The first part of this study replicates an earlier study (D. Waechter, I. Newman, and L. Rosenkoetter, 1998) that used a procedure for authentic assessment of students in a master's level research class, a class that is often feared and avoided by students, by means of a study on humor, since that content would be somewhat incompatible with anxiety. Students (n=88) completed a questionnaire on personal interpretation of humor, demographic information, and the Temperament Profile Survey. Students also completed a course evaluation indicating subjectively evaluated growth in understanding and critiquing research. Part two of the study used the general linear model to examine the relationships among view of humor, temperament, and course evaluation. Results indicate that there appear to be relationships between how one evaluates a course subjectively and how one evaluates the appropriate use of humor and an individual's temperament. Evaluations are also complicated by the interactions of age and temperament. Effect sizes were small but consistent. These findings increased investigators' awareness of the complexity of looking at students' evaluations of courses. (Contains 20 references.) (SLD)
The Relationship Between Humor (Temperament) and Course Evaluation

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Linda Rosenkoetter, M. S.

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University of Akron

Abstract

Part One of this study is a replication of an earlier study (Waechter, Newman & Rosenkoetter, 1998) which utilized a procedure for authentic assessment of students in a masters level research class, a course that is often feared and avoided by students, by means of a study on humor, since the content would be somewhat incompatible with anxiety. Students completed a questionnaire regarding personal interpretation of humor, demographic information and the Temperament Profile Survey. Students also completed a course evaluation indicating subjectively evaluated growth in understanding and critiquing research. Part Two of the study utilizes the general linear model to examine the relationship among view of humor, temperament and course evaluation. The potential relationship between temperament and course evaluation is explored. One of the basic findings was that there appear to be relationships between how one subjectively evaluates a course and how one evaluates the appropriate use of humor and an individual's temperament along with the interaction of age by temperament and the interaction of temperament by temperament. These findings increased the investigators' awareness of the complexity of looking at students' evaluation of courses. This effect sizes were small but were consistent. Caution in the use of evaluations is therefore strongly recommended.

Theoretical Background:

There has been a fair amount written on humor and the use of humor and teaching. The two most commonly given reasons for using humor in education include the improvement of learning (Zillmann, et. al., 1980; Ziv, 1979, 1988) and the reduction of anxiety (Mogavero, 1979; Schacht & Stewart, 1990). There is also evidence to suggest that incorporating humor in education helps to establish a positive learner attitude (Kelly, 1983; Ziv, 1979) to promote comprehension and retention (Davies & Apter, 1980, Ziv, 1979) and to make learning more enjoyable (Gilliland & Mauritsen, 1971; Welker, 1977).

Often the more feared courses by students in universities are courses in research design and statistical analysis. The purpose of this presentation is to give an example of how the authors incorporate a strategy that teaches the desired concepts in a manner which increases interest and reduces anxiety, while integrating both qualitative and quantitative concepts. It was felt that the use of humor would be somewhat incompatible with anxiety and therefore a desirable vehicle for teaching examples.

The importance of humor and laughter has taken on professional credibility in psychology over the years, Humor has been studied in relation to aggression (Palmer, 1993 coping (Carroll & Schmidt, 1992; Kupier, et. al., 1993; Overholser, 1992;
Stevenson, 1993), and health (Cousions, 1989; Fry, 1995). Despite extensive research, humor has still not been clearly defined or understood. Humor may mean different things to different people or different things to the same person in a different context.

Method:

In Part One of this study 88 graduate students were given instruction in both qualitative and quantitative concepts. In the qualitative aspect they were taught about the importance on initial coding and focus coding when given qualitative data. Initial codes are constructed after studying the data and are derived from the participants’ responses. Focused codes are then constructed from the initial codes that are combined and raise to an analytical level and then put into categories. Participants read the relevant chapters from the textbook (Newman & Benz, 1998) and listened to a presentation on problems of reliability of coding qualitative data. In other words, students were prepared for the task and then placed in a situation so their development of the concepts of qualitative coding were presented in such a way that they were able to solve the problem.

It was believed that if students personally experienced some of the limitations and problems in qualitative coding they would internalize the process and understand concepts through the vehicle of problem solving via a structured situation so that real learning would be possible.

Each student completed a questionnaire and the Temperament Profile Survey (Littauer, 1992). The Temperament Survey Profile yields scores on four temperament characteristics; Sanguine, which is defined as outgoing, curious, and energetic; Choleric individuals are defined as being a leader, independent and practical; Melancholy is defined as sensitive, analytical or idealists, and Phlegmatic individuals are calm, patient and sympathetic. The questionnaire contained demographics and qualitative questions regarding personal preferences about humor. Students were placed into groups of four or five and asked to initially code and then focus code qualitative responses to the following questions:

"What does laughter do for you?"
"List three things you feel are not funny."

What followed was an investigation into the interpretation and categorization of qualitative data. Different ways of categorizing data lead to different interpretations. In this regard consistency within groups and between groups was examined. The students were able to explore some of the methodological aspects of qualitative data analysis. During this activity consensus was reached through negotiation within each group. However there were substantial differences between the groups. These results were consistent with earlier investigation into qualitative coding by Newman, Mac Donald & Potts, 1995-6.
Qualitative data that students had previously grouped into categories, demographic information and data from the quantitatively scored Temperament Profile Survey were used by the students to generate correlational questions such as:

"Do males and females score differently on the four scales of the Temperament Survey?"

"Is a particular temperament type related to a specific category of reasons individuals laugh?"

In Part Two of this study, students’ responses to qualitative questions were categorized by the authors as follows:

What does laughter do for you?  List three things you feel are not funny.
Makes me feel good  Hurting others.
Helps me to reframe my problems.  Jokes about people’s problems.
Provides a means of expression  Sexual jokes.
Helps with relationships.  Making fun of religion.
Gives me energy  Ethnic Jokes.
Other  Jokes about social-economic status

Students also completed a six-item course evaluation in which they rated their competency in comprehending and critiquing research pre and post having had the Techniques of Research course. A low score on these items indicate perceived good skills. A high score indicates perceived poor skills. (See Appendix A) Additionally, Criterion Variable 7 (gain score) is defined as the difference between Criterion Variable 2 and Criterion Variable 3, Criterion Variable 8 is the sum of Criterion Variables 1 - 6 and Criterion Variable 9 is the sum of Criterion Variables 1, 4, 5, 6, plus the aforementioned gain score. The relationship between humor categories, course evaluation, temperament type and demographics are explored in the results section. The general linear model was used to analyze the results. The functional relationship that will be looked at is represented by the following model:

\[ Y_{1-9} = f(\text{humor, temperament & demographics}) + e \]

Included in this analysis are the main effect, interaction and second degree relationships. Y represents the students’ perceived course evaluation scores (McNeil, Newman & Kelly, 1996).
Results:

There were a number of significant correlations between course evaluation items and demographics and with humor categories. Table 1 shows the significant correlations between demographics and course evaluation questions. Criterion Variable 2 was significantly correlated with sex (females scoring high and males scoring low) and with being single (single individuals score low on this item but high on Criterion Variable 7). Individuals who identified themselves as being full time students received low scores on Criterion Variables 3 and 8. Criterion Variable 5 was negatively correlated with divorce and age. Older individuals scored low, as did individuals who identified themselves as being divorced. Divorced individuals also scored low on Criterion Variable 9.

Significant correlations between course evaluation and reasons that people laugh are represented in Table 2. Criterion Variables 4 and 8 were significantly correlated with stating that laughing makes one “feel good”. A low score on these questions is associated with the likelihood of stating feeling good as a reason for laughing. However stating that reframing is why one laughs is associated with a high score on Criterion Variable 4. Individuals scoring high on Criterion Variable 6 also stated that they laugh as a form of self-expression.

The issues that individuals felt should not be joked about were also significantly correlated with course evaluation questions. (See Table 3) Criterion Variable 1 was associated with jokes about death, ethnic jokes and sexual jokes. A low score on Criterion Variable 1 was associated with statements that one should not joke about ethnicity and sex. However a high score on Criterion Variable 1 was significantly correlated with statements that one should not joke about death. Criterion Variable 3 was negatively correlated with jokes about sex and ethnicity. A high score on Criterion Variable 5 was associated with statements that one should not joke about personality factors (.04). Criterion Variable 8 (sum of Criterion Variables 1 – 6) was negatively correlated with jokes about sex and SES. Criterion Variable 9 was positively correlated with jokes about SES (.05).

Interaction effects for temperament types and temperament by age as they relate to course evaluation were examined. These interactions were not plotted for descriptive purposes, however they were used simply as predictors of the evaluation. Specifically this data strongly supports that the way one tends to evaluate a straightforward question is actually much more complex than it may seem. Course evaluations are at least related to temperament and age. These relationships need to be considered when making judgements about course evaluations since it is not simply the instructor’s behavior that is reflected by the evaluations.

**Interactions among temperament types** in predicting course evaluation were run and are shown in Tables 7, 8, and 9. The interaction of temperament types phlegmatic and melancholy predicted response to Question 4 (Rate how much you
believe this course has helped you to read literature critically.) Individuals who scored high on these temperament traits scored low on this item.

For Criterion Variable 5 (Rate how much you believe this course has helped you to understand research literature.) there were three significant temperament interactions: Phlegmatic by melancholy, sanguine by melancholy and sanguine by phlegmatic. Individuals who scored high on phlegmatic by melancholy or on sanguine by melancholy scored low on Criterion Variable 5. However, individuals who scored high on sanguine and phlegmatic scored high on this question.

Choleric temperament type accounted for a significant amount of unique variance in predicting Criterion Variables 4 and 8, independent of other temperament scales and two way interactions. A low score on these items was associated with a high Choleric score.

Another question that wasn’t initially conceptualized but run post hoc was the interaction between age and temperament in predicting class evaluation. (See Tables 7 - 11) There was a large range in the age of students (22 – 54 with a mean of 32 and a standard deviation of 8.5).

The interaction between age and phlegmatic was significant in predicting Criterion Variable 1 (How confident were you about your ability to critique an article before taking this course?) and Criterion Variable 2 (Rate your perception of how you think your ability really was before taking this course.) A high value on this interaction indicated a high score on these questions.

Phlegmatic accounted for a significant amount of unique variance (.03) in predicting Criterion Variable 1 and Criterion Variable 2 independent of other temperament scales and two-way interactions. In both cases a high score on phlegmatic predicted a low score on the question.

Three interactions, age by choleric, age by sanguine and age by melancholy were significant in predicting Criterion Variable 6 (Rate your ability and comfort to ask questions about research as a function of having taken this course). A high value on these interactions indicated a high score on Criterion Variable 6. In addition age also accounted for a significant amount of unique variance and was positively related to the question. The sanguine melancholic and choleric temperament types each accounted for significant amounts of unique variance independent of other temperament types and two-way interactions. High scores on any of these temperament types indicated a low score on Criterion Variable 6.

Criterion Variable 7, which represents subjectively perceived gain in ability to critique an article as a function of having had the course was significantly predicted by the age by phlegmatic interaction (inverse relationship) and by phlegmatic independent of other temperament types or two way interactions (direct relationship).
Criterion Variable 8, which is the sum of Criterion Variables 1 – 6, was predicted by the interaction of age and choleric (.0304). The higher the value on this interaction, the higher the sum. Choleric accounted for a significant amount of unique variance (.02) and was inversely related to the score on Criterion Variable 8.

No curvilinear relationships were significant in predicting any of the criterion variables.

Conclusions:

Evaluations are complicated constructs not only related to an individual’s conception of what is funny, but also related to age, temperament and interactions of these. Although interest in interpreting evaluations of a course seems straightforward, there appears to be a variety of other confounding variables that are generally not considered when looking at an evaluation.

Although our effects are small, they are numerous. One must be very careful about the confounding effects due to the way in which students evaluate a particular professor to make sure that the evaluation is not indicative of their humor (or the professor's humor) age and/or temperament. How many evaluations of courses take these into consideration? How many evaluations of professors may have been modified if these had been taken into consideration? Perhaps more importantly, how could one take these into consideration and should one take these into consideration. These questions need to be discussed by individuals who have more insight than we have. Also the ramifications of such considerations and/or modifications for both pragmatic use and for further research need to be discussed.

The writers strongly recommend that caution be used when using course evaluations to estimate the effectiveness of an instructor. What appears to be a simple straightforward question tends to be answered to some extent by apparently unrelated confounding variables such as temperament, age and humor.
Carrol, J., & Schmidt, J. Correlation between humorous coping style and health. Psychological Reports, 70, 402.


Stevenson, R. (1993). We laugh to keep from crying: Coping through humor. Loss, Grief & Care, 7, 173-179.


### Table 1

**Significant Correlations (probability) between Criterion Variables and Demographics**

<table>
<thead>
<tr>
<th>CV1</th>
<th>CV2</th>
<th>CV3</th>
<th>CV4</th>
<th>CV5</th>
<th>CV6</th>
<th>CV7</th>
<th>CV8</th>
<th>CV9</th>
</tr>
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<tr>
<td>Age</td>
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<td>-.2133</td>
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<td></td>
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<td>Sex</td>
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<tr>
<td></td>
<td>(.05)</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>.2505</td>
</tr>
<tr>
<td></td>
<td>(.03)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.01)</td>
</tr>
<tr>
<td>Divorce</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.2569</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.01)</td>
<td></td>
<td></td>
<td>(.03)</td>
</tr>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td>-.2339</td>
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<td></td>
<td></td>
<td>(.02)</td>
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</tr>
</tbody>
</table>

### Table 2

**Significant Correlations (probability) between Criterion Variables and Reasons Why People Laugh**

<table>
<thead>
<tr>
<th>CV1</th>
<th>CV2</th>
<th>CV3</th>
<th>CV4</th>
<th>CV5</th>
<th>CV6</th>
<th>CV7</th>
<th>CV8</th>
<th>CV9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel Good</td>
<td></td>
<td></td>
<td></td>
<td>-.2282</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.03)</td>
<td></td>
<td></td>
<td></td>
<td>(.05)</td>
</tr>
<tr>
<td>Reframe</td>
<td></td>
<td></td>
<td></td>
<td>.2235</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(.03)</td>
<td></td>
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</tr>
<tr>
<td>Expression</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td>.2453</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(.02)</td>
</tr>
</tbody>
</table>
Table 3

Significant Correlations (probability) between Evaluation Questions and Things That Are Not Funny

<table>
<thead>
<tr>
<th>Jokes</th>
<th>CV1</th>
<th>CV2</th>
<th>CV3</th>
<th>CV4</th>
<th>CV5</th>
<th>CV6</th>
<th>CV7</th>
<th>CV8</th>
<th>CV9</th>
</tr>
</thead>
<tbody>
<tr>
<td>About Death</td>
<td>.2425</td>
<td>(.02)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic Jokes</td>
<td>-.2237</td>
<td>(.03)</td>
<td>-.2568</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Jokes</td>
<td>-.2443</td>
<td>(.02)</td>
<td>-.2995</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.2198</td>
</tr>
<tr>
<td>SES Jokes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.2777</td>
</tr>
<tr>
<td>Jokes about Personality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A

Techniques of Research

Evaluation

<table>
<thead>
<tr>
<th></th>
<th>Very Confident</th>
<th>Confident</th>
<th>Somewhat Confident</th>
<th>Not very Confident</th>
<th>Extremely Unconfident</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How confident were you about your ability to critique an article <em>before</em> taking this course?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Rate your perception of how you think your ability really was <em>before</em> taking this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Rate your perception of how you think your ability is <em>after</em> taking this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Rate how much you believe this course has helped you to <em>read literature critically</em>.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Rate how much you believe this course has helped you to <em>understand research literature</em>.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Rate your <em>ability and comfort to ask questions</em> about research as a function of having taken this course.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
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