Effective Instruction in Higher Education
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Abstract
This study analyzes the perceptions of 100 students regarding effective instruction in higher education. Participants in the study were upper classmen who have maintained a 2.5 grade point average and represent varying colleges across Texas A&M University-Kingsville. TAMU-K is a South Texas state university of about 6000 students, located 160 miles southeast of San Antonio. The city of Kingsville has an ethnically and culturally diverse population of approximately 26,000.

A survey posed questions in a forced-choice format and was designed to facilitate student reflection on how they best learn. The survey analyzes the importance of both professor enthusiasm and student interest. Also included are varied methodology items, including the lecture format and group formats.

Interesting Findings:
1. Professor enthusiasm was deemed more important that anything, even student interest in the subject. The attitude of the professor made the difference, regardless of the type of instruction or assessment.
2. Students de-emphasized the importance of the traditional lecture format that permeates the higher education classroom.
3. Students indicated that well-planned, interesting instructional activities will promote learning despite the level of student interest in the subject.
4. Students emphasized the need for multiple methods of instruction, using a variety of instructional materials with correspondingly assessment techniques.

Purpose of the Article
The purpose of this article is to analyze the perceptions of 100 university students regarding effective instruction in higher education. The following discussion revolves around implications for practicing educators. Specifically, how can educators best meet the needs of university students in today’s diverse society?

Literature Review
What does the literature say about effective instruction in higher education? What are the constructs that define an effective teacher? Although specific answers to these questions remain controversial, it has been recognized that teaching effectiveness includes multiple perspectives (Abrami, d’Apollonia, & Rosenfield, 1997; Marsh & Dunkin, 1997). One construct is methodology.

However, studies about effective methodology often reach different conclusions due to reviewer bias (d’Apollonia & Abrami, 1997). Marsh (1987) identified nine consistent factors on Students Evaluations of Educational Quality (SEEQ):
learning/value, enthusiasm, organization, breadth of coverage, group interaction, individual rapport, examinations/grading, assignment, and workload difficulty.

Studies suggest that exemplary teachers utilize multiple strategies in enhancing student learning. (Dunkin, 1995; Dunkin & Precians, 1992). The lecture is a necessary form of instruction as it is the quickest method to present the most information. However, the question of student attention and interest encourages the use of guided discussion, or group investigation in and out of class, to name only two alternatives to the traditional lecture. A number of variables contribute to student retention of content. Among these factors is the enthusiasm of the teacher. Exemplary teachers, according to Hilgemann & Bladget (1991), create a positive environment by challenging them intellectually. In addition, Horan (1991), describes exemplary teachers as highly organized and able to plan lessons to make courses relevant to their students. Romero-Simpson (1992) identified setting a positive climate for learning as imperative to effective instruction. He adds that critical to quality instruction and student learning is the removal of fear. What can be done to create a climate that removes fear and enhances learning? Quay and Quaglia (2004) emphasize that professors have the power to change the classroom teaching and learning environment. They stress the importance of laughter and the sharing of leadership to build a risk-free environment. In addition, acknowledging student accomplishment in the process of learning encourages continued effort, resulting ultimately in better grades.

Prior research has indicated a positive relationship between student participation in class discussion and motivation, retention, and problem solving ability (McKeachie, 1970; Smith, 1980). However, following these studies came those by Smith (1983) and Fischer & Grant (1983) which indicated that 80% of the class time revolved around the lecture method.

Cognitive psychologists have emphasized the necessity of the learner’s active involvement in the content, as long-term learning depends on the learner’s processing of the material (Gagne, Yekovich, & Yekovich, 1994; Gredler, 1992). Dillon (1994) emphasizes that teacher questions do not stimulate student thinking, and in turn, do not lead to student participation. He suggests instead, to utilize statements of thought or questions generated by students. Teacher questioning can also be problematic in that often questions asked are at the lowest cognitive level (Barnes, 1983).

Past research indicates that small-group in-class activities provide a more effective teaching technique than the traditional method of instruction (Beyer, 1985). Garside (1996) emphasizes that the traditional lecture methods of instruction do not involve students in analyzing, synthesizing, and assessing information. In small-group in-class activities, teachers facilitate while students become active learners, critically analyzing ideas (Meyers, 1986). Smith (1997) states “The virtues of active learning are widely acknowledged. We understand concepts better and retain them longer when we express these concepts in our own words” (p.49).

A study of college graduates to determine their perceptions as to what facilitated their continued enrollment and ultimate success cited faculty as a major factor (Hofmann, Posteroaro, & Presz, 1994). This study emphasized the perceived benefits of instructor interaction. Evidently, the role of the instructor continues to be invaluable.

Ogden (2003) recommends a teaching methodology that is a modification of the traditional lecture method. The Feedback Lecture, developed at Oregon State University was designed to meet the needs of an increasingly diverse population. The Feedback Lecture methodology divides the class period and includes activities prior to class, short mini-lectures, short discussion groups, and post-lecture activities. This format meets the needs of a variety of learning styles.
Magnan (1990) emphasizes the importance of instructors involving students in their lectures. So, even with this lecture-format method, the emphasis is not totally instructor talk. Conin Jones (2002) stresses the importance of including interactive components in every lecture, in saying, “Presenting an effective lecture is like writing a good drama—You must have a worthwhile story to tell and tell it in an interesting way” (p.454). Conin Jones (2002) also emphasizes using visual supports to supplement and enrich lecture.

Lowman (1994) attempts to define effective teaching using the terms intellectual excitement and interpersonal qualities. Intellectual excitement combines the qualities of how interesting and how clear the students find the professor’s teaching. A well-presented, organized lecture is more likely appreciated by students, even when the content is more complex. The interpersonal qualities, according to Lowman (1994) emphasized that the challenging instructor whose students achieve in an independent fashion illustrates how student motivation appears to be a function of a teacher’s skill at stimulating students’ own internal motives, rather than merely the result of a positive approach.

Mugleston (2006) surveyed college students over a period of eighteen months about their college experience. Students were asked to respond to the following open-ended question, “My college experience would have been easier and more productive if teachers would only…” (p.86). Students wanted classes that were “entertaining, interactive, not boring, and have short breaks when there are long lectures” (p.86). Student interest and professor enthusiasm were both deemed important and students pleaded for new ideas that would make learning easier.

What, then is an effective teacher? Rosebrough (2003) emphasizes that teaching is not simply a one-way process. It occurs when learning happens because students are actively engaged with connecting new information in meaningful contexts. This can happen in a variety of formats. Perhaps the key issue for professors in higher education is the need to keep reflecting and developing as teachers. Teaching is not a natural extension of our work as scholars.

**Method**

**Sample**

The sample of students used in this research consisted of 100 college juniors and seniors who maintained a minimum 2.5 grade point average and represent varying Colleges across a small South Texas State University.

**Procedure**

All participants completed a survey designed to identify students’ reflections regarding their perceptions on how they best learn. The survey posed questions in a forced choice format. To ensure diversity in participants, surveys were distributed in both elementary and secondary education methods classes. Another factor contributing to the diversity of the sample was the educational background of the participants. Included in the sample were transfer students from several area community colleges, as well as a couple of state universities.

*Participants received the following directions:*

1. You will be responding to a short survey that asks you to reflect on the types of instruction that help you learn.
2. As you complete the survey, think of all of your college classes.
Data Analysis

The perceived importance of professor enthusiasm is clear in the survey results. Sixty-one percent of the students asserted that “professor enthusiasm” had more effect on their learning than
“peer interaction in class, with both group and individual grades.” Even more remarkable is that 69% of the students cited “professor enthusiasm” as more important than “student interest in the subject.”

Several items dealing with the lecture model of instruction measured different aspects of that design. Only 11% of the students preferred the “lecture or guided discussion” while 89% of the students selected the “use of a variety of instructional materials and varied assessment techniques.” Twenty-three percent of the students selected “professor lecture with objective, paper-pencil tests,” while 77% chose “use a variety of learning activities and assessment techniques.” Thirty-nine percent of the students selected “professor lecture with objective paper-pencil tests, while 61% selected “group investigation outside of class with group grades assigned to projects.” The final item related specifically to the lecture format connected the lecture method to paper-pencil testing. In this item, only 19% of the students selected “lecture or guided discussion with paper-pencil testing, while 81% selected identifying “the use of multiple methods and varying assessment techniques” as most important.

Two items discussed the value of direct instruction from the professor. Only 21% of the students identified “direct instruction from the professor with paper-pencil tests” as being most important when compared to “the use of a variety of materials, both in instruction and assessment.” The other direct instruction item was compared to “peer interaction in class with performance assessment of both groups and individual efforts.” In this item, 62% of the students felt that peer interaction had more effect on their learning, while 38% preferred the direct instruction.

Three items looked at group investigation outside of class. “Group investigation outside of class” was compared to “peer interaction in class with both group and individual grades on projects.” Sixty-four percent of the students favored the peer interaction in class. When “group interaction outside of class was compared with “use a variety of learning activities with group grades assigned to projects,” students selected varied learning activities as more vital to their learning. Seventy-eight percent of the students selected “use a variety of learning activities with group grades assigned to projects.”

Only six percent of the students identified “academic learning time, or length of class period” as more important when compared to the use of “multiple methods of instruction with a variety of assessment techniques.”

Conclusions

What conclusions can be drawn from this data? Most importantly, students did not identify the most common forms of instruction and assessment seen in higher education as most valuable to their learning. The lecture style and direct instruction approaches with traditional paper/pencil tests, according to these students, are least effective in their learning processes.

In contrast, students identified variety as the key to success in their learning. They preferred multiple methods of instruction, using a variety of instructional materials with corresponding assessment techniques. They also cited active involvement with peers as effective in promoting learning. Active group involvement was favored whether it was scheduled within the class period or outside of class. However, students preferred peer interaction in class with group and individual assessment of projects over group investigation outside of class with group grades assigned to projects. This clearly indicates a perceived need for the professor to serve as expert and facilitator while students work in groups. This is further indicated by a preference shown to a variety of learning activities and evaluation techniques over group investigation outside of class, with group grades
assigned to projects. They emphasized the need for multiple methods of instruction, using a variety of instructional materials with corresponding assessment techniques. It is especially interesting that students felt that a variety of learning activities and assessment techniques far outweigh the variable of student interest or disinterest in the subject.

Students definitely favor learning from a variety of instructional materials facilitated by an enthusiastic instructor. It seems especially significant that professor enthusiasm was cited as even more important than student interest in the subject on almost a three-to-one basis. The same ratio holds true when looking at interesting learning activities and student interest in the subject. Students indicate that well-planned interesting instructional activities will promote learning despite the level of student interest in the subject.

**Implications for Educators**

This study recognizes the significant roles the professor plays in providing effective instruction. Whether serving as an expert in the delivery of a well-organized lecture, or a facilitator in a planned small-group activity, the professor is the key to the lesson’s success. The attitude of the professor was identified as the pivotal issue. This study suggests that instructors who demonstrate sincere enthusiasm in teaching, using whatever mode of delivery, are going to have interested students. This study even depicted professor enthusiasm as being more important than student interest in the subject. In essence, the attitude of the professor makes the difference, regardless of the type of instruction or assessment implemented.

This study highlights the successes that occur when students are interacting with their peers in a variety of different formats. Students can learn a great deal in collaborative groups.

This study also suggests that multiple means of assessment contributes to effective learning. Using a variety of methodology and materials, with appropriate assessments seems to be the key to success. College professors need to present instruction in a multitude of different ways, including the lecture method and varied group formats. The challenge is to utilize traditional and non-traditional formats, coupled with performance assessments that are aligned with the instructional methods employed.
**Survey:**

**What Contributes Most to My Learning?**

For each item below, choose the answer choice (a or b) that most closely matches what you think contributes most to your learning.

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<td>1a. professor enthusiasm</td>
<td>1b. peer interaction in class with both grades on projects</td>
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<td>2a. use of a variety of instructional materials and varied assessment techniques</td>
<td>2b. lecture or guided class discussion</td>
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<td>3a. professor lecture with objective, paper-pencil tests</td>
<td>3b. group investigation outside of class with group grades assigned to projects</td>
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<td>4a. use of a variety of learning activities and assessment techniques</td>
<td>4b. professor lecture with objective, paper-pencil tests</td>
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<td>5a. peer interaction in class with performance assessment of professor with objective,</td>
<td>5b. direct instruction from the both group and individual efforts paper-pencil tests</td>
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<td>6a. academic learning time or length of class period</td>
<td>6b. multiple methods of instruction with a variety of assessment techniques</td>
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<td>7a. student interest in the subject</td>
<td>7b. professor enthusiasm</td>
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<td>8a. group investigation outside of class with group grades assigned to projects</td>
<td>8b. peer interaction in class with both group and individual grades on projects</td>
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<td>9a. use of a variety of learning activities and varied assessment techniques</td>
<td>9b. group investigation outside of class and with group grades assigned to projects</td>
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<td>10a. use of multiple methods of instruction and varying assessment techniques</td>
<td>10b. lecture or guided discussion with objective paper-pencil testing</td>
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<td>11a. direct instruction from the professor with objective paper-pencil tests</td>
<td>11b. use of a variety of materials, both in instruction and in assessment</td>
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<td>12a. use of a variety of learning activities and varied assessment techniques</td>
<td>12b. student interest in the subject</td>
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References


