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## ABSTAACT

CEQ-The Advisor ratings from 400 of 763 class sections from the spring of 1971 administration lere divided into two groups of 200 sections each. The. sections were separated into five groups depending of the proportion of students taking the class as a requirement. These proportions were as follows: wore than $4 / 5$ cf the student enrollment was mandatory', $3 / 5$ to $4 / 5$ of student enrolluent was mandatory, etc. Identical analyses were performed on each sample with identical results. one-way analyses of variance (ANOVA) oneach of the six subscales of the CEQ yielded statistically significant differences among the mean ratings of the five groups. polynomical trend analyses subsequently.showed that the linear trend was significant ( $p$.01) in each case. This result isplied that as the proportion of students taking a class because of a requirement increases, the ratings given to the course and instructor decreases: Suggestions vere made to caution instructors about interpreting ced results for classes that have high or low proportions of requirement-enrolled students. It was suggested also that further here are regarded as conclusive evidence. (Author)

## Research Report

T/TLEE $\begin{gathered}\text { hould the proportion of students taking a class as } \\ \text { a requirement affect student rating of the course? }\end{gathered}$
$A \cup T H O P(S)$ Gerald M. Gillmore and Dale C. Brandenburg


REPORT \#\# 347
DATE March, 1974



## Abstract

CBQ-The Advisor ratings from 400 of 763 class sections from the spring of 1971 administration were divided into two groups of 200 sections each. The sections were separated into five groups depending on the proportion of atudents taking the class as a requirement. These proportions were as follows: more than $4 / 5$ of the, otudent en=ollment was mandatory, $3 / 5$ to $4 / 5$ of estudent enrollment was mandatory, etc. !

Identical analyses were performed on each sample with identical results. One-way analyses of varlance (ANOVA) on each of the six subscales of the CEQ yielded statistically significant differences among the mean ratings of the five groups. Polynomial trend analyses subsequently showed that the linear trend was significant ( $p<.01$ ) in each case. This rasult iuplied that as the proportion of otudents taking a class because of a requirement facreases, the ratings given to the course and instructor decreases.

Suggesfions were made to caution instructors about interpreting CBQ results for classes which have high or low pioportions of requirement enrolled students. It was auggested also that further investigations be performed in this area before the results presented here are regarded as sqnclusive avidence.

WOULD THE PROPORTION OF STUDENTS TAKING A
CLASS AS A REQUIREMENT AFPECT STUDENT RATING OF THE COURSE?
Gerald M. Gillmore and Dale C. Brandenburg

The perennial problem of determining the effectiveness of the college instructor has been pondered over, particularly by those dirfctly involved in the educational system. To have college instructors rated by their studento is not a universally accepted prodedure among college staffs, instead it presents an area of controversy. Sources of objections to such à procedure are manifold, especially from the farulty members who are probably worried about their possible rating and from administrators who are concerned about faculty morale. Ryans (1954). discussed this attitude of college instructors toward stụdent ratings and listed reasons why instructors are generally opposed to having their students rate them. . . . . .

At the University of Illinois, Urbana-Champaign, one instrument used to evaluate teaching effectiveness was the Illinois Course Evaluation Question-nadre-The Advisor. (CEQ-The Advisor). In 1962 a comittee from the Student Senate agreed to investigate the quality of teaching on/ the campus (Dillman, 1970). From ${ }_{0}^{1962}$ until 1968, several polls of student opinion of teacher effectiveness were taken at the Undversity. However, a complete overview of student opinion could not be obtained for a number of reasons. Finaliy, In 1968, the Subcomittee on Course and Teacher Evaluation of the Educational Affairs Committee of the Student Senate, with the cooperation of the deans and heads of departments of the colleges; decided to obtain an evaluation of teachers and courses by distributing questionnaires in the classroom. Starting in the school year of 1968 , students rated their instructors and courses by answering objectiva questions on:computerized forms at the end
of each semester. On the back of the questionnaire form they also responded'. to open-ended questions, such as: What are your general comments about the instructor in this course? For thorough details about the development of The Advisor see Feldman's report (1970).

The questionnaire used for evaluating the courses offered is the spring semester of 1972 was called the CRQ-The Advisor. The CEQ instrument consists of 50 items which are divided into six subscales: General Course Attitude, Method of Instruction, Course Content, Interest - Attention; Instructor, and Specific Items (Aleamoni and Spencer, 1973). The first through the fifth subscales contain eight items each; the last subscale has ten items (see Appendix A). This information is shown in Table 1.

Table 1
Subscales of the CEQ-The Advisor

|  | Subscales |
| :--- | :---: |
| 1. General Course Attitude | Number of Items |
| 2. Method of Instruction | 8 |
| 3. Course Content. | 8 |
| 4. Interest - Attention | 8 |
| 5. Instructor | 8 |
| 6. Specific Items | 8 |

Students indicate their degree of agreement or disagreement on each item. Responses to the 50 questionnaire items are based on a four-point scale of Strongly Agree (SA), Agree (A), Disagree ( $D$ ), and Strongly Disagree
for the positively stated items und the reverse weighting for the negative ones. Bach item has a predetermined best answer which receives the highest woight. The mean of each item is calculated by the arithmetic average of the. atudents ${ }^{\text {a }}$ responses. Higher means on the CEQ-The Advisor indicata more favorable attitudeo.

The CEQ-The Advisof is voluntardly administered by the instructor to his class. After the answer sheets are scored the results are returned to the instructor who administered the instrument. The purposes of the CEQ-The Advisor are to provide the instructor with some insight into the manner in which he and hie course are perceived by his s'tudents and thus suggest ways to improve his course; to make publication of results available to the students; to give the students an opportunity to gain broader knowledge of course , material, methods, and objectives than is now available; and to enable the administrators within each college to gain insight into the overall effectiveness of its course offerings.

The purpose of this study was to determine whether student overall ratings of courses are affected by the proportion of the class taking it as a requirement. In other words, does the class with the majority, say $80 \%$, of students taking it as a requirement receive lower ratings than a class with a smaller percentage of students taking it p.s a requirement? Other investigations (Gage, 1961; Heilman and Armentrout, 1936; Lovell and Haner, 1955) have shown conflicting results. The null hypothesis to be tested was that there is no significant difference among the ratings obtained when differing proportions of students take a course as a requirement;

## Subjeots

The data was obtained from instructors who voluntarily administered the CEQ-The Advisor to their classes in the spring semester of 1971. Both undergraduate and graduste level classes were used. The instrument was administered during regular class or final examination periods. In all classes, the questionnaire was given near enough to the end of the semester so that students could estimate their current performance in the course. A total of 763 class sections were available for study. Variables

This study used the six CEQ subscales as dependent variables. These are: (1) General Course Attitude, (2) Method of Instruction, (3) Course Content, (4) Interest - Attention, (5) Instructor, and (6) Specific Items. The independ dent variable, proportion of students taking a course as a requirement, was formed by dividing available class results into five groups as follows:

Group. 1 was composed of the classes which had $80 \%$ of the students taking the course as a requixement.

Group 2 was composed of the classes which had $60 \%$ to $79 \%$ of the students taking the course of a requirement.
Groups 3, 4, and 5 similarily consisted of $40 \%$ to $59 \%, 20 \%$ to $39 \%$, and less than $20 \%$ of the students taking the course as a requirement, respectively.

## Data Analysis

In this study the total sample of 763 sections was randomly dividad into two samples of 200 sections each. The only restriction of selecting the data was that the same course taught by the same instructor was not included in the same group. The differences in ratings were examined within each subscale.

Means for each subscale of each group were computed. Orie-way ANOVA was used for investigating the difference in ratings within each subsegle. The overall strength of association between the percentage of students taking courses as a requirement and the rating was estimated by the following formula (Hays, 1963, p. $38^{\frac{1}{2}}$ ).

$$
\text { est } \omega^{2} . \quad \frac{S S \text { between }-(J-1) M S \text { within }}{S S \text { tot'al }+M S \text { within }}
$$

where $J$ number of groups
The polynomial regression technique ${ }^{1}$ was then applied in order to investi. gate the trend of the relationship between dependent and findependent variables within each sample.

## Results

## Ceneral Course Attitude

The means obtained from the ratings for the five groups in both samples - are shown in Table 2. For Sample 1, the highest mean was 3.32 and the lowest was 2.94; for Sample 2, the highest mean was 3.37 and the lowest was 2.93. The classes which had less than $20 \%$ of the students taking the course as a requirement received the highest rating, while the lowest rating was observed for the group which had more than $88 \%$ required-enrollment students. The results in both samples were similur.
${ }^{1}$ It should be noted that the polynomial regression technique was applied in this case even though there may have been a violation of one of its assumptions. That is, the abscissa had five points which do not nectssarily constitute an interval scale. However, we are confident that the measure on the abscissa (proportion of class) is at least monotonically related to the true propoxtion scale base ${ }^{8}$ on group means. Therefore, rur analyses for trend are approximate and the sertousness of the violation cennot be regarded as a detriment to the results in general (Nunnelly, 1967, p. 25).

## Table 2

Means for General Courge Attitude

| Group | $\bigcirc \quad \mathrm{N}$ |  | W |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Sample 1 | Sample 2 | Sample 1 | Sample 2 |
| 1. 80-100\% required | 56 | 80 | 2.94. | 2.93 |
| 2. 60-79\% required. | 27 | 35 | 3.11 | 3.04 |
| 3. $40-59 \%$ required | 27. | 26 | 3.04 | 3.21 |
| 4. 20-39\% required ; | 48 | 22 | 3.24 | 3.20 |
| 5. Less than- 0 ( ${ }^{\text {cequired }}$ | 42 | 37 | 3.32 | 3.37 |

One-way ANOV was performed using the proportion of required-ehrollment students as the independent variable and the obtained subscale ratjags as the dependent variable. The F-ratio was statistically significant with probability of less than, 01 in both samples (see Table 3 for ANOVA). The index of $\omega^{2}$ showed that the independent variabie was estimated to account for only $12 \%$ of the variance in the ratings for Sample 1, and $20 \%$ for Sample 2. Thus, knowing a student's group membership does not appreciably assist in predicting his rating of the class. In both samples, the trend of the relationship between the independent and dependent variables was linear. In other words, the linear regression was fitied to the data, and it was found to be statistically significant at the .01 level. This result is shown in Table 3 and graphed in Figure 1.

Table 3
Oneway ANOVA Including the Tast for Linear Trend and Estimated $\omega^{2}$ for General Course Attitude

| Source of Variation |
| :--- |

## Method of Instruction

The means for the Method of Instruction subscale are given in Table $\dot{4}_{\text {. In }}$. In both samples, the highest ratings were in the fifth group, i.e., less than $20 \%$ of required-enrollment students, while the classes which had more than $80 \%$ of required-enrollment students received the lowest ratings.

FIGURE 1
LINEAR RELATIONSHIPS OF MEAN RATINGS FOR GENERAL COURSE ATTITUDE


Table 4
Means for Method of Instruction.

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Group |  |  |  |  |
|  | Sample 1 | Sample 2 | Sample 1 | Samele 2 |
| 1 | 56 | 80 | 2.69 | 2.72 |
| 2 | 27 | 35 | 2.87 | 2.86 |
| 3 | 27 | 26 | 2.78 | 2.90 |
| 4 | 48 | 22 | 2.95 | 2.86 |
| 5 | 42 | 37 | 2.98 | 3.08 |
| Total | 200 | 200 | 2.85 | 2.85 |

The results of one-way ANOVA are shown in Table 5. The tests yielded significant $F$-ratios with probability less than .01 in both samples. However, the proportion of required-enrollment students in class was estimated (via $\omega^{2}$ ) to account for about $6 \%$ of the variance for Sample 1 ratings and slightly over s\% fur Sample 2. The trend analysis showed that linear regression was fitted to the data in both cases and the result was statiatically significant at ". 01 level as shown in Table 4. An illustration of the linear trend for: mean ratings is given' in Figure 2.

Course Content.
The first group of students gave the lowest mean ratings for the Course Content subscale, specifically, 2.78 and 2.70 for Sample 1 and Sample 2 , respectively. The classes which were composed of luss than $20 \%$ of requireden rollment students received the highest ratings as shown in Table 6. These were 3.04 for Sample 1 and 3.08 for Sample 2. In Sample 2, the class rating means Increased as the proportion of the required-enrollment students decreased. A similar result can be noted in Sample 1 except for a reversal between Groups 2 and 3.

Table 5
One-way ANOVA Including the Teat for Linear Trend and Estimated $\omega^{2}$ for Me hod of Instruction

| Source of Variation | $d f$ | SS | MS | 1. F | $\omega^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sample 1 |  |  |  |  |  |
| Between Groups | 4. | 2:7600 | 0.6900 | 4.0584* | 0.0576 |
| Linear Trend | 1 | 2,3515 ${ }^{\circ}$ | 2.3515 | .13.8324* |  |
| desidual | 3 | 0.4085 | 0.1362 | $\because 1$ |  |
| Within Groups | 195 | 33.1527 | 0.1700 |  |  |
| - Total | 199 | 35.9127 |  |  |  |
| Sample 2 |  |  |  |  |  |
| Between Groups | 4 | 3.5442 | 0.8860 | 5.6248* | $\cdot, 0.0847$ |
| Linear Trend | 1. | 3.1377 | 3.1377 | 19.9219* | - |
| Residual | 3 | 0.4065 | 0.1355 |  |  |
| Within Groups | 195 | 30.7175 | 0.1575 |  |  |
| . Total | 199 | 34.2617 |  |  |  |

$* p<.01$

Table 6
Means for Course Content

| Group | $N$ |  | X |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Sample 1 | Sample 2 | Sample 1 | Sample? |
| 1 | 56 | 80 | 2.78 | 2.70 |
| 2 | 27 | 35 | 2.88 | 2.82 |
| 3 | 27 | 26 | 2.86 | 2.95 |
| 4 | 48 | 22 | 3.00 | 3.03 |
| $\because 5$ | 42 | 37 | 3.04 | 3.08 |
| Total | 200 | 200 | 2.91 | 2.86 |

FIGURE 2
LINEAR RELATIONSHIPS OF MEAN RATINGS FOR METHOD OF INSTRUCTION


The Furatio from one-way ANOVA was significant at . 01 level in both samples; The estimated $\omega^{2}$ for Samples 1 and 2 were, 11 and ,24, respectively. The inear trend was statistically aignificant at $1 \%$ level. NThe results of the above analyses are presented in Table 7. Figure 3 shows the linear treng for the mean ratings of each group in each sample.

Table 7
One-way ANOVA Including the Test for Linear Trend and Estimated $\omega^{2}$ for Couree Content -

| Source of Variation | $d f$ | SS | MS | $F$ | $\omega^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\because \quad \cdots$ Sample 1 |  |  |  |  |  |
| Between Groups | 4 | 2.0965 | 0.5241 | 6.9197* | 0.1063 |
| Linear Trend , | 1 | 1.9577 | 1.9577 | 25.8613* |  |
| Residual | 3 | 0.1388 | 0.0463 |  |  |
| Within Groups | 195 | 14.7701 | 0.0757 |  | - |
| Total | 199 | 16.8666 |  | $1 \cdots 1$ |  |
| Sample 2 |  |  |  |  |  |
| Between Groups | 4 | 4.5993 | $\therefore 0.1150$ | 16.6740* | 0.2387 |
| Linear Trend | 1 | 4.4933 | 4.4932 | 65.1188* | * |
| Residual | 3 | 0.1051 | 0.0350 | , |  |
| Within Groups | 195 | 13.4469 | 0.0690 | * |  |
| Total | 199 | 18.0462 |  | \% |  |

${ }^{*} p<.01$

4
FIGURE 3
LINEAR RELATIONSHIPS OF MEAN: RATINGS FOR COURSE CONTENT




$\begin{array}{lllll}n_{2}=80 & n_{2}=35 & n_{2}=26 & n_{2}=22 & n_{2}=37\end{array}$
GROUP NUAEER AND SAMPLE SIZES

## Interest - Attention

As observed in the previous analyses, the group which had less than $20 \%$ of the required-enroliment students in class gave the ifohest ratings for this subscale in both samples. The lowest ratings for the Interest - Attention subacale were in the first group and these were 2.61 and 2.62 for Samples 1 and 2 , respectively. The means for this qubscale are shown in Table 8.

Table 8
Means for Interest - Attention

| Group | $\cdots$ |  | X |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Sample 1 | Sample 2 | Sample 1 | Sample 2 |
| 1 | 56 | 80 | 2.61 | 2.629 |
| 2 | 27 | $\therefore .35$ | 2.82 | 2.75 |
| 3 | 27 | 26 | - 2.75 | 2.94 |
| 4 | 48 | 22 | 2.99 | 2.99 |
| 5 | 42 | 37 | 3.02 | 3.11 |
| Total | 200 | 200 | 2.84 | 2.82 |

According to the one-way ANOVA results, the hypothesis of no effect of the proportion of the required-enrollment students in class on the ratings was. rejected at .01 level in both sauples. Approximately $12 \%$ and $19 \%$ of the variance in ratings (estimated by $\omega^{2}$ ) was accounted for by the proportion of the required-enrollment students in Samples 1 and 2 , respectively. The result of the trend analysis was oignificant at .01 level for a linear trend; Therefore, the linear regression was fitted to both data sets. The results of these analyses are given in Table 9. Figure 4 illustrates the 11near trend for the mean ratings of this variable for each group in each sample.

Table 9
One-way ANOVA Including the Test for Linear
Trend and Estimated $\omega^{2}$ for Interest - Attention

| Source of Variation | $d f$ | ${ }^{\prime}$ SS | MS | $F$ | $\omega^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sample 1 |  |  |  |  |  |
| Between Groups | 4 | 5.5610 | 1,3903 | 7.9181* | 0.1215 |
| Linear Trend | 1 | 4.9641 | 4.9641 | 28.8694* |  |
| Residual | 3 | 0.5969 | 0.1990 , |  |  |
| Within Groups | 195 | 34.2381 ! | 0.1756 | - |  |
| Total | 199 | 39.7991 | - |  |  |
| - Sample 2 |  |  |  |  |  |
| Between Groups | 4 | 7.5298 | 1.8825 | 12.9811* | 0.1933 |
| Linear Irend | 1 | 7.3914 | -7.3914 | 50.9752* |  |
| Residual | 3 | 0.1384 | 0.0461 |  |  |
| Within Groups | . 195 | 28.2780 | 0.1450 |  |  |
| Total | -199 | 35,8079 |  |  |  |

## Instructor

The means of instructor rating are presented in Table 10. The instructors teaching classes which had more than $80 \%$ of the required-enrollment students (Group 1) received the lowest rating, i.e., 3.06 and 3.03 in Samples 1 and 2, respectively. The instructors teaching the fourth group, 1.e; , 20\% -39\% of the required-enrollment students, received the highest ratings in Sample 1 and the ones teaching less than $20 \%$ of the required-enrollment students received the highest ratings in Sample 2.

# FIGURE 4 <br> LINEAR RELATIONSHIPS OF MEAN RATINGS FOR INTEREST-ATTENTION 

SAMPLE
SAMPLE 2 -


Table 10
Means for Instructor
c

| Group | $N$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Sample 1 | Sample 2 | Sample 1 | Sample 2 |
| 1 | 56 | 80 | 3.06 | 3.03 |
| 2 | 27 | - 35 | 3.14 | 3.12 |
| 3 | 27 | - 26 | 3.12 | 3.14 |
| 4 | 48 | 22 | 3.24 | 3.17 |
| 5 | 42 | 37 | 3.22 | 3.27 |
| Total | 200 | 200 | 3.16 | -3.12. |

The results of one-way ANOVA are given in Table 11. The F-ratio was significant at . 05 level for Sample 1, and at .01 for Sample 2. The proportion of the required-enrollment students in class wąs estimated by $\omega^{2}$ to account for only about $3 \%$ and $6 \%$ of the variance in the instructor ratings in Samples 1 and 2, respectively. Only the inear regression was significant at .01 level in both sets. The results are given in Table 11. Figure. 5 shows the linear trend for the mean ratings of the instructor subscale.

## Speoifis Items

For the Specific Items subscale, the highest ratings were in the fifth group, 1, e., 2.98 and 3.02 in Samples 1 and 2, respectively. Again, the first group gave the lowest ratings, $1 . e ., 2.85$ and 2.81 in Samples 1 and 2 , respectively. The mean ratings increased as the proportion of the required-enrollment students decreased in Sample 2 and a similar result wạ noted for sample 1 except for a reversal for Groups 2 and 3. The resulte are shown in Table 12.

Table 11
?
Oneway ANOVA Including the Test for Linear
Trend and Estimated $\omega^{2}$ for Instructor

| Source of Variation | $\therefore d f$ | SS | MS | ${ }^{\prime}$ | $\omega^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sample $1^{\circ}$ |  |  |  |  |  |
| Between Groups | 4 | 1.0120 | 0.2530 | 2.4472* | 0.0281 |
| Linear Trend | 1. | . 0.8341 | 0.8341 | 8.0667** |  |
| Residual | 3 | 0.1779 | 0.0593 |  |  |
| Within Groups | 195 | 20.1585 | 0.1034 |  |  |
| Total | $199^{\circ}$ | . 21.1705 |  |  |  |
| Sample 2 |  |  |  |  |  |
| , Between Groups | 4 | 1.5433 | 0.3858 | 4.2554** | 0.0611 |
| Linear Trend | 1 | 1.4916 | 1.4916 | 16.4454** |  |
| Residual | 3 | 0.0517 | $0.0172^{\prime}$ |  | 1 |
| Within Groups | 195 | 17.6803. | 0.0907 |  |  |
| Total | . 199 | 19.2236 |  | : |  |

$\begin{aligned} * p & <.05 \\ * * p & <.01\end{aligned}$
Table 12
$\beta$
Means for Specific Items

| Group |  |  | X |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Sample 1 | Sample 2 | Sample 1 | Sample 2 |
| 1 | 56 | 80 | 2.85 | 2.81 |
| 2 | 27 | 35 | 2.92 | 2.89 |
| 3 | 27 | 26 | 2.87 | 2.97 |
| 4 | 48 | 22 | 2.96 | 2.98 |
| 5 | 42 | 37 | 2.98 | 3.02 |
| Total | 200 | 200 | 2.92 | 2.90 |

FIGURE 5

## LINEAR RELATIONSHIPS OF MEAN RATINGS FOR INSTRUCTOR

SAMPLE $1-$
SAMPLE 2--


Significant differences in ratings were iound at the . 05 level in Sample 1 and at the . 01 level in Sample 2. Approximately $3 \%$ and singhtiy over $9 \%$ of the variances (estimated by $\omega^{2}$ ) in ratings were accounted for by the percentage of required-enrollment students in Sampiea 1 and 2, reapectively. In both data sets, the trend analysis was not signjficant beyond linear. The resultant analyses are presented in Table 13. Figure 6 shows the linear trend for the mean ratings for each grour within each sample.

Table 13
One-way ANOVA Including the Test for Linear Trend and Estimated $\omega^{2}$ for Specific Items

| Source of Variation | $d f$ | SS | MS | $F$ | $\omega^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sample 1 |  |  |  |  |  |
| Between Groups | 4 | 0.6215 | 0.1554 | 2.5731* | 0.0305 |
| Linear Trend | 1. | 0.5195 | 0.5195 | 8.6010** |  |
| " Residual | 3 | 0.1020 | 0.0340 |  |  |
| Within Groups | 195 | 11.7747 | 0.0604 |  |  |
| Total | 199 | 12.3962 |  |  |  |
| Sample 2 |  |  |  |  |  |
| Between Groups | 4 | 1.4096 | 0.3524 | 6.1956** | 0.0941 |
| Linear Trend | 1. | 1.3268 | 1.3268 | 23.3181** |  |
| Residual | 3 | 0.0828 | 0.0276 |  |  |
| Within Groups | 195 | $11.0914^{\prime}$ | 0.0569 |  |  |
| Total | 199 | 12.5010 |  |  |  |

FIGURE 6 LINEAR RELATIONSHIPS OF MEAN RATINGS FOR SPECIFIC ITEMS

SAMPLE 1
SAMPLE 2 -m-


## Discussion and Conclusions

The results of the study clearly indicate that instruceors and courses get: different ratings using the CFQ-The Advisor depending upon the proportion of students enrolled in a class who take that class as a requirement'. In generai, It was found that the larger the proportion of students taking a course as as. requirement, the lower the ratings given to the course.

This conclusion is justified for the following two reasons:
(1) The overall E-ratio for each of the six CEQ-The Advisor subscales for each of the two samples of class sections were statistically significant.
(2) The results of the trend analyses for each subscale and sample indicate a statistically significant linear trend. In each case'it was determined that the linear regression line fitted the data substantially better than any higher-order regression line ( $p<, 01$ for linear; others not aignificant).

Thus, it is concluded that the linear standardized regression weight is different from zero (here, positive) for each analygig:

It can be observed from the tables of mans for each subscale that there does not appear to be substantial differences between the highest and lowest means for either of the two samples. However, if these means are interpreted in reference to the norms for any of the subscales, obvious and important decile differences can be noted. To illustrate this point Table 14 was developed in reference to the subscale norms from the CEQ Manual (Aleamoni, 1972) for total University of 111 nois sections and the smaller of the two sample mean differences between Group 1 and Group : 5.

Table 14
Norị Decile Changes Correaponding to Group 1
and Group 5 Mean Differences


It is easy to see from Table 14 that Group 1 ratings are below the median "and Group 5 ratings are at', or above, the median for each subscale,

- This result has clear implications toward the interpretation of CEQ ratings for classes which have high or low proportions of required-enrollment students in a class. However, we cannot confidently conclude that required courses" will always receive low ratings simply because those courses are "dull" from the student's peint of view. These results, on the other jand, do show in general that instructors in these courses are penalized because of the course's status.

Dther variables that may influence these ratings should be investigated before separate norm tables or another similar method is used to equalize th affect of required-enrollment. It is also necessary to replicate this study With data from other semesters. These investigations should be undertaken before the results presented here should be regarded as conclusive evidence.

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Appendix A
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Please. use this side of the form for your personal comments on teacher elfectiveness and general course value - - then turn it over and answes the objective questions on the other side, using pencil onfy. Remember - these questionnaires will be collected by a student in your class and mailed by hin to the Advisor stall. Your instructor will nol see your completed evaluation.

## COURSE CONTENT

Please give your comments on the agurse content, subject malter and any particular relevance this course has had to your area of sluaty.


## PAPERS ANO HOME WORK

Comment on the vatue of books, horiework, and papers. (if any) in this course.

## EXAMS

Comment on the exams. (quizzes, practicals) as to difficulty, faimess, etc.

## GENERAL

1. What improvements in this course would you suggest?
2. Please give your thoughtful evaluation of this course with comments. Are you satisfied with what you gol out of this course? Do you corisider it a valuable edscational experience? Simply a means of passing a requirement? Or adisappointment? Please comment.
