Stat101 Homework Short Report for Topic 06 AB

Mean	Std.dev	Min	Q1	Median	Q3	Max
6.24	2.38	0.00	5.00	6.00	8.00	12.00
(25%)	(9.5%)	(0%)	(20%)	(24%)	(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.introstat40	48.00	w.introStat59	32.00	w.introstat43	24.00	w.introstat23	16.00
w.introStat50	48.00	w.introstat69	32.00	w.introStat51	24.00	w.introstat29	16.00
w.introstat26	36.00	w.introstat31	28.00	w.introStat53	24.00	w.introstat36	16.00
w.introstat39	36.00	w.introstat35	28.00	w.introstat66	24.00	w.introstat46	16.00
w.introstat42	36.00	w.introstat44	28.00	w.introstat67	24.00	w.introStat56	16.00
w.introStat52	36.00	w.introstat48	28.00	w.introstat70	24.00	w.introstat68	16.00
w.introstat65	36.00	w.introStat54	28.00	w.introstat21	20.00	w.introstat24	12.00
w.introstat33	32.00	w.introStat58	28.00	w.introstat28	20.00	w.introstat27	12.00
w.introstat34	32.00	w.introstat61	28.00	w.introstat38	20.00	w.introstat30	12.00
w.introstat37	32.00	w.introstat62	28.00	w.introstat47	20.00	w.introstat64	4.00
w.introstat45	32.00	w.introstat63	28.00	w.introStat57	20.00	w.introstat25	0.00
w.introstat49	32.00	w.introstat32	24.00	w.introstat60	20.00		
w.introStat55	32.00	w.introstat41	24.00	w.introstat22	16.00		

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.
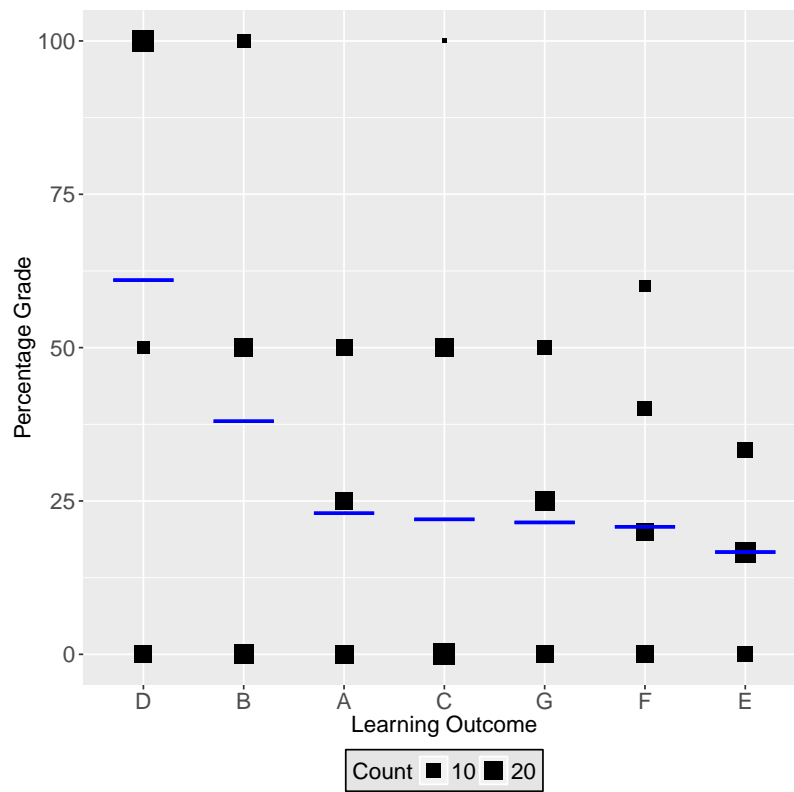

Figure 2: Fluctuation diagram of percentage correct by learning outcome. Mean scores are drawn as blue bars.

LO	Qset	#	Mean	Std.dev	Min	Median	Max
D	I	2	64	48.49	0.00	100.00	100.00
D	J	4	58	49.86	0.00	100.00	100.00
A	B	4	48	50.47	0.00	0.00	100.00
A	A	4	44	50.14	0.00	0.00	100.00
B	E	1	40	49.49	0.00	0.00	100.00
B	F	1	36	48.49	0.00	0.00	100.00
F	M	5	36	48.49	0.00	0.00	100.00
F	Q	5	30	46.29	0.00	0.00	100.00
G	S	5	26	44.31	0.00	0.00	100.00
G	U	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	23.33	25.42	0.00	33.33	66.67
C	G	1	20	40.41	0.00	0.00	100.00
F	N	5	18	38.81	0.00	0.00	100.00
G	R	5	18	38.81	0.00	0.00	100.00
G	T	5	16	37.03	0.00	0.00	100.00
F	O	5	14	35.05	0.00	0.00	100.00
E	K	9	10	15.43	0.00	0.00	33.33
F	P	5	6	23.99	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.