is needed. The 410 Time Management job skill was observed as deficient by nearly 50% of all employers.



*Critical Personal Traits Needed
for Current Healthcare
Employees*

The table to the right shows the percentage of healthcare employers which identified each personal trait as being critical for its workforce.

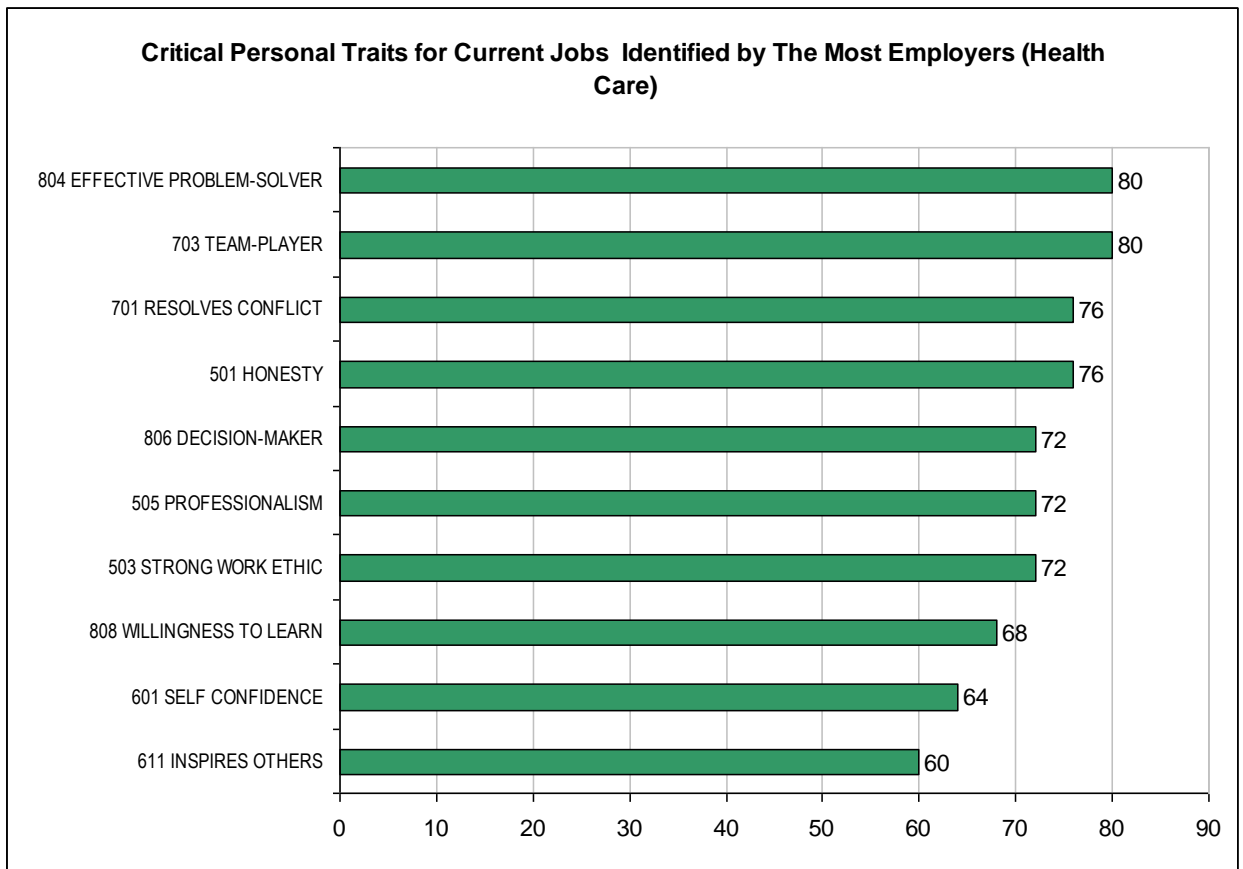
On average, the traits in the 800 Intellectual skills group were slightly more important than those in the other three categories.

Four personal traits were identified as being critical by at least 75% of the employers:

- 804 Effective Problem-Solver
- 703 Team Player
- 701 Resolves Conflict
- 501 Honesty

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs		Healthcare
	n=	25
		%
501 HONESTY		76
503 STRONG WORK ETHIC		72
505 PROFESSIONALISM		72
504 RELIABILITY		44
511 ROLE MODEL FOR OTHERS		40
506 DEDICATION		36
507 FOCUSED ON TASK		32
508 PUNCTUAL		24
509 ADAPTABLE		24
510 RESPECTFUL		16
502 METHODOICAL		8
<hr/>		
601 SELF CONFIDENCE		64
611 INSPIRES OTHERS		60
610 TAKE THE INITIATIVE		60
607 SELF MANAGEMENT		56
605 CONTINUOUS IMPROVEMENT		52
608 ACHIEVES GOALS		52
604 SUCCESS DRIVEN		40
602 INDUSTRIOUS		36
606 AMBITIOUS		24
612 TENACITY		16
609 INFORMED RISK-TAKER		12
603 CHALLENGE STATUS QUO		8
<hr/>		
703 TEAM-PLAYER		80
701 RESOLVES CONFLICT		76
710 CLEARLY EXPRESSES IDEAS		56
711 FOSTERS COLLABORATION		48
702 COOPERATIVE		44
713 OPEN TO CONSTRUCTIVE CRITICISM		40
704 COMPASSIONATE		32
705 CARING		32
708 COURTEOUS		28
709 PERSUASIVE		24
712 LIKABLE PERSONALITY		24
706 TACTFUL		20
707 SEEKS FEEDBACK		12
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		80
806 DECISION-MAKER		72
808 WILLINGNESS TO LEARN		68
809 FORWARD THINKING (TO FUTURE)		60
803 RATIONAL		60
802 INQUIRING		36
807 DEDUCTIVE REASONING		32
805 CREATIVITY		28
801 CURIOSITY		20

The ten traits identified most frequently by healthcare employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits Identified in Healthcare Employees

The table to the right shows the percentage of healthcare employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

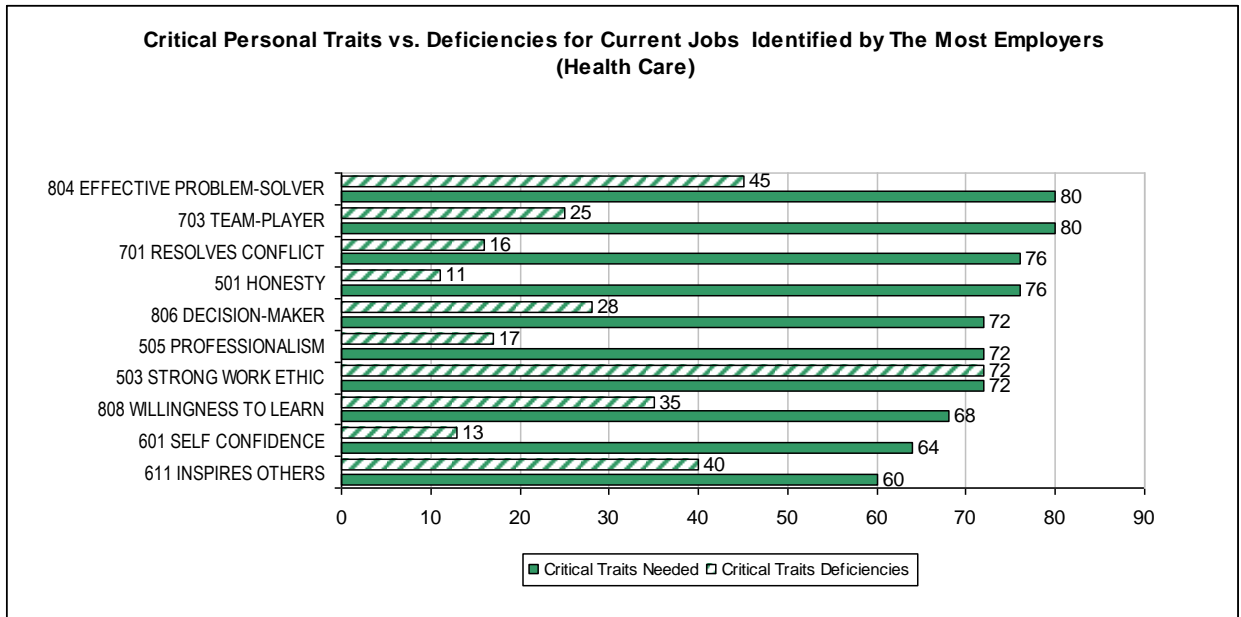
Three traits were identified by at least 67% of the healthcare employers as being deficient:

- 503 Strong Work Ethic
- 612 Tenacity
- 707 Seeks Feedback

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants		Healthcare
(Base: Employers Needing Each Traits)		n= 25
		%
503 STRONG WORK ETHIC		72
502 METHODICAL		50
507 FOCUSED ON TASK		38
508 PUNCTUAL		33
509 ADAPTABLE		33
504 RELIABILITY		27
505 PROFESSIONALISM		17
506 DEDICATION		11
501 HONESTY		11
511 ROLE MODEL FOR OTHERS		10
510 RESPECTFUL		0
612 TENACITY		75
610 TAKE THE INITIATIVE		53
602 INDUSTRIOUS		44
611 INSPIRES OTHERS		40
606 AMBITIOUS		33
608 ACHIEVES GOALS		31
605 CONTINUOUS IMPROVEMENT		23
607 SELF MANAGEMENT		21
604 SUCCESS DRIVEN		20
601 SELF CONFIDENCE		13
603 CHALLENGE STATUS QUO		0
609 INFORMED RISK-TAKER		0
707 SEEKS FEEDBACK		67
713 OPEN TO CONSTRUCTIVE CRITICISM		50
712 LIKABLE PERSONALITY		50
704 COMPASSIONATE		50
706 TACTFUL		40
711 FOSTERS COLLABORATION		33
703 TEAM-PLAYER		25
702 COOPERATIVE		18
701 RESOLVES CONFLICT		16
710 CLEARLY EXPRESSES IDEAS		14
708 COURTEOUS		14
705 CARING		13
709 PERSUASIVE		0
804 EFFECTIVE PROBLEM-SOLVER		45
805 CREATIVITY		43
807 DEDUCTIVE REASONING		38
808 WILLINGNESS TO LEARN		35
809 FORWARD THINKING (TO FUTURE)		28
806 DECISION-MAKER		28
803 RATIONAL		27
802 INQUIRING		22
801 CURIOSITY		20

The deficiency scores for the most critical personal traits are shown the following graph. Four of the traits have relatively high percentages of employers which identified the traits as being deficient in the workforce.

The 503 Strong Work Ethic trait was identified as critical and deficient by 72% of all healthcare employers.



Quadrant Analysis: Healthcare Employers

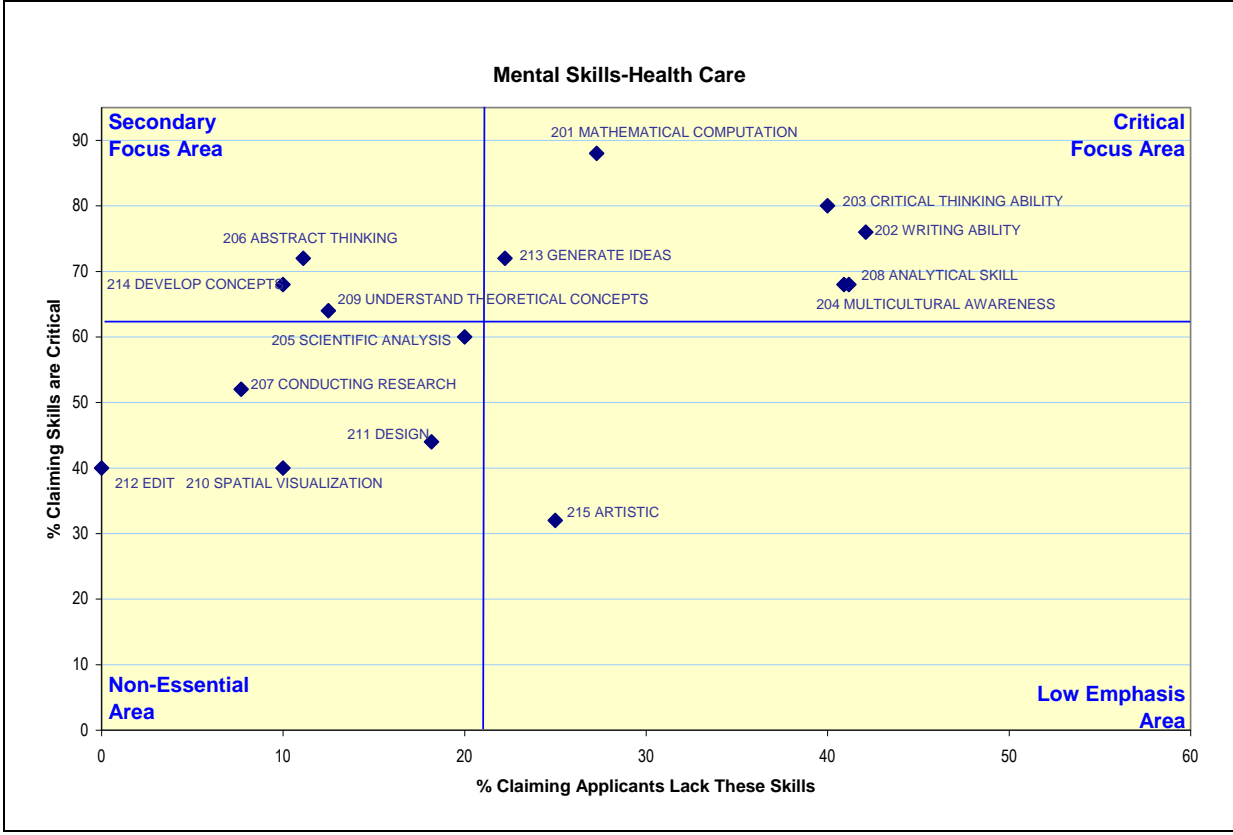
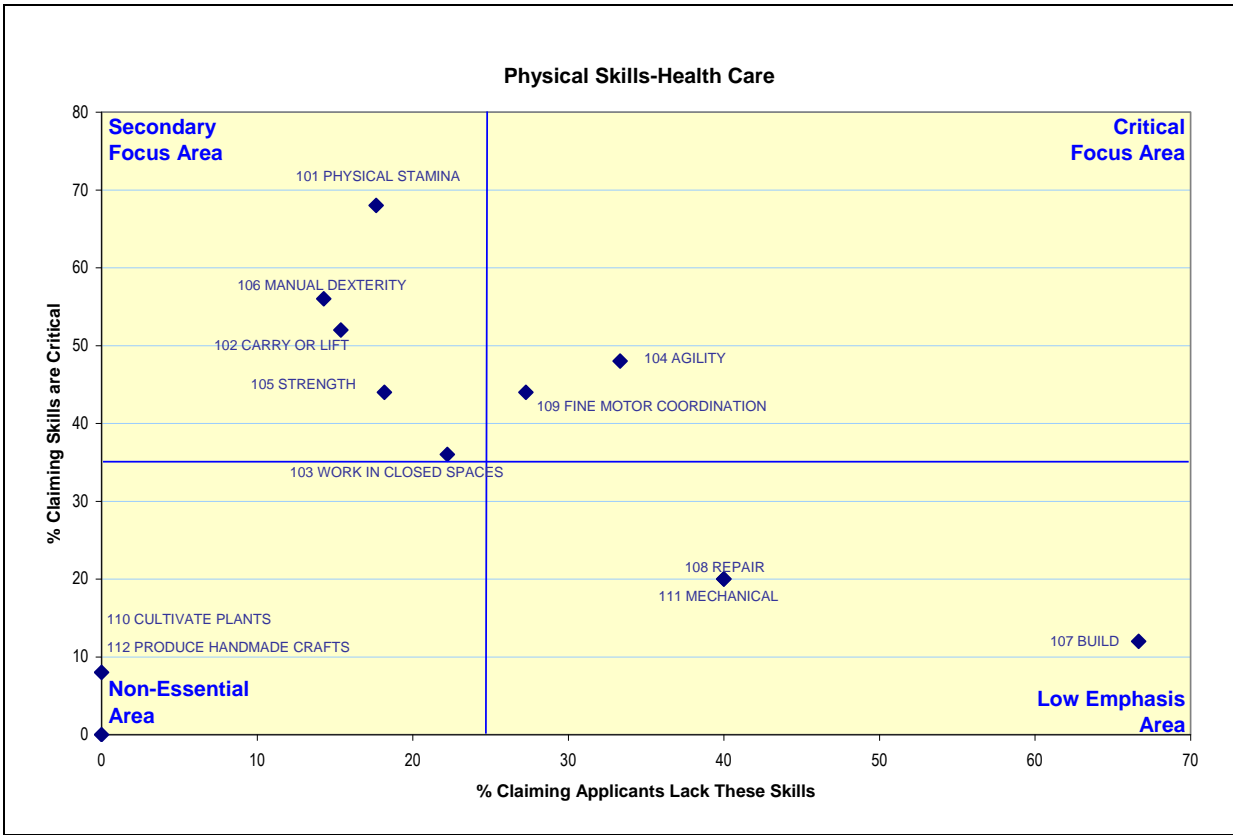
A quadrant analysis for the healthcare sector, for all job categories, is shown on the following four pages.

The data show that the following job skill areas are in need of attention:

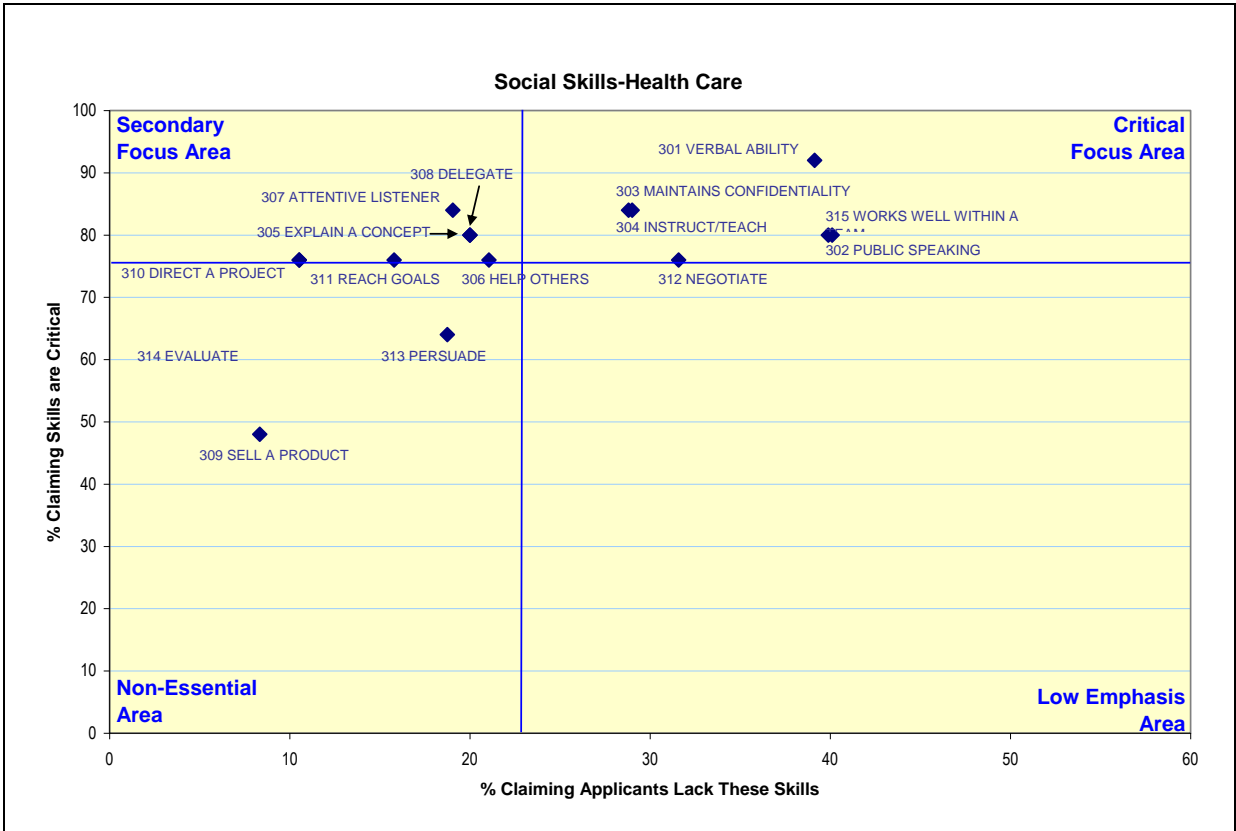
- Mathematics and writing skills
- Analytical, critical thinking, and ideation skills
- Multicultural awareness
- Confidentiality
- Teamwork
- Listening and verbal skills
- Instruction and teaching
- Time management

The data show that the following personal traits areas are in need of attention:

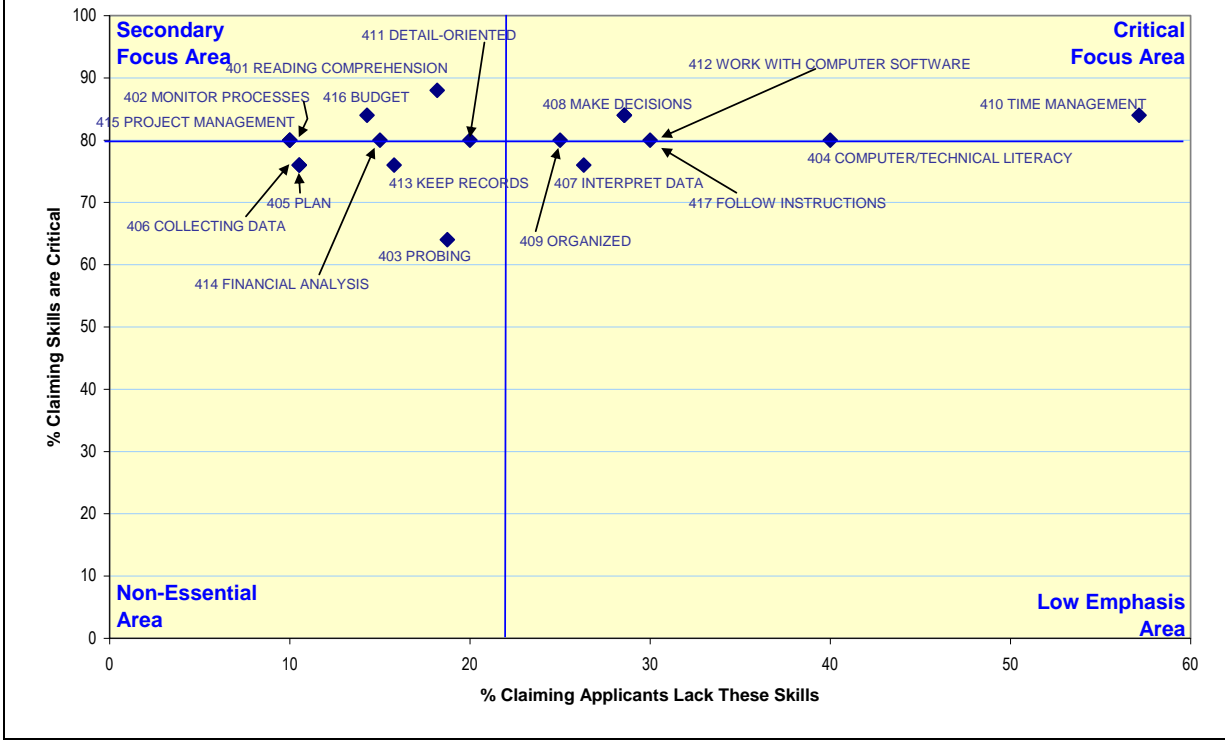
- Work ethic
- Taking initiative
- Inspiring others
- Achieving goals
- Fostering collaboration
- Being an effective problem solver
- Making decisions
- Being willing to learn
- Forward thinking
- Rational

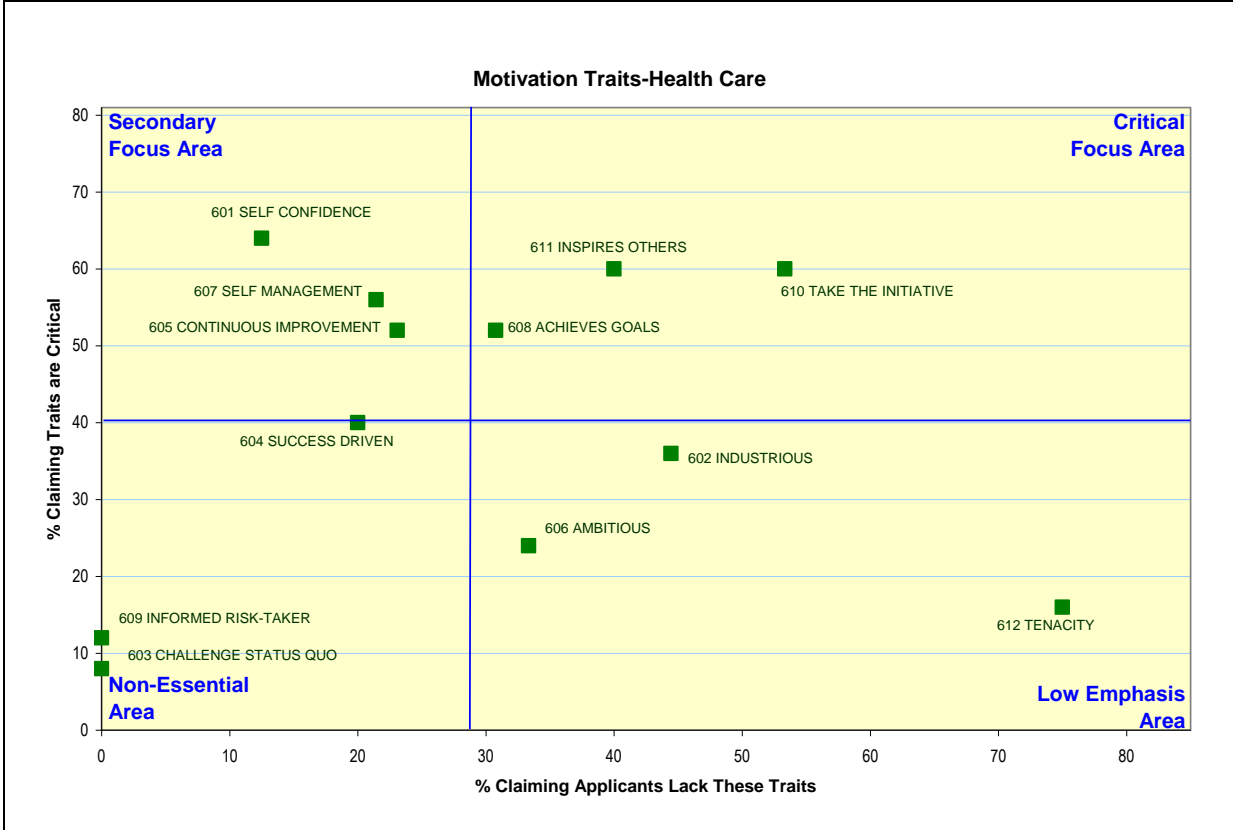
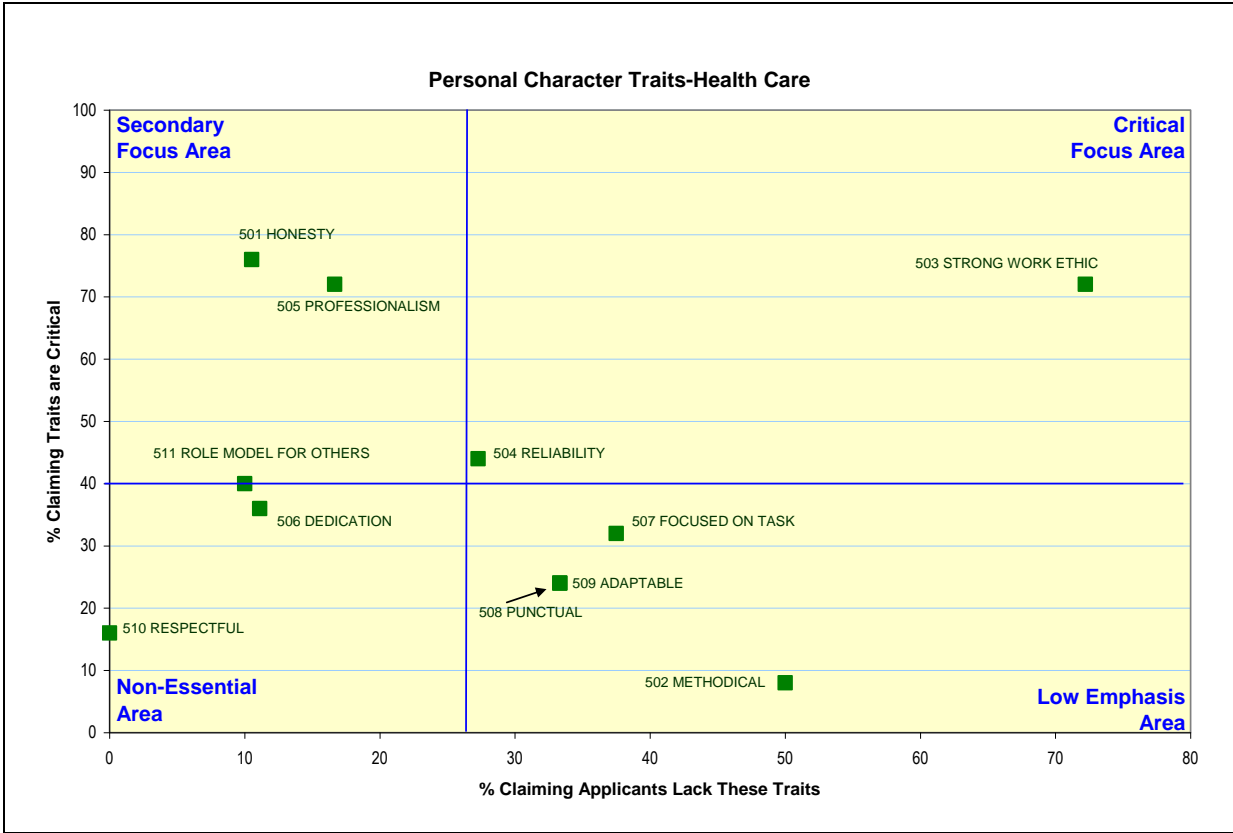


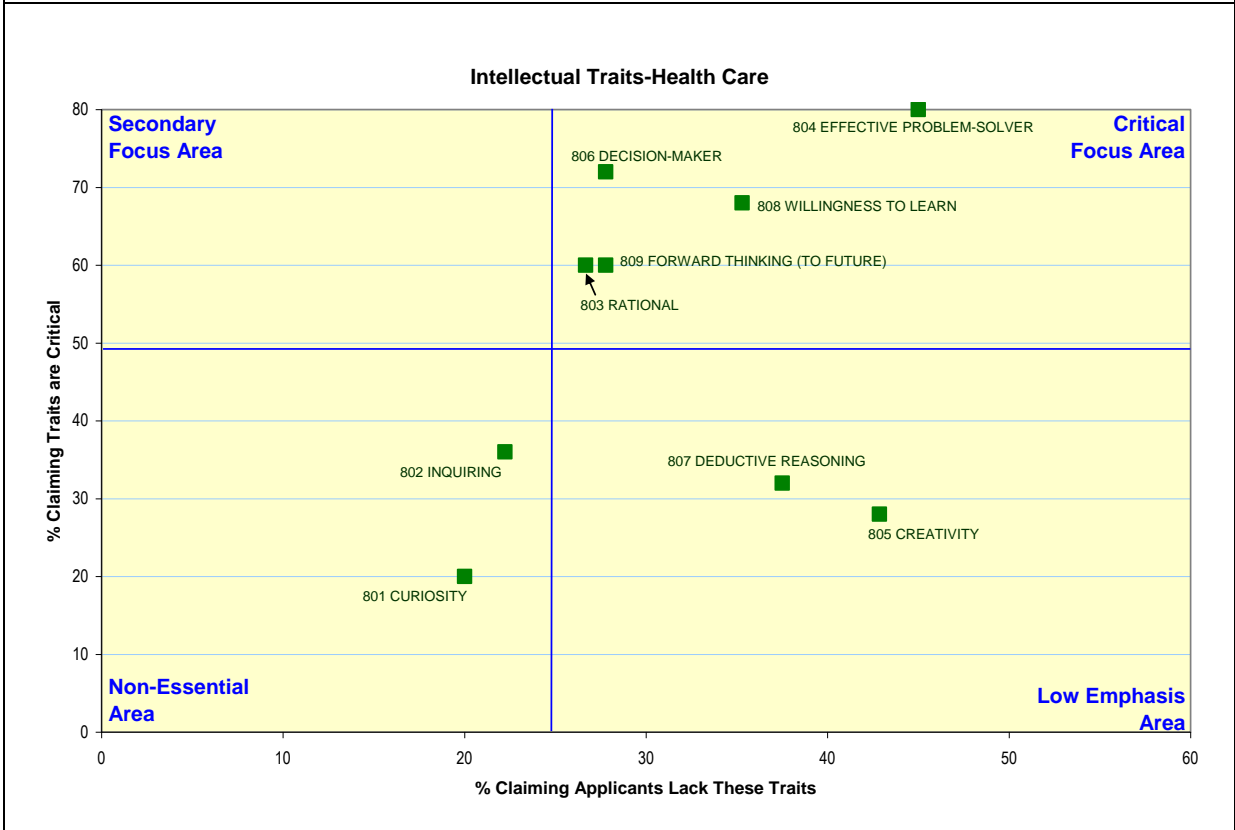
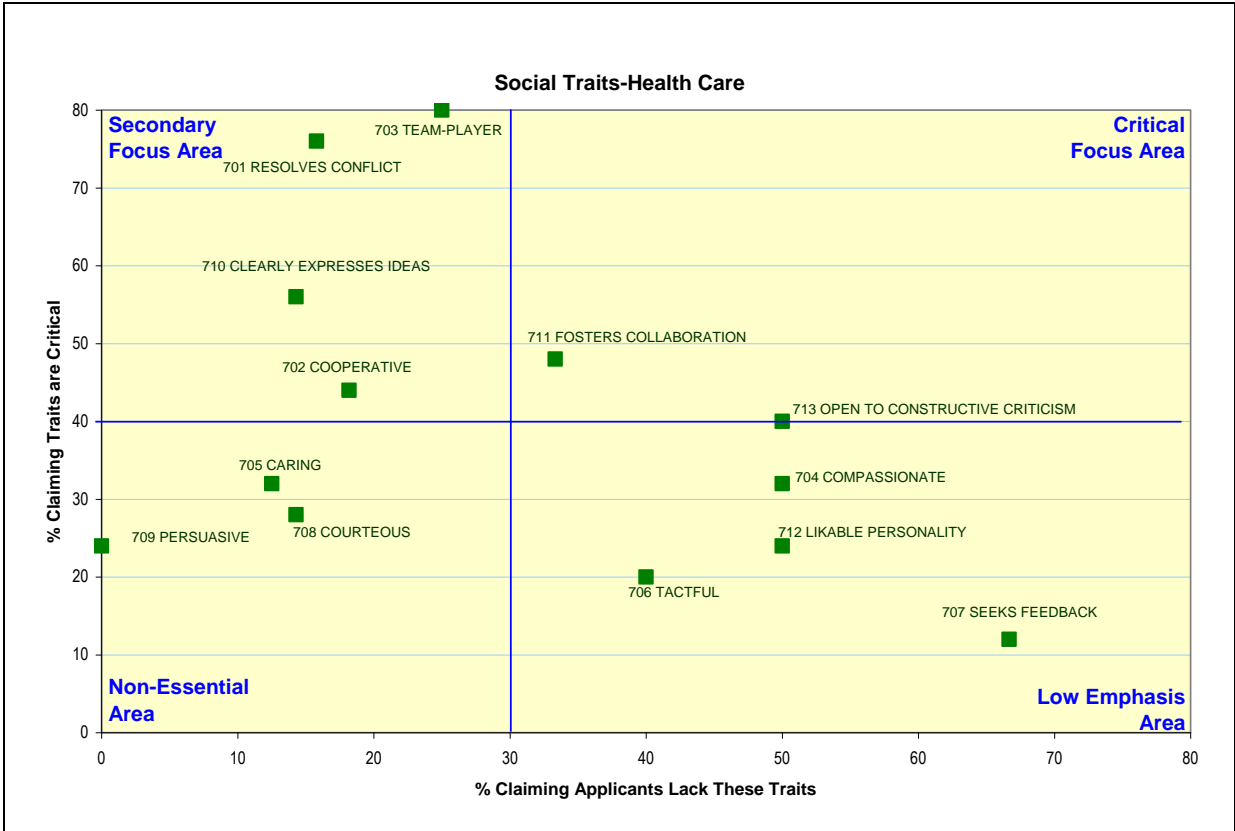
Social Skills-Health Care



Traditional Skills-Health Care







Summary of Job Skills and Personal Traits Needed for Current Jobs: Mining Sector

Introduction

Responses for employers in the mining industry are summarized in this section of the report:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

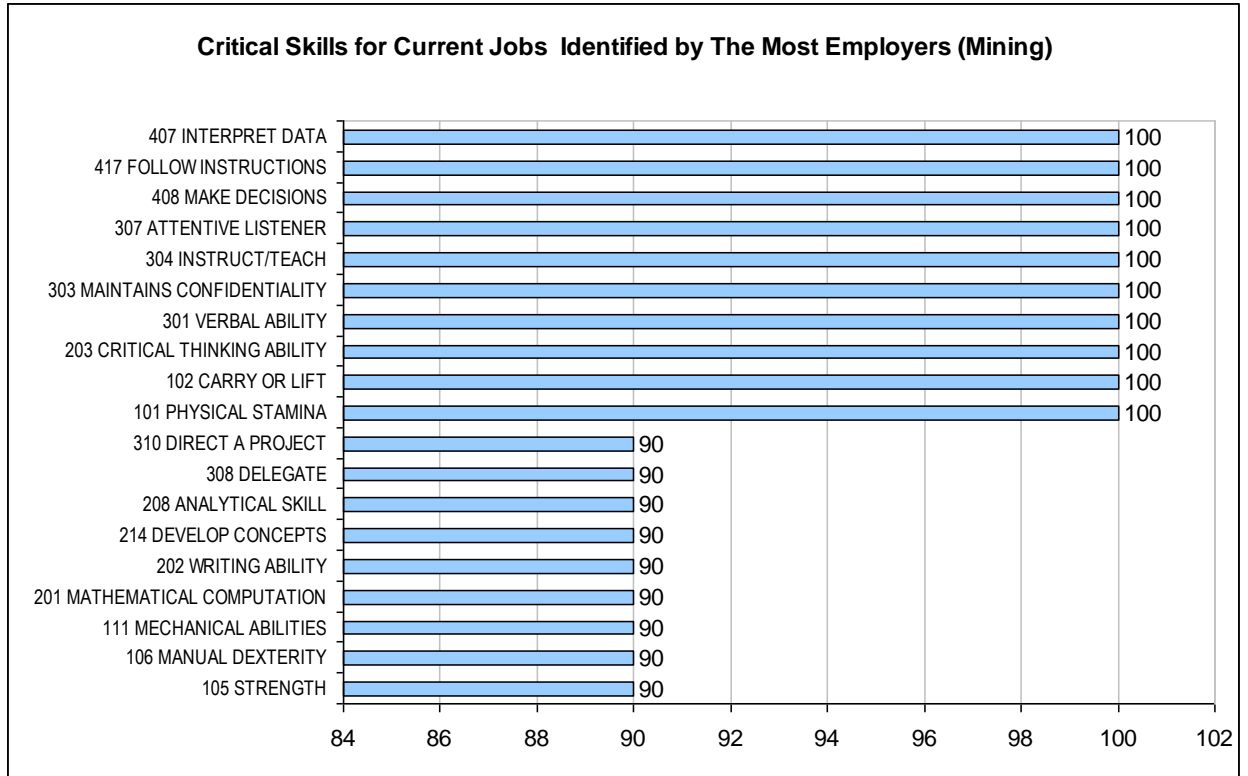
Critical Job Skills Needed for Current Mining Employees

The table to the right shows the percentage of employers which identified each job skill as being critical.

While Physical skills are obviously an important part of the mining workforce profile, the average score for Traditional and Social skills categories were actually higher than the averages for Physical and Mental categories.

Skills Identified (By % of Employers) as Being Critical for Current Jobs		Mining
	n=	10
		%
101 PHYSICAL STAMINA		100
102 CARRY OR LIFT		100
105 STRENGTH		90
106 MANUAL DEXTERITY		90
111 MECHANICAL ABILITIES		90
104 AGILITY		80
108 REPAIR		80
103 WORK IN CLOSED SPACES		80
109 FINE MOTOR COORDINATION		60
107 BUILD		60
112 PRODUCE HANDMADE CRAFTS		0
110 CULTIVATE PLANTS		0
<hr/>		
203 CRITICAL THINKING ABILITY		100
201 MATHEMATICAL COMPUTATION		90
202 WRITING ABILITY		90
214 DEVELOP CONCEPTS		90
208 ANALYTICAL SKILL		90
213 GENERATE IDEAS		80
207 CONDUCTING RESEARCH		80
205 SCIENTIFIC ANALYSIS		80
206 ABSTRACT THINKING		70
204 MULTICULTURAL AWARENESS		70
209 UNDERSTAND THEORETICAL CONCEPTS		70
211 DESIGN		60
212 EDIT		60
210 SPATIAL VISUALIZATION		50
215 ARTISTIC		50
<hr/>		
301 VERBAL ABILITY		100
303 MAINTAINS CONFIDENTIALITY		100
304 INSTRUCT/TEACH		100
307 ATTENTIVE LISTENER		100
308 DELEGATE		90
310 DIRECT A PROJECT		90
311 REACH GOALS		90
312 NEGOTIATE		90
313 PERSUADE		90
315 WORKS WELL WITHIN A TEAM		80
305 EXPLAIN A CONCEPT		80
306 HELP OTHERS		80
314 EVALUATE		80
302 PUBLIC SPEAKING		70
309 SELL A PRODUCT		50
<hr/>		
408 MAKE DECISIONS		100
417 FOLLOW INSTRUCTIONS		100
407 INTERPRET DATA		100
401 READING COMPREHENSION		90
410 TIME MANAGEMENT		90
409 ORGANIZED		90
404 COMPUTER/TECHNICAL LITERACY		90
413 KEEP RECORDS		90
416 BUDGET		90
411 DETAIL-ORIENTED		90
414 FINANCIAL ANALYSIS		90
405 PLAN		80
406 COLLECTING DATA		80
402 MONITOR PROCESSES		80
415 PROJECT MANAGEMENT		70
403 PROBING		70
412 WORK WITH COMPUTER SOFTWARE		60

The job skills most frequently indicated as being critical are shown in the chart below.



Deficiencies in Job Skills Identified in Mining Employees

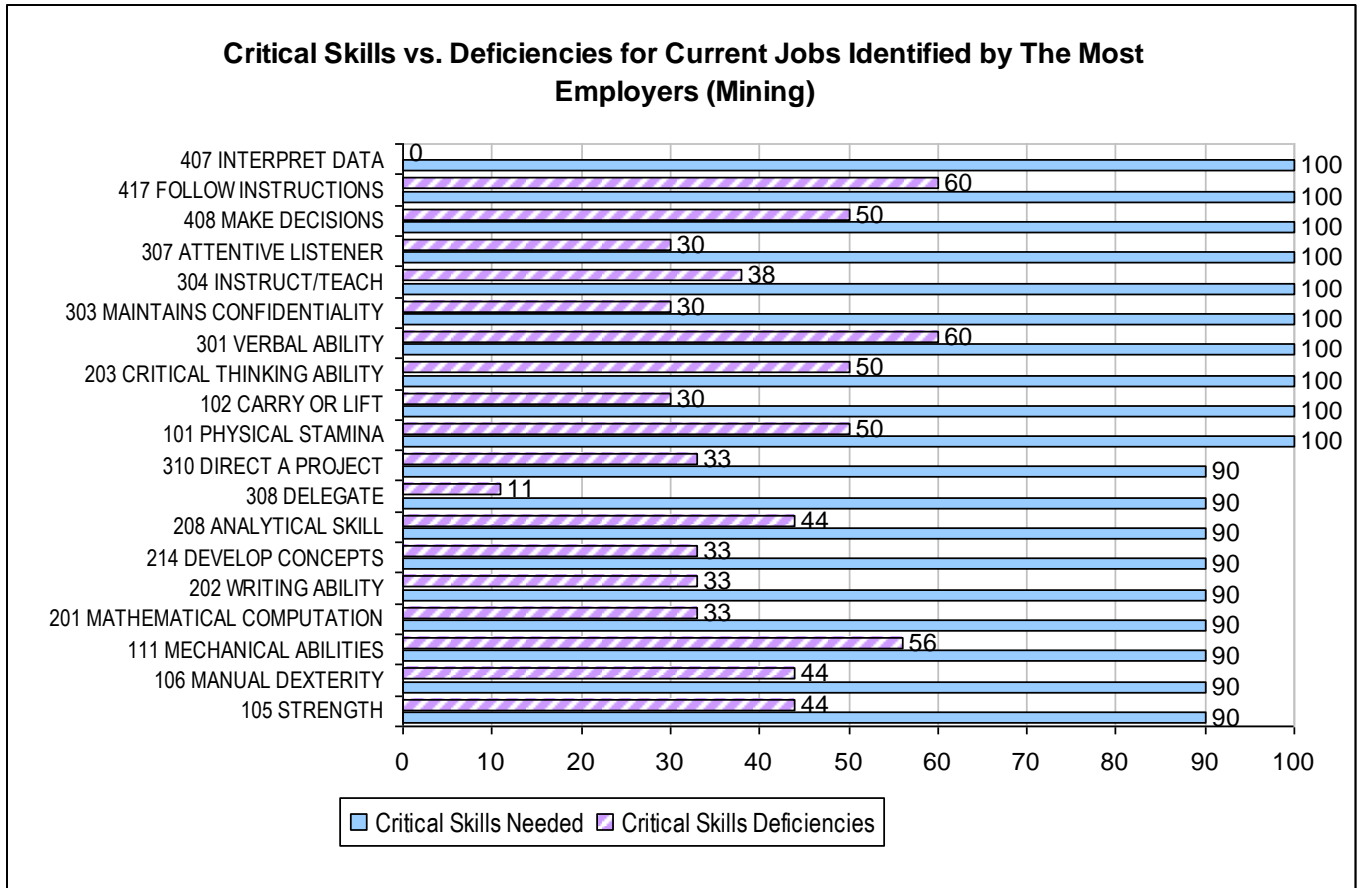
The table to the right shows the percentage of mining employers who indicated that they observed deficiencies in each job skill among employees and applicants.

The job skills were identified by more 60% of the mining employers as being deficient included:

- 213 Generate Ideas
- 301 Verbal Ability
- 404 Computer/Technical Literacy
- 417 Follow Instructions

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants		<u>Mining</u>
(Base: Employers Needing Each Skill)		n= 10 %
111 MECHANICAL ABILITIES		56
101 PHYSICAL STAMINA		50
109 FINE MOTOR COORDINATION		50
105 STRENGTH		44
106 MANUAL DEXTERITY		44
108 REPAIR		38
104 AGILITY		38
103 WORK IN CLOSED SPACES		38
107 BUILD		33
102 CARRY OR LIFT		30
110 CULTIVATE PLANTS		0
112 PRODUCE HANDMADE CRAFTS		0
<hr/>		
213 GENERATE IDEAS		63
203 CRITICAL THINKING ABILITY		50
208 ANALYTICAL SKILL		44
206 ABSTRACT THINKING		43
202 WRITING ABILITY		33
201 MATHEMATICAL COMPUTATION		33
214 DEVELOP CONCEPTS		33
209 UNDERSTAND THEORETICAL CONCEPTS		29
207 CONDUCTING RESEARCH		25
205 SCIENTIFIC ANALYSIS		25
210 SPATIAL VISUALIZATION		20
215 ARTISTIC		20
211 DESIGN		17
204 MULTICULTURAL AWARENESS		14
212 EDIT		0
<hr/>		
301 VERBAL ABILITY		60
302 PUBLIC SPEAKING		57
315 WORKS WELL WITHIN A TEAM		50
304 INSTRUCT/TEACH		50
305 EXPLAIN A CONCEPT		38
306 HELP OTHERS		38
311 REACH GOALS		33
313 PERSUADE		33
310 DIRECT A PROJECT		33
303 MAINTAINS CONFIDENTIALITY		30
307 ATTENTIVE LISTENER		30
312 NEGOTIATE		22
314 EVALUATE		13
308 DELEGATE		11
309 SELL A PRODUCT		0
<hr/>		
404 COMPUTER/TECHNICAL LITERACY		67
417 FOLLOW INSTRUCTIONS		60
412 WORK WITH COMPUTER SOFTWARE		50
408 MAKE DECISIONS		50
410 TIME MANAGEMENT		44
401 READING COMPREHENSION		33
414 FINANCIAL ANALYSIS		33
406 COLLECTING DATA		25
409 ORGANIZED		22
416 BUDGET		22
402 MONITOR PROCESSES		13
405 PLAN		13
413 KEEP RECORDS		11
411 DETAIL-ORIENTED		11
407 INTERPRET DATA		0
415 PROJECT MANAGEMENT		0
403 PROBING		0

The deficiency scores for the most critical job skills are plotted in the chart below. Among these job skills, six were identified as being deficient by at least 50% of the employers who also rated them as critical.



Critical Personal Traits Needed for Current Mining Employees

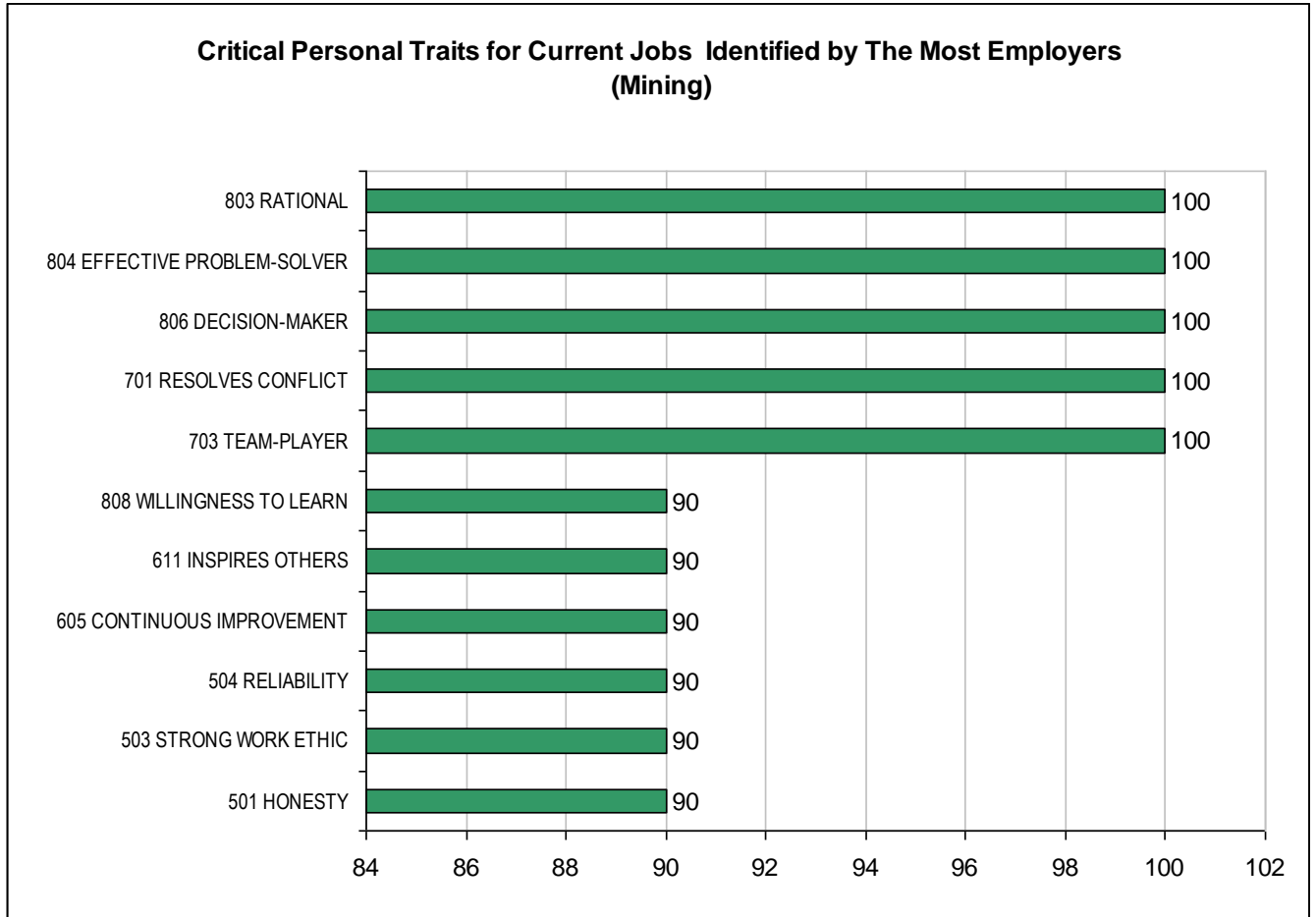
The table to the right shows the percentage of mining employers which identified each personal trait as being critical for its workforce.

Traits in the 800 Intellectual skills group were, on average, slightly more important than those in the other three categories.

As indicated here, many traits were identified as being critical and five were identified by all employers as such.

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs		<u>Mining</u>
	n=	10
		%
501 HONESTY		90
503 STRONG WORK ETHIC		90
504 RELIABILITY		90
505 PROFESSIONALISM		70
506 DEDICATION		60
511 ROLE MODEL FOR OTHERS		60
507 FOCUSED ON TASK		40
508 PUNCTUAL		40
510 RESPECTFUL		40
502 METHODOICAL		30
509 ADAPTABLE		20
<hr/>		
605 CONTINUOUS IMPROVEMENT		90
611 INSPIRES OTHERS		90
608 ACHIEVES GOALS		80
607 SELF MANAGEMENT		80
610 TAKE THE INITIATIVE		80
602 INDUSTRIOUS		80
601 SELF CONFIDENCE		70
606 AMBITIOUS		70
604 SUCCESS DRIVEN		50
603 CHALLENGE STATUS QUO		40
612 TENACITY		30
609 INFORMED RISK-TAKER		10
<hr/>		
703 TEAM-PLAYER		100
701 RESOLVES CONFLICT		100
702 COOPERATIVE		70
710 CLEARLY EXPRESSES IDEAS		70
711 FOSTERS COLLABORATION		70
709 PERSUASIVE		70
707 SEEKS FEEDBACK		60
706 TACTFUL		50
713 OPEN TO CONSTRUCTIVE CRITICISM		40
705 CARING		40
708 COURTEOUS		30
704 COMPASSIONATE		30
712 LIKABLE PERSONALITY		10
<hr/>		
806 DECISION-MAKER		100
804 EFFECTIVE PROBLEM-SOLVER		100
803 RATIONAL		100
808 WILLINGNESS TO LEARN		90
809 FORWARD THINKING (TO FUTURE)		70
807 DEDUCTIVE REASONING		70
805 CREATIVITY		70
802 INQUIRING		70
801 CURIOSITY		50

The eleven traits identified most frequently by mining employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits
Identified in Mining Employees

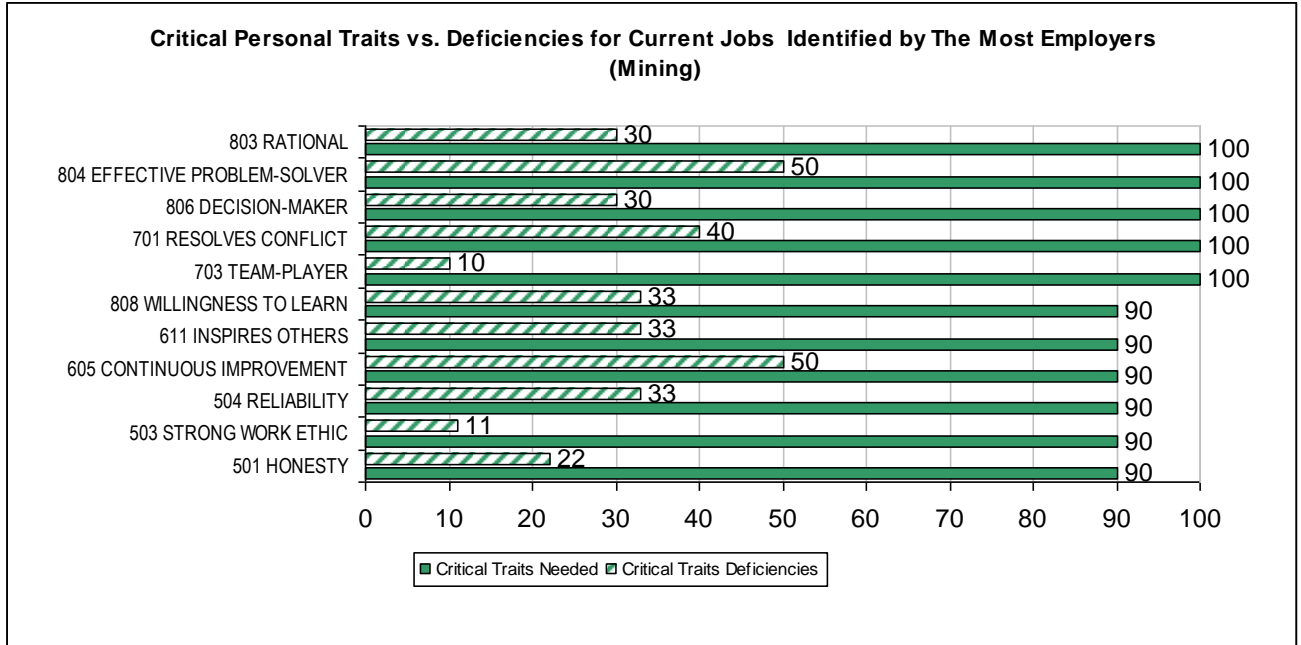
The table to the right shows the percentage of mining employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

Five traits were identified by at least 67% of the Mining employers as being deficient:

- 508 Punctual
- 510 Respectful of Others
- 511 Role Model for Others
- 609 Informed Risk Taker
- 712 Likeable Personality

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants		Mining
(Base: Employers Needing Each Traits)		n= 10
		%
508 PUNCTUAL		75
510 RESPECTFUL		75
511 ROLE MODEL FOR OTHERS		67
505 PROFESSIONALISM		57
507 FOCUSED ON TASK		50
506 DEDICATION		50
504 RELIABILITY		33
502 METHODOICAL		33
501 HONESTY		22
503 STRONG WORK ETHIC		11
509 ADAPTABLE		0
<hr/>		
609 INFORMED RISK-TAKER		100
605 CONTINUOUS IMPROVEMENT		56
608 ACHIEVES GOALS		50
603 CHALLENGE STATUS QUO		50
606 AMBITIOUS		43
610 TAKE THE INITIATIVE		38
607 SELF MANAGEMENT		38
611 INSPIRES OTHERS		33
612 TENACITY		33
601 SELF CONFIDENCE		29
602 INDUSTRIOUS		25
604 SUCCESS DRIVEN		20
<hr/>		
712 LIKABLE PERSONALITY		100
706 TACTFUL		60
710 CLEARLY EXPRESSES IDEAS		57
713 OPEN TO CONSTRUCTIVE CRITICISM		50
707 SEEKS FEEDBACK		50
709 PERSUASIVE		43
701 RESOLVES CONFLICT		40
704 COMPASSIONATE		33
702 COOPERATIVE		29
705 CARING		25
711 FOSTERS COLLABORATION		14
703 TEAM-PLAYER		10
708 COURTEOUS		0
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		50
808 WILLINGNESS TO LEARN		33
809 FORWARD THINKING (TO FUTURE)		30
806 DECISION-MAKER		30
803 RATIONAL		30
805 CREATIVITY		14
802 INQUIRING		14
807 DEDUCTIVE REASONING		0
801 CURIOSITY		0

The deficiency scores for the most critical personal traits are shown in the following graph. Two of the traits listed had at least 50% of the employers identifying them as both critical and deficient.



Quadrant Analysis: Mining Employers

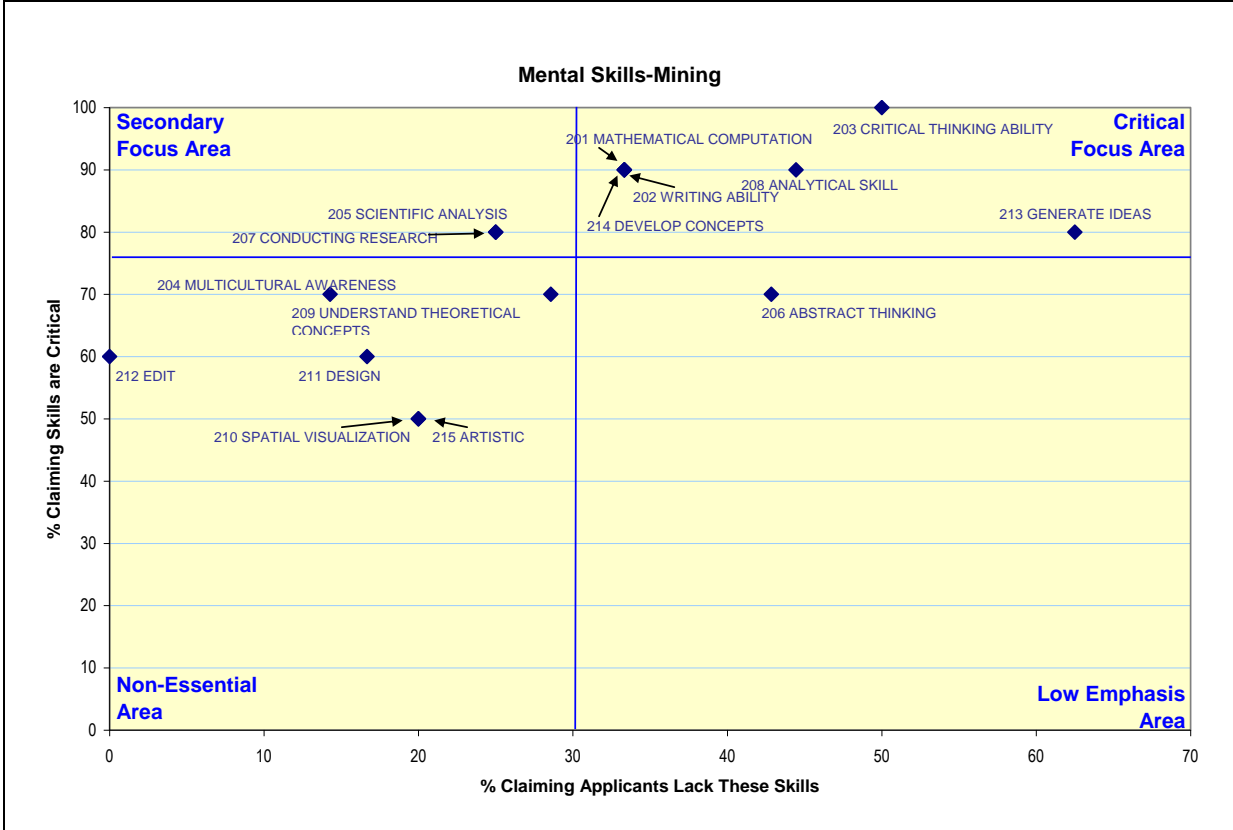
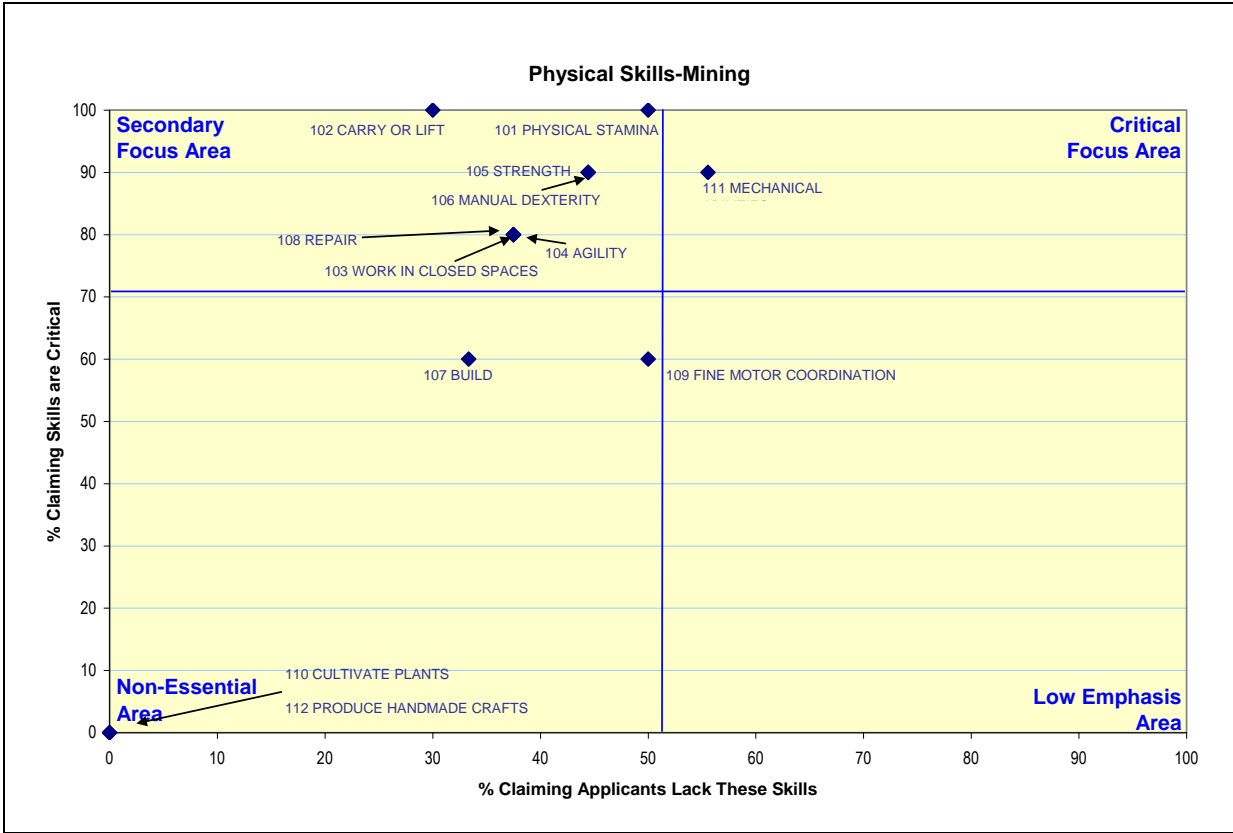
A quadrant analysis for the mining industry, for all job categories, is shown on the following four pages.

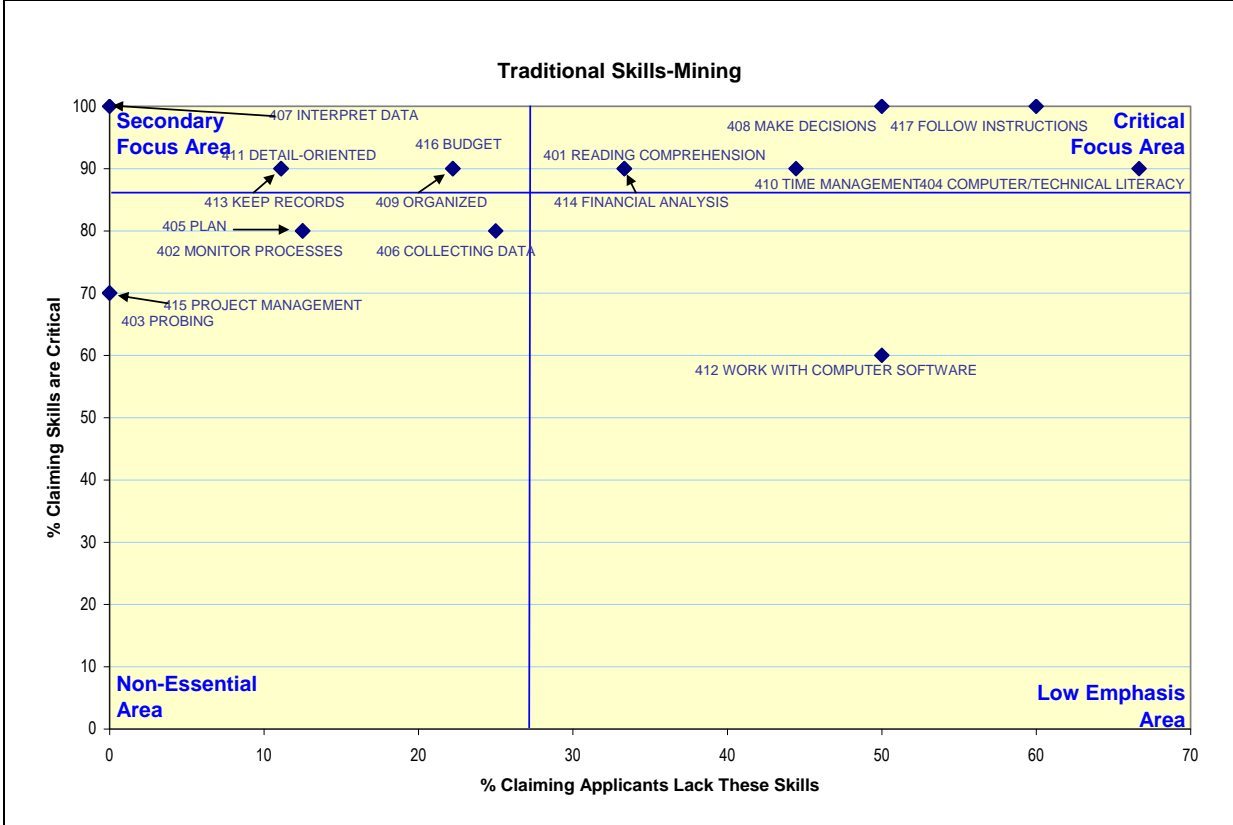
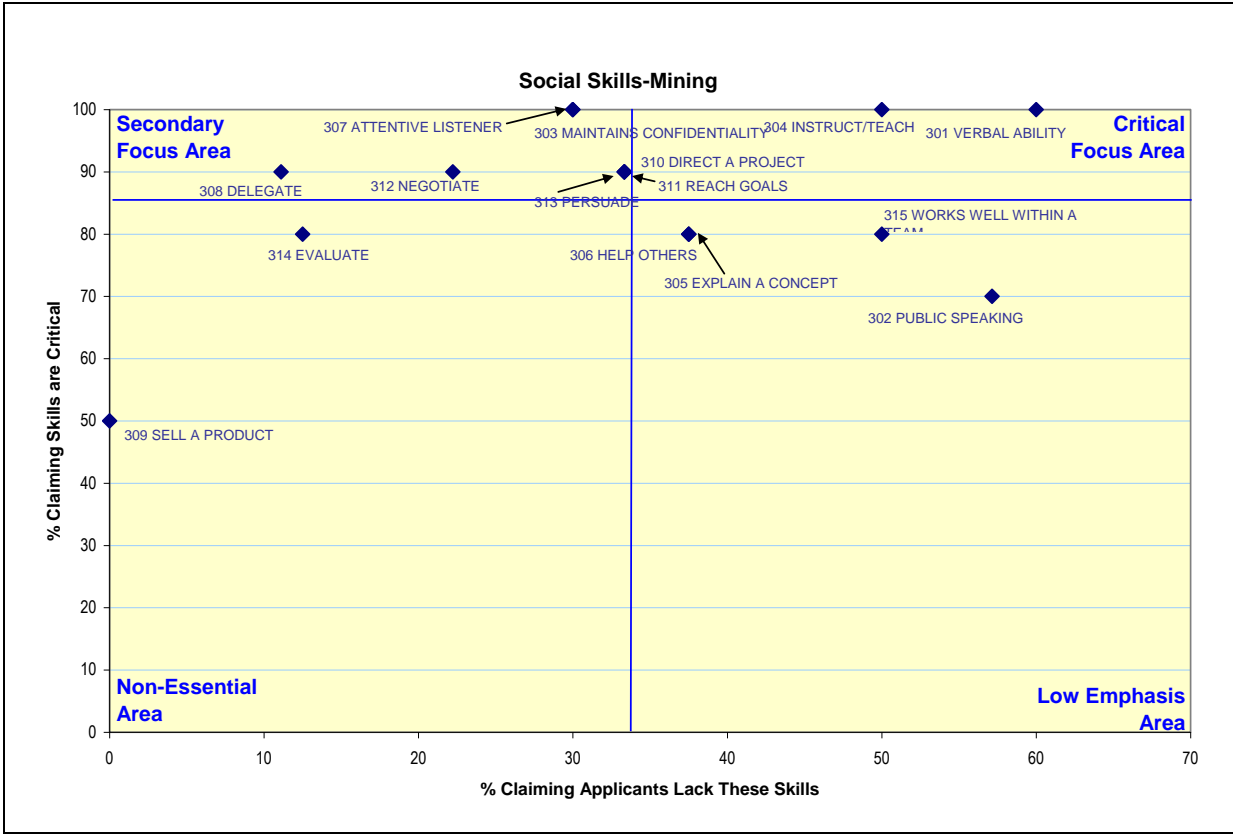
The data show that the following job skill areas are in need of attention:

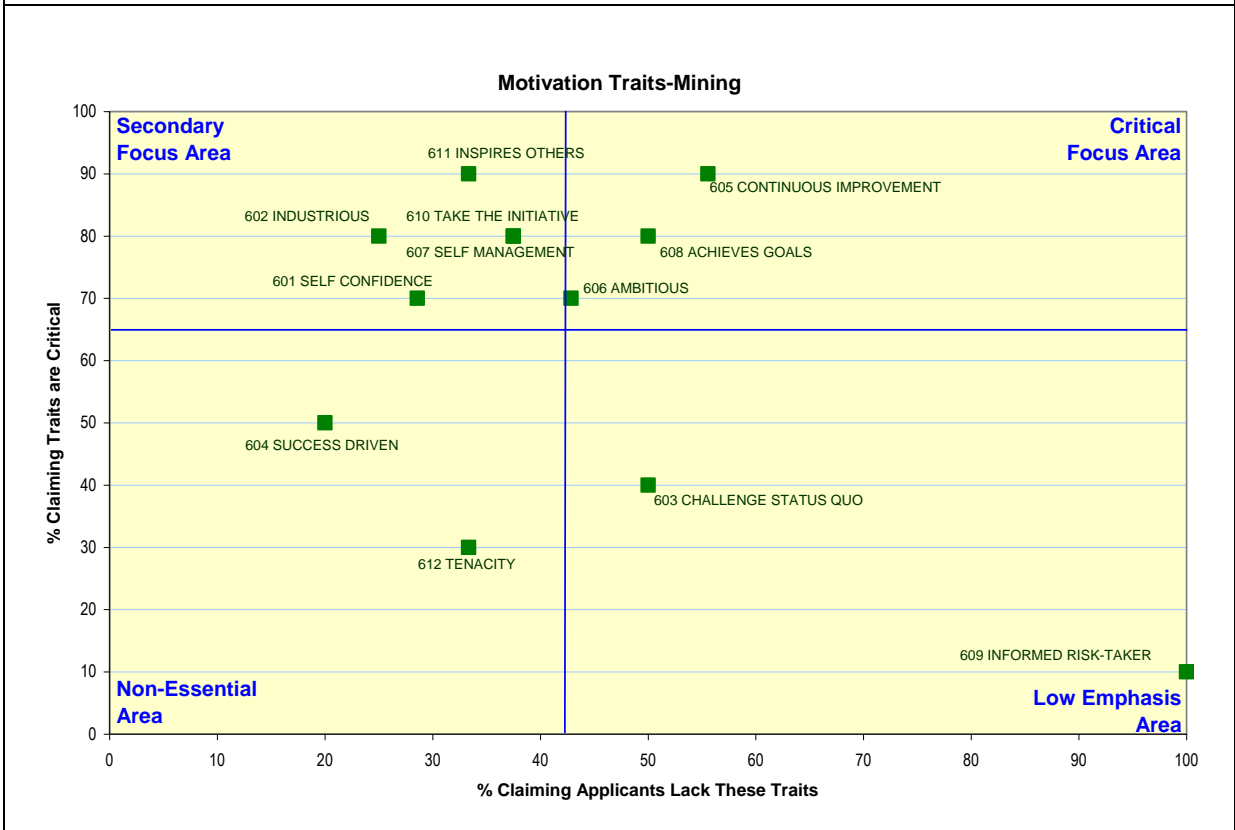
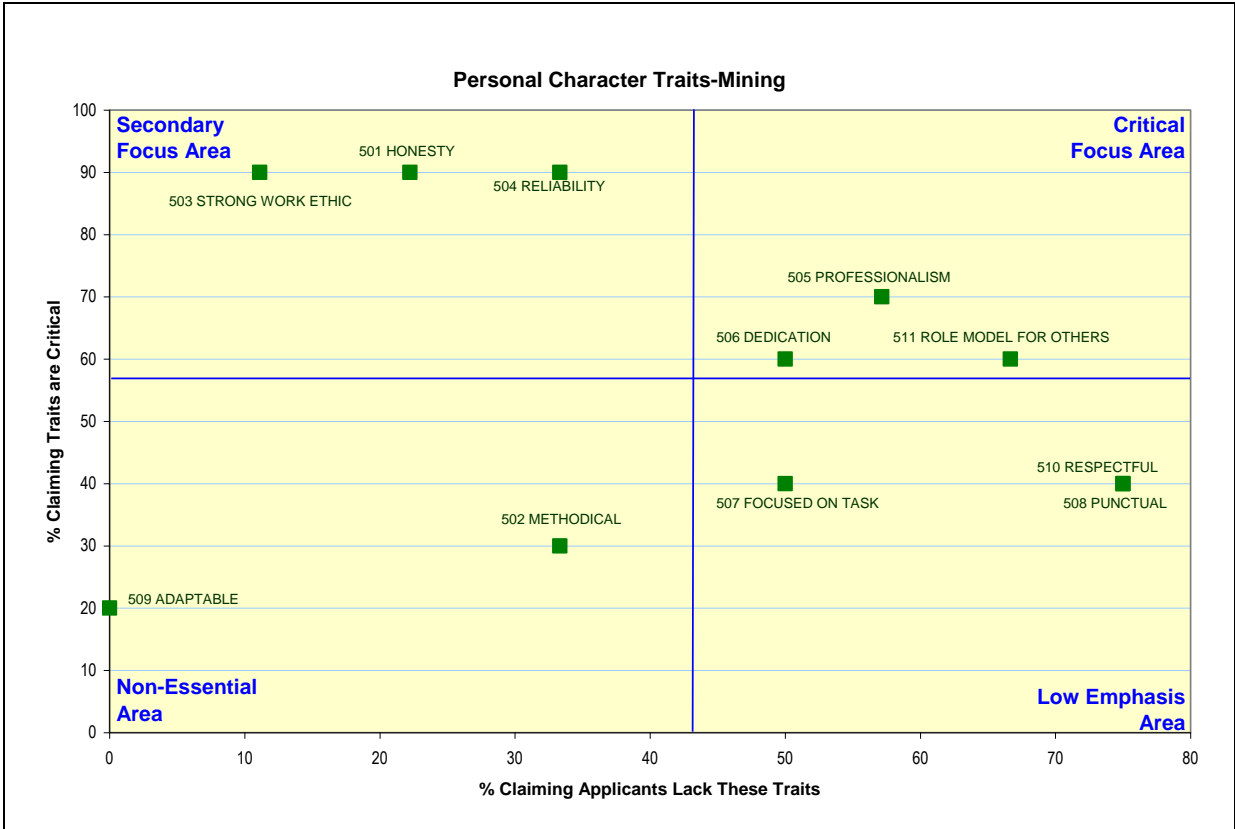
- Mechanical skills
- Analytical, critical thinking, and ideation skills
- Mathematics and writing
- Listening and verbal skills
- Instruction and teaching
- Making decisions
- Following instruction
- Time management
- Computer literacy
- Reading comprehension

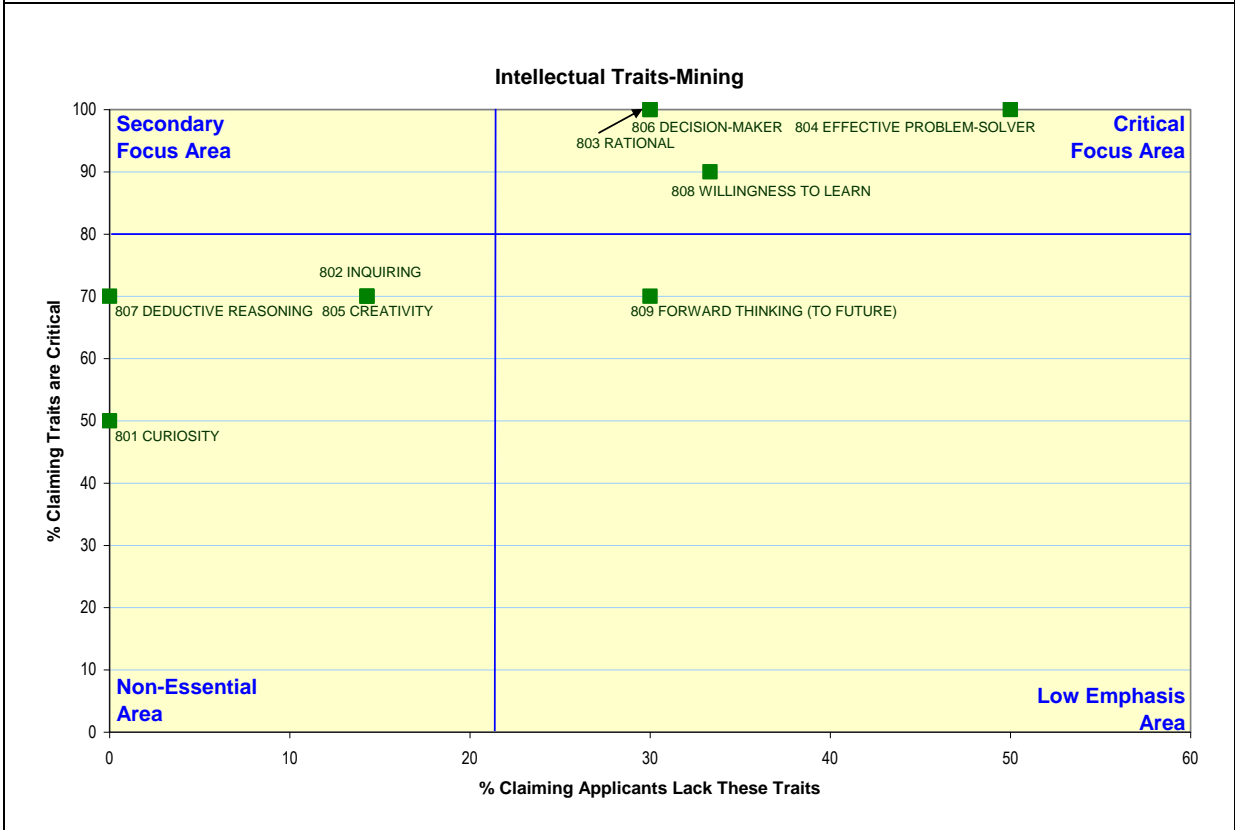
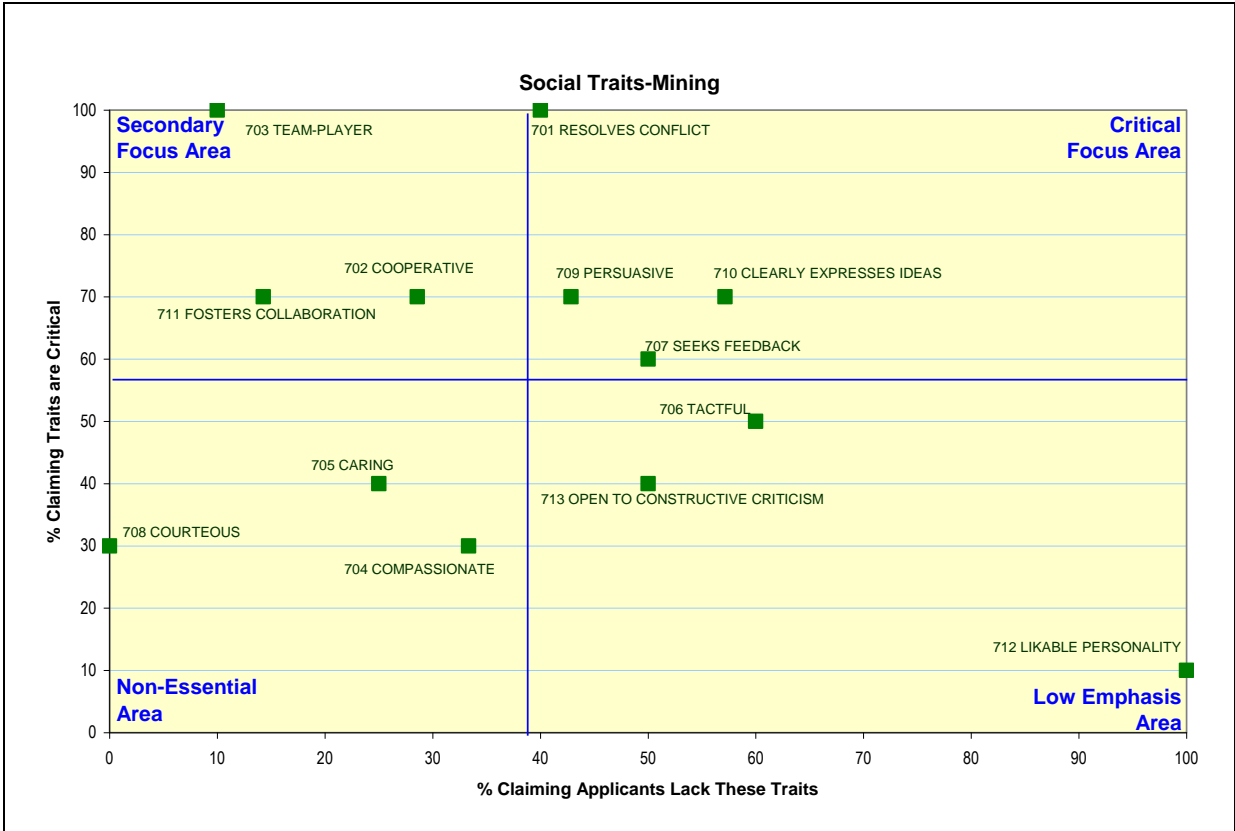
The data show that the following personal traits areas are in need of attention:

- Professionalism
- Dedication
- Role model for others
- Work ethic
- Achieving goals
- Continuous improvement
- Clearly expressing ideas
- Resolving conflict
- Persuasive
- Decision-maker
- Effective problem solver
- Being willing to learn









Summary of Job Skills and Personal Traits Needed for Current Jobs: Construction Sector

Introduction

In this section of the report, the responses for employers in the construction industry are summarized:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

Critical Job Skills Needed for Current Construction Employees

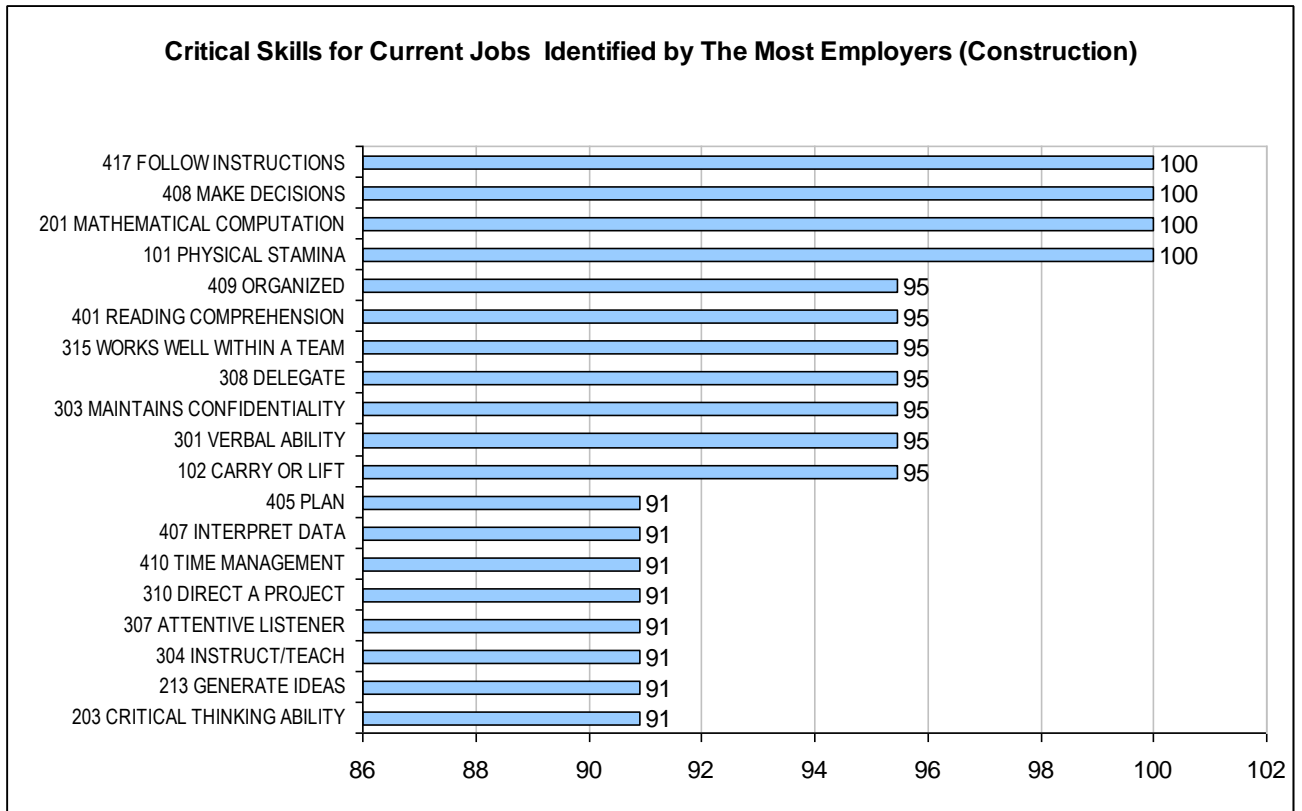
The table to the right shows the percentage of employers which identified each job skill as being critical.

As with healthcare and mining, the skills in the Social and Traditional skills categories were on average more important than skills in the Physical and Mental categories.

Of the job skills measured, 29 were identified as being critical by more than 85% of the construction respondents.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	Construction
	n= 22
	%
101 PHYSICAL STAMINA	100
102 CARRY OR LIFT	95
105 STRENGTH	86
104 AGILITY	86
108 REPAIR	82
107 BUILD	82
111 MECHANICAL ABILITIES	77
106 MANUAL DEXTERITY	73
109 FINE MOTOR COORDINATION	73
103 WORK IN CLOSED SPACES	55
112 PRODUCE HANDMADE CRAFTS	14
110 CULTIVATE PLANTS	9
201 MATHEMATICAL COMPUTATION	100
203 CRITICAL THINKING ABILITY	91
213 GENERATE IDEAS	91
202 WRITING ABILITY	82
214 DEVELOP CONCEPTS	73
211 DESIGN	68
206 ABSTRACT THINKING	64
208 ANALYTICAL SKILL	59
209 UNDERSTAND THEORETICAL CONCEPTS	59
204 MULTICULTURAL AWARENESS	55
210 SPATIAL VISUALIZATION	50
215 ARTISTIC	50
212 EDIT	45
207 CONDUCTING RESEARCH	41
205 SCIENTIFIC ANALYSIS	36
301 VERBAL ABILITY	95
303 MAINTAINS CONFIDENTIALITY	95
308 DELEGATE	95
315 WORKS WELL WITHIN A TEAM	95
304 INSTRUCT/TEACH	91
307 ATTENTIVE LISTENER	91
310 DIRECT A PROJECT	91
305 EXPLAIN A CONCEPT	86
306 HELP OTHERS	86
312 NEGOTIATE	86
314 EVALUATE	86
311 REACH GOALS	82
302 PUBLIC SPEAKING	82
313 PERSUADE	82
309 SELL A PRODUCT	68
408 MAKE DECISIONS	100
417 FOLLOW INSTRUCTIONS	100
401 READING COMPREHENSION	95
409 ORGANIZED	95
410 TIME MANAGEMENT	91
407 INTERPRET DATA	91
405 PLAN	91
406 COLLECTING DATA	91
413 KEEP RECORDS	91
411 DETAIL-ORIENTED	91
416 BUDGET	86
404 COMPUTER/TECHNICAL LITERACY	82
415 PROJECT MANAGEMENT	82
414 FINANCIAL ANALYSIS	77
402 MONITOR PROCESSES	77
412 WORK WITH COMPUTER SOFTWARE	73
403 PROBING	59

The job skills most frequently indicated as being critical are shown in the chart below. As indicated above, there were a large number of skills deemed critical. These were the top 19 and were all over 90%.



Deficiencies in Job Skills Identified in Construction Employees

The table to the right shows the percentage of construction employers who indicated that they observed deficiencies in each job skill among employees and applicants.

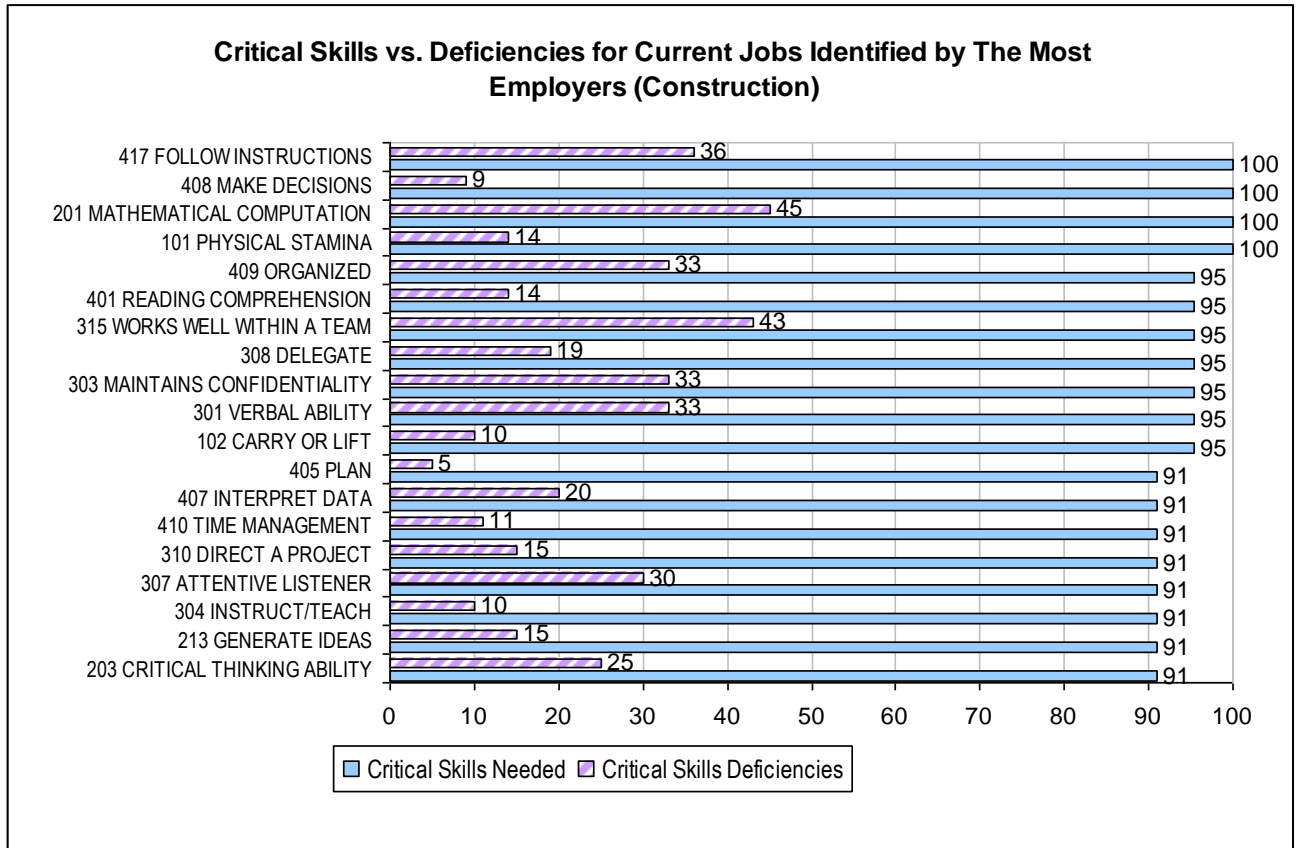
As indicated above, construction employers identified a fairly broad range of skills as being critical. The degree to which these critical skills were observed as being deficient was not as high and was fairly well distributed across the various job skills. None of the job skills were rated as being deficient by more than 50% of the employers who rated them as being critical.

The job skills identified by more than 40% of the employers as being deficient were:

- 111 Mechanical Abilities
- 201 Mathematical Computation
- 201 Multicultural Awareness
- 315 Works Well Within a Team
- 410 Time Management
- 413 Keep Records
- 404 Computer/Technical Literacy

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	Construction
	n= 22
	%
111 MECHANICAL ABILITIES	41
108 REPAIR	33
104 AGILITY	21
107 BUILD	17
101 PHYSICAL STAMINA	14
109 FINE MOTOR COORDINATION	13
105 STRENGTH	11
102 CARRY OR LIFT	10
103 WORK IN CLOSED SPACES	8
106 MANUAL DEXTERITY	6
110 CULTIVATE PLANTS	0
112 PRODUCE HANDMADE CRAFTS	0
201 MATHEMATICAL COMPUTATION	45
204 MULTICULTURAL AWARENESS	42
202 WRITING ABILITY	39
208 ANALYTICAL SKILL	38
210 SPATIAL VISUALIZATION	27
211 DESIGN	27
203 CRITICAL THINKING ABILITY	25
207 CONDUCTING RESEARCH	22
206 ABSTRACT THINKING	21
212 EDIT	20
209 UNDERSTAND THEORETICAL CONCEPTS	15
213 GENERATE IDEAS	15
205 SCIENTIFIC ANALYSIS	13
214 DEVELOP CONCEPTS	13
215 ARTISTIC	9
315 WORKS WELL WITHIN A TEAM	43
302 PUBLIC SPEAKING	33
301 VERBAL ABILITY	33
303 MAINTAINS CONFIDENTIALITY	33
307 ATTENTIVE LISTENER	30
311 REACH GOALS	28
309 SELL A PRODUCT	27
305 EXPLAIN A CONCEPT	21
308 DELEGATE	19
313 PERSUADE	17
310 DIRECT A PROJECT	15
306 HELP OTHERS	11
312 NEGOTIATE	11
314 EVALUATE	11
304 INSTRUCT/TEACH	10
410 TIME MANAGEMENT	45
413 KEEP RECORDS	45
404 COMPUTER/TECHNICAL LITERACY	44
417 FOLLOW INSTRUCTIONS	36
409 ORGANIZED	33
412 WORK WITH COMPUTER SOFTWARE	31
411 DETAIL-ORIENTED	25
407 INTERPRET DATA	20
406 COLLECTING DATA	20
416 BUDGET	16
401 READING COMPREHENSION	14
402 MONITOR PROCESSES	12
414 FINANCIAL ANALYSIS	12
415 PROJECT MANAGEMENT	11
408 MAKE DECISIONS	9
403 PROBING	8
405 PLAN	5

The deficiency scores for the most critical job skills are plotted in the chart below. 201 Mathematical Computation and 315 Works Well Within a Team appear to need focus.



*Critical Personal Traits Needed
for Current Construction
Employees*

The table to the right shows the percentage of construction employers which identified each personal trait as being critical for its workforce.

The degree to which Construction employers found the various traits to be critical was fairly well distributed across the four categories.

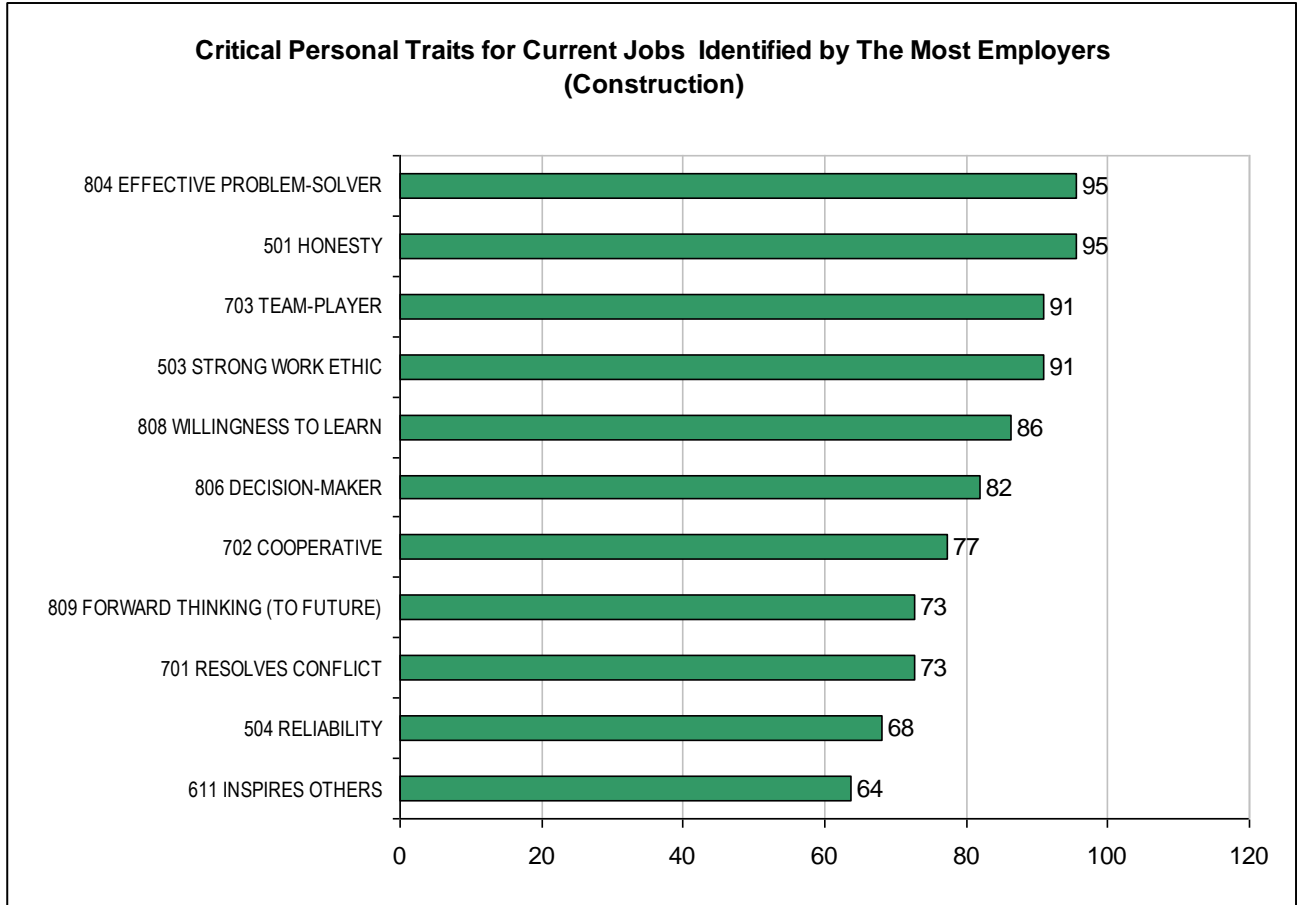
The traits in the 800 Intellectual skills group were slightly more important than those in the other three categories.

These personal traits were identified as being critical by at least 75% of the employers:

- 501 Honesty
- 503 Strong Work Ethic
- 703 Team Player
- 702 Cooperative
- 804 Effective Problem Solver
- 808 Willingness To Learn
- 806 Decision-Maker

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs		Construction
	n=	22
		%
501 HONESTY		95
503 STRONG WORK ETHIC		91
504 RELIABILITY		68
505 PROFESSIONALISM		59
506 DEDICATION		50
511 ROLE MODEL FOR OTHERS		36
507 FOCUSED ON TASK		36
508 PUNCTUAL		27
509 ADAPTABLE		27
502 METHODICAL		27
510 RESPECTFUL		14
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611 INSPIRES OTHERS		64
601 SELF CONFIDENCE		64
608 ACHIEVES GOALS		64
610 TAKE THE INITIATIVE		64
602 INDUSTRIOUS		64
605 CONTINUOUS IMPROVEMENT		59
606 AMBITIOUS		55
607 SELF MANAGEMENT		50
604 SUCCESS DRIVEN		50
603 CHALLENGE STATUS QUO		32
609 INFORMED RISK-TAKER		23
612 TENACITY		18
<hr/>		
703 TEAM-PLAYER		91
702 COOPERATIVE		77
701 RESOLVES CONFLICT		73
713 OPEN TO CONSTRUCTIVE CRITICISM		64
708 COURTEOUS		55
710 CLEARLY EXPRESSES IDEAS		45
707 SEEKS FEEDBACK		45
706 TACTFUL		45
712 LIKABLE PERSONALITY		36
711 FOSTERS COLLABORATION		27
709 PERSUASIVE		27
704 COMPASSIONATE		27
705 CARING		18
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		95
808 WILLINGNESS TO LEARN		86
806 DECISION-MAKER		82
809 FORWARD THINKING (TO FUTURE)		73
807 DEDUCTIVE REASONING		64
803 RATIONAL		55
802 INQUIRING		45
805 CREATIVITY		36
801 CURIOSITY		23

The traits identified most frequently by construction employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits Identified in Construction Employees

The table to the right shows the percentage of Construction employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

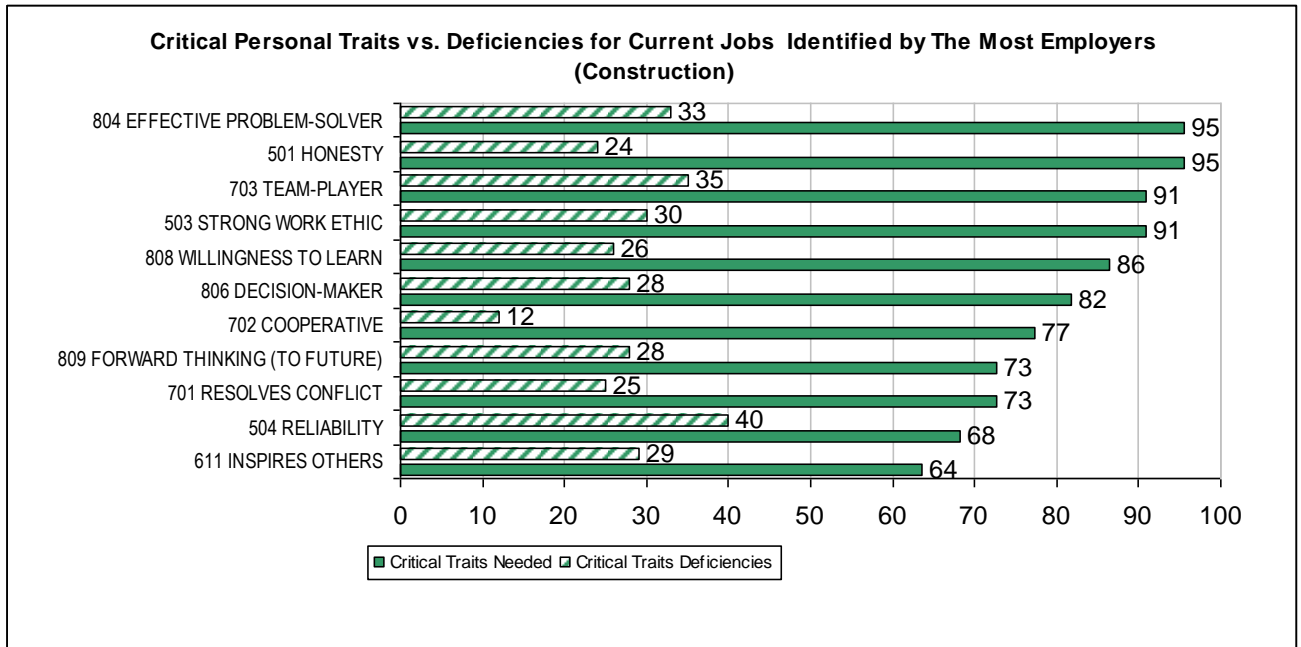
Only one trait was identified as being deficient by at least 50% of the employers:

- 507 Focused on Task

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants		Construction
(Base: Employers Needing Each Traits)		n= 22
		%
507 FOCUSED ON TASK		50
504 RELIABILITY		40
508 PUNCTUAL		33
509 ADAPTABLE		33
505 PROFESSIONALISM		31
503 STRONG WORK ETHIC		30
506 DEDICATION		27
501 HONESTY		24
511 ROLE MODEL FOR OTHERS		13
502 METHODICAL		0
510 RESPECTFUL		0
<hr/>		
605 CONTINUOUS IMPROVEMENT		46
606 AMBITIOUS		33
610 TAKE THE INITIATIVE		29
608 ACHIEVES GOALS		29
611 INSPIRES OTHERS		29
607 SELF MANAGEMENT		27
612 TENACITY		25
602 INDUSTRIOUS		21
601 SELF CONFIDENCE		21
604 SUCCESS DRIVEN		18
603 CHALLENGE STATUS QUO		14
609 INFORMED RISK-TAKER		0
<hr/>		
713 OPEN TO CONSTRUCTIVE CRITICISM		43
710 CLEARLY EXPRESSES IDEAS		40
703 TEAM-PLAYER		35
711 FOSTERS COLLABORATION		33
701 RESOLVES CONFLICT		25
709 PERSUASIVE		17
712 LIKABLE PERSONALITY		13
702 COOPERATIVE		12
708 COURTEOUS		8
706 TACTFUL		0
707 SEEKS FEEDBACK		0
704 COMPASSIONATE		0
705 CARING		0
<hr/>		
804 EFFECTIVE PROBLEM-SOLVER		33
807 DEDUCTIVE REASONING		29
809 FORWARD THINKING (TO FUTURE)		28
806 DECISION-MAKER		28
808 WILLINGNESS TO LEARN		26
805 CREATIVITY		13
803 RATIONAL		8
801 CURIOSITY		0
802 INQUIRING		0

The deficiency scores for the most critical personal traits are shown in the following graph.

The 504 Reliability trait was identified as deficient by 67% of those who indicated it was a critical trait.



Quadrant Analysis: Construction Employers

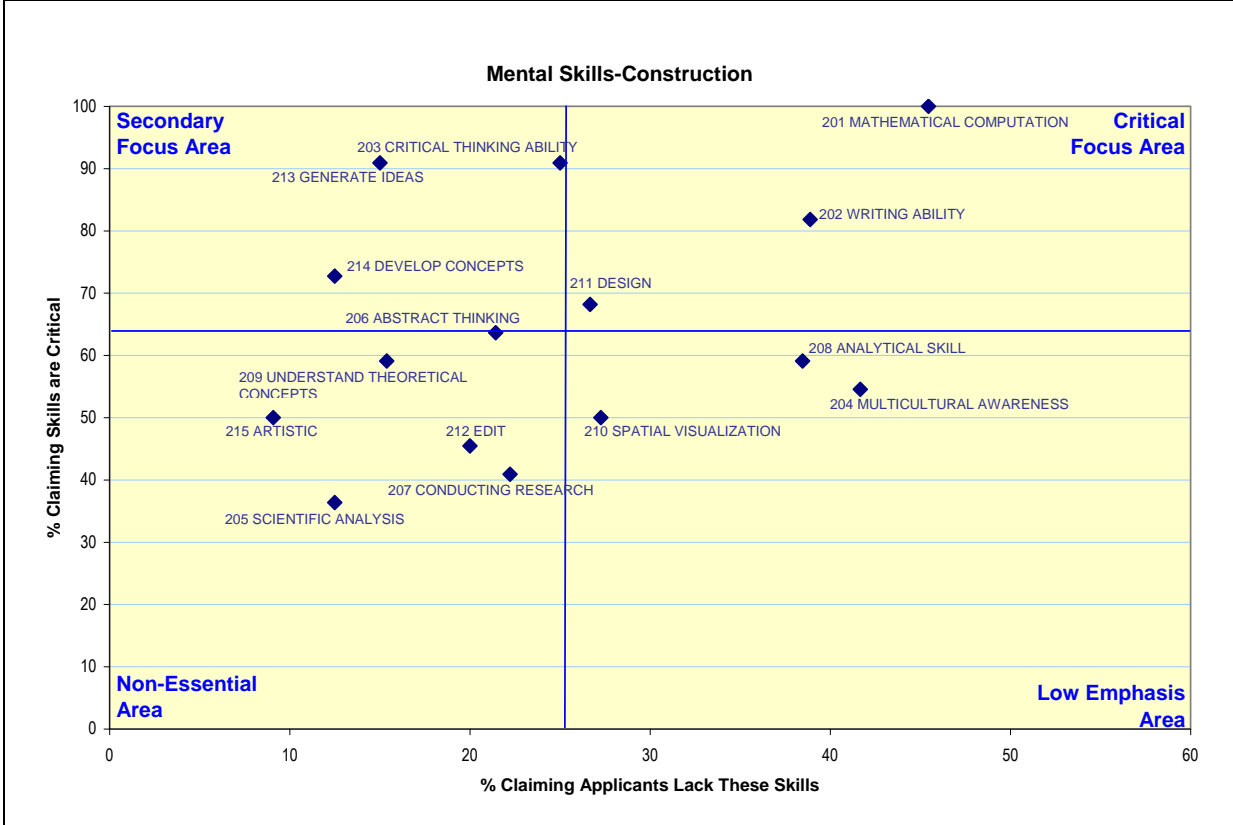
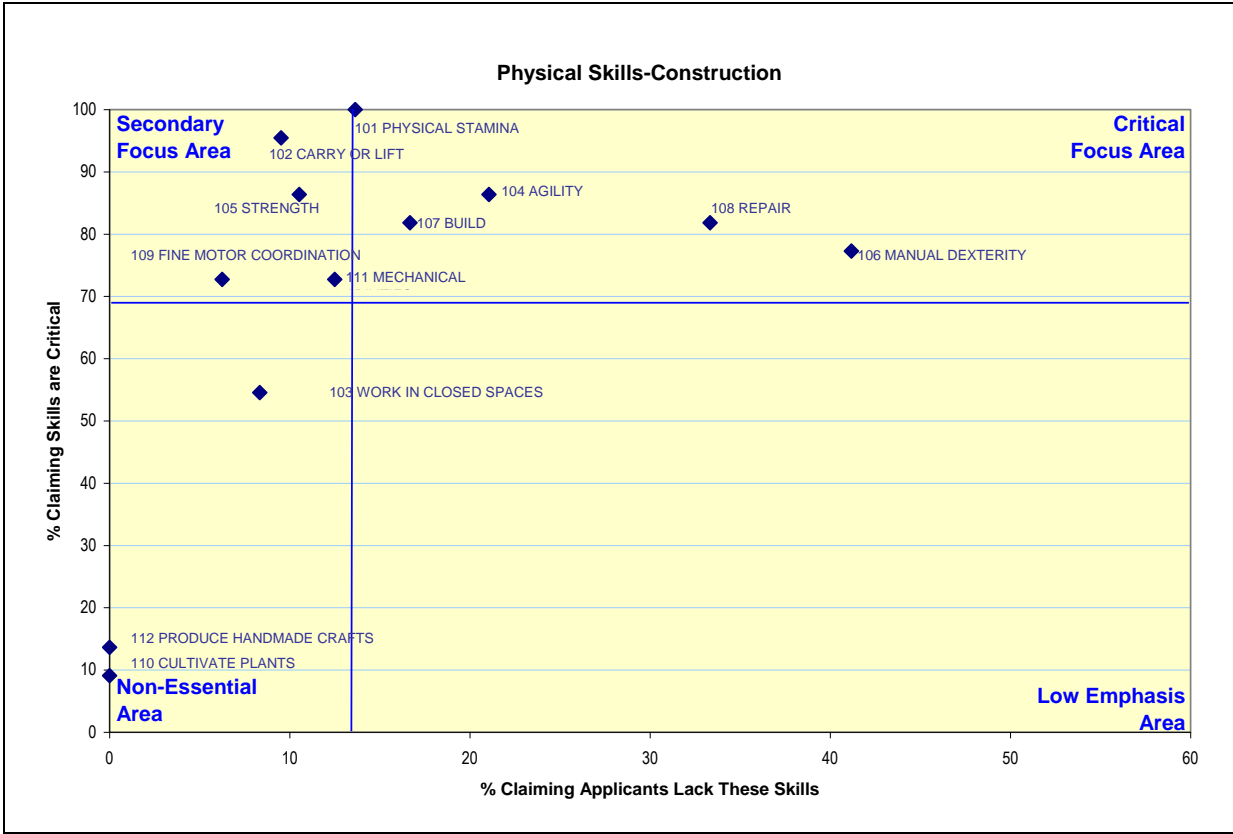
A quadrant analysis for the construction industry, for all job categories, is shown on the following four pages.

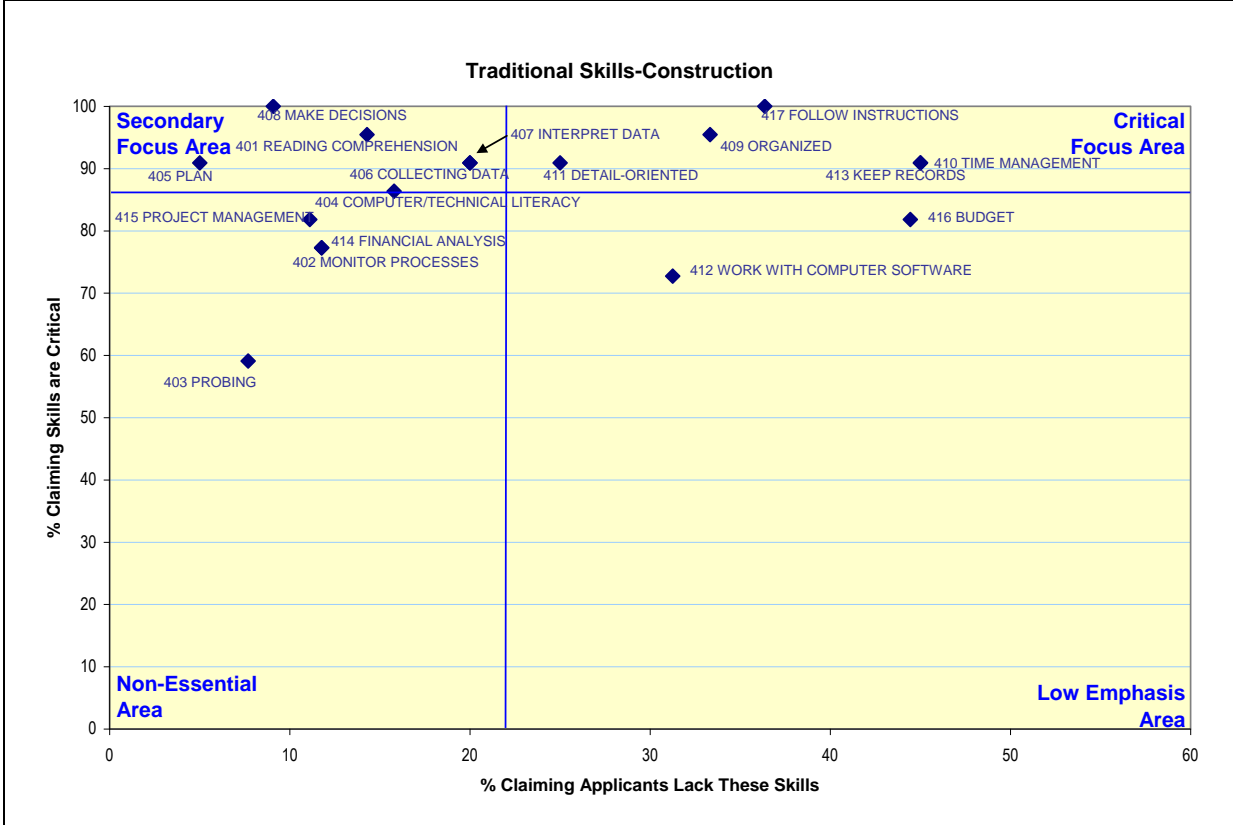
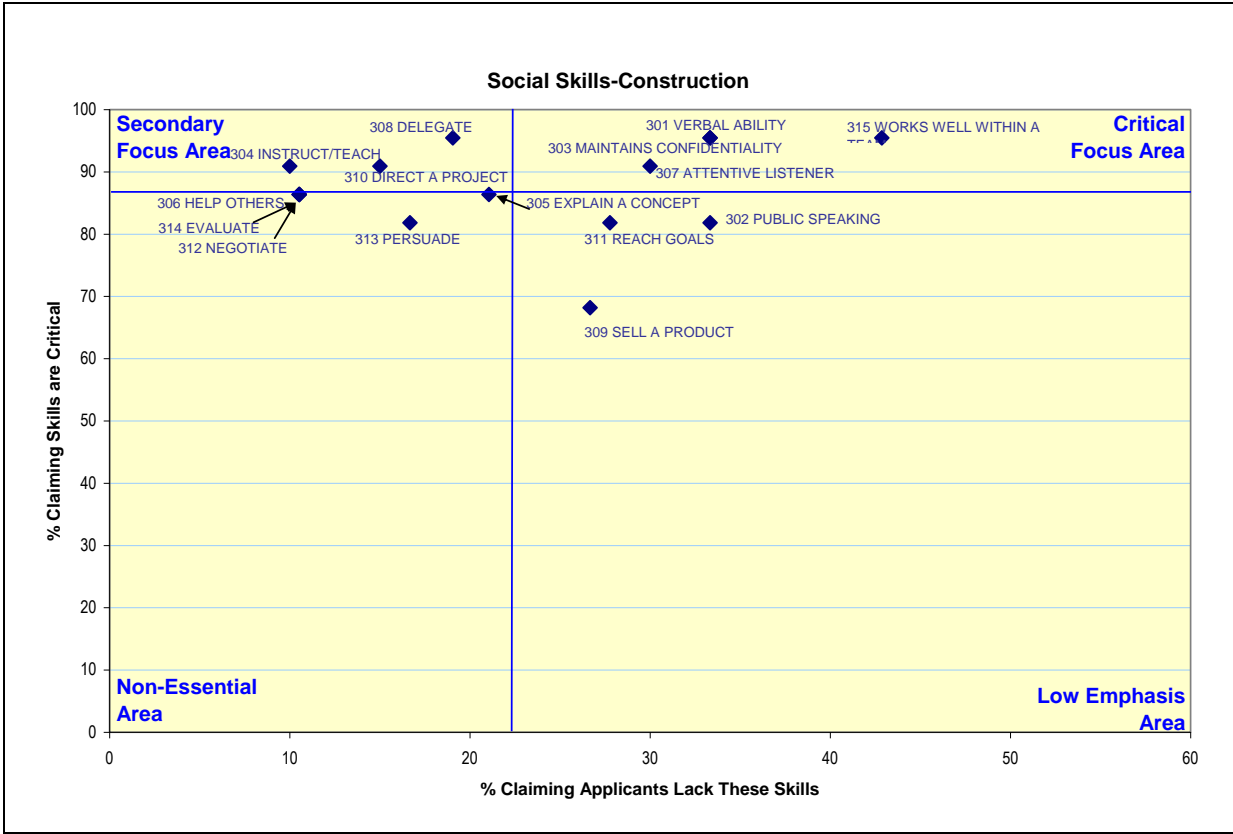
The data show that the following job skill areas are in need of attention:

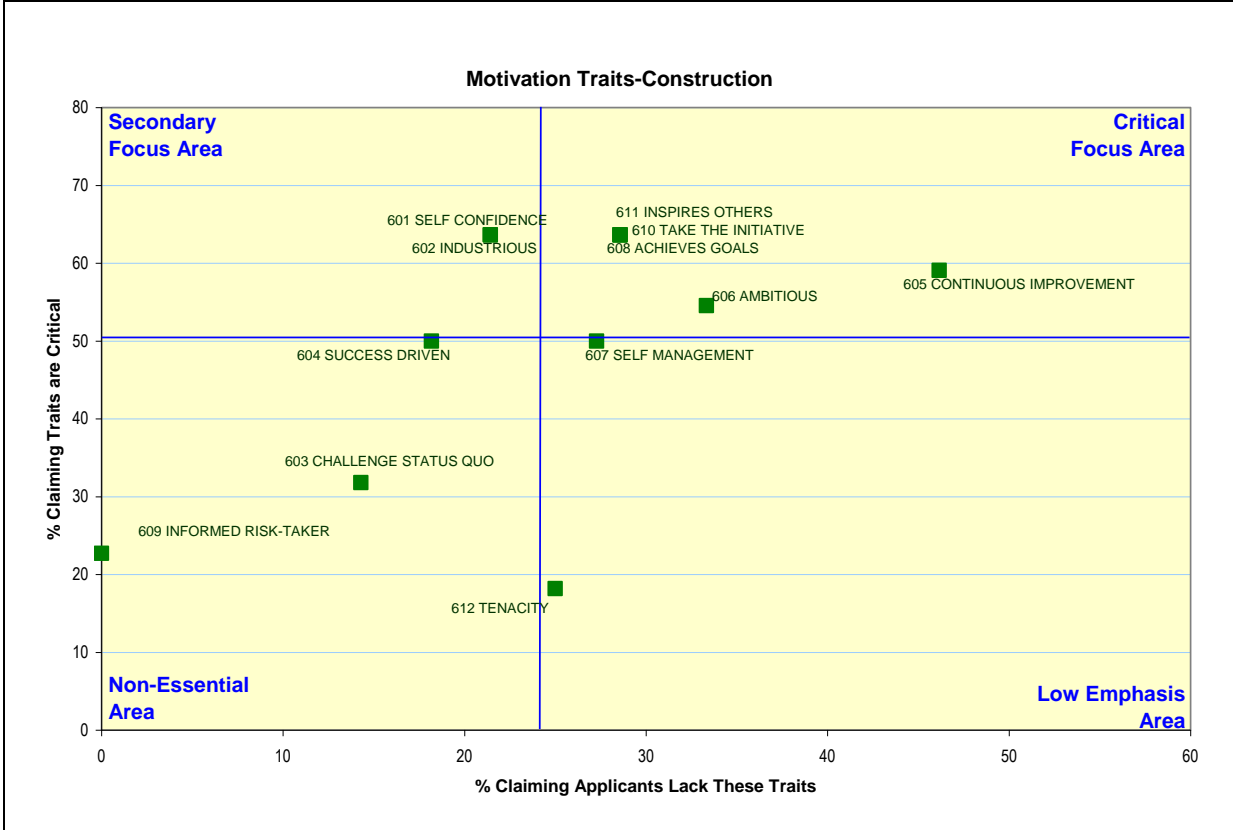
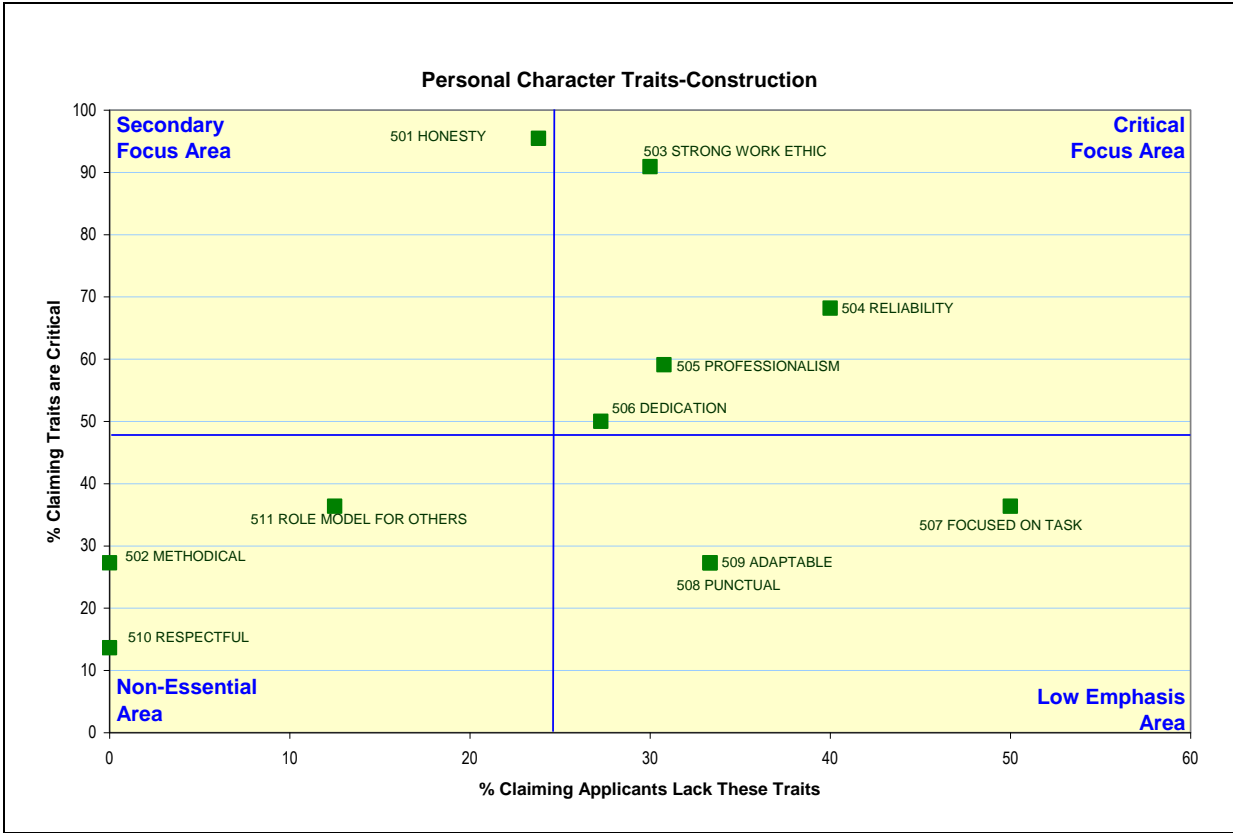
- Physical stamina and agility
- Build and repair, manual dexterity
- Mathematics and writing skills
- Listening and verbal skills
- Maintains confidentiality
- Multicultural awareness
- Teamwork
- Time management
- Record keeping, details, and organization

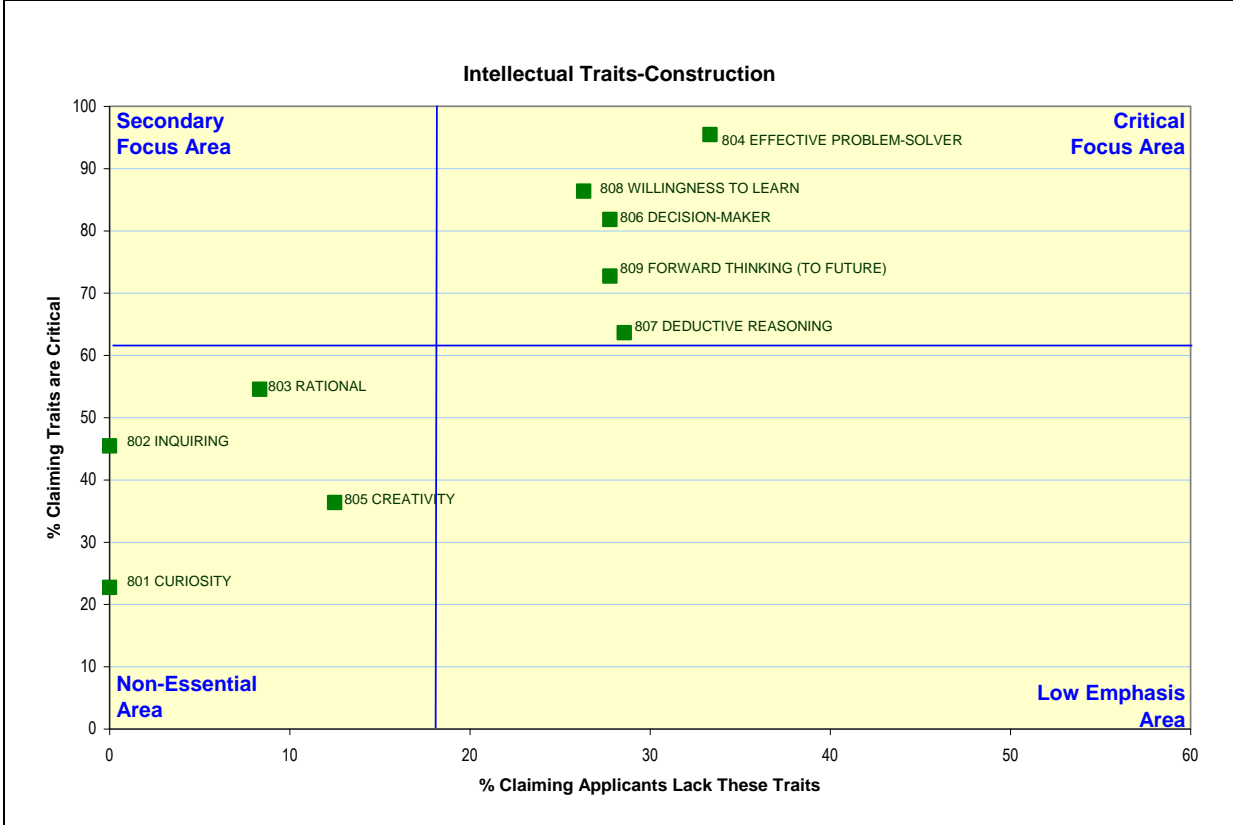
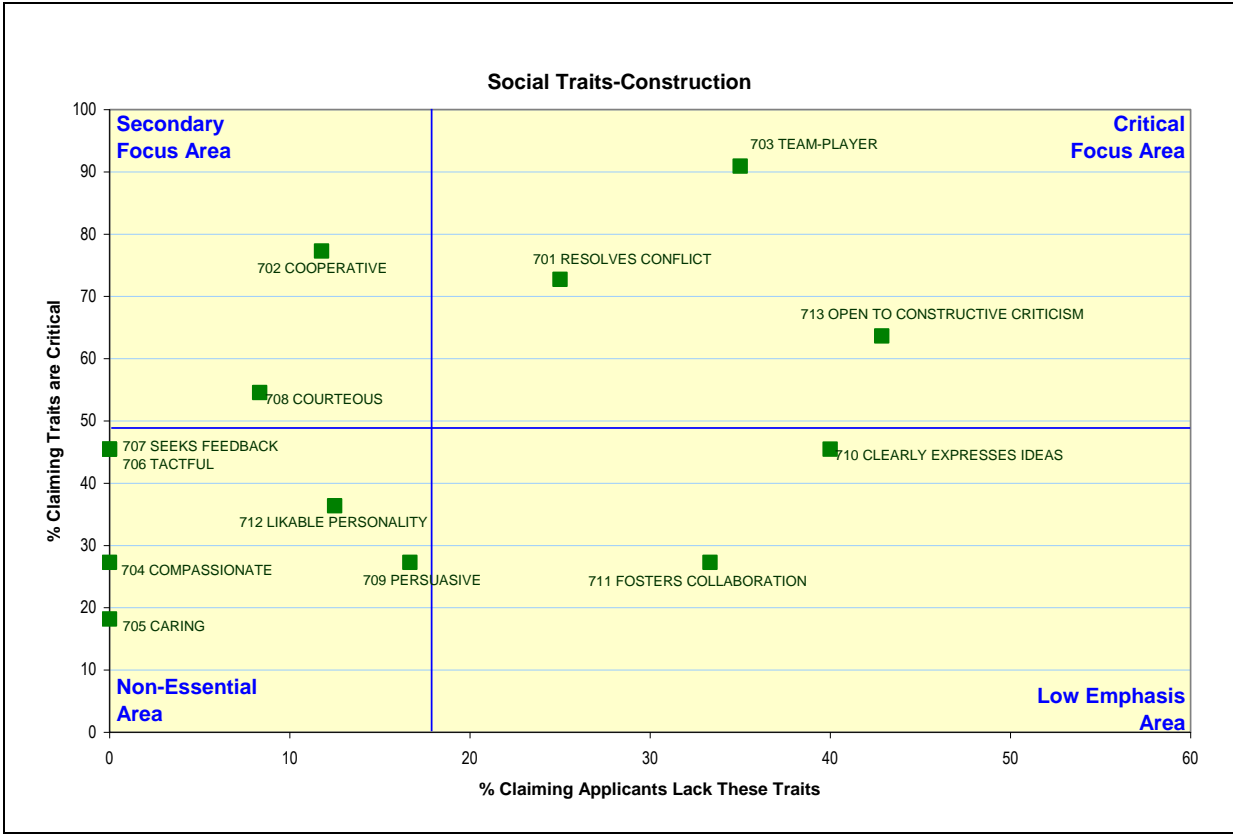
The data show that the following personal traits areas are in need of attention:

- Work ethic, reliability, and dedication
- Professionalism
- Taking initiative
- Inspiring others
- Achieving goals and ambitious
- Fostering collaboration
- Open to criticism
- Team player
- Resolving conflict
- Being an effective problem solver and deductive reasoning
- Making decisions
- Being willing to learn
- Forward thinking









Summary of Job Skills and Personal Traits Needed for Current Jobs: General Business Sector

Introduction

In this section of the report, the responses for employers in the general business category are summarized:

- Critical job skills and deficiencies
- Critical personal traits and deficiencies
- Quadrant analysis (all employees)

Critical Job Skills Needed for Current General Business Employees

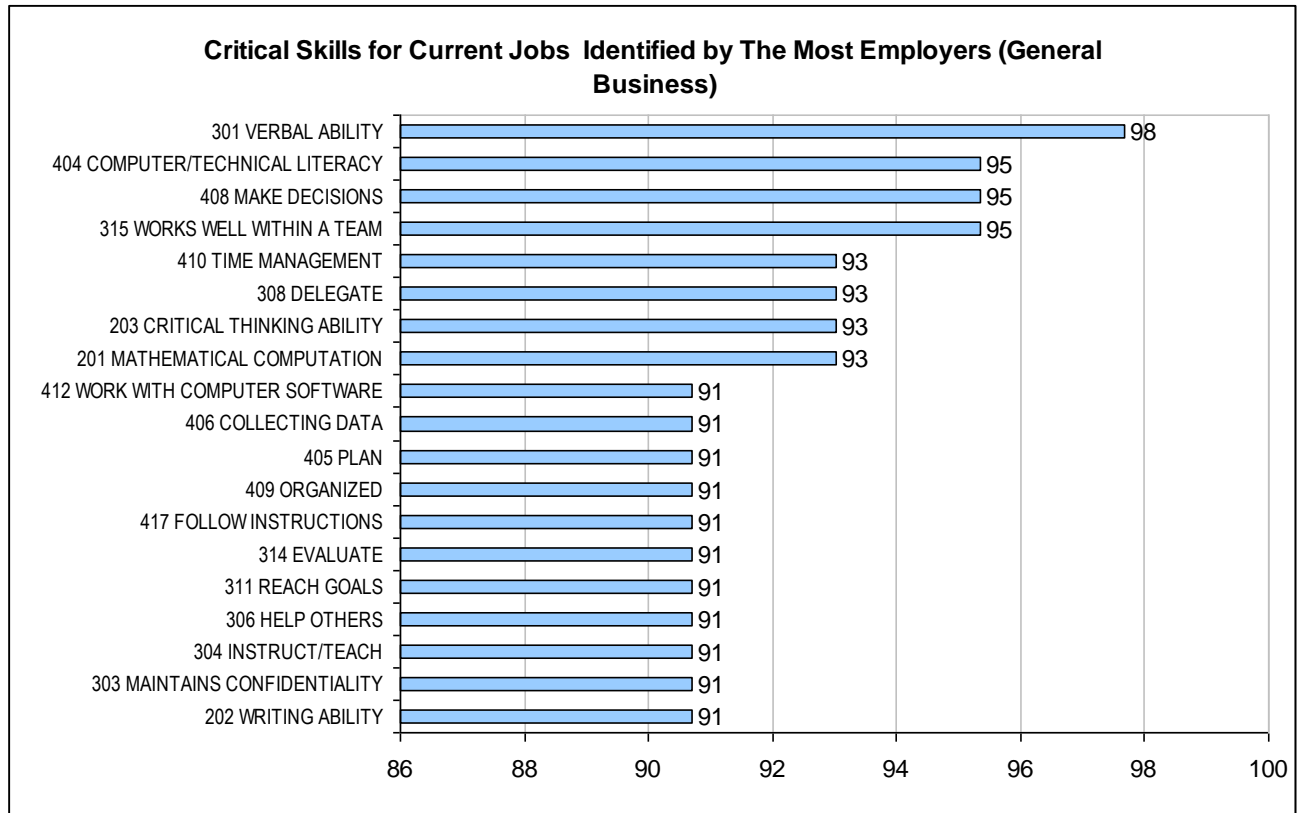
The table to the right shows the percentage of employers which identified each job skill as being critical.

Employers in the general business category, like in the other sectors reported earlier, placed more emphasis on job skills in the Social and Intellectual categories.

There were a total of 19 job skills that were rated as critical by over 90% of the employers.

Skills Identified (By % of Employers) as Being Critical for Current Jobs	General Business
	n= 43
	%
101 PHYSICAL STAMINA	67
102 CARRY OR LIFT	58
105 STRENGTH	49
103 WORK IN CLOSED SPACES	47
108 REPAIR	44
111 MECHANICAL ABILITIES	44
109 FINE MOTOR COORDINATION	42
106 MANUAL DEXTERITY	40
104 AGILITY	35
107 BUILD	35
112 PRODUCE HANDMADE CRAFTS	14
110 CULTIVATE PLANTS	12
201 MATHEMATICAL COMPUTATION	93
203 CRITICAL THINKING ABILITY	93
202 WRITING ABILITY	91
213 GENERATE IDEAS	88
214 DEVELOP CONCEPTS	79
206 ABSTRACT THINKING	79
208 ANALYTICAL SKILL	79
204 MULTICULTURAL AWARENESS	72
207 CONDUCTING RESEARCH	60
209 UNDERSTAND THEORETICAL CONCEPTS	58
212 EDIT	49
211 DESIGN	47
210 SPATIAL VISUALIZATION	44
205 SCIENTIFIC ANALYSIS	42
215 ARTISTIC	40
301 VERBAL ABILITY	98
315 WORKS WELL WITHIN A TEAM	95
308 DELEGATE	93
303 MAINTAINS CONFIDENTIALITY	91
304 INSTRUCT/TEACH	91
306 HELP OTHERS	91
311 REACH GOALS	91
314 EVALUATE	91
305 EXPLAIN A CONCEPT	88
312 NEGOTIATE	88
307 ATTENTIVE LISTENER	86
310 DIRECT A PROJECT	86
302 PUBLIC SPEAKING	84
313 PERSUADE	84
309 SELL A PRODUCT	74
408 MAKE DECISIONS	95
404 COMPUTER/TECHNICAL LITERACY	95
410 TIME MANAGEMENT	93
417 FOLLOW INSTRUCTIONS	91
409 ORGANIZED	91
405 PLAN	91
406 COLLECTING DATA	91
412 WORK WITH COMPUTER SOFTWARE	91
401 READING COMPREHENSION	88
407 INTERPRET DATA	88
413 KEEP RECORDS	88
414 FINANCIAL ANALYSIS	88
402 MONITOR PROCESSES	88
416 BUDGET	86
411 DETAIL-ORIENTED	84
415 PROJECT MANAGEMENT	81
403 PROBING	65

The job skills most frequently indicated as being critical are shown in the chart below. Note that most of the job skills listed are from the Social and Traditional skills categories. Just three are from the Mental category and none are from the Physical skills category.



Deficiencies in Job Skills
Identified in General Business
Employees

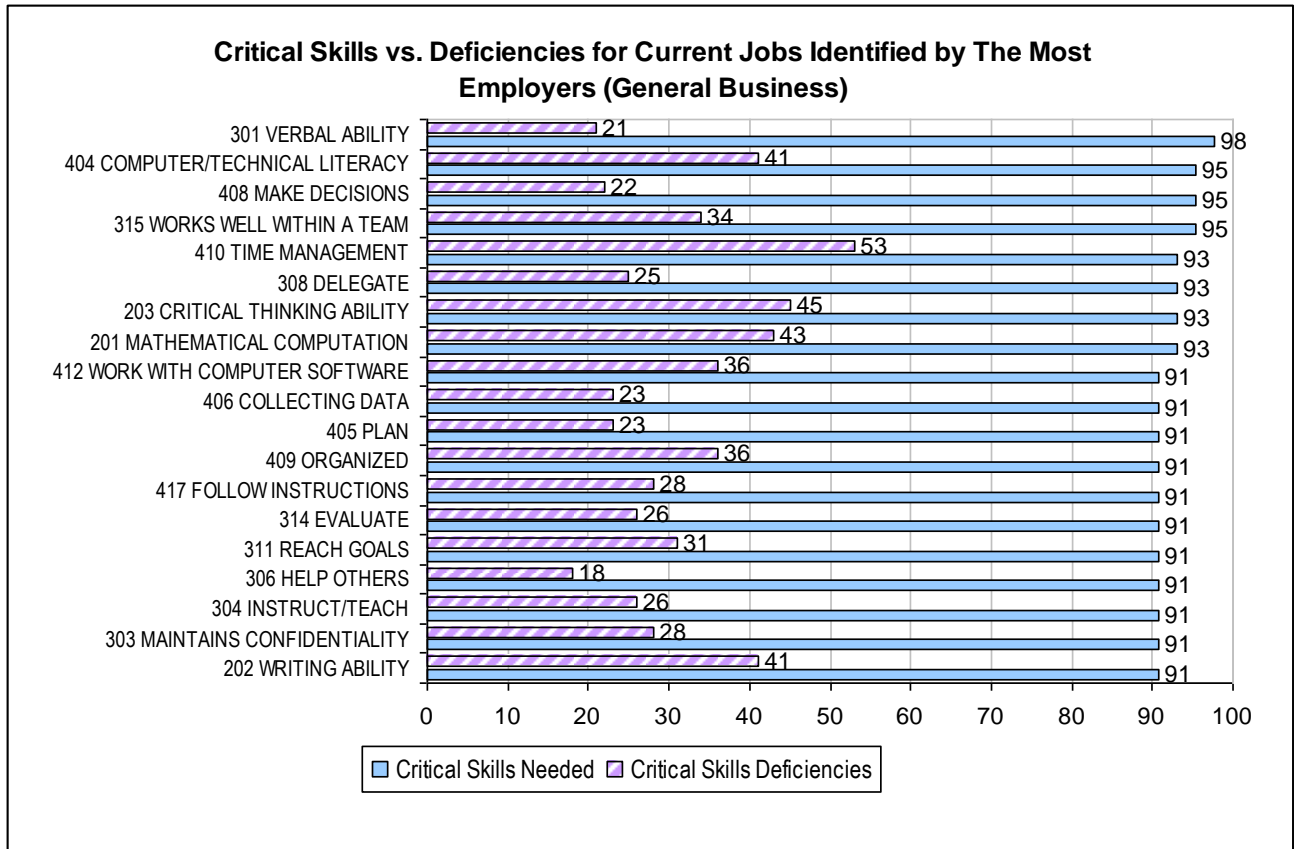
The table to the right shows the percentage of general business employers who indicated that they observed deficiencies in each job skill among employees and applicants.

One job skill was identified by more than 50% of the employers as one that was deficient in employees and applicants:

- 410 Time Management

Skills Identified (By % of Employers) as Being Deficient in Employees and Applicants (Base: Employers Needing Each Skill)	General Business
	n= 43
	%
101 PHYSICAL STAMINA	48
111 MECHANICAL ABILITIES	47
110 CULTIVATE PLANTS	40
105 STRENGTH	38
102 CARRY OR LIFT	36
106 MANUAL DEXTERITY	35
108 REPAIR	32
104 AGILITY	27
103 WORK IN CLOSED SPACES	25
109 FINE MOTOR COORDINATION	22
107 BUILD	20
112 PRODUCE HANDMADE CRAFTS	17
203 CRITICAL THINKING ABILITY	45
201 MATHEMATICAL COMPUTATION	43
202 WRITING ABILITY	41
213 GENERATE IDEAS	39
204 MULTICULTURAL AWARENESS	35
215 ARTISTIC	29
208 ANALYTICAL SKILL	26
210 SPATIAL VISUALIZATION	26
214 DEVELOP CONCEPTS	24
206 ABSTRACT THINKING	24
207 CONDUCTING RESEARCH	23
205 SCIENTIFIC ANALYSIS	17
211 DESIGN	15
212 EDIT	14
209 UNDERSTAND THEORETICAL CONCEPTS	12
315 WORKS WELL WITHIN A TEAM	34
311 REACH GOALS	31
302 PUBLIC SPEAKING	31
303 MAINTAINS CONFIDENTIALITY	28
309 SELL A PRODUCT	28
307 ATTENTIVE LISTENER	27
304 INSTRUCT/TEACH	26
314 EVALUATE	26
308 DELEGATE	25
305 EXPLAIN A CONCEPT	24
310 DIRECT A PROJECT	22
301 VERBAL ABILITY	21
306 HELP OTHERS	18
313 PERSUADE	17
312 NEGOTIATE	13
410 TIME MANAGEMENT	53
404 COMPUTER/TECHNICAL LITERACY	41
412 WORK WITH COMPUTER SOFTWARE	36
409 ORGANIZED	36
413 KEEP RECORDS	34
411 DETAIL-ORIENTED	33
407 INTERPRET DATA	29
415 PROJECT MANAGEMENT	29
417 FOLLOW INSTRUCTIONS	28
402 MONITOR PROCESSES	26
416 BUDGET	24
406 COLLECTING DATA	23
405 PLAN	23
408 MAKE DECISIONS	22
403 PROBING	21
401 READING COMPREHENSION	18
414 FINANCIAL ANALYSIS	18

The deficiency scores for the most critical job skills are plotted in the chart below. A total of eight of these job skills were rated as deficient by more than 33% of the employers.



*Critical Personal Traits Needed
for Current General Business
Employees*

The table to the right shows the percentage of general business employers which identified each personal trait as being critical for its workforce.

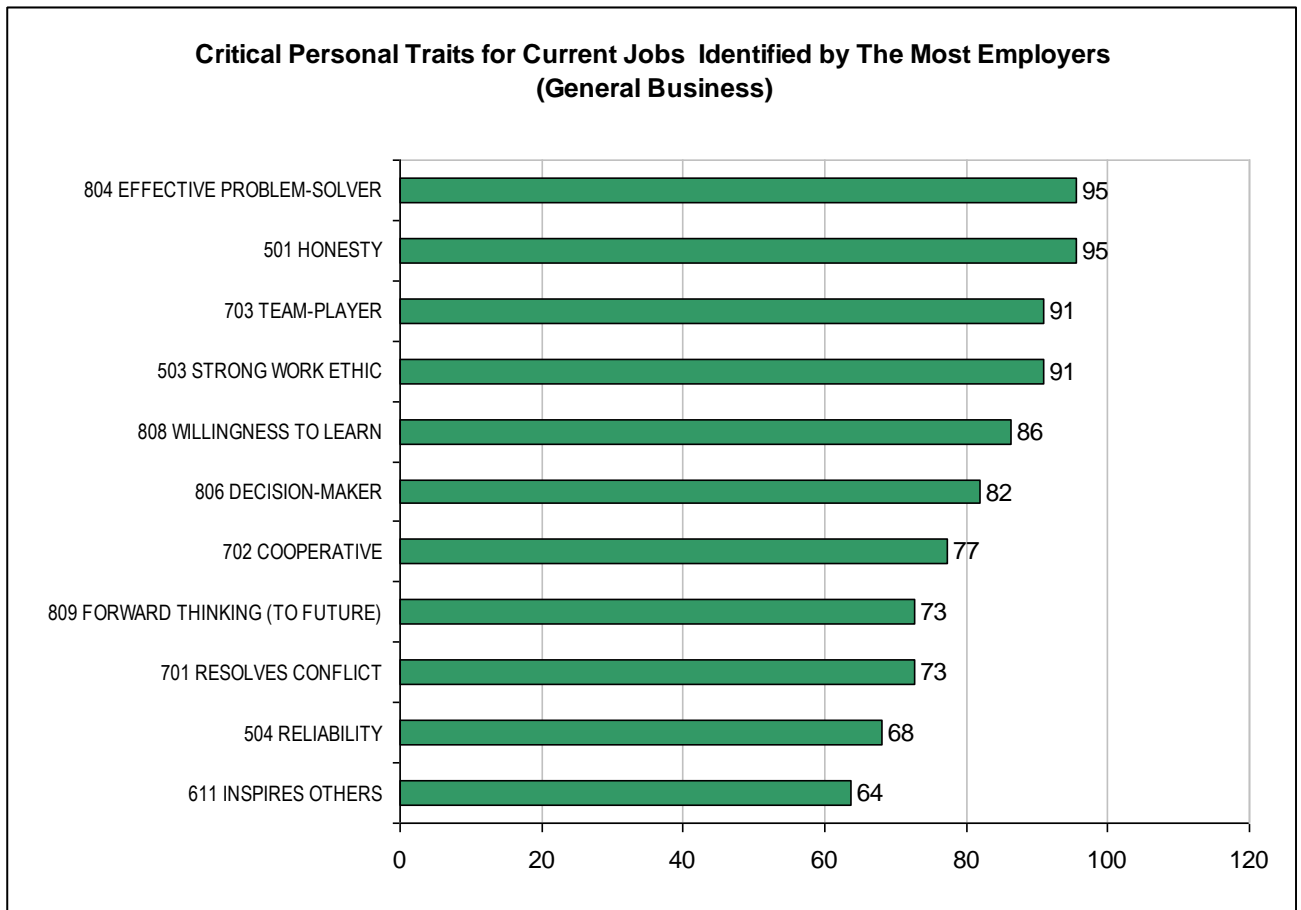
As with the other three industry groupings, general business employers were likely to identify the traits in the 800 Intellectual skills group as critical more frequently than traits in the other three categories.

Seven personal traits were identified as being critical by at least 75% of the employers:

- 804 Effective Problem-Solver
- 808 Willingness to Learn
- 806 Decision Maker
- 703 Team Player
- 702 Cooperative
- 501 Honesty
- 503 Strong Work Ethic

Personal Traits Identified (By % of Employers) as Being Critical for Current Jobs	General Business
	n= 43
	%
501 HONESTY	95
503 STRONG WORK ETHIC	91
504 RELIABILITY	68
505 PROFESSIONALISM	59
506 DEDICATION	50
511 ROLE MODEL FOR OTHERS	36
507 FOCUSED ON TASK	36
508 PUNCTUAL	27
509 ADAPTABLE	27
502 METHODICAL	27
510 RESPECTFUL	14
611 INSPIRES OTHERS	64
601 SELF CONFIDENCE	64
608 ACHIEVES GOALS	64
610 TAKE THE INITIATIVE	64
602 INDUSTRIOUS	64
605 CONTINUOUS IMPROVEMENT	59
606 AMBITIOUS	55
607 SELF MANAGEMENT	50
604 SUCCESS DRIVEN	50
603 CHALLENGE STATUS QUO	32
609 INFORMED RISK-TAKER	23
612 TENACITY	18
703 TEAM-PLAYER	91
702 COOPERATIVE	77
701 RESOLVES CONFLICT	73
713 OPEN TO CONSTRUCTIVE CRITICISM	64
708 COURTEOUS	55
710 CLEARLY EXPRESSES IDEAS	45
707 SEEKS FEEDBACK	45
706 TACTFUL	45
712 LIKABLE PERSONALITY	36
711 FOSTERS COLLABORATION	27
709 PERSUASIVE	27
704 COMPASSIONATE	27
705 CARING	18
804 EFFECTIVE PROBLEM-SOLVER	95
808 WILLINGNESS TO LEARN	86
806 DECISION-MAKER	82
809 FORWARD THINKING (TO FUTURE)	73
807 DEDUCTIVE REASONING	64
803 RATIONAL	55
802 INQUIRING	45
805 CREATIVITY	36
801 CURIOSITY	23

The eleven traits identified most frequently by general business employers as being critical for their current employees are shown in the chart below.



Deficiencies in Personal Traits Identified in General Business Employees

The table to the right shows the percentage of general business employers who indicated that they observed deficiencies in each personal trait among employees and applicants.

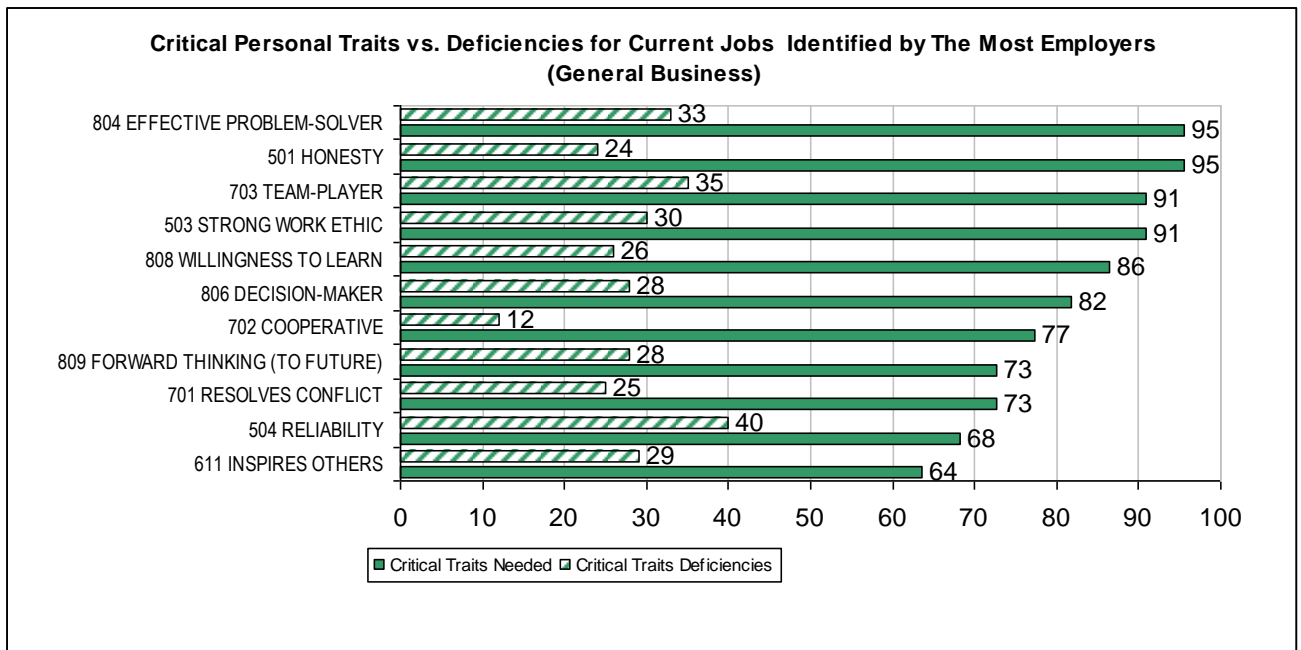
One trait was identified by 50% of the employers as being deficient:

- 507 Focused on Task

Traits Identified (By % of Employers) as Being Deficient in Employees and Applicants		<u>General Business</u>
(Base: Employers Needing Each Traits)	n=	43
		%
507 FOCUSED ON TASK		50
504 RELIABILITY		40
508 PUNCTUAL		33
509 ADAPTABLE		33
505 PROFESSIONALISM		31
503 STRONG WORK ETHIC		30
506 DEDICATION		27
501 HONESTY		24
511 ROLE MODEL FOR OTHERS		13
502 METHODICAL		0
510 RESPECTFUL		0
605 CONTINUOUS IMPROVEMENT		46
606 AMBITIOUS		33
610 TAKE THE INITIATIVE		29
608 ACHIEVES GOALS		29
611 INSPIRES OTHERS		29
607 SELF MANAGEMENT		27
612 TENACITY		25
602 INDUSTRIOUS		21
601 SELF CONFIDENCE		21
604 SUCCESS DRIVEN		18
603 CHALLENGE STATUS QUO		14
609 INFORMED RISK-TAKER		0
713 OPEN TO CONSTRUCTIVE CRITICISM		43
710 CLEARLY EXPRESSES IDEAS		40
703 TEAM-PLAYER		35
711 FOSTERS COLLABORATION		33
701 RESOLVES CONFLICT		25
709 PERSUASIVE		17
712 LIKABLE PERSONALITY		13
702 COOPERATIVE		12
708 COURTEOUS		8
706 TACTFUL		0
707 SEEKS FEEDBACK		0
704 COMPASSIONATE		0
705 CARING		0
804 EFFECTIVE PROBLEM-SOLVER		33
807 DEDUCTIVE REASONING		29
809 FORWARD THINKING (TO FUTURE)		28
806 DECISION-MAKER		28
808 WILLINGNESS TO LEARN		26
805 CREATIVITY		13
803 RATIONAL		8
801 CURIOSITY		0
802 INQUIRING		0

The deficiency scores for the most critical personal traits are shown in the following graph. Four of the traits have relatively high percentages of employers which identified the traits as being deficient in the workforce.

A relatively high percentage of those who said the 504 Reliability trait was critical also indicated that it was deficient among its workforce.



Quadrant Analysis: General Business Employers

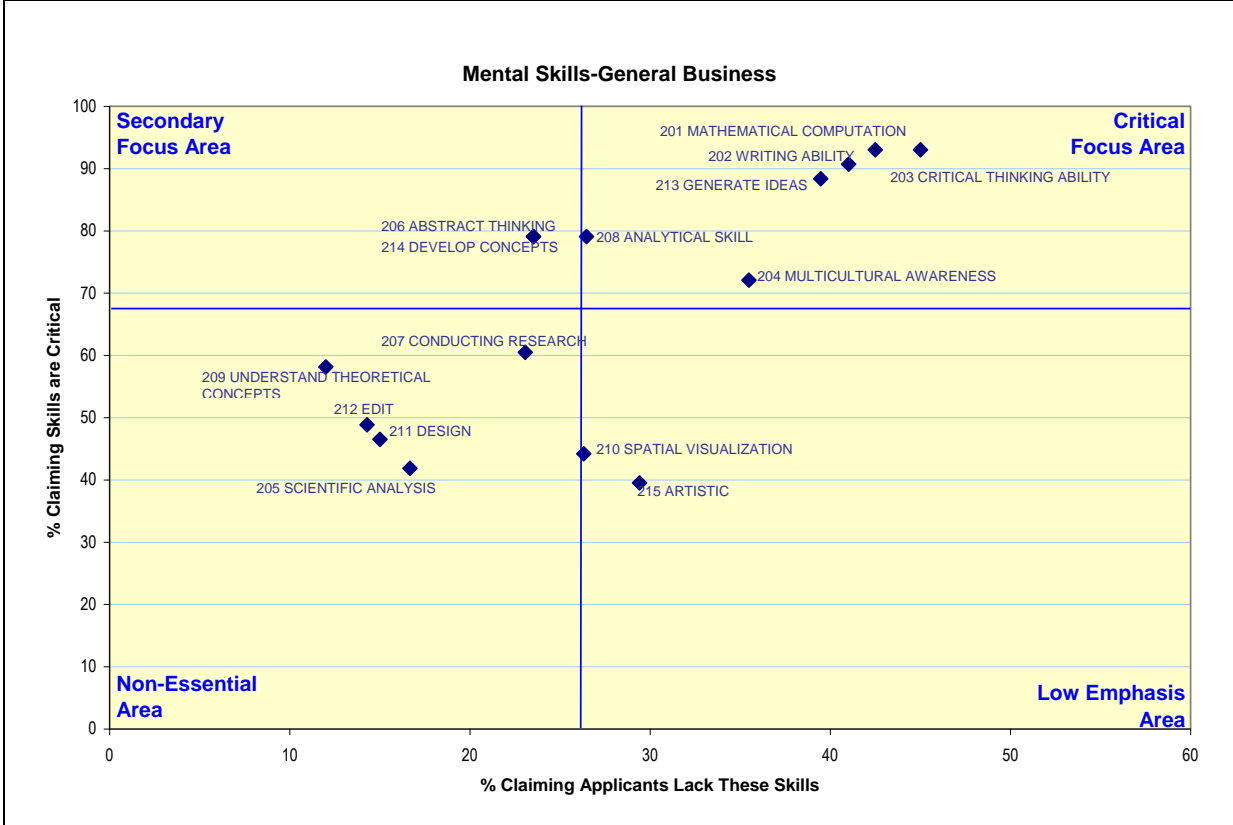
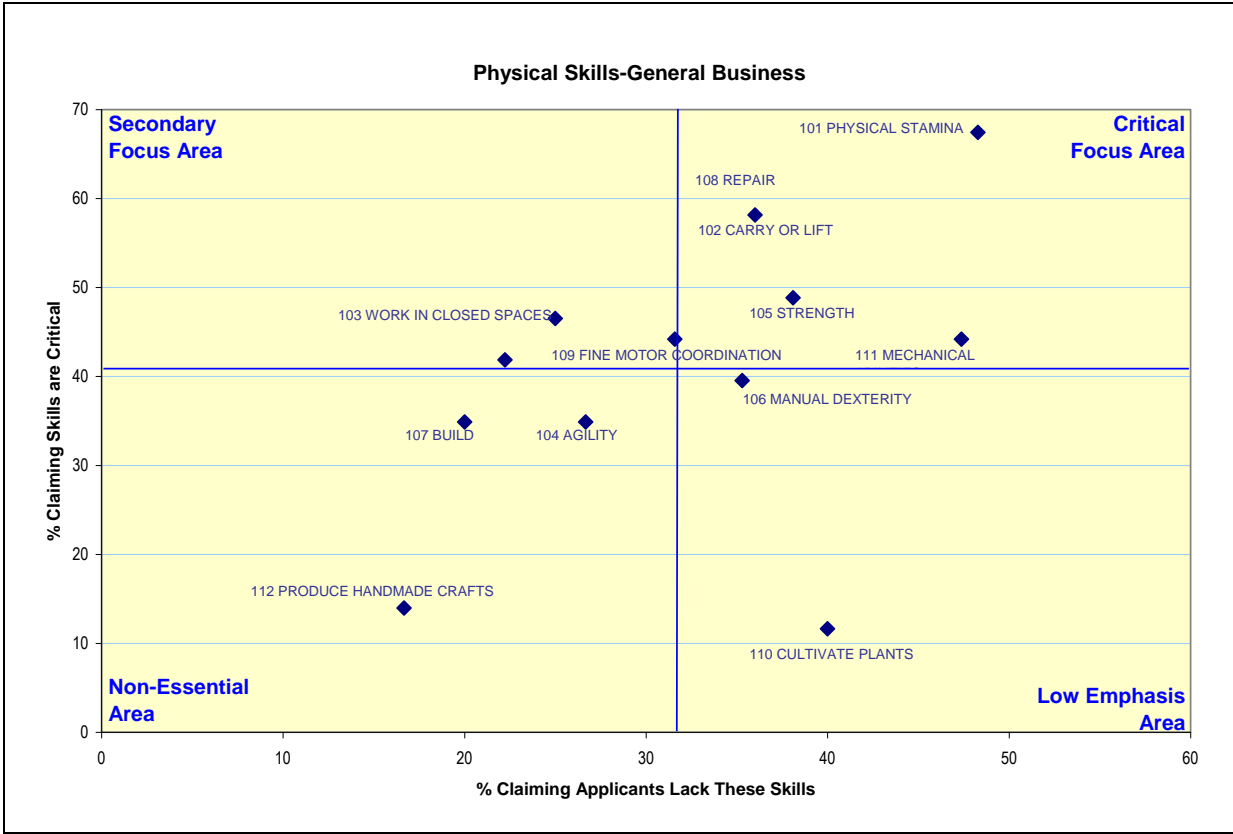
A quadrant analysis for the healthcare sector, for all job categories, is shown on the following four pages.

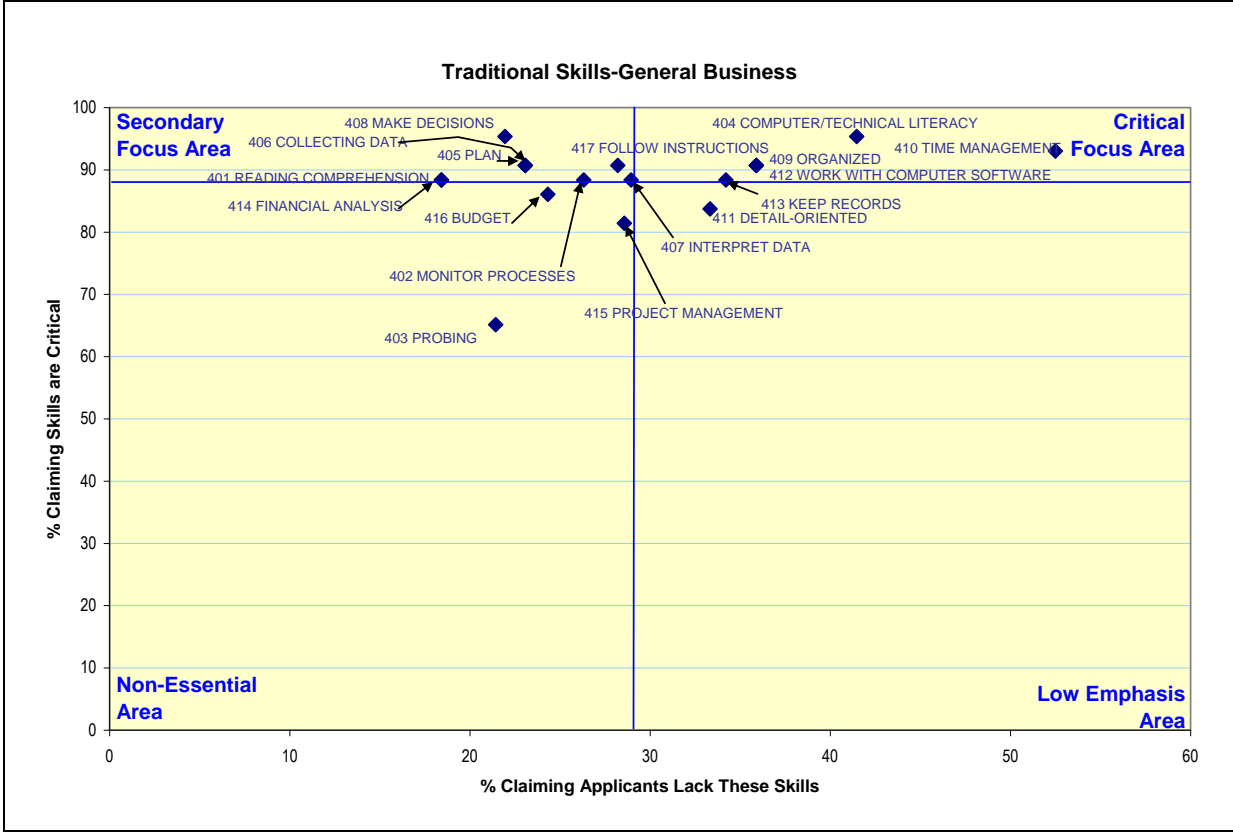
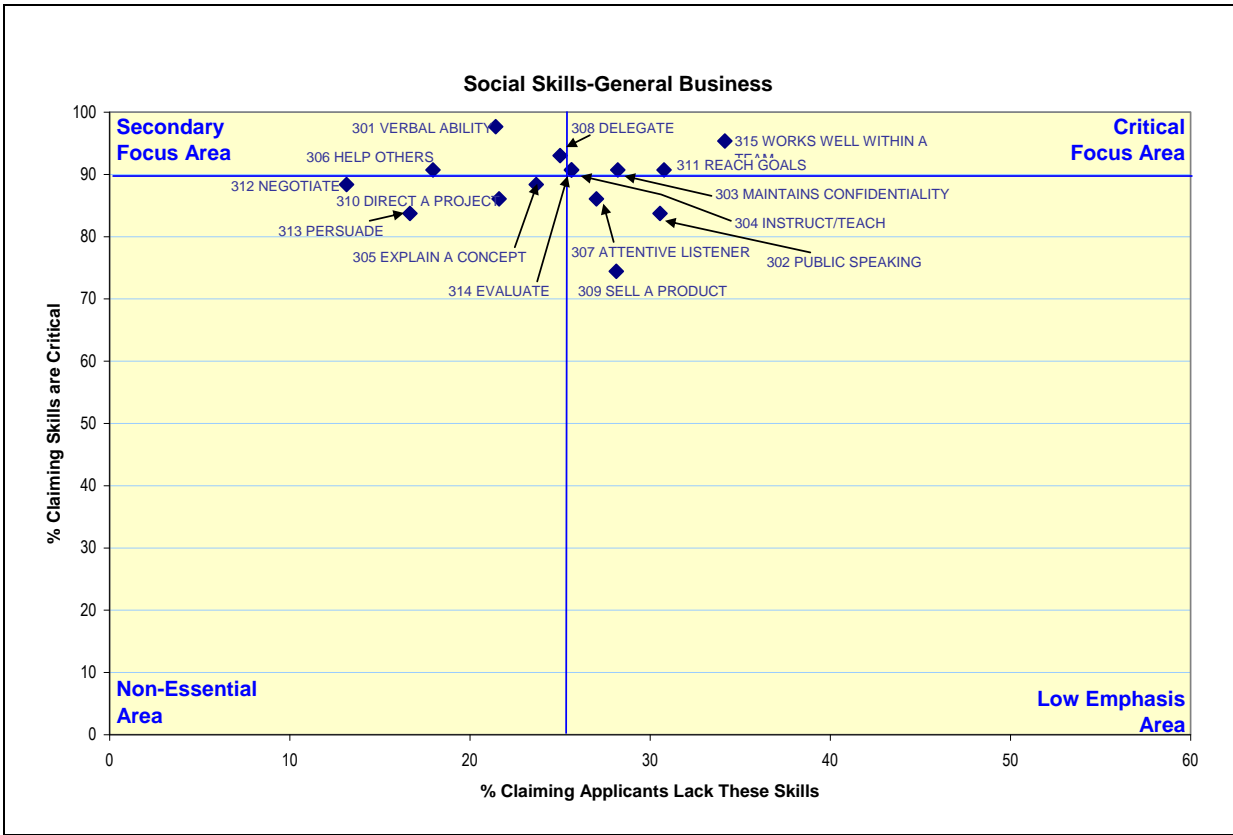
The data show that the following job skill areas are in need of attention:

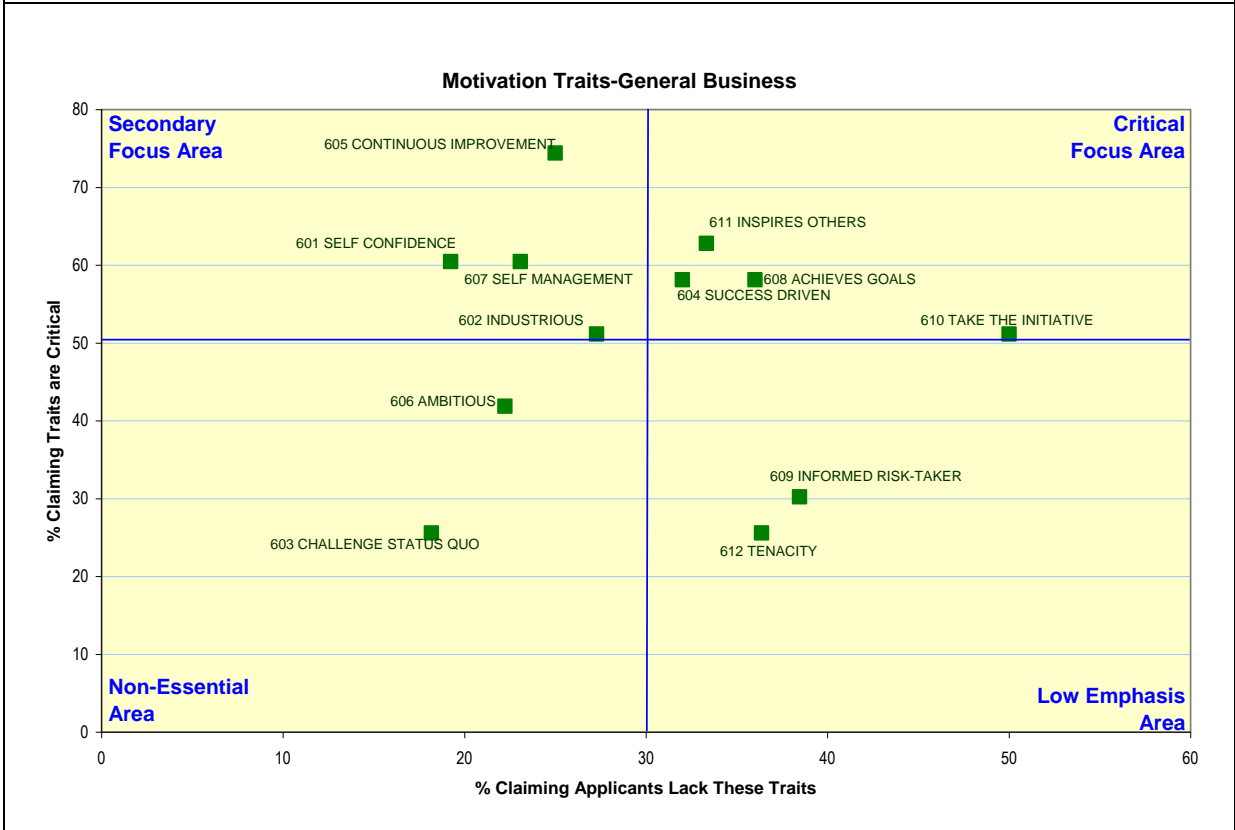
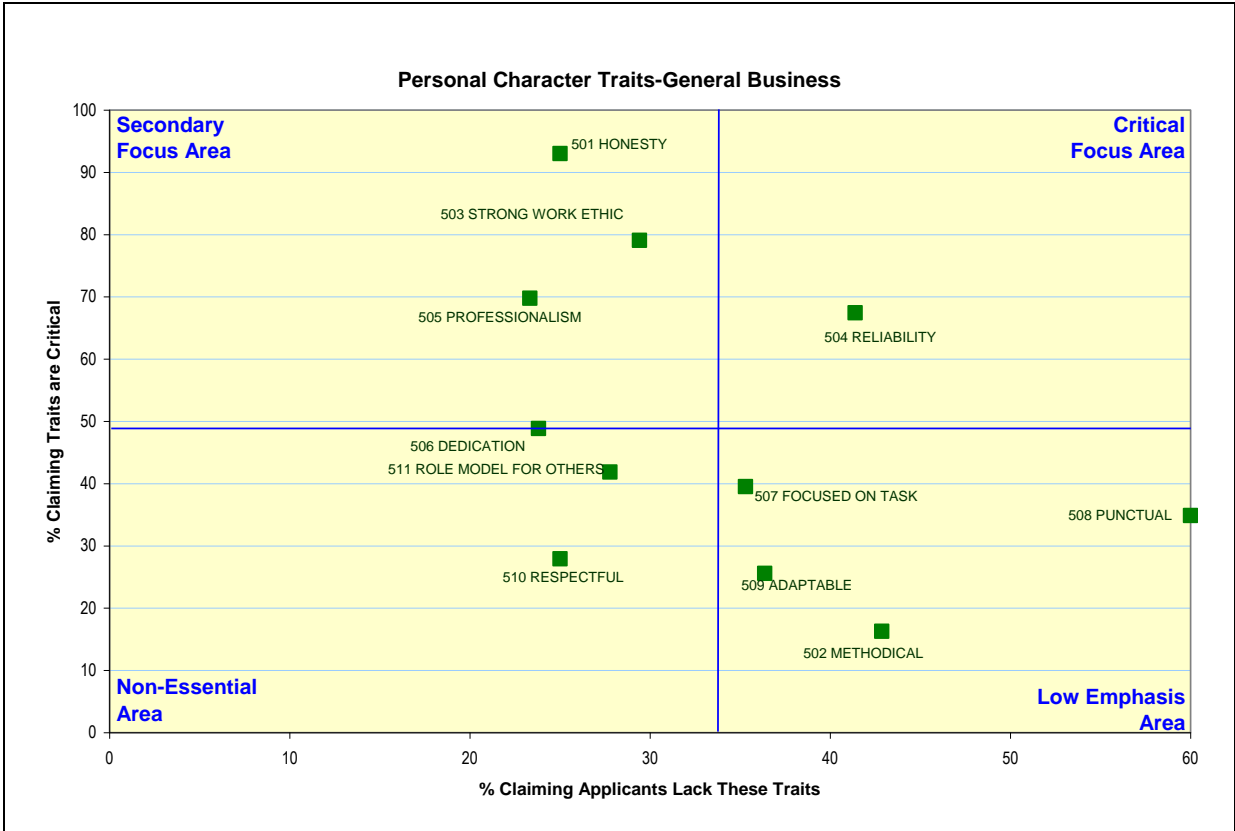
- Stamina, strength, able to carry and lift
- Mechanical and repair abilities
- Mathematics and writing skills
- Analytical, critical thinking, and ideation skills
- Multicultural awareness
- Work well with a team
- Organized and time management
- Computer and technical skills

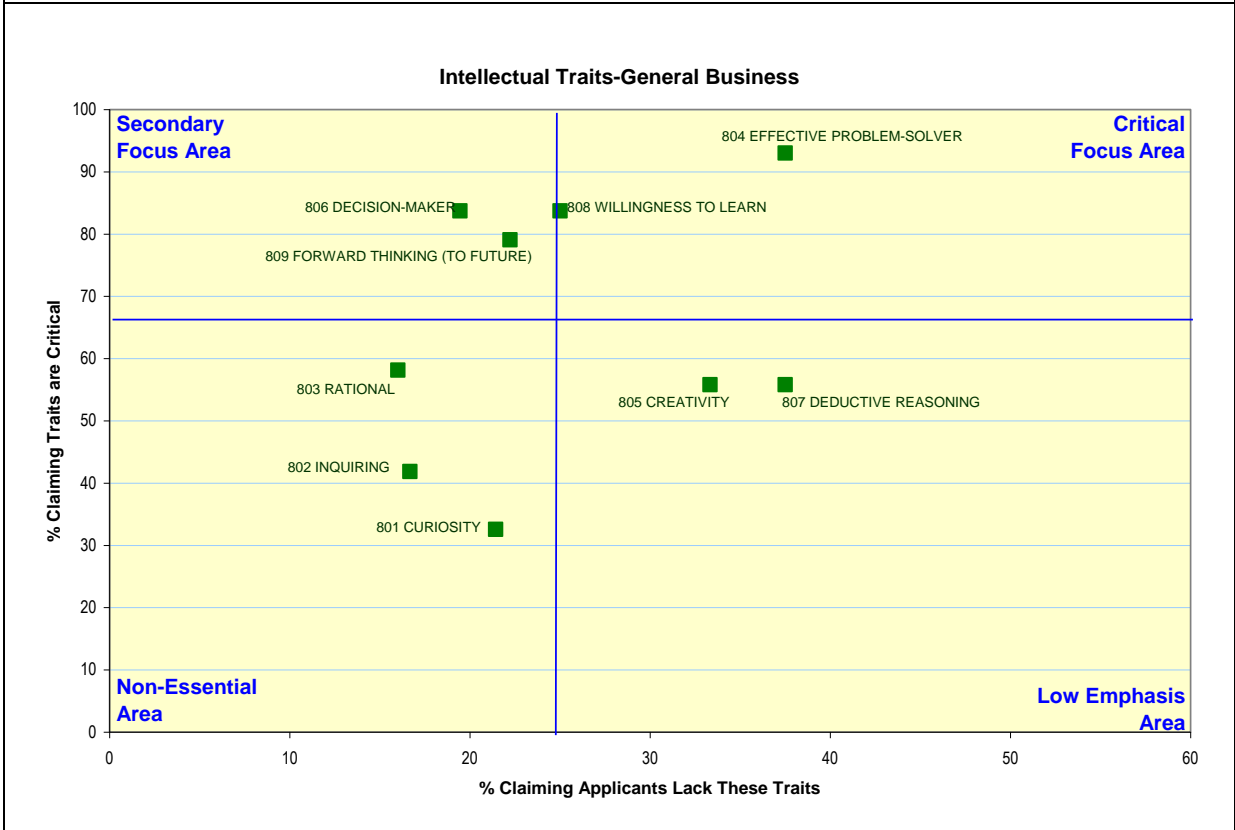
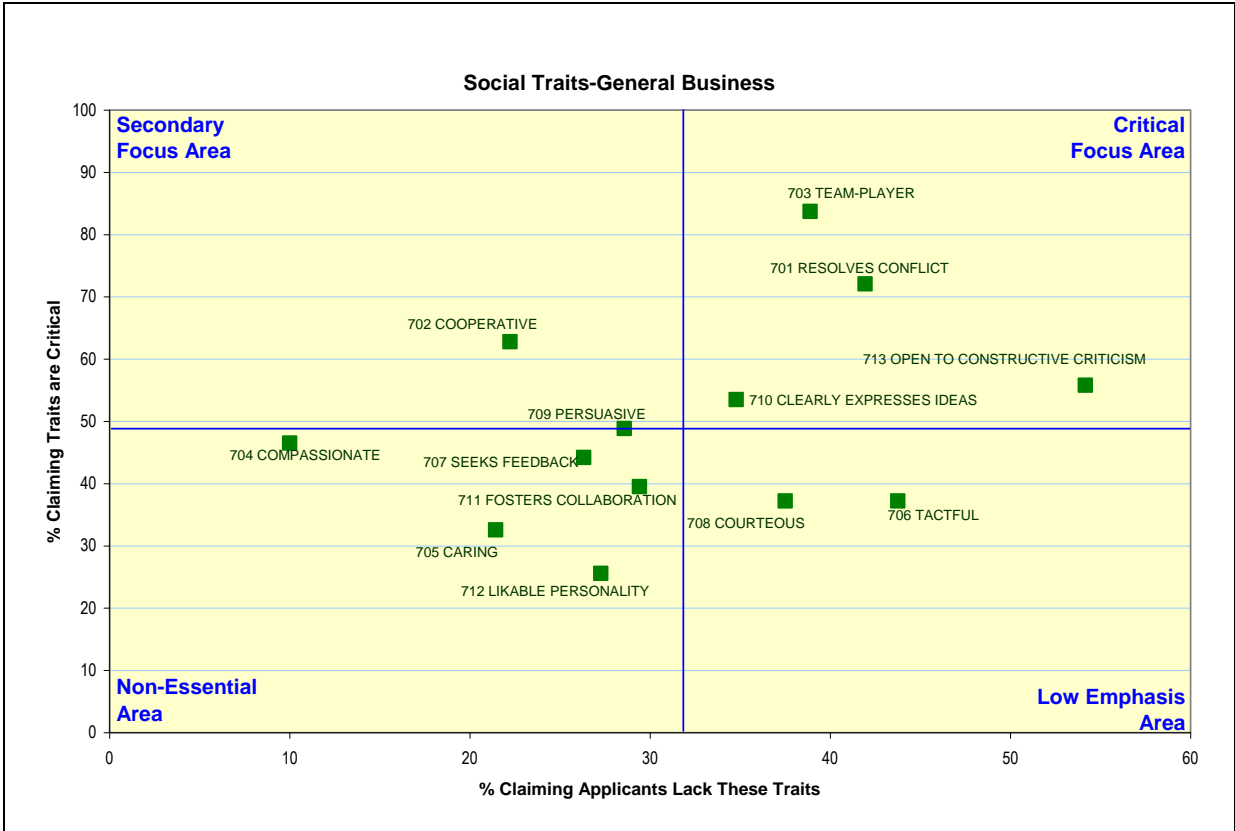
The data show that the following personal traits areas are in need of attention:

- Reliability
- Taking initiative
- Inspiring others
- Success driven and achieving goals
- Team Player
- Listens to others
- Resolves conflict
- Open to constructive criticism
- Being an effective problem solver









Critical Job Skills Identified By Employers for Planned Jobs for Next Five Years

In the face to face interview, employers were asked to consider the new jobs planned for the next five years and to identify the job skills required that were not already required for current jobs:

"You mentioned that you planned to hire ___ employees in the next 5 years in the (Job Group). Based on your needs, what are the important skills needed in your company for (Job Group) that are not currently needed? (HAND CARD 1) In other words, what skills will be needed for these new hires that are different than those you mentioned earlier?"

As indicated, employers were given a card as an aide. The card provided a list of all job skills for consideration.

The table on the next page shows the percentage of employers who indicated that each job skill was critical for planned jobs over the next five years. As a reminder, the base of respondents for these data was those who planned on hiring new jobs over the five years.

As indicated in the table, many of the skills deemed critical for planned jobs were also identified as being critical for current jobs.

The job skills most frequently identified as being critical for planned jobs include:

- 111 Mechanical Abilities
- 108 Repair
- 404 Computer/Technical Literacy

Skills Identified (By % of Employers) as Being Critical for Planned Jobs	Total Sample n=	Employer Type			
		Healthcare	Mining	Construction	General Business
		%	%	%	%
	42	11	5	12	14
	%	%	%	%	%
111 MECHANICAL ABILITIES	70	80	25	100	78
108 REPAIR	50	60	75	-	44
105 STRENGTH	40	20	75	-	44
101 PHYSICAL STAMINA	35	20	50	-	44
104 AGILITY	35	40	50	-	33
106 MANUAL DEXTERITY	35	20	50	-	44
107 BUILD	35	40	50	-	33
109 FINE MOTOR COORDINATION	35	20	50	-	44
102 CARRY OR LIFT	30	20	50	-	33
103 WORK IN CLOSED SPACES	15	20	25	-	11
110 CULTIVATE PLANTS	10	20	25	-	-
112 PRODUCE HANDMADE CRAFTS	10	20	25	-	-
202 WRITING ABILITY	39	33	40	43	42
201 MATHEMATICAL COMPUTATION	36	22	40	43	42
203 CRITICAL THINKING ABILITY	36	22	40	14	58
213 GENERATE IDEAS	33	22	60	14	42
206 ABSTRACT THINKING	27	11	40	14	42
214 DEVELOP CONCEPTS	27	44	20	-	33
204 MULTICULTURAL AWARENESS	24	11	40	-	42
207 CONDUCTING RESEARCH	24	22	-	29	33
205 SCIENTIFIC ANALYSIS	18	22	-	-	33
209 UNDERSTAND THEORETICAL CONCEPTS	15	-	40	-	25
215 ARTISTIC	15	22	-	-	25
208 ANALYTICAL SKILL	12	-	-	14	25
210 SPATIAL VISUALIZATION	9	-	-	14	17
211 DESIGN	9	-	-	14	17
212 EDIT	9	11	-	-	17
301 VERBAL ABILITY	38	17	40	50	55
315 WORKS WELL WITHIN A TEAM	38	17	80	-	55
310 DIRECT A PROJECT	34	33	20	-	55
311 REACH GOALS	31	33	20	-	45
304 INSTRUCT/TEACH	28	17	40	25	36
307 ATTENTIVE LISTENER	28	17	40	-	45
302 PUBLIC SPEAKING	25	17	20	25	36
303 MAINTAINS CONFIDENTIALITY	25	-	20	50	45
305 EXPLAIN A CONCEPT	22	8	40	-	36
313 PERSUADE	22	17	20	-	36
314 EVALUATE	22	8	-	-	55
306 HELP OTHERS	19	8	20	-	36
308 DELEGATE	16	8	-	-	36
309 SELL A PRODUCT	16	25	-	-	18
312 NEGOTIATE	16	8	-	25	27
404 COMPUTER/TECHNICAL LITERACY	51	55	50	43	53
412 WORK WITH COMPUTER SOFTWARE	41	18	50	57	47
410 TIME MANAGEMENT	37	27	33	29	47
409 ORGANIZED	29	9	33	29	41
415 PROJECT MANAGEMENT	29	18	50	29	29
402 MONITOR PROCESSES	24	18	33	-	35
411 DETAIL-ORIENTED	24	18	17	-	41
407 INTERPRET DATA	22	18	17	43	18
408 MAKE DECISIONS	22	18	17	-	35
413 KEEP RECORDS	22	18	-	-	41
401 READING COMPREHENSION	20	18	17	14	24
405 PLAN	20	18	33	-	24
416 BUDGET	20	9	-	29	29
417 FOLLOW INSTRUCTIONS	20	9	50	-	24
403 PROBING	15	9	-	14	24
406 COLLECTING DATA	15	18	-	14	18
414 FINANCIAL ANALYSIS	15	18	-	14	18

Critical Personal Traits Identified By Employers for Planned Jobs for Next Five Years

In the face to face interview, employers were to identify the personal traits required for planned jobs:

"Thinking again about the hiring of ___ employees in the next 5 years, what are the important traits needed in your company for that (Job Group) that are not currently needed? (HAND CARD 2) In other words, what traits will be needed for these new hires that are different than those you mentioned earlier?"

The table on the next page shows the percentage of employers who indicated that each trait was critical for planned jobs over the next five years. Again, the base of employers for these data was those who planned on hiring new jobs over the five years.

The personal traits most frequently identified as being critical for planned jobs include:

- 503 Strong Work Ethic
- 506 Dedication
- 605 Continuous Improvement
- 713 Open to Constructive Criticism
- 809 Forward Thinking
- 808 Willingness to Learn

Personal Traits Identified (By % of Employers) as Being Critical for Planned Jobs	Employer Type				
	Total	Healthcare	Mining	Construction	General
	Sample				Business
	n= 42	11	5	12	14
	%	%	%	%	%
503 STRONG WORK ETHIC	49	42	80	-	63
506 DEDICATION	49	50	80	17	50
504 RELIABILITY	44	33	80	33	44
509 ADAPTABLE	44	33	60	17	56
505 PROFESSIONALISM	41	25	60	33	50
511 ROLE MODEL FOR OTHERS	38	25	60	50	38
508 PUNCTUAL	33	8	100	-	44
507 FOCUSED ON TASK	26	17	60	17	25
510 RESPECTFUL	26	8	60	-	38
501 HONESTY	18	17	40	-	19
502 METHODICAL	13	-	20	-	25
605 CONTINUOUS IMPROVEMENT	50	50	80	50	40
608 ACHIEVES GOALS	38	14	40	67	47
601 SELF CONFIDENCE	35	21	60	-	53
607 SELF MANAGEMENT	35	21	40	17	53
610 TAKE THE INITIATIVE	33	21	60	17	40
611 INSPIRES OTHERS	30	29	40	17	33
606 AMBITIOUS	28	7	80	-	40
604 SUCCESS DRIVEN	20	7	20	17	33
602 INDUSTRIOUS	18	14	-	17	27
603 CHALLENGE STATUS QUO	13	7	20	-	20
612 TENACITY	13	7	20	-	20
609 INFORMED RISK-TAKER	10	7	-	-	20
713 OPEN TO CONSTRUCTIVE CRITICISM	47	64	75	60	25
703 TEAM-PLAYER	42	27	75	20	50
708 COURTEOUS	39	36	50	-	50
711 FOSTERS COLLABORATION	36	27	75	20	38
712 LIKABLE PERSONALITY	36	27	25	-	56
701 RESOLVES CONFLICT	31	27	50	-	38
704 COMPASSIONATE	31	45	75	-	19
706 TACTFUL	31	27	50	20	31
702 COOPERATIVE	28	18	25	20	38
707 SEEKS FEEDBACK	22	27	25	-	25
709 PERSUASIVE	22	18	25	-	31
710 CLEARLY EXPRESSES IDEAS	22	9	25	40	25
705 CARING	19	27	25	-	19
809 FORWARD THINKING (TO FUTURE)	56	50	80	67	50
808 WILLINGNESS TO LEARN	50	50	40	33	57
804 EFFECTIVE PROBLEM-SOLVER	44	30	20	67	57
802 INQUIRING	28	20	40	-	36
805 CREATIVITY	28	30	20	-	36
803 RATIONAL	25	10	40	-	36
807 DEDUCTIVE REASONING	22	20	-	33	29
801 CURIOSITY	19	-	20	33	29
806 DECISION-MAKER	16	20	20	-	14

Training / Education Needed By Employers for Planned Jobs for Next Five Years

The 68 employers who indicated that they planned for new jobs in the next five years were asked to indicate which education and/or training needs applied to those jobs.

The responses are shown in the tables over the next several pages. The values in each table reflect the percentages of employers who planned to hire over the next five years and who indicated that the specified training was needed.

The responses are grouped by the level of education and training required, in ascending order by complexity/difficulty:

- Vocational Training
- Associate Degree
- Bachelor Degree
- Graduate Degree / Professional

As indicated, a wide variety of education and training needs are identified.

Healthcare

Employers in this sector were likely to indicate a wide variety of education and training needed for planned jobs. Healthcare related activities were obviously well represented and employers also identified a broad array of business and technology areas.

Mining

These employers identified a much narrower array of education and training needs than employers in other industries. Selections were geared toward engineering, mining technology, and other technology.

Construction

Employers in the construction field were focused on mechanical systems training, engineering, and technology. These employers were the least likely to identify areas requiring graduate studies.

General Business

These employers, by nature of the sample, identified a wide variety of training

needed. Areas generating relatively higher response included truck driving, mechanical systems, computer-related, and business studies.

Education / Training Needed for Planned Jobs (Base: Those planning jobs in the next five years)	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
<u>Vocational Training</u>	n= 68	20	7	16	25
121 WELDING	18	0	57	25	16
101 CERTIFIED NURSING ASSISTANT	16	50	0	0	4
109 ELECTRONICS	16	5	43	13	20
120 TRUCK DRIVING/CDL	16	0	0	31	24
103 BLDG. MAINTENANCE/TECH	15	10	0	19	20
113 HVAC	12	10	0	13	16
107 CONSTRUCTION MANAGEMENT	7	0	0	25	4
112 HOSPITALITY/RESTAURANT MGT.	6	5	0	6	8
118 TELECOMMUNICATIONS TECHNICIAN	6	10	0	6	4
105 CERTIFIED PERSONAL TRAINING	3	5	0	0	4
104 CALL CENTER MANAGEMENT	1	5	0	0	0
106 CHILD DAY CARE MANAGEMENT	1	0	0	0	4
108 CULINARY ARTS	1	0	0	0	4
110 FIRE SCIENCE	1	0	14	0	0
114 JEWELRY DESIGN & REPAIR	1	0	0	0	4
115 LANDSCAPE DESIGN	1	0	0	0	4
116 LOCKSMITH	1	0	0	6	0

Education / Training Needed for Planned Jobs (Base: Those planning jobs in the next five years)	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
<u>Associate Degree</u>	n= 68	20	7	16	25
206 BUSINESS STUDIES	18	20	14	13	20
209 COMPUTER INFORMATION SYSTEMS	16	10	0	19	24
231 MEDICAL RECORDS ADMINISTRATION	10	35	0	0	0
232 MINING TECHNOLOGY	9	0	43	13	4
210 CONSTRUCTION TECHNOLOGY	7	5	0	25	0
228 LICENSED PRACTICAL NURSING	7	20	0	0	4
229 MANUFACTURING INDUSTRIAL TECHNOLOGY	7	20	0	0	4
208 COMPUTER GRAPHICS	6	5	0	13	4
221 HEALTH AND WELLNESS TECHNOLOGY	6	15	0	0	4
224 HUMAN SERVICES	6	15	0	0	4
238 RESPIRATORY THERAPY	6	15	0	0	4
203 AUTOMOTIVE TECHNOLOGY	4	0	0	0	12
207 CIVIL ENGINEERING TECHNOLOGY	4	0	29	6	0
230 MASONRY	4	5	0	6	4
237 RADIOLOGY TECHNOLOGY	4	15	0	0	0
214 DIAGNOSTIC MEDICAL SONOGRAPHY	3	10	0	0	0
215 DRAFTING TECHNOLOGY	3	0	0	13	0
216 EMERGENCY MEDICAL TECHNOLOGY	3	0	14	6	0
217 ENVIRONMENTAL STUDIES	3	0	14	6	0
219 FIRE PROTECTION AND SAFETY TECHNOLOGY	3	0	14	0	4
226 INFORMATION TECHNOLOGY	3	10	0	0	0
233 PARALEGAL STUDIES	3	10	0	0	0
235 PLUMBING TECHNOLOGY	3	0	0	6	4
236 QUALITY MANAGEMENT SYSTEMS	3	0	0	0	8
239 ROOFING	3	0	0	6	4
241 SURVEYING AND MAPPING TECHNOLOGY	3	0	29	0	0
204 AVIATION MAINTENANCE	1	0	0	0	4
212 DENTAL HYGIENE	1	0	0	0	4
213 DESKTOP PUBLISHING	1	5	0	0	0
225 INDUSTRIAL CHEMICAL TECHNOLOGY	1	0	0	0	4
234 PARAMEDIC TECHNOLOGY	1	5	0	0	0
240 SURGICAL TECHNOLOGY	1	0	0	6	0

Education / Training Needed for Planned Jobs	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
(Base: Those planning jobs in the next five years)	n= 68	20	7	16	25
<i>Bachelor Degree (Part 1)</i>					
359 NURSING	13	45	0	0	0
301 ACCOUNTING	12	15	14	13	8
309 BUSINESS	12	0	0	19	20
354 MARKETING	7	15	0	0	8
331 FINANCE	6	0	0	6	12
333 FOOD AND NUTRITION STUDIES	6	15	0	0	4
344 HUMAN RESOURCES MANAGEMENT	6	15	0	0	4
302 ADVERTISING	4	5	0	6	4
315 COMPUTER PROGRAMMING	4	5	0	6	4
319 DIETETICS	4	10	0	0	4
326 ELECTRICAL ENGINEERING	4	5	14	6	0
339 HEALTHCARE ADMINISTRATION	4	15	0	0	0
307 BIOLOGY	3	5	0	0	4
312 CIVIL ENGINEERING	3	0	29	0	0
313 CLINICAL/MEDICAL LABORATORY TECHNOLOGY	3	10	0	0	0
317 CONSTRUCTION MANAGEMENT	3	0	0	13	0
321 EARLY CHILDHOOD EDUCATION	3	0	0	0	8
325 ECONOMICS	3	0	0	6	4
342 HOSPITALITY ADMINISTRATION & MANAGEMENT	3	5	0	0	4
346 INDUSTRIAL ENGINEERING	3	0	0	0	8
347 INFORMATION SYSTEMS	3	0	0	0	8
350 LIBERAL ARTS	3	0	0	6	4
352 MANAGEMENT INFORMATION SYSTEMS	3	5	0	0	4

Education / Training Needed for Planned Jobs	Total Sample	Employer Type			
		Healthcare	Mining	Construction	General Business
(Base: Those planning jobs in the next five years)	n= 68	20	7	16	25
<i>Bachelor Degree (Part 2)</i>					
357 MECHANICAL ENGINEERING	3	0	14	0	4
366 PUBLIC RELATIONS	3	10	0	0	0
371 SOCIAL WORK	3	10	0	0	0
306 ATHLETIC TRAINING	1	0	0	0	4
308 BIOTECHNOLOGY	1	5	0	0	0
310 CHEMICAL ENGINEERING	1	0	0	0	4
311 CHEMISTRY	1	0	0	0	4
316 COMPUTER SCIENCE	1	0	0	0	4
318 CULINARY ARTS	1	0	0	0	4
328 ENGLISH	1	0	0	6	0
337 GEOGRAPHY	1	0	0	0	4
343 HUMAN DEVELOPMENT AND FAMILY STUDIES	1	5	0	0	0
345 HUMAN SERVICES	1	0	0	0	4
348 INFORMATION TECHNOLOGY	1	0	0	0	4
353 MATERIALS ENGINEERING	1	0	0	0	4
356 MATHEMATICS	1	5	0	0	0
363 PSYCHOLOGY	1	5	0	0	0
365 PUBLIC ADMINISTRATION	1	0	0	6	0
367 REAL ESTATE	1	0	0	6	0
369 SCIENCE	1	5	0	0	0
372 SOFTWARE ENGINEERING	1	0	0	0	4
382 COMMUNICATIONS	1	5	0	0	0

Education / Training Needed for Planned Jobs	Total	Employer Type			
		Sample	Healthcare	Mining	Construction
(Base: Those planning jobs in the next five years)	n= 68	20	7	16	25
<i>Master/PHD/Professional Degree</i>					
401 BUSINESS ADMINISTRATION	10	15	14	6	8
409 INFORMATION SYSTEMS	6	20	0	0	0
403 ENGINEERING	4	0	14	6	4
405 FINANCE	4	5	14	0	4
407 HUMAN RESOURCES	4	10	14	0	0
410 NURSING	4	15	0	0	0
402 EDUCATION	3	5	0	0	4
406 HEALTHCARE MANAGEMENT	3	10	0	0	0
411 OCCUPATIONAL THERAPY	3	10	0	0	0
412 PHYSICAL THERAPY	3	10	0	0	0
414 PSYCHOLOGY	3	10	0	0	0
417 SOCIAL WORK	3	10	0	0	0
418 COUNSELING	3	5	0	0	4
408 HUMAN SERVICES	1	5	0	0	0
413 PHYSICIAN ASSISTANT	1	5	0	0	0
416 SPEECH PATHOLOGY	1	0	0	0	4
501 EDUCATION	1	0	0	0	4
601 ACCOUNTING	1	0	0	0	4
604 EDUCATION	1	0	0	0	4

