EAP and Student Motivation

—A Comparative Study—

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Student Support Center

At a 4-year college where I formerly taught for 27 years, approximately 20% of the students failed the required English class as 1st year students. When those students repeated the class as a make-up class, about 50% of them failed again. I wondered why. Classes were held only once a week, however, and I thought that perhaps an insufficient amount of exposure to the material may have either influenced memory, or otherwise affected the students' interest and desire to succeed. On the other hand, my own effectiveness as a teacher may have been relevant to their failure; but surveys where students evaluated my performance showed that I was a popular, well-liked teacher.

The above classes were taught for an entire year, meaning that by the end of the year students may have lost motivation. "Time" may have been a factor in their lack of progress. End-of-the-year distractions may also have affected desires to work for success. If these considerations are valid, educators must maintain a high level of motivation throughout the entire school year.

I've now taught at Akita University for 3 full years as a regular teacher. During this time I have observed that the desire that students have to study is on a much different level than it was at my former school; failures in the required English class at Akita University have been noticeably fewer. During my 1st year, however, I did see an unusual increase in the number of absences during the 2nd semester (when compared to absences of the 1st semester). I did not consider at that time whether or not the increase could be related to the aptitude level of the students. My students at that particular time were at the intermediate and advanced levels in all department categories. I was a bit unnerved, therefore, to see that a low aptitude was not necessarily associated with negative behavior regarding punctuality and attendance in class. Two more years of teaching have reinforced my surprised perception that high aptitude levels are more negatively associated with the simple task of class attendance than low aptitude levels. This is not something that I

expected to see. Or.....and this idea dawned on me: Could it be that students simply lose motivation during the latter part of the school year?

Considering aptitude and motivation in this regard, this simple study will show that declines in educational performance can be associated categorically with the department to which the student belongs. Not that the department should be considered the cause of the problem. It is probable that the quality of student who has motivation problems is the type of student who is attracted to certain vocations. This may be cause for concern when considered in terms of quality (public) health and (public) works' services, where these students will be working someday.

As mentioned above, absences are one area of concern where differences in student quality may be observed. A noticible difference between students of different departments led me to consider whether-or-not differences in grade performance (A, B, C, D letter grades) might exist as well. Of course, my focus is quite simple: Are there (as with absences) perceptible differences between the quantity and quality of letter grades when semesters are compared? My initial interest was to look at increases/decreases among highly motivated or successful ("A") students, and increases/decreases among poorly performing ("D") students. My purpose was to discover if and where (which department) these two types of students might be found.

Because of the assigned nature of the classes that I was asked to teach, it will be seen that in any given (two-semester) year, different aptitude levels (although of the same department) will be compared. This may seem to be unfair or inaccurate. However, although the same 1st semester groups could not be followed for an entire year, the 2nd semester classes to which they will be compared will be (except for one case) a comparatively higher-level class. I will assert, from the data in this study, that the latter (higher aptitude, 2nd semester) classes have a greater likelihood for lower quality performance.

At the time of my first exposure to the situation of there being noticeable differences when comparing semesters, I did not take the matter serious enough to think that my records would be of value. Much less did I imagine that my observations would become the subject for a study such as the one I am now compiling, where complete statistics/records would be best for a strong conclusion. Consequently, I did not keep all of my records (at least regarding absences). Regarding grades, however, 100% of that information has been preserved.

Definition of Terms in this Comparison Study

Increase will be noted as <. This will sometimes be read as % < (percent increase).

Decrease will be noted as >. This will sometimes be read as % > (percent decrease).

nr will be used to notate **no records**, where I have had no records to show a total.

Sem. will sometimes be used to mean **semester.**

N. is sometimes used to refer to **Nurses.**

Facts regarding this comparison study

1. All classes monitored for this study are 1st year EAP classes.
2. The textbook is/was the same for all students (decided by the Ed. Dept.).
3. The teacher in this study was the same for all students.   Me!!
4. There were no variations in teaching style between classes.   Classes A1-A11 and classes C1-C15 (from which classes were assigned to me) received the exact same lessons (including homework, interviews, and jokes).
5. Although Education and Nursing students were taught together, statistics regarding each will be considered separately.   Engineering-student statistics included, this study will compare three groups.

The 12 classes that were taught during the 3-year consecutive period of time are given in the chart below.   Classes, designated as "A" and "C", refer to the departments of Education/Nursing and Engineering, respectively.   Low numbers (e.g. A1) signify a "basic" level (aptitude); high numbers (e.g. C15) signify an "advanced" level (aptitude).   The "intermediate" levels fall in between.   Aptitude levels were determined by a Placement Test given at the beginning of the school year.   First-semester classes in the chart below are given as the upper figure for each school year, and second-semester classes are the lower figure.

Class Name/Year (1st and 2nd Sem.) During 3 Years

	2011	2012	2013
Education and Nursing	A8 and A10	A1 and A10	A1 and A11
Engineering	C9 and C11	C11 and C15	C14 and C8

Please note that while an assortment of aptitude levels (**basic** through **advanced**) is

represented for the Education and Nursing classes, only **intermediate** and **advanced** levels are represented for the Engineering classes (because these classes were assigned for me to teach). This will be important to remember when we later find glaring weaknesses in the upper aptitude levels of Engineering students.

Absence Record Averages (1ˢᵗ Sem. / 2ⁿᵈ Sem.)

As stated, my records have not been complete for an exact consideration of all absences. However, given the data that is available, certain facts may be known. Please note: There were no Nurses in the 1ˢᵗ Sem. of the 2012-13 school year. Neither could records be found for either the 2ⁿᵈ Sem. of 2011-2012 for the Engineering department, or for any department during the entire 1ˢᵗ Sem. of the 2013-2014 school year. This lack of data is unfortunate, but as will be seen, not serious enough to prevent certain obvious conclusions.

As mentioned earlier, a brief statement regarding Nursing students is warranted. I have taught Nursing students off campus (unrelated to my experience at Akita University) for more than fifteen years. During that time I noticed social and individual personality types that allowed a different sort of social interaction than what I saw at Akita University where these vocation-type students were mixed with students from the Education Department. Friendship or interest-related groupings seem to create a social climate where Nursing students may have felt out-of-place. In the combined classes at Akita University I witnessed more isolated or limited social interaction in the mixed classes. I therefore separated the data for Nursing students from the data of Education students in this study, in order to allow for any difference there might be. This, even though all students in the mixed group were considered to be at the same aptitude level. The following decimal figures represent average absences for all student groups during the respective 1ˢᵗ and 2ⁿᵈ semesters.

Absence Record Averages (1ˢᵗ Sem. / 2ⁿᵈ Sem.)

	2011-12	2012-13	2013-14
Education	3.1> 2.64	1.6 < 2.46	nr / 3.15
Nursing	2.1 < 4.56	no N. / 2.39	nr / 2.59
Engineering	1.4 / nr	1.6 < 2.17	nr / 3.49

Given the above data, the following are the total average absences for the three groups. Note

that increases occurred in all three groups.

Total Average Absences

	Education	Nursing	Engineering
1st Semester (x5)	2.35	2.1	1.5
2nd Semester (x8)	2.75	3.18	2.83

Comparing only the two semesters, average absences for the three school years are given as **Total Averages** below.

Overall averages: 1st Semester 1.98

2nd Semester 2.92

This is an increase in absences of 47% from 1st to 2nd semesters when all groups are considered together. When individual groups (departments) are compared, the following percent increases are realized.

Breakdown of Absence % Increase (by department)

Education: a 17% increase

Nursing: a 51% increase

Engineering: an 88% increase

See that **all** departments experienced an **increase** in absences during the 2nd semester. I told the students at the beginning of each semester that this would probably happen, and repeated the warning several times during the semester.

Despite incomplete data, therefore, a general impression can be obtained regarding where there is the greatest degree of absence-increase during the 2nd semester. While noting that the Engineering Department has the highest increase, it should also be noticed that this department has the greatest amount of qualifying data for a balanced picture (2 data entries for each semester). While the Education Department has 2 data entries for the 1st semester and 3 entries for the second, the Nursing group had only 1 entry for the 1st semester and 3 for the 2nd semester.

Before continuing with a look at grades, there is another matter of importance that should be mentioned in relation to the problems of both increasing absences and (yet to be seen) declining

grades/performance. During the middle of each semester, immediately following the Mid-term examination, I offer to interview each student in the EAP English classes to show them my records of their performance during the first half of the semester. I actually prepare a complete analysis and computation of all my data on each student for the first 15 classes, and determine the student's grade at that point in time. I offer to show this (individualized/personal) information to any student who might be interested. I explain that my purpose in such record keeping is to see how much the student will try to improve their performance during the last15 classes (during the 2nd half of the semester), which concludes with the Final examination. I do not stress, however, that my real purpose is to simply acknowledge which students are really interested in their own progress. My focus is **attitude**.

From my records the following statistics show the percentage of students who came for individual consultation. The figures are averages from 3 school years that include the 2011-2014 time period. The first percentage is for the 1st semester, and the second percentage is for the 2nd semester. Note that all three groups showed a decrease in interest in the 2nd semester. See especially which department had the greatest decrease in interest.

Education: 77.5% and 66.7% for a 13.9% decrease

Nursing: 75% and 65.3% for a 12.9% decrease

Engineering: 87.5% and 48% for a 45% decrease

The averages for both Education and Nursing are somewhat similar for the 1st semester, reflecting a positive interest level for 3-out-of-4 students. A nearly equal decline in interest is found for both groups in the 2nd semester. A comparatively high, perhaps anxiety-driven interest is found (almost pleasingly) among the Engineering students in the 1st semester. This percentage plummets in the 2nd semester to nearly half the interest level. Recall that the Education/Nursing classes were a mixed bag of Basic-to-Advanced students; the actual average aptitude value for this (total) group is 6.5. The average aptitude value for the Engineering students was 11.3. Comparatively, this is not impressive. It should be a matter of concern to consider what happens to the interest and motivation of Engineering students who have the highest English language aptitude.

Let us now look at a comparison of grades between the students of each department.

Interpretation of Grades

There was a complete record of all students' grades for the period of time of this study. Please refer to the comparison chart below for the following discussion.   Although the percentages of all 1st and 2nd semester letter grades are compared (as increasing, decreasing, or remaining the same), my personal focus and discussion will be on the "D" grades and "A" grades only. Low-letter "D" grades will first be discussed.

When reading the chart, please see the three school years on the left, with department names below them.   Letter grades are given in bold print.   Below each of the letter grades are two figures: on the left is the percentage for the 1st semester; on the right, the percentage for the 2nd semester.   Below both figures for the "A" grades ($\blacklozenge$) is the computed percent of increase or decrease that occurred when semesters are compared.

1st and 2nd Semester Grade Comparison

2011	"A"	"B"	"C"	"D"
Education	22% < 29%	22% < 64%	48% > 7%	8% > -----
	$\blacklozenge$ A 31.8% increase in A grades.			
Nursing	56% > 13%	22% < 25%	22% < 56%	----- < 6%
	$\blacklozenge$ A 76.8% decrease in A grades.			
Engineering	28% > 3%	34% < 47%	34% = 34%	3% < 16%
	$\blacklozenge$ An 89.3% decrease in A grades.			
2012				
Education	20% < 46%	47% > 23%	30% < 31%	3% > -----
	$\blacklozenge$ A 130% increase in A grades.			
Nursing	(no N.)/11%	(no N.)/67%	(no N.)/22%	(no N.)/ -----
Engineering	22% < 31%	36% < 55%	42% > 14%	----- / -----
	$\blacklozenge$ A 40.9% increase in A grades.			
2013				
Education	11% < 23%	54% > 46%	35% > 31%	----- /-----
	$\blacklozenge$ A 100.9% increase in A grades.			
Nursing	25% > 23%	75% > 59%	-----/18%	----- / -----
	$\blacklozenge$ An 8.6% decrease in A grades.			
Engineering	43% > 5%	47% > 26%	10% < 63%	----- < 6%
	$\blacklozenge$ An 88.4% decrease in A grades.			

"D" Grade Interpretation

It is simple to understand that an increase of **"D"** grades is not a good thing, while a decrease is a good thing. In the three-year period being discussed, there were only 2 cases where **"D"**s decreased: **A8 and A10** went from 8% to 0% in 2011, and **A1 and A10** went from 3% to 0% in 2012. Note that both of these decreases are in Education (Department) classes.

During the same period, there were 3 cases where **"D"**s increased: **A1 and A10** (Nurses only) went from 0% to 6% in 2011; **C9 and C11** (Engineering) went from 3% to 16% in 2011; and **C14 and C8** (Engineering) went from 0% to 6% in 2013.

Three facts may be understood from this meager data:

1. There were no increases among Education students.
2. All increases among Engineering students occurred at *intermediate* and *advanced* aptitude levels.
3. There were no increases among any of the *basic* aptitude students.

"A" Grade Interpretation

For emphasis, the chart data will be reprinted for a closer look and explanation. For **"A"** grade increases, 4 cases are found:

2011   A8/A10   a 31.8% increase

2012   A1/A10   a 130% increase

2013   A1/A11   a 109.9% increase

2012   C11/C15   a 40.9% increase

The years are not given in consecutive order so that the Engineering students (C) can be separated for a clearer comparison. It is also very important to explain that although the Education/Nursing departments are (in fact) cited/labeled as (A), there were **no** Nurses found in any of these **"A"** grade improvement categories. All improvements were among Education students.

Regarding **decreases** in **"A"** grades, again, 4 cases are found:

2011   A8/A10   a 76.8% **decrease**

2013   A1/A11   an 8.6% **decrease**

2011   C9/C11   an 89.3% **decrease**

2013   C14/C8   an 88.4% **decrease**

Unlike the above (increase) groups, where (A) department students were all Education students, both of the **decreases** that occurred were among exclusively Nursing students. However, the highest **decreases** occurred among intermediate and advanced (aptitude) Engineering students.

"A" Grade Quality Comparison

We will next consider the quality of **"A"** grades. The purpose for this discussion is to show **not** how improvement did or did not occur between semesters; rather, we will now consider **when** (which semester) and **where** (which department) the highest and lowest **"A"** grades occurred. This collection of data will confirm that students are much more motivated during the 1st semester than they are during the 2nd semester. But it will furthermore show (surprisingly) that where the highest grades are found is where the least amount of long-term motivation is maintained (throughout the school year).

For purposes of convenience, *high* and *low* considerations for **"A"** grades have been separated at the 25% mark, inasmuch as there are 23%, 22%, and 20% found below this percentage, and there are 28%, and 29% above it. This seemingly natural division also conveniently allows two groups, each having 7 percentage-yielding elements, although some percentages are shared (23%, 22%, and 11%). If interested, please refer to the **1st and 2nd Semester Grade Comparison** chart for the years of the listed classes (departments).

Order of Highest % "A" only			Order of Lowest % "A" only		
56%	A8	Nursing 1st Sem.	23% (2)	A11	Ed/Nursing 2nd Sem.
46%	A10	Education 2nd Sem.	22% (2)	A8/C11	Ed/Engineering 1st Sem.
43%	C14	Engineering 1st Sem.	20%	A1	Education 1st Sem.
31%	C15	Engineering 2nd Sem.	13%	A10	Nursing 2nd Sem.
29%	A10	Education 2nd Sem.	11% (2)	A10/A1	Nursing/Ed 2nd Sem.
28%	C9	Engineering 1st Sem.	5%	C8	Engineering 2nd Sem.
25%	A1	Nursing 1st Sem.	3%	C11	Engineering 2nd Sem.

For the 1st semester in the *highest* group, we have two departments represented. They are Nursing, with 56% and 25%, and Engineering, with 43% and 28%. For the 2nd semester in the *highest* group, again two departments are represented. They are Education, with 46% and 29%, and Engineering, with 31%. Note that the most-represented group in the total consideration is

Engineering. This is a commendable achievement. Note also that 4 of these *highest* percentages occurred in the 1st semester (thus making the 1st semester the best represented).

For the *lowest* percentages in the "A" group, Education is the most represented (4 mentions). Nursing and Engineering are both mentioned 3 times. However, please note that Engineering occupies the *lowest* two places (5% and 3%) in this grouping. When considering **when** these grades were achieved, it will be noticed that only 4 of the entries (22% x 2, 20%, and 11%) were achieved in the 1st semester, while 6 entries (an increase) occurred in the 2nd semester (23% x 2, 13%, 11%, 5%, and 3%). Of particular notice is the fact that the **lowest** percentages occurred at the end of the school year (i.e. 2nd semester).

Further Consideration and Comparison

In terms of how each department-group placed (percentage-wise) in relation to each other, considering the above 25% separation (*high-low*) value as semesters are compared, we have the following (below) breakdown. Place-values are simply determined by numbering the sequence 1-8 (1st semester) and 1-9 (2nd semester). Recall that one Nursing class was not represented during the 1st semester of the 2012-13 school year (hence, only 8 elements).

Highest "A's"/Lowest "A's" Comparison

1st Semester		2nd Semester	
1. 56%	Nursing	1. 46%	Education
2. 43%	Engineering	2. 31%	Engineering
3. 28%	Engineering	3. 29%	Education
4. 25%	Nursing		
		4. 23%	Education
5. 22%	Education	5. 23%	Nursing
6. 22%	Engineering	6. 13%	Nursing
7. 20%	Education	7. 11%	Nursing
8. 11%	Education	8. 5%	Engineering
		9. 3%	Engineering

In the 1st semester, the Education group was represented 37.5% of the time. This group occupied places 5, 7, and 8 (all in the lower echelon of the upper group). In the 2nd semester, Education occupies roughly a 33% representation (a decrease), but quality has greatly improved to

places 1, 3, and 4. Having the same basic representation value as in 1st semester, they have moved upward to a 66% representation in the upper echelon. This shows great improvement in the 2nd semester (when compared to the 1st semester).

In Nursing, the 1st semester yields a 25% representation overall, yet a 50% showing in the upper field of the best grades; they place 1st and 4th. Their showing for the 2nd semester is 33%, an increase; however, placing 5th, 6th, and 7th, one can see where quality has substantially decreased by the end of the school year.

Lastly, we look at the Engineering group. Having the same exposure as the Education group (at 37.5%) in the 1st semester, they placed 2nd and 3rd in the upper tier, and 6th place in the lower tier. Looking solely at this, it is an excellent representation. Maintaining the same 33% exposure as the other two groups during 2nd semester, however, they produced a disheartening result, sinking to the bottom in places 8 and 9, at 5% and 3%. This, while maintaining 2nd place (at 31%) near the top of the tier.

The following is a breakdown of the above-explained statistics.

8 Groups

Education   3 (37.5%) #s 5,7,8

Nursing   2 (25%) (top 4!!) #s 1,4

Engineering   3 (37.5%) #s 2,3,6

9 Groups

Education   3 (33%) #s 1,3,4

Nursing   3 (33%) #s 5,6,7

Engineering   3 (33%) #s 2,8,9

Conclusion

It is hoped that this detailed discussion and accompanying statistics will show that high-aptitude Engineering students noticeably lose motivation over the duration of the school year. Education students, conversely improve, while showing an attitude of perseverance and endurance. Nursing students lose motivation, but not to the degree that Engineering students do; for the future, these students have now been segregated from their Education department peers. They may now be observed independently.