

# Developments in Business Simulation & Experiential Exercises, Volume 12, 1985

## ABSEL REVISITED: IN-CLASS STUDY INVOLVEMENT INCREASES LEARNING

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This paper seeks to show the advantages of using a form of experiential learning. Student involvement, Using group quizzes in a traditional lecture-based class, increases the apprehension of complex material. Additionally, students acquire and practice lifelong job-related skills when using the participate quiz method.

### DISCUSSION

Quizzing. Is it a viable method for aiding and improving the learning process? Experience has indicated that the use of quizzes does improve a student's ability to acquire and retain subject matter. Due to this conviction, I have implemented a quizzing process in my teaching methods wherever appropriate. I have used this teaching technique successfully in industrial teaching sessions as well as the typical college classroom setting. True, the procedure requires extra work and time from the instructor, but the time and the energy required has always been well rewarded.

Until 1980, my quizzes were always administered in a standard manner. The quizzes were passed out to the class, each student recorded the answers on a separate sheet, and the answer sheet was passed in while the student retained the question sheet. In order to provide immediate feedback to the class of answers to the quiz questions, each question was answered and discussed as thoroughly as necessary for complete understanding. Finally, the quizzes were returned to the instructor so that they could be used in other sections. This saved material and time.

While attending the 1980 ABSEL Meeting in Dallas, Texas, I attended a paper presentation by Richard D. Arthur Jr. of Judson College that caused me to modify the quizzing techniques used in my Principles of Marketing courses. The title of his paper was "An Evaluation of In-Class Student Involvement" standard which was based on Professor Arthur's subject, Principles of Economics. According to Arthur's paper:

It is felt that one of the keys to successful learning is feedback and what this study did was to utilize the advantages of experience as a teacher and I allow the students to discover, while still in class, whether or not he or she had truly inquired and could therefore properly apply any new knowledge gained from material just covered.

In order to do this, the instructor prepared a series of multiple choice questions for each chapter that was to be covered during the course of study (approximately ten per chapter). The students were to, prior to class and using their text material if they so desired, individually pick the best or most complete answers for each of the questions. Once in class, the students were divided into groups of approximately six per group (they kept the same group throughout the course) and were instructed to discuss each question and arrive at a single best answer for the group. No text material was allowed to be used during the group discussion. After a set amount

of time, usually 20-30 minutes depending on the material being discussed, each student submitted a group answer sheet, and then the questions were reviewed by the entire class, and the "correct" answers given. The instructor would then spend the remainder of the two-hour class period lecturing on the subject matter and attempting to explain the problem areas exposed by the questions.

The results of Professor Arthur's innovative technique indicate that his students' comprehension of the subject material increased by approximately 20 percent. The actual examination scores used in the experiment indicate an increase in learning of 23.17 percent.

For my Principles of Marketing courses, I have modified the quizzing procedure in several ways. The changes are designed to compensate for the differences in the subject areas of marketing and economics. Changes include:

1. The quizzes are not passed out prior to class, but rather the students are expected to prepare themselves for the quiz by studying the assigned chapters. Upon arrival in class, they should be ready to participate in the quizzing process.
2. The groups are comprised of four members each instead of six.
3. Group membership is changed in a random fashion for each quiz during the course; therefore, the groups are never constant.
4. The groups are instructed to arrive at answers for each question and record these on a separate sheet of paper.
5. Each student in the group is to arrive at his own personal best answer and record these on an individual answer sheet.

To complete the process:

6. After 15-20 minutes, the instructor collects the group answer sheets.
7. Students are allowed to review and modify their individual answer sheets for 5 more minutes.
8. The individual answer sheets are collected; however, students retain the question sheets.
9. The instructor and students discuss each question and answer until the material is understood.
10. The instructor collects the quiz sheets for future use.
11. The individual answer sheet determines a student's grade.

These modifications leave intact Arthur's principles of student involvement.

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Participatory quizzing has decided advantages. First, it rapidly increases marketing students' active vocabulary because they are forced into a conversational mode that uses marketing technology. Students cannot listen passively and still be involved in the group's decision making. Members of the group must learn to express themselves. In doing so, they experience the give-and-take of decision making.

Second, the group participation approach increases the student's ability to work with different types of people who approach problem solving in various ways. As the groups start to take their quizzes, one group may work individually, with each person answering his own quiz questions on his own answer sheet and then comparing answers for the group answer sheet. Others may start out by answering each question as a group, followed by group members deciding what answers they wish to record on their own answer sheet. The students know what their grades will be based on their individual answer sheets. The group answer sheet is used only as a guide for the instructor to check for those students who come to class unprepared and simply answer the quiz questions from the group answer sheet.

Third, this student-involved process helps students who hesitate to participate. This method of quizzing has shown that peers will automatically pull the hesitant student into the learning process. Quizzing by this method keeps the aggressive student from dominating individual responses. This dominating student may influence the group answer on the group answer sheet, but individuals are allowed to arrive at their own conclusions. This, in turn, develops assertiveness in passive students who otherwise might have a tendency to sit back and only listen.

A fourth advantage involves the critical skill of persuasion. Students learn to convince others by using facts, examples, reasons, and statistics—tools of oral and written communication.

High student interest is a fifth advantage. When using participatory quizzing, instructors are likely to find that the

noise level is high as debates rage, but this noise level is indicative of the interest of the students in the subject matter, a marked increase over the traditional lecture/rote-taking system.

The immediate feedback the students receive is a sixth advantage. The students and instructor told a lively discussion on all the questions and answers.

Seventh, the group quizzes are graded and used to determine those students who came to class unprepared; thus the unprepared student soon learns that preparation leads to better grades.

Finalize, the quiz questions are designed to identify the major topics and detailed information from each chapter in the text; therefore, the class time required for the quizzes is put to practical use since time to cover the chapter material is comparable to the time spent in the traditional lecture/rote-taking method.

During the academic term, three examinations, which cover the same material as the quizzes, are given in a traditional manner. The final consists of a comprehensive examination.

At the end of the 1980 Fall Term, after using the participatory quizzing method, students in the Fort Lewis College marketing classes participated in the National Testing Services Norming Examination Program. The results were positive. Of the twenty-six schools participating, Fort Lewis College ranked among the top three (see Appendix I). At the end of the Winter Term, 1981 (January through April), students in the marketing classes ranked high in the top 10 percent of the nation (see Appendix II). Prior to fall, 1980, the author taught marketing in a traditional manner and his students, still ranking well, still ranked only at the 75th percentile. The major reason for this marked improvement between the two groups of students, the latter ranking in the top 10 percent of the nation in norming exams, must have been the result of the change in teaching techniques: participative quizzing. Student involvement obviously leads to increased learning.

### APPENDIX I

#### INFORMATION ON 1981 EQUATING GROUP - INTRODUCTORY MARKETING

##### Distribution of Mean Scores of Participating Institutions

<u>Mean Scaled Scores</u>	<u>Number of Institutions</u>
50 and over	3
45 - 49.9	6
40 - 44.9	5
35 - 39.9	8
Below 35	4
	26
<u>Major:</u>	
Business-Related Field	= 88%
Non-Business Field	= 6%
Undecided	= 6%

##### Characteristics of Students\*

<u>Sex</u>	<u>Age</u>	<u>Educational Level</u>
Female - 42%	17-20 = 54%	Freshman = 13%
Male = 58%	21-25 = 36%	Sophomore = 20%
	26-30 = 5%	Junior = 49%
	Over 30 = 6%	Senior = 17%
		Graduate = 2%
<u>Final Course Grade:</u>		
		A = 19%
		B = 33%
		C = 34%
		D = 11%
		E = 2%

\*Percents for some variables do not add to 100 due to rounding. Percentages are based only on those students for whom valid responses were available for each variable.

# Developments in Business Simulation & Experiential Exercises, Volume 12, 1985

## APPENDIX I CONTINUED



COLLEGE LEVEL EXAMINATION PROGRAM  
of the COLLEGE BOARD



FT LEWIS COLLEGE  
BUSINESS & MARKETING DIV  
DURANGO CO 81301

Institution Code: 823A  
Administration Date: JAN 81

Course I.D.: 2  
Page No.: 2

Examination Title: INTRODUCTORY MARKETING

Student Name			Date of Birth	Sex	Identification Number	Current Education Level	Sub 1	Scores Sub 2	Total	Percentile Rank
Last	First	M.I.								
MULLIGAN	JOSEPH		04/21/59	M	22250053A	COLL JUNIOR			45	..
MUNDY	KIM	I	11/01/60	F	524803235	COLL JUNIOR			37	..
NETZ	KATHERIN		11/27/57	F	585768880	COLL JUNIOR			42	..
NORMAN	SCOTT	E	04/02/59	M	524649418	COLL SENIOR			46	..
O'LEARY	KELLY		12/28/57	M	52490141A	COLL JUNIOR			45	..
PETERSON	TERRYL	L	09/14/60	F	524067309	COLL SENIOR			40	..
PIPPIN	TRUDY	L	08/30/60	F	524883220	COLL JUNIOR			46	..
RAITNER	RUTH	L	08/25/57	F	524945432	COLL JUNIOR			45	..
REHNBURG	MICHAEL		11/09/59	M	524515688	COLL JUNIOR			45	..
ROBINSON	WILLIAM	B	11/22/57	M	524178701	COLL JUNIOR			41	..
ROELKNER	GREGG	S	05/26/59	M	523464477	COLL SENIOR			41	..
ROTHSCHILD	CINDY	L	06/09/60	F	524043461	COLL JUNIOR			46	..
SCHREINER	DARLENE	L	07/08/59	F	194446734	COLL JUNIOR			45	..
STANEROS	ALVA	M	02/22/59	F	585664490	COLL SENIOR			45	..
STANTON	CARL	P	08/26/59	M	524884464	COLL JUNIOR			44	..
STEINKE	TERRI	P	02/01/59	F	524198866	COLL SENIOR			45	..
STENSON	DAN	M	05/28/60	M	522184118	COLL JUNIOR			41	..
STRAIN	DEAN	J	09/30/59	M	522400205	COLL SENIOR			47	..
STIMPP	TED	P	08/30/59	M	523394888	COLL SENIOR			45	..
VAUGHN	JOHN	L	11/1/56	M	523368830	COLL JUNIOR			42	..
WILLIAMS	NATHANIE	N	04/29/60	F	009520244	COLL JUNIOR			42	..
WILLARD	RALPH	A	03/04/57	M	150552344	COLL JUNIOR			43	..
WILLUGHBY	VALARIE	A	08/10/60	F	471722351	COLL JUNIOR			43	..
WOLTEN	SEAN		10/10/59	M	496684534	COLL SENIOR			43	..
WOODHOUSE	DOON	D	01/30/59	M	56370640P	COLL GRAD			60	..

Score Point(s)	Sub 1	Sub 2	Total	Score Point(s)	Sub 1	Sub 2	Total	Score Point(s)	Sub 1	Sub 2	Total
90 (804-795)				59 (504-585)				39 (394-385)			
79 (794-785)				58 (584-575)				38 (384-375)			
78 (784-775)				57 (574-565)				37 (374-365)			
77 (774-765)				56 (564-555)				36 (364-355)			
76 (764-755)				55 (554-545)				35 (354-345)			
75 (754-745)				54 (544-535)				34 (344-335)			
74 (744-735)				53 (534-525)				33 (334-325)			
73 (734-725)				52 (524-515)				32 (324-315)			
72 (724-715)				51 (514-505)				31 (314-305)			
71 (714-705)		1		50 (504-495)				30 (304-295)			
70 (704-695)		1		49 (494-485)				29 (294-285)			
69 (694-685)				48 (484-475)				28 (284-275)			
68 (684-675)				47 (474-465)				27 (274-265)			
67 (674-665)				46 (464-455)				26 (264-255)			
66 (664-655)				45 (454-445)				25 (254-245)			
65 (654-645)				44 (444-435)				24 (244-235)			
64 (644-635)				43 (434-425)				23 (234-225)			
63 (634-625)				42 (424-415)				22 (224-215)			
62 (624-615)				41 (414-405)				21 (214-205)			
61 (614-605)				40 (404-395)				20 (204-200)			
60 (604-595)		1									

SUMMARY STATISTICS		
SUB 1	Number of Students	
	Mean	41.1
	Standard Deviation	11.1
SUB 2	Number of Students	
	Mean	41.1
	Standard Deviation	11.1
TOTAL	Number of Students	70
	Mean	50.1
	Standard Deviation	9.10

# Developments in Business Simulation & Experiential Exercises, Volume 12, 1985

## APPENDIX I CONTINUED

### Colleges Participating in the Equating Administration of the CLEP Examination in INTRODUCTORY MARKETING Winter 1980-81

The following institutions administered the Introductory Marketing examination as part of the 1980-81 equating study. They tested a total of 1,453 students.

Alabama A & H University, AL  
Boise State University, ID  
Central Texas College, TX  
College of Staten Island, NY  
College of St. Catherine, MN  
Columbia State Community College, TN  
Dabney S. Lancaster Community College, VA  
East Carolina University, NC  
Ft. Lewis College, CO  
Hesser College, NH  
Howard Payne University, TX  
Illinois Benedictine College, IL  
Lock Haven State College, PA  
Mary Washington College, VA  
Middlesex County College, NJ  
Mid-State Technical Institute, WI  
Morningside College, IA  
Niagara University, NY  
Our Lady of Holy Cross, LA  
St. Johns College, KS  
St. Johns University, NY  
St. Louis Community College, Florissant Valley, MO  
Sul Ross State University, TX  
University of North Dakota, ND  
University of Rhode Island - Kingston, RI  
Western New England College, MA

## APPENDIX II

### Marketing

Alabama State University - Montgomery, Alabama  
Elon College - Elon College, North Carolina  
Fairfield University - Fairfield, Connecticut  
Fort Lewis College - Durango, Colorado  
Frostburg State College - Frostburg, Maryland  
Gonzaga University - Spokane, Washington  
Hampton Institute - Hampton, Virginia  
Hofstra University - Hempstead, New York  
Indiana State University - Terre Haute, Indiana  
Louisiana State University - Baton Rouge, Louisiana  
Michigan State University - East Lansing, Michigan  
New Mexico State University - Las Cruces - Las Cruces, New Mexico  
Nicholls State University - Thibodaux, Louisiana  
Pan American University - Edinburg, Texas  
Pittsburg State University - Pittsburg, Kansas  
Robert Morris College - Coraopolis, Pennsylvania  
Saint Mary's College - Notre Dame, Indiana  
State University of New York at Buffalo - Buffalo, New York  
State University of New York College of Technology at Utica/Rome - Utica, New York  
Stonehill College - North Easton, Massachusetts  
The Lindenwood Colleges - St. Charles, Missouri  
Tuskegee Institute - Tuskegee, Alabama  
University of Alaska - Anchorage - Anchorage, Alaska  
University of Hawaii - Honolulu - Honolulu, Hawaii  
University of Montana - Missoula, Montana  
University of Portland - Portland, Oregon  
University of Richmond - Richmond, Virginia  
University of Southern Mississippi - Hattiesburg, Mississippi  
Washburn University of Topeka - Topeka, Kansas  
Western Kentucky University - Bowling Green, Kentucky  
Winston-Salem State University - Winston-Salem, North Carolina 20

# Developments in Business Simulation & Experiential Exercises, Volume 12, 1985

## APPENDIX CONTINUED

### Scaled Score

The examinee's score on the subtest reported on a scale of 20 to 80. Scores for each subtest were scaled independently in such a way that the distribution of scores earned by examinees would have a mean of 50 and a standard deviation of 10.

### Percentile Rank

The approximate percentile rank of the examinee's score when compared to the distribution of scores earned by all examinees. This entry may be roughly interpreted as the percentage of examinees who received scores lower than the examinee on the particular subtest.

### Interpretation

You may wish to compare the performance of students in your program with that of the students in the other programs which participated in this project. Ranges of program mean scores by subject are given below.

### Program Mean Score

	Lower 1/3	Middle 1/3	Upper 1/3
Accounting	46.39-	46.90-52.82	52.83+
Finance	46.22-	46.23-52.77	52.73+
Management of Human Resources	49.21-	49.22-54.40	54.41+
Marketing	48.53-	48.54-51.32	51.83+
Operations Management	43.52-	48.53-51.63	51.69+

Due to the shortened length of the subtests and the content differences between subtests, scaled scores are not appropriate for comparing individual students in any but the most general way. Complete full length versions of the various examinations, which are appropriate for individual differential assessment, may be administered on a closed basis for valid educational purposes by arrangement with the Regents External Degree Program or the American College Testing Program.

INSTITUTION: FORT LEWIS COLLEGE

M419

PAGE 6

### SUMMARY

N	MEAN	STD DEV
179	59.94	6.61