

***A PILOT STUDY TO ASSESS THE EFFECTS OF  
HUMOR IN RELATIONSHIP  
TO TEACHING EFFECTIVENESS***

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## ***A PILOT STUDY TO ASSESS THE EFFECTS OF HUMOR IN RELATIONSHIP TO TEACHING EFFECTIVENESS***

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In a 1968 work entitled, "A Teacher is Many Things", Drs. Earl Pullias and James Young elaborated on the many qualities or roles often required by an instructor at the college/university level. A litany of these roles include qualities such as: guide, teacher, searcher, counsellor, creator, evaluator, knowledge authority, emancipator, learner, facer of reality, and culminator, to name a few. Two of the roles mentioned in their book, "storyteller and actor", might appear to be unnecessary, or even questionable in their suitability for such a list. How does storytelling and acting relate to being an effective teacher? According to Pullias and Young, storytelling provides the student with a sense of place and identity and the ability to discover "...how others have solved problems similar to their own, ...learn to appreciate their own lives...feel inferior...superior...be repelled or inspired" (1968, p. 161). As an actor, the individual plays the role of a teacher, developing ways to carefully stage the learning moment for the class, a role the individual maintains throughout the time he/she is on stage before his/her students. Thus, the classroom professor assumes the role of an "edutainer (Zemke, 1991). The professor functions both as an educator and entertainer on the learning stage.

But how does storytelling and acting relate to the concept of humor in the

classroom? Just as there are appropriate circumstances for many, if not all of the qualities mentioned in the Pullias and Young book, the use of humor in the classroom may contribute to the process, both as a learning tool, or as a method of placing the students in an enhanced psychological mindset, which will, in turn, assist in facilitating the learning process. Hill (1988) suggests that humor can enhance comprehension of new material when jokes or stories provide examples. Costello (1991) portends that laughter stabilizes blood pressure and stimulates circulation, ultimately relaxing the whole system. Students relax and become listeners when teachers reveal and apply their sense of humor (Hill,1988). Additionally, humor opens communication channels and develops rapport between student and teacher. A sense of belonging (Duncan, 1990) or 'connectedness' can result from humor or sharing a laugh (Feigelson, 1989). Lefcourt and Martin (1986) suggest that humor and laughter represent an important mechanism for coping with many psychosocial stressors that humans encounter in their daily lives (p.1). They further point out that humor focuses on relieving interpersonal tensions. Additionally, humor can be viewed as a "moderator or minimizer of the serious" (Lefcourt & Martin, 1986, p.123).

As an educator, armed with

knowledge, and given the responsibility to see that it is transferred to students, one must maintain the competitive edge for insuring student attention in order to allow the learning to cross the barriers that might be in place. Many of us will recall the movie and television series "The Paper Chase" where the late John Houseman played the role of Professor Kingsfield, a fictional Harvard law professor. The humorous side of Professor Kingsfield was rarely seen, and when it was, it was only outside the classroom environment. But for many of us, the style and personality portrayed by John Houseman in the Paper Chase would not prevail in reaching the type of students found in today's college and university classrooms.

Today many students are not afforded the luxury of a solitary educational focus, rather students have ongoing careers, family obligations, second jobs, and organizational or community commitments that absorb much of their time. Additionally, students may be confronted with deadlines for completing degrees, mobility concerns that impinge upon any long term time investment in educational programs, or even possible deferred personal gratification through an extensive long term effort requiring as much as ten years to complete a degree program. Today's nontraditional student is packaged with a variety of challenging obstacles to a smooth and uninterrupted educational experience. The majority of corporate and military, graduate level, and off campus programs are taught in the evening, during periods ranging from two to five hours. The vast majority of the students have just completed their normal day's schedule, and

are not in the same frame of mind as full time students attending day classes as portrayed in *The Paper Chase*. Instructors, functioning in the role of actors, must be able to adapt their style to insure that the "learning moment" will occur, and not go unnoticed (Pullias & Young, 1968). By placing the students in proper frame of mind through the use of humor, an instructor can hope to reduce the boredom associated with long classes after a full workday.

While research supports the idea that there are many different learning styles, it is not always apparent which one will benefit a particular student. Nor is it possible to identify one style that will meet everyone's needs across the classroom. Therefore, many professors have adopted a variety of methodologies for maximizing their own potential in the classroom. Humor, as one strategy, allows students to be more receptive to quick transitions to new topics, reveals the human side of the professor, and if only temporarily, releases the student's contrived defenses or anxieties. Humor reveals, to the student, the possibility that embarrassment, seemingly foolish inquiries and risk oriented learning behaviors are acceptable and even encouraged in this 'learning' environment. Kushner, a noted humor consultant contends that an audience will remember even the dry basic information if it is aligned with humor. (Newman, 1989).

It is probably a safe assumption, from an academic point of view, that the classroom process is infrequently associated with the terms 'fun', 'exciting' or even 'humorous' as a learning experience. In fact, more often students identify the experience as a time consuming means to a

greatly sought after or needed end, that being the credential and its side effect: knowledge. Periodically, professors become aware of colleagues with positive profiles from students. We often wonder if these high marks correlate to any real learning by students. It is not unusual to hear reviews integrating the use of classroom humor in conveying positive comments regarding a particular professor.

But why humor? As previously mentioned, researchers have found that humor can minimize anxiety (Malone, 1980), and reduce boredom (Ray, 1960). Humor and accomplishment are definitely linked (Smith, 1990). C. W. Metcalf (1990) suggests that the purpose of humor is to bond, not to separate. Humor can be a catalyst in overcoming the fear of failure. Metcalf's humorobics suggests that humor, just as with any skills or art form, should be practiced frequently to avoid atrophy. Humor should be the instrument by which one maintains a respectable distance from 'terminal professionalism' (Metcalf, 1990). How one views a given situation can provide a much needed sense of control. Humor makes you more human "... more approachable... leads to good communication and a fruitful exchange of ideas" (Feigelson, 1989, p.8) Training films used for educational purposes have adopted a method of relying on humor by presenting a realistic event through an exaggerated obvious point to enhance learning (Cleese, 1990). Businesses like Southwest Airlines support and encourage employees having fun, some formalize a "fun committee" (Jaffe, 1990). Hal Schatz, Vice President of Sales and Marketing for the training division of Lettuce Amuse U Comedy Schools,

incorporate trained comedians to teach various subjects, suggesting that "...humor piques interest, melts barriers, promotes participation, enhances learning and boosts morale" (1991, p.60).

"...humor has been associated with verbal aggression, information retention and recall, learning and entertainment" (Graham, Papa & Brooks, 1992, p.161). Studies have found that humor can be an important learning tool in the learning process. Information disseminated to students in which humor is used as part of the learning process, may, in some instances, be recalled because of the humor associated with the learning moment. Freud referred to humor as a defense mechanism allowing one to confront difficult situations (1928). He further suggested that humor, unlike wit and the comic, had a "liberating element". Research has shown that not all students learn alike. While the processes involved in the concept of learning will not be explored in this paper, it is however, necessary that the instructor be willing to acknowledge that his or her style may not provide the most appropriate method for transferring information to the student, information which will be learned and retained as cognitive knowledge. Graham et al. state that "the introduction of new information...may cause apprehension and possible anxiety. Much of the anxiety can be...expunged by humor" (p. 167). Educators have a responsibility to their students, as well as their profession, to insure that the learning moment occurs. This responsibility is far greater than to just insure that pertinent information is presented to students, but also in a way in which it can be comprehended and absorbed in an

individuals cognitive knowledge base. For some, the idea that one must change or alter one's teaching style can appear to be quite threatening, as change normally is, but if one assumes that learning is only the student's responsibility, they do not comprehend the role of the instructor as a teacher! A teacher's role is not only to disseminate information, but to the best of one's ability, insure that the information has been understood and learning has occurred.

This study does not attempt to imply that humor must be a mandated solution to facilitate the learning process, and must be utilized in every course by every instructor. Its sole purpose is to explore humor as an appropriate learning technique which can be used in the classroom environment. The authors also believe that humor may not be the correct choice for every instructor, or for every course. Many would agree that if Professor Kingsfield had used humor in his classroom, the intensity he required for his students would have declined or diminished. Politicians rely on humor and laughter to boost their popularity and credibility. Laughter is the best motivator (Reynolds, 1989). However, when used inappropriately, humor could blow up in one's face, as President Reagan discovered when he indicated that the federal deficit was big enough to take care of itself, so why worry about it. (Reynolds, 1989) A miscalculated, misaligned effort which was poorly timed and definitely inappropriate! But the authors contend that humor is a viable educational technique which, when used in the proper situation, will lead to enhanced learning and student satisfaction.

The question being researched in this study is to determine whether the use of

humor in the classroom environment will facilitate the learning process (in this study defined as higher examination scores), and increase the students satisfaction of the overall learning experience.

The purpose of this study was to determine whether the use of humor as a proactive and ongoing ingredient of classroom instruction resulted in significant differences in students performance (as reflected in examination scores), and in student course evaluations (as reflected in the student critiques).

The research methodology used in this study is causal-comparative since the groups (classes) had already been formed, and the authors had no control in the selection process. The population of the study were two graduate Embry-Riddle Aeronautical University Aeronautical Science classes, both enrolled in the MAS 604 course, Human Factors in Aviation/Aerospace Science, and two graduate University of West Florida classes, both enrolled in the MAN 6156 course, Organizational Behavior. The two Embry-Riddle classes were taught by the same instructor during the same academic term while the two West Florida classes were taught in two consecutive terms. In one of the Embry-Riddle classes, and in one of the West Florida classes a proactive humor treatment was utilized, while no proactive humor was used in the other section.

Both instructors agreed prior to the beginning of the courses that they would cover the identical information in both of the classes, the midterm and final examination would be identical for the respective classes, and a criterion, verses norm referenced, grading system was utilized. In an attempt

to correct for any subjectivity in the results, only the midterm and final examination test scores were used to evaluate student performance; presentations, exercises and research papers were not considered. The two instructors utilized numerous forms of levity in the classes which received the humor treatment, including jokes, cartoons, comical video's, stories, and experiences. The humorous material did not in any way, pertain to the subject matter being covered in the class.

The two research hypotheses of this study are: that students in classes in which proactive humor was used minimized anxiety and reduced boredom will have significantly higher evaluation scores (midterm and final examinations) as compared to those students whose classes did not receive humor treatment; and that instructors who utilize proactive humor in the classroom environment will be perceived by the students as being more effective educators (as measured by the end course critiques), than those instructors who did not utilize humor. The null hypotheses are: there will be no significant difference in student examination scores in classes which use proactive humor to minimize anxiety and reduce boredom, when compared to classes which do not use humor; and there will be no significant difference in the student's perception of teacher effectiveness, as measured by the course critiques, between instructors who use proactive humor in the classroom, as compared to those who do not. Both hypotheses were tested at the  $\alpha = .05$  level of significance.

Certain assumptions were made in this study. First, the instructors teaching the course will communicate the same

information to both sections of the course used in this study. Second, the use of humor will be used to further explain or elaborate on the information being presented. (While there is evidence that the use of humor which directly relates to the learning event could assist in facilitating the retention and recall of information, this aspect of humor research will be left for another study, to allow the authors to study examination scores which were not influenced by the infusion of humor to explain or assist in recalling the learning event.) The use of humor therefore, did not provide the classes receiving the humor treatment with an advantage over those which did not receive the treatment.

A limitation of this study was that the authors had no input to the composition of the individual class sections. Although a comparison of the students in the class sections revealed that their educational level, grade point averages, and work experiences were very similar, the inability of the authors to randomly assign the individuals must be considered a limitation of this study.

As far as this study is concerned, proactive humor will be defined as the use of levity, (jokes, cartoons, comical stories and experiences, etc.) intentionally initiated by the instructor that does not relate directly to the information being presented in the course. This will insure that the examination scores will not be affected by the use of humor directly related to the subject matter being presented. As in every course there will always be situations where unplanned levity will occur. Both instructors made every attempt to insure that no levity was initiated by them in the classes

which were not designated to receive the humor treatment.

The statistical tests used to evaluate the data from the study were the t-Test for independent means and the Chi Square test. The t-Test was used to test for significance between the examination scores of the two classes; while Chi Square tested for significance between the student critique responses.

At the conclusion of the classes, the midterm and final examination test scores for the two-Embry-Riddle MAS 604 classes (Table 1) were compared against each other utilizing the t-Test for independent means. The same process was completed for the West Florida MAN 6156 classes (Table 2). The results revealed that there was no significant difference between either the Embry-Riddle (Figure 1) or West Florida (Figure 2) classes in relation to their test scores. Based on this information, the first null hypothesis was not rejected. Classes where humor was used to minimize anxiety and relieve boredom did not have significant higher examination scores as compared with classes who did not receive the humor treatment.

In the case of the second hypothesis, the course critique were compared using the nonparametric Chi Square test. Since the Embry-Riddle and West Florida critiques are somewhat similar in format, but not exactly alike, different survey questions were used to evaluate the second hypothesis. In the case of the Embry-Riddle critique, the question which asked, "Compared to other instructors you have had (second school and college) how effective has this instructor been in this course?" In the case of the West Florida critique, the question which

asks students "Overall, I would rate the instructors teaching skill" was used. The Chi Square was used in both cases to evaluate the data. The results of the classes which did not receive the humor treatment were, for this test, considered the expected values, while the classes which received the humor treatments were considered the observed values. Since Embry-Riddle classes (Table 3) did not have the same amounts of students, (24 verses 22) it was assumed that the raw data would have to be interpolated, however, since three members of the larger class, and one member of the smaller class were on temporary duty assignments and did not participate in the course critique, the number of critiques for both classes was 21, negating the need to interpolate the data. In the case of the University of West Florida classes, both were "full" classes with 30 students each (Table 4). There were some students which dropped the course at the start of the term, but these vacancies were filled by students from a waiting list. The data from the classes were compared against each other (as expected and observed values) since that data allowed for a direct verses estimated comparison. The results from both the Embry-Riddle (Figure 3) and West Florida (Figure 4) critiques indicated significance in the evaluations of the instructors by the students. The classes in which the humor treatment was utilized rated the instructors significantly higher in their course critique as compared to the classes where the humor treatment was not utilized. The null hypothesis was therefore rejected.

Table 1

Midterm and Final Examination Scores for Embry-Riddle MAS 604

	<u>Class With Proactive Humor</u>		<u>Class Without Proactive Humor</u>	
Student	Midterm	Final	Midterm	Final
1	85	88	90	97
2	94	90	92	90
3	96	98	88	86
4	93	92	88	82
5	90	92	73	88
6	92	96	98	96
7	88	84	98	92
8	84	88	87	82
9	89	88	98	93
10	98	99	78	91
11	86	88	88	84
12	93	97	93	90
13	94	98	90	92
14	90	90	94	98
15	90	92	96	94
16	93	83	93	92
17	72	87	88	86
18	98	86	82	83
19	96	88	87	89
20	83	82	99	*
21	82	90	94	*
22	90	*	96	*

\* Student was not available for the final examination due to temporary military duty assignment (TDY/TAD). Individuals were administered a make-up examination which differed from the one used in class. Because of the difference in the examination the scores were not included in the study.

Table 2

Midterm and Final Examination Scores for West Florida MAN 6156

	<u>Class With Proactive Humor</u>		<u>Class Without Proactive Humor</u>	
Student	Midterm	Final	Midterm	Final
1	90	93	92	86
2	88	88	88	98
3	98	92	90	93
4	96	93	88	88
5	94	94	94	94
6	97	93	90	83
7	90	90	96	81
8	88	83	96	93
9	86	96	85	98
10	94	98	97	93
11	96	93	96	97
12	81	85	96	90
13	96	90	90	92
14	97	92	91	83
15	83	96	96	94
16	93	83	94	96
17	91	85	92	90
18	90	91	88	85
19	96	92	91	96
20	96	99	99	86
21	89	83	83	89
22	93	93	88	94
23	88	88	95	93
24	92	80	83	88

(table continues)

25	95	83	97	86
26	86	87	89	80
27	78	96	88	99
28	89	95	98	96
29	80	94	93	98
30	*	96	94	99

\* Student was not available for the final examination due to temporary military duty assignment (TDY/TAD). Individuals were administered a make-up examination which differed from the one used in class. Because of the difference in the examination the scores were not included in the study.

Table 3

Results From Embry-Riddle MAS 604 Course Critique Question "Compared to Other Instructors You Have Had (Secondary School and College) How Effective Has This Instructor Been In This Course?"

	<u>Class With Proactive Humor*</u>	<u>Class Without Proactive Humor**</u>
Excellent	19	6
Good	2	14
Satisfactory	0	1
Fair	0	0
Poor	0	0

\* Three students were not available to complete the course critique due to temporary military duty assignment (TDY/TAD).

\*\* One student was not available to complete the course critique due to temporary military duty assignment (TDY/TAD).

Table 4

Results From University of West Florida MAN 6156 Course Critique Statement "Rate the Overall Teaching Skills of the Instructor."

	<u>Class With Proactive Humor</u>	<u>Class Without Proactive Humor</u>
Outstanding	28	16
Good	2	13
Average	0	0
Below Average	0	0
Poor	0	0

t-Test for Independent Samples

<u>Statistic</u>	<u>Value</u>
No. of Scores in Group One	43
Sum of Scores in Group One	3872.00
Mean of Group One	90.00
Sum of Squared Scores in Group One	349942.00
SS of Group One	.281.91
No. of Scores in Group Two	41
Sum of Scores in Group Two	3695.00
Mean of Group Two	90.12
Sum of Squared Scores in Group Two	334367.00
SS of Group Two	1366.38
t-Value	-0.06
Degree of Freedom	82
p-Value at .05	1.970

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Figure 1. t-Test results for Embry-Riddle Aeronautical University MAS 604 examination scores.

t-Test for Independent Samples

<u>Statistic</u>	<u>Value</u>
No. of Scores in Group One	59
Sum of Scores in Group One	5351.00
Mean of Group One	90.69
Sum of Squared Scores in Group One	486889.00
SS of Group One	1580.53
No. of Scores in Group Two	60
Sum of Scores in Group Two	5495.00
Mean of Group Two	81.58
Sum of Squared Scores in Group Two	504719.59
SS of Group Two	1468.59
t-Value	-0.95
Degree of Freedom	117
p-Value at .05	1.980

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Figure 2. t-Test results for University of West Florida MAN 6156 examination scores.

One Dimensional Chi Square

<u>Observed Frequency</u>	<u>Expected Frequency</u>	<u>Cell Chi Square</u>
19.00	6.00	28.17
2.00	14.00	10.29
0.00	1.00	1.00
Chi Squared		39.45
Total Numbers of Observations		21
Number of Categories (N)		3
Degrees of Freedom (N-1)		2
p-Value at .05		5.99

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Figure 3. Chi Square results for Embry-Riddle MAS 604 course critique question.

One Dimensional Chi Square

<u>Observed Frequency</u>	<u>Expected Frequency</u>	<u>Cell Chi Square</u>
28.00	16.00	9.00
2.00	13.00	9.31
0.00	1.00	1.00
Chi Squared		19.31
Total Numbers of Observations		30
Number of Categories (N)		3
Degrees of Freedom (N-1)		2
p-Value at .05		5.99

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Figure 4. Chi Square results for University of West Florida course critique question.

The results of this study revealed that proactive humor did not have a significant impact in the scores in the classes in which it was utilized, as compared with the classes where it was not used. From these results, one would assume that humor has no effect on the students in terms of increasing their knowledge of the subject matter. However, as stated earlier in this paper, the humor which was used did not relate to the material being taught in the classes. There have been other studies which maintain that there is a direct correlation between the scores students receive, and the use of humor to explain, exemplify, enhance, intensify, magnify, heighten, etc. the material being presented. This study specifically sought to correct for this variable by insuring that humor would not be used for this purpose, and to leave this question for future research.

In the case of the question which asks if proactive humor would have significance in the students evaluation of the instructor, as measured by the course critiques, the test results rejected the null hypothesis. As found in both the Embry-Riddle and West Florida critiques, the classes where proactive humor was used reflected significantly higher instructor evaluations, as compared to those classes where it was not used. Although humor did not increase the students' scores, it did, as hypothesized by the authors, increase the perception of the effectiveness of the instructor. Some may question the importance of the students perception as a creditable measuring device, especially since it appears that it did not result in higher test scores. But to make an assumption such as this, one ignores that fact that learning

cannot only be measured by test scores. There are certain intangibles which cannot be quantified in every instance, and only through the subjectivity of the student evaluations can the affects be analyzed. In this case the subjective course critique indicate that the use of proactive humor was effective in increasing the students' perception of the learning process.

Overall, the study suggests that there is an impact on the relationship that exists between the professor and the student when humor is applied in the learning process. While humor, in this study, does not support retention of subject matter as measured by test results, it does suggest a plethora of topics to be studied testing the use of various types of humor, short term vs long term retention, rote vs abstract learning, or even student morale, just to name a few.

The application of humor in the classroom can be used as a transitioning strategy, enhancing subject matter, dealing with disruptions or even as a method of sympathizing with students (Hill, 1988). Humor can bring the subject matter and textbook into reality for the students. Humor and laughter cannot replace the content of the course, but it can act as a catalyst or method of exciting and assisting the student to become aware of the very process of learning.

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