MURDER VERSUS MUSIC: GIVING STUDENTS A CHOICE IN INTRODUCTORY ECONOMICS

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Abstract

This paper describes a writing assignment used in introductory economics where students chose to write one longer essay based on an economics murder mystery or four shorter essays based on popular music, and they chose whether or not to work with a partner. Students also answered a survey constructed to identify whether their preferred learning styles were visual, auditory, or kinetic. Cross tabulations were computed between the choice of assignment variables and learning styles, student gender, and course grade in order to identify which variables were related. The results suggest that learning styles and performance in the course are not strongly related to the choice of assignment, but gender is. This finding supports earlier findings that females learn and understand economics differently than males. Anecdotal evidence is also provided to support the use of these types of writing assignments to promote interest and, possibly, long-term learning in economics.

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Murder Versus Music: Giving Students a Choice in Introductory Economics

Writing assignments are often used in introductory economics or economics survey courses to give students practice communicating basic economic principles. These assignments are commonly structured as essay questions about the material or are based on current events. However, during the spring semester of 1999, students in two sections of an economics survey course were allowed to choose between a writing assignment based on an economics murder mystery and a writing assignment based on popular music. These subjects were chosen so that the material would specifically apply to students’ lives and interests in order to highlight the relevance of economics in their daily lives.¹

The students also answered questionnaires designed to characterize their learning styles—kinetic, auditory, or visual—in order to test whether there is a relationship between choice of assignment and learning style. The hypothesis is that students who are primarily auditory learners will choose the music assignment while students who are primarily visual learners will choose the reading assignment. Cross tabulations are computed to investigate this relationship.

Because the issue of gender has been widely studied in economic education with several findings that females do worse in introductory economics than males (Dynan and Rouse, 1997; Anderson, Benjamin, and Fuss, 1994; and, Tay, 1994), this paper also addresses the relationship between student gender and choice of assignment. The hypothesis is that females will choose different assignments than males because females learn and understand economics differently than males. Again, cross tabulations are
computed to investigate this relationship between choice of assignment and student gender.

For these assignments, students were given the opportunity to work with a partner because both assignments (but the music assignment, in particular) involved creativity on the part of the students, and discussing their ideas with a partner could spark creativity as well as verify the accuracy of their economic explanations. Allowing students to work cooperatively also may help some students learn better (Felder, 1996) and foster lifelong learning (Millis and Cottell, 1998). Giving them the option to work with partners also reduced the instructor’s costs of grading the assignments.

LEARNING STYLES AND GENDER

While there are several systems for classification of learning styles, the focus here is on the classification according to kinetic, auditory, or visual learning. Kinetic learners use sensation and motion to make connections while auditory learners rely on sound and visual learners rely on sight (When Learning and…, 2000). While instructors have different teaching styles, students have different learning styles—that is, different strengths and preferences in the ways they process information. This writing assignment was designed to allow students the opportunity to choose an assignment that more closely matched their preferred learning styles than a more traditional assignment based only on the subject matter.

Studies show that a mismatch between teacher and student learning styles can result in students learning less and being less interested in the subject (Bartlett, 1996; Borg and Shapiro, 1996). Bartlett recommends using a variety of techniques so that the instructor will reach the different learning styles of the students. Most instructors tend to
use teaching styles that match their own learning styles (Kolb, 1981), and this paper suggests that giving students a choice in assignments is one way to incorporate variety without greatly increasing costs to the instructor. If alternative assignments are offered, a student may be able to choose one that matches his preferred learning style, and this may promote long-term learning of economics.

There have been several studies analyzing gender effects in teaching and learning economics. Extending research findings that female students perform relatively worse on multiple-choice tests and relatively better on essay tests (Ferber, et al., 1983; Lumsden and Scott, 1987), Walstad and Robson, 1997, found that male and female students perform differently on certain items in a multiple-choice test, even after controlling for factors such as differences in economic ability. They suggest that factors such as differential reasoning, socialization, or instructional practices may contribute to gender differences in economic understanding. Sandler, Silverberg, and Hall (1996) suggest that males and females learn differently from different types of assignments and argue that women prefer opportunities to relate material to their own lives.

Harter, et al., 1999, found that there is a gender difference in teaching methods among college instructors as well. They suggest that differences in the ways males and females learn and understand economics may translate into differences in teaching methodologies where females are more likely to use cooperative learning activities while males are more likely to use a traditional lecture format. Although this paper does not specifically analyze differences in student learning between genders, the relationship between gender and students’ choices is investigated.
ASSIGNMENTS AND DATA

These alternative writing assignments were used in a one-semester economics survey course where basic microeconomic and macroeconomic concepts were covered. The students were not economics or business majors but were generally taking the course because it was required for their major programs of study. A majority of the students (80-90%) were 19- to 20-year-old, Caucasian sophomores in a pharmacy or physician assistant program. These programs of study are highly competitive at the private, Catholic, four-year university where the course was taught, and the students were generally highly motivated to do well. The grade on the writing assignment represented 15% of each student’s final grade in the course.

For the music assignment, students (working individually or in pairs) were to find a minimum of three economic concepts in four different songs. There were no restrictions on the type of music to be used, but students could not choose more than two songs by the same artist. Then, they had to write an essay for each song which included the lyrics of the song, a description of the message of the song, and an exhaustive list of economic concepts, ideas, definitions, theories, etc. that were either directly or indirectly referred to in the song. For each, they were instructed to define the concept and explain specifically how it was part of the song. They were advised to include references to material covered in class, in the textbook, and even additional library research if applicable. They also were required to record the songs on either a cassette tape or a compact disc and submit this with the written assignment.

For the murder mystery assignment, students (working individually or in pairs) were to read the novel *Murder in the Margin* (Jevons, 1978) and write an essay that
included a summary of the basic plot with an explanation about who committed the murder and how the murderer was discovered (which involved economic analysis), and a description of a minimum of 12 economic concepts, ideas, definitions, theories, etc. that were either directly or indirectly referred to in the story. For each, they were instructed to define the concept and explain specifically how it was part of the story. They were advised to include references to material covered in class, in the textbook, and even additional library research if applicable. Then, in order to make the assignment more personally relevant, the students who chose the murder mystery assignment were instructed to describe a personal example from their own lives where economics applied, including an explanation of the relevant economic concept or theory.  

In order to get feedback from the students about the project, they were also asked to comment on the assignment (either the music or the book) and what they learned from it. Besides providing this anecdotal evidence describing their reactions to the assignment, students were also asked to complete a questionnaire designed to identify their preferred learning styles. The first section on the survey requested information about which assignment was chosen, and the second section contained 36 questions to identify whether students preferred a visual, auditory, or kinetic style of learning. There were 12 questions related to each learning style, and they were arranged in random order. The survey was administered during the last week of class, and it was optional. It was not part of the writing assignment or the students’ final grades. Students were told that the results would not be looked at until after the semester was over and would be used in a paper describing student learning and alternative writing assignments. They were given the option to provide Social Security numbers as a way to link grades to survey
responses. There were 82 students who submitted writing assignments and received
grades, and 77 of them (94%) answered the learning styles survey. There were two who
chose not to include Social Security numbers on the survey forms.

The descriptive statistics for the data are presented in Table 1. Students made two
choices about the assignment—music vs. murder and partner vs. no partner. Thus, the set
of possible alternatives contains four options—music alone, music with a partner, murder
alone, murder with a partner. The mean values in Table 1 illustrate that there was variety
among the students in their choices of assignment. Interestingly, if the choices are
divided into “music” or “murder,” regardless of whether there were partners,
approximately one-half of the students chose each assignment—54% chose “music,” and
46% chose “murder.” Almost one-half (43%) of the students chose to work with a
partner.

The most popular choice was the music with a partner choice, with 40% of
students choosing this. The second most popular option was the murder mystery
assignment without working with a partner, with 29% choosing it. A possible
explanation for this may be that students perceived that it was easier to divide the labor in
the music assignment than in the murder mystery assignment. In the music assignment,
each person might find two songs and write those essays, and the students could confer
afterwards when putting the project together to turn in. However, each student would
have to read the whole book in order to be familiar enough with the story to write about
the economic concepts, even if the students divided the murder assignment. It is also
possible that, since the music assignment involved more creativity, students who chose
that assignment might be more creative which might correspond to being more likely to work with a partner.

In Table 1, the variable “Change” denotes that 17% of the students initially decided to do one of the options and then changed to the other one. Interestingly, approximately half of these students started with the music assignment and switched to the murder mystery while the other half made the other switch. Table 1 also shows that 60% of the students in the two sections of introductory economics were female.

The variables Visual, Auditory, and Kinetic are dummy variables that were constructed to identify a student’s preferred style of learning. For example, the variable “Visual” equals 1 if the student responded “I agree” to more of the visually-oriented questions on the learning styles survey than to questions identifying auditory or kinetic learning styles. “Auditory” and “Kinetic” were constructed similarly. Table 1 shows that the most commonly preferred learning style was auditory. Forty-four percent of the students are characterized as primarily auditory in learning style while 23% are characterized as primarily visual, and 8% are characterized as primarily kinetic. The remaining 25% of the students did not have a dominant learning style preference.

**DATA ANALYSIS**

Cross tabulations were computed to investigate the relationships between the choice of assignment and the learning styles variables, student gender, and course grade. Pearson’s chi-squared statistics were computed to gauge the statistical significance of the relationships. If the chi-squared statistic is significant, this suggests that there is a difference in the distribution of choice of assignment among those students who have a specific characteristic such as a preferred style of learning and those students who do not
have that same characteristic. The results showed that there was no statistically
significant relationship between choice of assignment and preferred learning styles or
course grades. Therefore, the hypotheses linking learning styles to choice of
assignment are rejected, and the conclusion is that there is no relationship between a
student’s primary learning style and which assignment he chooses. Also, students who
performed better in the course did not choose certain assignments that differed from the
choices made by students who performed worse in the course.

The only cross tabulation that was significant was between choice of assignment
and student gender. The value of Pearson’s chi-squared statistic with three degrees of
freedom is 7.31 with a p-value of 0.063. These cross tabulations are presented in Table 2.
The absolute frequencies are provided with the column percentages in parentheses. The
percentages provide a clearer illustration of how the distribution of choice of assignment
differs between males and females. The choices made by the males were more evenly
distributed than the choices made by the females. In fact, much higher percentages of the
males, as compared to the females, chose to do the music assignment without a partner or
the murder mystery assignment with a partner. The females more often chose the music
assignment with a partner or the murder mystery assignment without a partner. This
finding could suggest that males and females may have differences in preferred learning
styles. However, cross tabulations between gender and learning style variables did not
yield statistically significant results. The possible explanations provided earlier about
why students might choose to work with a partner on the music assignment but not on the
murder mystery assignment apparently would apply only to females, although it is not
clear why.
In order to investigate further the gender differences, cross tabulations were constructed between gender and learning styles, course grade, and working with a partner. Gender was not strongly related to any of the variables. The results lead us to fail to reject the hypothesis that gender is related to choice of assignment. This finding that males and females make different choices about economics assignments supports the findings of earlier research that there may be gender differences in learning and understanding economics.

**ANECDOTAL EVIDENCE**

The anecdotal evidence that students provided in their assessments of these assignments provides a glimpse of the impacts of the alternative writing assignments on students’ evaluations of their learning. In reading the students’ comments, it seemed that the assignments may have fostered long-term learning. Whether students did the music assignment or the murder mystery assignment, the most common comments offered can be divided into the following three main topics:

1. **Economics Is Everywhere.**
2. **The Assignment Was Enjoyable.**
3. **I Understand the Concepts Better.**

The largest number of comments were in the first category. A representative sample of the specific comments made by students (both males and females) are presented in Table 3. The evidence of possible long-term learning is found in the fact that, through this assignment, students were able to make a connection between the schoolwork and their lives outside the classroom, and they commented that they will remember the concepts longer because of the association with a particular song or a specific scene from the
novel. Because they associated the material with their own lives, they also believed that
the course content was more relevant. One student wrote that “…things learned in this
course are far more applicable than simply remembering them for the next exam or quiz.”
The students also said that, now that they are aware of the presence of economics in their
lives, they are more likely to use the reasoning tools learned in the class. One student
even related a personal example where, when faced with the choice of whether or not to
buy a CD, she found herself asking which selection would give her greater satisfaction.
One student summed it up by writing that “…economics is not just a required class that I
have to take in college, it is part of everyday life.” This anecdotal evidence suggests that
the students may have internalized economic concepts as a result of these writing
assignments.

CONCLUSION

This paper describes alternative writing assignments that were constructed so that
the material would specifically apply to students’ lives and interests in order to highlight
the relevance of economics in daily life and motivate students to become involved in their
own learning. Anecdotal evidence suggests that the assignments may have fostered long-
term learning where students internalized the economic concepts. Having students reflect
on what they learned from the assignments may contribute to this learning as well,
although many of the students described how these specific assignments—visual images
from the novel or lyrics from the songs—will help them remember economic concepts in
the future. This is an important finding given that much of the learning that occurs in
introductory economics is probably short-term learning geared toward passing a specific
exam or course.
Even though the sample described in this paper is small, there is variety in the data set regarding learning styles, student gender, course grade, and choice of assignment. The statistical results suggest that, for some reason, there are gender differences in students’ choices of assignments. This finding indicates that offering a choice of assignments in an economics course may be a good idea since males and females make different choices and may have disparities in the ways they learn and understand economics.

In their assessments of the assignments, students commonly stated that they liked the assignment. Although an instructor’s first priority is to teach the material, providing assignments that students “like” may help them remember economic concepts better, may help them use the concepts more in their lives outside the classroom, and may make them want to take more economics courses. In other words, giving students a choice and providing a variety of assignments may increase their comfort level and willingness to learn. As one student stated, this assignment…“provided a comfortable association with the field of economics.” Since the study of economics is often challenging to students, combining the economic way of thinking and solving problems (with which many students are not familiar) with comfortable associations may better prepare them to be economically literate members of society in the future.

It is important to note that the costs to the instructor of using this assignment are not significantly larger than the costs of using any writing assignment. There are some added costs associated with listening to the music and reading the novel; however, the instructor could minimize some of these costs by making group assignments or giving students a list of songs from which to choose for the music assignment. The benefits of
possible long-term learning and favorable attitudes toward the subject matter should outweigh the additional costs to the instructor who already uses writing assignments in her courses.
ENDNOTES

1 The idea for the music assignment came from a presentation at the 1998 ASSA Conference describing the use of music to teach economics. See Tinari and Khandke, 2000, for further discussion of benefits and costs of using music in economics.

2 This course differs from traditional microeconomics and macroeconomics principles courses in that fewer topics are covered and some of those that are included are covered in less depth. Because this course is an introduction to microeconomics and macroeconomics, it is necessary to limit content as compared to traditional principles courses. The primary topics covered are opportunity cost, comparative advantage, supply and demand in output and input markets, perfect competition, monopoly, business cycles, GDP, and inflation.

3 Although the instructor used the assignments in a survey course where the students are not economics majors, the assignment could easily be modified for use in an introductory principles course. In fact, it could be an important addition to a principles course since this is where many students experience economics for the first time. Requiring them to apply economics to their own life experiences would be an important addition in terms of increasing student learning and interest in economics and could possibly help to increase the number of students majoring in economics. According to Fry and Kolb, 1979, students are more likely to major in a field where teaching and learning styles match, and giving them choices in assignments that relate to their personal lives could provide more of these matches in economics. In order to use this assignment in principles, where specific content must be covered because it will be used in upper-level courses, the instructor could provide students with a list of concepts from which they must choose. The assignment could be done completely outside of class and, when due at the end of the semester, could serve as a review of relevant concepts for students. This instructor might also require the use of graphs or specific models in the explanations.

4 The economics requirement was added to these programs of study four years before these students were in the class in an effort to add more critical thinking and economic analysis to the students’ studies.

5 When comparing these students with students in a traditional microeconomics course at the same institution, it was found that the students in the survey course had statistically significantly higher average SAT scores and grade-point-averages than students in the principles course. Because the students are different in these respects, it is possible that they would behave differently when completing course assignments such as the essay described in this paper. However, since the “murder versus music” assignment was not used in the principles course, no comparison can be made at this time.

6 Instructors who do not wish to be “shocked” by students’ music choices might want to impose some restrictions. Leaving the choice completely open led to submission of graphic lyrics in some cases.

7 Students who chose the music assignment were not asked to do this because they were already relating the content to their own lives by choosing the songs to analyze. The songs that were chosen reflected their personal music preferences.

8 The learning styles questions were from a Learning Style Inventory constructed by Wyman (1999) and used by various corporations and universities such as Motorola, NASA, and Penn State University. A copy of the 36 questions can be obtained from http://www.howtolearn.com/.

9 Six students switched from the music assignment to the murder mystery assignment while seven students switched from the murder mystery assignment to the music assignment.

10 These findings are somewhat different from the population at large. Visual learners make up about 65 percent of the population while auditory learners make up about 30 percent of the population and kinetic
learners make up about 5 percent of the population (Sherow, 2000). This difference from the general population is not surprising since auditory learners “…learn best with lectures, records, audiotapes, oral presentations, …” It is likely that more auditory learners have self-selected into this group of high-achieving college students.

11 The cross tabulations for Visual and Auditory with Choice of Assignment were not significant. The results for Kinetic and Choice of Assignment were statistically significant, but they are not presented or discussed here because only 6 students had a preferred learning style of Kinetic. With such a small sample of kinetic learners, conclusions would be not meaningful.

12 Gender was strongly related to “Kinetic” because 5 of the 6 students with a preferred learning style of kinetic were male. However, these results are not discussed here because the number of kinetic learners is too small to draw meaningful conclusions.

13 Although all of the comments provided in Table 3 are positive, three or four students did make negative comments about the assignment. The negative comments about the music assignment were complaints about the assignment being too time-consuming. A couple of students said that searching for “the right songs” took a lot of time. The negative comments about the murder mystery assignment were generally complaints that the end of the story was too contrived.

14 See Tinari and Khandke, 2000, for more suggestions about reducing the costs of the music assignment and specific music recommendations.
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The Triad Model—Teaching Learning Process: Learning Styles,  

Health Professions Department  
Elgin Community College  
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Elgin Community College's Home Page at http://www.elgin.cc.il.us

last modified December 14, 1999

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### TABLE 1
Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Alone</td>
<td>77</td>
<td>0.14</td>
</tr>
<tr>
<td>Music with Partner</td>
<td>77</td>
<td>0.40</td>
</tr>
<tr>
<td>Murder Alone</td>
<td>77</td>
<td>0.29</td>
</tr>
<tr>
<td>Murder with Partner</td>
<td>77</td>
<td>0.17</td>
</tr>
<tr>
<td>Change</td>
<td>77</td>
<td>0.17</td>
</tr>
<tr>
<td>Female</td>
<td>77</td>
<td>0.60</td>
</tr>
<tr>
<td>Visual</td>
<td>77</td>
<td>0.23</td>
</tr>
<tr>
<td>Auditory</td>
<td>77</td>
<td>0.44</td>
</tr>
<tr>
<td>Kinetic</td>
<td>77</td>
<td>0.08</td>
</tr>
</tbody>
</table>

### TABLE 2
Cross Tabulation
Choice of Assignment and Gender

<table>
<thead>
<tr>
<th>Choice of Assignment</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Music Alone</td>
<td>7 (22.58)*</td>
<td>4 (8.70)</td>
<td>11 (14.29)</td>
</tr>
<tr>
<td>Music with Partner</td>
<td>10 (32.26)</td>
<td>21 (45.65)</td>
<td>31 (40.26)</td>
</tr>
<tr>
<td>Murder Alone</td>
<td>6 (19.35)</td>
<td>16 (34.78)</td>
<td>22 (28.57)</td>
</tr>
<tr>
<td>Murder with Partner</td>
<td>8 (25.81)</td>
<td>5 (10.87)</td>
<td>13 (16.88)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>31 (100.00)</td>
<td>46 (100.00)</td>
<td>77 (100.00)</td>
</tr>
</tbody>
</table>

*Values in parentheses are column percentages.
### TABLE 3
Representative Sample of Students’ Comments

<table>
<thead>
<tr>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economics is everywhere, and it will affect our lives no matter what we choose to do in life.</strong></td>
</tr>
<tr>
<td><strong>This project helped me to see that economic concepts can be found almost anywhere.</strong></td>
</tr>
<tr>
<td><strong>We sometimes fail to realize how our schoolwork connects to our real life. This assignment allowed us to make that connection.</strong></td>
</tr>
<tr>
<td><strong>Economics practically surrounds every aspect of our lives.</strong></td>
</tr>
<tr>
<td><strong>Through examining these songs and their economic themes, I gained a better understanding of the concepts themselves, and also have come to realize that the things learned in this course are far more applicable than simply remembering them for the next exam or quiz.</strong></td>
</tr>
<tr>
<td><strong>I never thought that the songs I sing every day were actually applicable to my economics class! I learned some things about economics that I will remember for as long as I remember the song lyrics!!!</strong></td>
</tr>
<tr>
<td><strong>This assignment has increased my awareness of economics in everyday life, and has provided a comfortable association with the field of economics.</strong></td>
</tr>
<tr>
<td><strong>This assignment has taught me that economics is so integrated in our lives, it can touch us without our awareness of it.</strong></td>
</tr>
<tr>
<td><strong>In this assignment, I learned that economics is not just a required class that I have to take in college, it is part of everyday life.</strong></td>
</tr>
<tr>
<td><strong>Until reading the book I never really knew that economics could be applied to real life situations. I think that I have learned a lot more about economic concepts. Because I can think of them and how they were described in the book, I also think I will probably remember these concepts.</strong></td>
</tr>
<tr>
<td><strong>This assignment has taught me many things but perhaps most importantly it made me realize that economics is all around me and I use the laws every day whether or not I know it. I went to Sam Goody yesterday and I could not help but thinking of “What would give me greater satisfaction, the $15 or the CD?” It will be difficult not to think of the laws in the book when I decide to spend some money.</strong></td>
</tr>
<tr>
<td><strong>I really did not realize the way economic reasoning could be used to solve any type of problem.</strong></td>
</tr>
<tr>
<td><strong>I feel that the novel was very helpful to further enhance and personalize my economic understanding.</strong></td>
</tr>
<tr>
<td><strong>I now realize that economics is part of my daily life, whether I am aware of it or not.</strong></td>
</tr>
<tr>
<td><strong>Now throughout my daily routine I can recognize economics. Economics, therefore, is not just learned in a classroom, but everywhere in life.</strong></td>
</tr>
<tr>
<td><strong>The novel was better than any textbook that I have ever read, and I think the principles displayed in the book will remain in my head longer than if I had just memorized them for a test.</strong></td>
</tr>
<tr>
<td><strong>I can now apply economics to everyday life and use it to figure out why certain things happen the way they do.</strong></td>
</tr>
<tr>
<td><strong>I will now notice that many of my unconscious decisions can be explained by economics.</strong></td>
</tr>
<tr>
<td><strong>By relating economics to the songs that I listen to, it made me look at them in a whole new way. In the process, I understood the economics terms by relating them to real life situations instead of just reading the notes and writing a paper.</strong></td>
</tr>
</tbody>
</table>