

EDL 7150: Inferential Statistics. Out of Class Problem No. 1

Suppose a principal of a fairly good-size elementary school, has records of teacher absenteeism over the past ten years. It is now March of the current academic year and the principal just received a report of last month's teacher absenteeism. He notices, perhaps for the first time, that there has been an uptick in number of days of teacher absences, not only for February, but for the previous month (January) as well. This increase in teacher absenteeism appears unusual. However, he wonders whether this is a truly aberrant occurrence or, perhaps, within the limits of reasonable probability. Since it is known that you have just completed a doctoral course in statistics, the principal has sought your help.

Year	N Tchrs	Teacher Reported Days of Absenteeism by Month									TOTAL
		SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	
2003-04	39	0	2	4	3	3	5	3	1	0	21
2004-05	39	3	2	3	3	4	4	2	3	2	26
2005-06	41	3	4	5	2	4	2	3	2	3	28
2006-07	43	4	3	2	3	2	3	2	2	4	25
2007-08	41	2	3	3	3	4	3	3	3	2	26
2008-09	42	3	2	2	4	3	4	1	1	3	23
2009-10	43	2	3	3	5	2	4	1	4	1	25
2010-11	41	2	4	4	3	3	5	2	3	0	26
2011-12	42	4	1	3	2	4	3	3	2	3	25
2012-13	43	2	3	4	4	6	8				(30)
TOTAL	414	25	27	33	32	37	42	(20)	(21)	(18)	((255))

Use what you have learned about probability and probability distributions to help the principal determine whether he should be alarmed, or not over the increase in teacher absenteeism. State your conclusion and, for the principal's sake, provide an explanation of how you arrived at that conclusion.

Next week, I will show you a couple of ways I attacked the problem.

(There are several ways of attacking this problem. It would be difficult say that one way is superior to another. Take your best shot and report your results and explanation on the [Inferential Statistics ning](#).)