Introductory Statistics Homework Short Report for Topic 06 CD

Mean	Std.dev	Min	Q1	Median	Q3	Max
6.76	2.27	2.00	5.00	7.00	8.00	12.00
(27%)	(9.1%)	(8%)	(20%)	(28%)	(32%)	(48%)

Table 1: Summary statistics of the scores

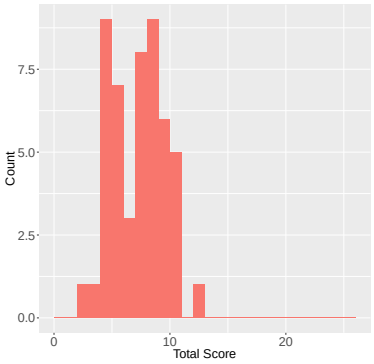

Figure 1: Histogram of scores. Blue data represent scores less than 80 percent.

Each of the 50 students were given 25 questions from a bank of 89 questions. Figure 1 and Table 1 give the overall summary of student performance. Table 2 lists the 50 students who scored below 80 percent on the assignment. Table 3 and Figure 2 provide summary statistics of the scores per question set and learning outcome.

	% Correct		% Correct		% Correct		% Correct
w.introstat91	48.00	w.introstat112	32.00	w.introstat74	28.00	w.introstat100	16.00
w.introstat75	40.00	w.introstat76	32.00	w.introstat94	28.00	w.introstat103	16.00
w.introstat81	40.00	w.introstat84	32.00	w.introstat98	28.00	w.introstat105	16.00
w.introstat85	40.00	w.introstat87	32.00	w.introstat108	24.00	w.introstat111	16.00
w.introstat88	40.00	w.introstat92	32.00	w.introstat79	24.00	w.introstat114	16.00
w.introstat99	40.00	w.introstat93	32.00	w.introstat86	24.00	w.introstat116	16.00
w.introstat120	36.00	w.introstat95	32.00	w.introstat104	20.00	w.introstat119	16.00
w.introstat71	36.00	w.introstat96	32.00	w.introstat107	20.00	w.introstat80	16.00
w.introstat77	36.00	w.introstat102	28.00	w.introstat110	20.00	w.introstat82	16.00
w.introstat78	36.00	w.introstat109	28.00	w.introstat72	20.00	w.introstat117	12.00
w.introstat89	36.00	w.introstat113	28.00	w.introstat73	20.00	w.introstat101	8.00
w.introstat97	36.00	w.introstat115	28.00	w.introstat83	20.00		
w.introstat106	32.00	w.introstat118	28.00	w.introstat90	20.00		

Table 2: The 50 students whose percentages are less than 80%.

Topic 06 Learning Outcomes:

A. Use standardizing to determine how many standard deviations an observation is away from the mean value.
B. Use z-scores to compare observations for different quantitative variables.
C. Explain how standardizing affects the shape, center, and variability of the distribution of a quantitative variable.
D. Determine which quantitative variables could be modeled using the normal distribution by interpreting graphical representations of the variable.
E. Apply the 68-95-99.

F. Find percentile or area values for any given observation from a normal distribution.
G. Find the value of an observation when given a percentile or area value from the normal distribution.

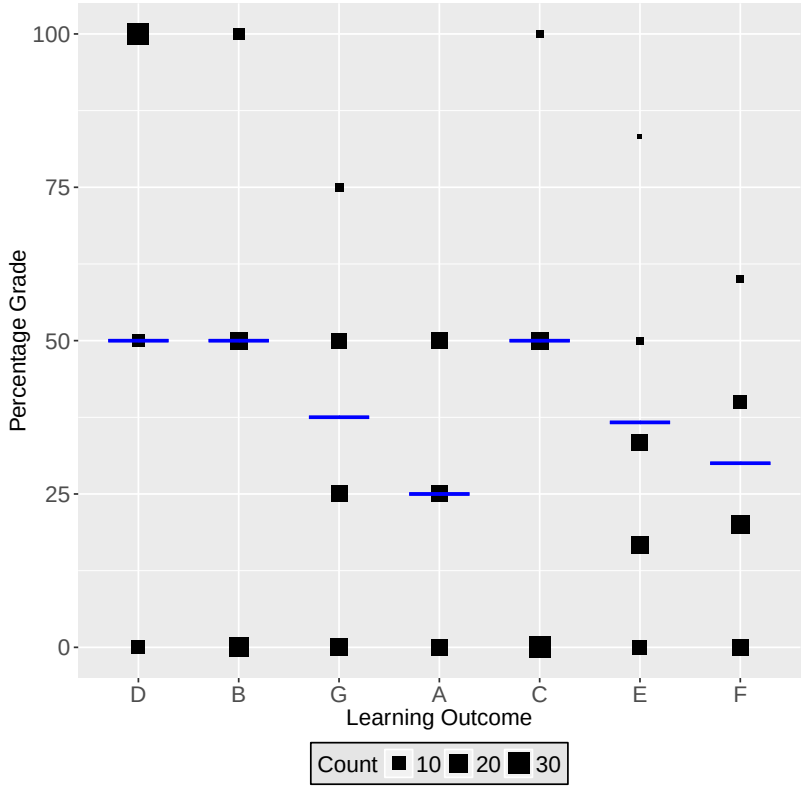

Figure 2: Fluctuation diagram of percentage correct by learning outcome. Mean scores are drawn as blue bars

LO	Qset	#	Mean	Std.dev	Min	Median	Max
D	I	2	80	40.41	0.00	100.00	100.00
D	J	4	64	48.49	0.00	100.00	100.00
A	B	4	54	50.35	0.00	100.00	100.00
A	A	4	48	50.47	0.00	0.00	100.00
B	E	1	42	49.86	0.00	0.00	100.00
G	U	5	32	47.12	0.00	0.00	100.00
G	R	5	30	46.29	0.00	0.00	100.00
G	S	5	26	44.31	0.00	0.00	100.00
C	H	1	24	43.14	0.00	0.00	100.00
E	L	9	22	20.88	0.00	33.33	66.67
F	M	5	22	41.85	0.00	0.00	100.00
F	O	5	22	41.85	0.00	0.00	100.00
B	F	1	20	40.41	0.00	0.00	100.00
C	G	1	20	40.41	0.00	0.00	100.00
F	N	5	20	40.41	0.00	0.00	100.00

E	K	9	19.33	25.28	0.00	0.00	100.00
F	P	5	16	37.03	0.00	0.00	100.00
F	Q	5	16	37.03	0.00	0.00	100.00
G	T	5	16	37.03	0.00	0.00	100.00
A	C	4	0	0.00	0.00	0.00	0.00
A	D	4	0	0.00	0.00	0.00	0.00

Table 3: Summary statistics of the question sets. Rows are sorted by mean scores, which are marked red if less than 80 percent.