



The Relationship between Early Alert and Academic Standing from 2013-2014 to 2014-2015

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Purpose of Brief

The following brief illustrates the relationship between early alert and academic standing at Crafton from 2013-2014 to 2014-2015.

Summary of Findings

- The number of students receiving an early alert increased from 205 in 2013-2014 to 313 in 2014-2015, an increase of 53%.
- The following groups of students are statistically significantly and substantially more likely to receive an early alert when compared to the proportion of Crafton students who earned a GOR:
 - African American
 - Hispanic
 - 19 years old or younger
 - Economically disadvantaged
- The number of faculty initiating an early alert increased from 23 in 2013-2014 to 34 in 2014-2015, an increase of 48%.
- 34% to 42% of students receiving an early alert persisted to the following primary term and were not on probation.

Overview

The fourth Crafton Hills College team to participate in the Leading from the Middle Academy (LFMA) requested research on the relationship between students who received an early alert and their academic standing (i.e. probation) in the following primary term. The LFMA Early Alert team requested the following information:

- 1) The number of students who received an early alert from 2013-2014 to 2014-2015
- 2) The number of faculty who have initiated an early alert from 2013-2014 to 2014-2015
- 3) Examine the relationship between students who have received an early alert and student probation
- 4) Examine the relationship between EOPS and Left Lane students who received an early alert and non-EOPS and non-Left Lane students who received an early alert

Possible Implications

Very few faculty participating in the Early Alert program initiate a positive early alert. There is some evidence from the Educational Partnership Initiative (EPI) and research conducted by Faulconer et al. (2014) suggesting that incorporating positive alerts increases the student's recognition of all types of early alert as well as faculty participation in early alert. The LFMA Early Alert team may want to consider focusing professional development around using the positive feedback feature of early alert to help increase faculty and student interest in using early alert.

Left Lane and EOPS students who received an early alert were not found to be more likely to successfully complete their course when compared to other students who received an early alert. Since both of the Left Lane and EOPS programs provide services to students prior to the start of the term this is not surprising. Students who receive an early alert, receive the alert during the course and after the start of the term, indicating that additional support for these students is needed that is most likely different from what EOPS and Left Lane provide.

African American, Hispanic, economically disadvantaged, and students 19 years old or younger were all more likely to receive an early alert. These students are also identified in the student equity plan as being disproportionately impacted and early alert may be a strategy that can be used to help these students.

Methodology

The Crafton Office of Institutional Effectiveness, Research, and Planning (OIERP) worked with District Computing Services to identify students who received an Early Alert from 2013-2014 to 2014-2015. A direct link to access the SARS Alert data was provided to the OIERP. The database provided the term, section, faculty, and reason(s) for the alert.

The Probation Students Informer Report was used to identify students on probation from 2013-2014 to 2014-2015. This report provided the term and academic standing of each student on probation.

The effect size statistic was used to indicate the size of the difference between the proportion of students who received an early alert and the proportion of Crafton students. One method of interpreting effect size was developed by Jacob Cohen. Jacob Cohen defined “small,” “medium,” and “large” effect sizes. He explained that an effect size of .20 can be considered small, an effect size of .50 can be considered medium, and an effect size of .80 can be considered large. Research in the social sciences has indicated that a substantial effect is considered meaningful if the effect size is .10 or higher. It is important to mention that the number of students in each group does not influence Effect Size; whereas, when statistical significance is calculated, the number of students in each group does influence the significance level (i.e. “p” value being lower than .05).

Findings

1 – Number of Students Receiving an Early Alert. In 2013-2014 205 unduplicated students received an early alert initiated by their instructor and in 2014-2015 313 unduplicated students received an early alert. The number of students receiving an early alert increased from 205 in 2013-2014 to 313 in 2014-2015, an increase of 53% (n = 108) students.

Table 1 illustrates the relationship between the percent of students who received an early alert and the percent of all Crafton students in 2014-2015 by student demographics. The results indicate that African American students, Hispanic students, students 19 years old or younger, and economically disadvantaged students were all statistically significantly and substantially more likely to receive an early alert when compared to the proportion of students at Crafton who earned a GOR in the same academic year.

Table 1: Student Demographics of 2014-2015 Students who received an Early Alert Compared to All Crafton Students who earned a GOR by Effect Size and Statistical Significance.

Student Demographics	Early Alert Students		Crafton Students who Earned a GOR		Effect Size	Statistical Significance
	#	%	#	%	#	%
Gender						
Female	159	50.8	4,268	53.1	-.05	No
Male	153	48.9	3,757	46.7	.04	No
Unknown	1	.3	15	.2		
Total	313	100.0	8,040	100.0		
Ethnicity						
Asian	17	5.4	489	6.1	-.03	No
African American	41	13.1	683	8.5	.16	Yes
Hispanic	170	54.3	3,534	44.0	.21	Yes
Native American/Alaskan Native	4	1.3	172	2.1	-.06	No
Caucasian	80	25.6	3,138	39.0	-.28	Yes
Unknown	1	.3	24	.3		
Total	313	100.0	8,040	100.0		
Age						
19 or younger	122	39.0	2,288	28.5	.23	Yes
20-24	122	39.0	3,313	41.2	-.05	No
25-29	28	8.9	1,087	13.5	-.13	Yes
30-34	23	7.3	528	6.6	.03	No
35-39	5	1.6	281	3.5	-.10	Yes
40-49	9	2.9	326	4.1	-.06	No
50 and above	4	1.3	216	2.7	-.09	Yes
Unknown	0	0.0	1	0.0		
Total	313	100.0	8,040	100.0		
Economically Disadvantaged						
No	104	33.2	3,753	46.7	-.27	Yes
Yes	209	66.8	4,287	53.3	.27	Yes
Total	313	100.0	8,040	100.0		

Note: A negative effect size represents a higher percentage of all Crafton students who earned a GOR and a positive effect size represents a lower percentage of Crafton students who earned a GOR. A substantial effect size is .20 or higher and a statistically significant effect is a p value less than .05.

The type of early alert that instructors can initiate is divided into two categories: positive feedback and improvement needed. Five of the early alert categories provide students with positive feedback: demonstrates initiative, demonstrates leadership, excellent participation, leadership potential, and shows significant improvement. Very few students received an early alert that was positive in nature. The two most common were excellent participation and leadership potential. In Spring 2015 five students received the excellent participation alert and eight students received the leadership potential alert. Most of the alerts received by students identified areas of improvements for students. The five most common were missing assignments, low test scores, missing a test, turning in poor quality assignments, and test taking skills (see Table 1A).

Table 1A: Frequency and percent of Early Alert Reason in 2014 – 2015 sorted in descending order.

Early Alert Reason	#	N	%
Missing Assignment	202	327	61.8%
Missed Test or Quiz	164	327	50.2%
Low Test Scores	157	327	48.0%
Lack of Participation	96	327	29.4%
Test Taking Skills	96	327	29.4%
Study Skills	95	327	29.1%
Excessive Absences	84	327	25.7%
Poor Quality Assignments	67	327	20.5%
Student Stopped Attending and Did Not Drop	41	327	12.5%
Possible Learning Disability	21	327	6.4%
May Benefit from DSPS	19	327	5.8%
Excessive Tardiness	17	327	5.2%
Does not have required course materials	16	327	4.9%
Outside Work Conflicts	13	327	4.0%
Health Issues	5	327	1.5%
Financial Difficulties	4	327	1.2%
Disruptive Behavior	2	327	0.6%
Inappropriate Behavior	2	327	0.6%
Academic Dishonesty	1	327	0.3%
May not be challenged by course content	1	327	0.3%
Never attends	0	327	0.0%

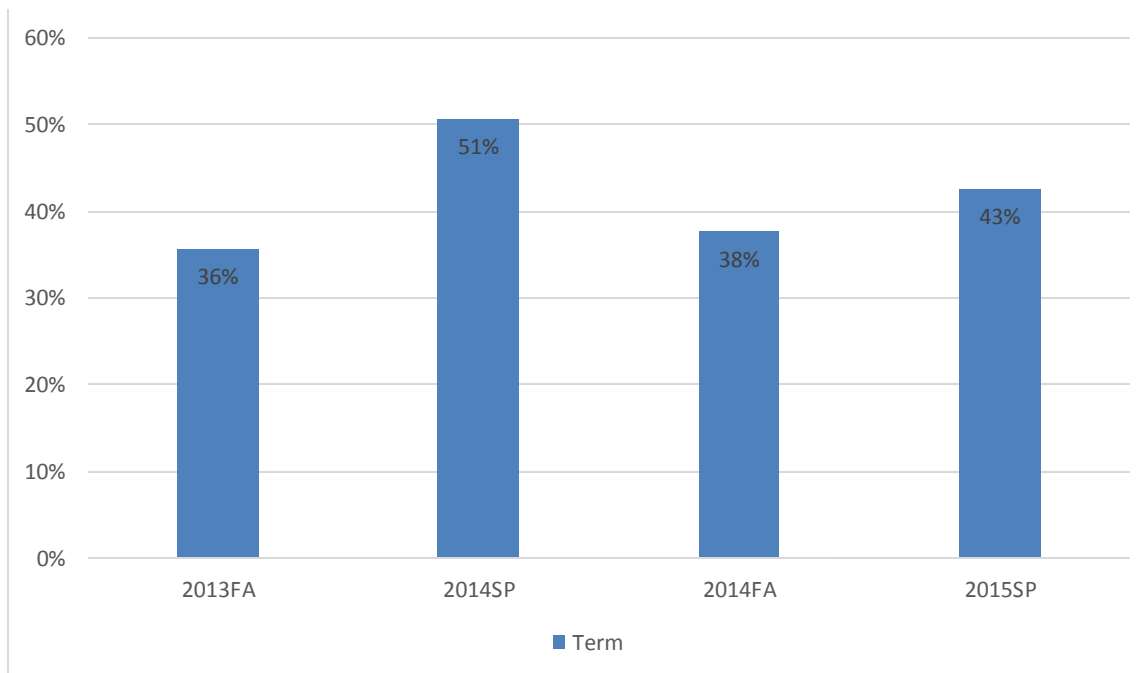
2 – Number of Faculty Initiating an Early Alert. The number of faculty initiating an early alert increased from 23 in 2013-2014 to 34 in 2014-2015, an increase of 11 (48%).

3 - Relationship between students who have received an early alert and probation. Referring to Table 2 and Figure 1, the number of students who received an early alert increased from 140 in Fall 2013 to 162 in Spring 2015, an increase of 22 (16%). This increase is most likely a result of the increase in the number of a faculty initiating an alert which increased from 17 in Fall 2013 to 23 in Spring 2015, an increase of 6 (35%). The percent of students receiving an early alert who were also on probation increased from 36% in Fall 2013 to 43% in Spring 2015 (see Table 2 and Figure 2). However, the percent of students receiving an early alert and who were on probation did decrease from 51% in Spring 2014 to 43% in Spring 2015.

Table 2: Percent of Unduplicated Students Receiving an Early Alert from 2013-2014 to 2014-2015.

Term	Number on Probation	Number Receiving Alert	Percent on Probation
2013FA	50	140	35.7%
2014SP	35	69	50.7%
2014FA	58	154	37.7%
2015SP	69	162	42.6%

Figure 1: Percent of Students on Probation who Received an Early Alert from 2013-2014 to 2014-2015.



Examining the relationship between early alert and probation indicates that students receiving an early alert are less likely to persist to the subsequent primary term and stay off of probation (see Table 2A). Specifically, 34% of students were retained from Fall 2014 to Spring 2015 and were not on probation in Spring 2015.

Table 2A: Number and percent of Students receiving an early alert, earning a GOR in subsequent primary term, and not being on Probation in the Subsequent Primary Term.

Received Early Alert		Subsequent Primary Term earned GOR (Term to Term Retention)			Subsequent Primary Term earned GOR and Not on Probation			
Term	#	Term	#	%	Term	#	%*	% Retained and Not on Probation**
2013FA	140	2014SP	93	66.4	2014SP	59	63.4	42.1
2014SP	69	2014FA	34	49.3	2014FA	26	76.5	37.7
2014FA	154	2015SP	99	64.3	2015SP	53	53.5	34.4

*The number of students who earned a GOR in the subsequent term and were not on probation, divided by the number of students who earned a GOR in the subsequent term (e.g.: 59/93 = 63.4).

**The percent retained and not on probation is the number of students who earned a GOR in the subsequent primary term and were not on probation, divided by the number of students who received an early alert (e.g.: 59/140 = 42.1).

4 – Examine the relationship between EOPS and Left Lane students who received an early alert and non-EOPS and non-Left Lane students who received an early alert. Students who received an early alert in Fall 2013, Spring 2014, Fall 2014, or Spring 2015 and participated in Left Lane in those terms were substantially (ES = .34) less likely to successfully complete the course where they received the early alert (11%) than students who received an early alert and did not participate in left lane (26%). At the same time, students who received an early alert in Fall 2013, Spring 2014, Fall 2014, or Spring 2015 and were also in EOPS in those terms were less likely to successfully complete the course where they received the early alert (23%) than students who received an early alert and did not participate in EOPS (26%). The difference for EOPS students was not statistically significant or substantial.

References

Faulconer, J., Geissler, J., Majewski, D., & Triflio, J. (2014). Adoption of an early-alert system to support university student success. *Educational Technology. Delta Kappa Gamma Bulletin*, 80 (2), 45-48.