

THE ATTRIBUTES AND ATTRIBUTE-
CONSEQUENCES OF GREAT COLLEGE TEACHERS

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CONSEQUENCES OF GREAT COLLEGE TEACHERS

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CHAPTER I

ABSTRACT

Good teachers impart good education. Great teachers groom their students to become leaders.

Ordinary teachers direct us along the right path, but great teachers inspire us to seek our own path. They encourage us to discover our talents.

--Author Unknown

Higher education is a very important topic to many people, which is evidenced in part by the number of people involved, the money spent, and the research which has been conducted in this area. While many studies have been completed aiming to determine the attributes that constitute a “great teacher,” this is where most studies have ended. This paper looks to further people’s knowledge in this area by taking a deeper look into these questions.

Using the soft-laddering interview technique this research further examines what attributes students prefer in their college professors. It also examines the basis behind their attribute choices by determining both the consequences and values that motivate their choices. The research then further examines these issues through the use of in-person questionnaires, and also studies whether different attribute-consequence choices are made for students’ favorite teachers and those who are best at facilitating learning,

along with whether there are differences based on major, demographics, etc.

Results indicate that while there are some differences between majors, how great teachers are defined, and data collection methods, primarily, students prefer teachers who take a sincere interest in students' learning, make courses interesting, and show a commitment to class. These attributes are important, as students are primarily concerned with developing a true understanding of the material being taught in class.

INTRODUCTION

Teaching is not an occupation but a social institution. Partnering with parents, teachers provide the intellectual, social, and emotional platform on which future generations grow. We trust them with our children from the innocent age of five years until they are old enough to fight wars. Parents insist their children display obedience and respect for teachers from the time they learn to tie their shoes until they explore postmodernism in esoteric college classes. The efficacy of teacher instruction reveals itself in the skills their students display in their careers and their contribution to society. Teachers are not portals to information, but are beacons of knowledge. Teachers must inspire curiosity and earn admiration; how they acquire these noble qualifications is partly based on student notions of the ideal teacher. This paper assists teachers at the college level reach the pinnacle of teaching effectiveness by documenting how college students describe great teachers.

Teachers have a profound impact on the development of youth. On any given weekday ten percent of Americans will participate in educational activities. Those individuals attending school will spend over five hours under the supervision of teachers and almost three hours on independent assignments (USBLS, 2009). This lofty view of the teacher is shared by society at-large; over 75% of Americans rate the teaching profession as possessing great or considerable prestige. Teachers are esteemed on par with doctors, nurses, and scientists (Riper, 2006).

Education is both an important and expensive social investment. Over eighty-five percent of Americans have completed high school, which entails at least twelve years of

their life! More than one-quarter of Americans will invest four or more years of their life obtaining a college degree (U.S. Census, 2004). The importance of higher education is evidenced by the large amount of money dedicated to its provision. Through government aid, personal tuition payments, and the like, the U.S. spends approximately \$386 billion in higher education each year. Tertiary education consumes almost three percent of the nation's GDP, and most of these expenditures are allocated towards teachers' salaries (NCES, 2008). Teachers absorb most of the expenditures because they do most of the work.

The success of a class is largely determined by the amount of learning that takes place and the students' ability to transfer that learning to other problems. Learning is affected by a number of complex processes, and teachers can improve their transfer of knowledge by incorporating lessons from the science of learning. These include tools such as active transfer, metacognition, efficient learning environments, and the like (NRC, 2000). Learning is also affected by less erudite factors; among these is the satisfaction of the student. Students, it would seem, are more likely to stay awake during class, place confidence in the materials' importance, and study harder if they possess favorable opinions of the professor. Even though student appraisals are imperfect measures of learning (Rodin and Rodin, 1973), it would be difficult to claim that learning takes place if the student asserts otherwise. Hence the almost universal use of teaching evaluations to document and measure teacher performance.

Student perceptions also play a role in forming conceptual models of great teaching. Suppose that we form a model of a great teacher, and when this teacher is

described to students they express an aversion to attending this teacher's class. We would justifiably suspect the validity of this model. In fact, Jones (1981) argues that the *only* criteria by which models of great teachers should be judged are (1) the learning that occurs and (2) opinions of parties involved with the teaching. Models of great teachers should be built, at least partially, with the input of students.

Previous studies have documented with precision and eloquence the attributes students believe comprise a great teacher. The present study joins this endeavor by eliciting college student perceptions of great teacher attributes through personal interviews and questionnaires. The personal interviews employ an interviewing technique developed in the marketing literature, which allows for a unique contribution that no other study [the authors are aware of] has provided: the consequences of great-teacher attributes that students value. Students are invited to describe the attributes they believe comprise a great teacher. The interview then goes where no other study has ventured, by asking the student about the consequences of those teacher attributes that make the attribute valuable.

These consequences can be particularly useful. Suppose students systematically indicate that being a dynamic lecturer is an attribute of great teachers, but a particular faculty member does not have the personality that allows them to be viewed as "dynamic." Then, suppose this faculty member learns that the consequence that causes "dynamic lecturer" to be a valued attribute is that it helps students stay awake in class. With this knowledge, the faculty member can devise other means for keeping students awake (*e.g.*, active learning methods) and achieve the same consequence with an

attribute better tailored to their personality. With both the attributes and attribute-consequences of great teachers, instructors can both seek to acquire these attributes and identify their unique teaching strategy that achieves those consequences.

The personal interviews differ from previous studies by allowing a representative sample of students to describe instructors in their own words, not constrained or biased by a structured questionnaire design. Questionnaires do have some advantages though, and a second component of this study utilizes questionnaires to further explore the nature of great teachers. The term “great teacher” is itself nebulous, and could relate to popular teachers, teachers adept at facilitating learning, or both. Are the attributes corresponding to popular teachers identical to those teachers who best facilitate knowledge? The questionnaire addresses this by asking students to select the four attributes from a list which (a) best describes their favorite teachers and (b) best describes teachers best at facilitating learning. The questionnaire is administered to college students pursuing agricultural economics and engineering degrees, allowing inquiry into whether descriptions of great teachers vary according to discipline.

The paper proceeds with a literature review, a section on the personal interviews, and a section on the questionnaire. The personal interview and questionnaire sections are each organized to contain a description of the methodology, the sample of students, and the research results. The results assert that students’ idea of the great teacher is one who is a dynamic lecturer, personable, a clear communicator, gets to know students, and cares that students learn. The great teacher is someone who is dedicated to teaching and expresses this dedication in their class activities—with perhaps no surprise to the reader.

Students' preference for teachers with these attributes are driven by a desire to obtain high grades, understand the material, commit to the class, and enhance their future career. Descriptions of great teachers are similar across personal interviews and questionnaires, differ little across majors and demographics, and describes both a popular teacher and a teacher adept at facilitating learning. Succinctly, a great teacher is one who cares about the students and expresses this care in both their personal relations with the student and class activities.

CHAPTER II

LITERATURE REVIEW

IN SEARCH OF THE GREAT COLLEGE TEACHER

College instruction differs from primary and secondary education in that the teacher and student meet for only small periods of time. A large volume of information must be covered in these short lectures, and a large amount of independent studying and practice is presumed to take place independent of the instructor. This presents a conflict. Instructors who consume a large amount of time motivating the material and holding class discussions may find themselves covering an insufficiently small amount of material, and the instructor who covers much material finds little time for making the subject interesting and stimulating class discussion. The lecture must provide students with the intellectual tools to study without supervision, but also provide the inspiration and motivation to study independently. When students struggle, it is often unclear whether they struggle with the concepts or the motivation. It is likely that most cases involve a complex mixture of both.

Universities and colleges host a variety of disciplines and scientific knowledge is specialized, making it difficult for scientific experiments to identify specific teaching methods that can be generalized to all classes. The idiosyncratic personalities of

instructors limit the extent to which a successful teaching method for one instructor can be extended to others. These considerations make it difficult for strictly scientific methods to help one become a great teacher. Consequently, faculty strives for great teaching largely by reflecting on personal and shared teaching experiences (Kane, Sandretto, and Health, 2004; Schindler, 1991; Ward, 1968; Opulente, 1965).

Motivated teachers will also seek to reflect upon the experiences of students. This includes students' perceptions of what attributes describe a great teacher. Student perceptions then cause the ambitious instructor to alter their teaching style in accordance with their personality and their course topic. The ideal teaching style is specific to the instructor and the course, and it is for this reason teaching is often referred to as an *art* but rarely as a science. A review of the literature reveals statements such as, "*I believe that teaching is primarily an art,*" (Kegel, 1964, page 102), and article titles like: *The Commotion of Teaching*, *The Great Teacher is a Creative Individual*, *The Tao of Teaching: Romance and Process*, *The Lively Lecture: 8 Variation*, *The Teacher as an Actor: Some Dangers* (Reid, 2003; Opulente, 1965; Schindler, 1991; Ward, 1968). Hence, teachers must explore different techniques to determine what methods best suit their personality. The research which is most helpful to teachers aspiring to greatness are those studies which provide general and flexible ideas for classroom activity. The value of studying student perceptions of great teaching is that the generality of the results allow the research findings to be incorporated into any course and by any teacher of any personality.

Student perceptions of the ideal teacher are informative and useful. Although one can envision a number of biases students might hold, empirical evidence suggests

these biases are generally too small for concern (Grush and Costin, 1975). Students possess some information that the teacher does not possess. If college students and teachers agreed on what comprises a great teacher, instructors could simply pursue their own perceptions of ideal teachers and would achieve the respect and approval of students. To some degree, students and teachers do agree on the attributes of excellent teachers (Shikiar, 1976), but they differ on some points. Both students and teachers concur on the importance of understanding and effective communication of the material, but students place a higher weight on stimulating/engaging lectures and the friendliness of teachers. As teachers have aggressively adopted new multimedia technologies, they have overestimated students' desire for these technologies over traditional chalkboard lectures (Boyer, Briggeman, and Norwood, 2009; Miron, 1985; Miron and Sebal, 1978; Yourglic, 1955).

In pursuit of these unique student insights, an interesting literature has developed focusing on student descriptions of great teachers. Some studies employ survey techniques, where students are given a list of teacher attributes and are asked to rank the most important attributes. These studies demonstrate the importance of stimulating students' curiosity, preparation of lectures, using a variety of teaching methods, effective communicating, and encouraging independent thinking (Mannan and Traicoff, 1976; Pogue, 1967; Miron, 1985; William and Tomlin, 1996; Onwuegbuzie, *et. al.*, 2007). More than simply detailing important attributes, some studies document the synergies between enthusiastic personalities and competent teaching abilities (Jones, 1989). One of the more interesting studies contains narratives written by 26 students

describing their favorite teachers—narratives which illustrate the importance students place on amicable teachers who are anxious to help students learn (Anonymous, 1955).

A separate line of literature exploits in the information inherent in teacher-award applications. Some teaching awards require students to both nominate the teacher and provide a written narrative on the teachers' merits. By studying the application narratives, researchers can infer the qualities of the teacher that earned them the student nomination. Students self-select into these samples, and thus are not representative of the student population. The disadvantage of a biased sample is accompanied by a number of advantages though. The student narratives contain more detail than traditional surveys. The students are not constrained by a particular survey design, nor are they restricted to a particular set of attributes and attribute descriptions. The descriptions of excellent teachers are therefore more genuine, which may compensate for the biased sample.

The nomination narratives from one study assert that the ideal teacher is one who (1) treats students and assigns grades fairly (2) is inspiring and stimulating (3) extends students respect as a person (4) commands an impressive knowledge of the material and (5) is enthusiastic about teaching (Goldsmith, Gruber, and Wilson, 1977). In similar spirit, Hoffman (1963) asks college seniors to think of their favorite teachers and to write reasons for their selections. The most important justification for a favorite teacher is categorized as a kind, respectful, and helpful personality. The second most important attribute relates to the effectiveness of the instructor's presentation and communication of course content and the third most important attribute describes great

teachers as possessing an admirable personality and character.

Using a similar study to Hoffman (1963), a more recent study of Chinese students concurred with the claim that students' favorite teachers inspire students with both kindness and encouragement, whereas their least favorite teachers give dry lectures that pertain only to examinations. Another study asks students to state in one sentence what describes their best professor; a categorization of the statements reveals that an interest in student success and a variety of teaching methods is the most frequent response. Using a more sophisticated data analysis, Slate *et. al.* (2009) found that when students are given open-ended questions about great teachers, the dominant themes include communication, helping, teachers well, fun, and the like. Together these students contend that the ideal teacher sincerely cares that the student learns, and that sincerity shows in the variety and engaging classes they hold. Such a claim is further supported by a symposium of students concerning potential improvements to university instruction (Rinn, 1981), and is found among excellent teachers at the community college (Horan, 1991), and the primary school level (Acocella, 2002).

An alternative methodology is to identify excellent teachers and study their teaching techniques. Studies that audio-tape lectures of high and low-rated teachers find that higher-rated instructors are more responsive and interactive with students, incorporate more course discussion, blanket students with criterion-based praise, and encourage students to learn from their errors. In contrast, lower-rated instructors employ more dry lectures, less student involvement, and frequently exhibit confusion in the classroom (Phoenix, 1987). A slightly different research approach identifies teaching

award recipients, interviews them about their methods, and then conducts similar interview with novice teachers to contrast their teaching styles and beliefs about effective teaching. It is clear to the researchers of this approach that exemplary teachers have a sophisticated view of teaching and assessment, and place a higher priority on long-term learning. Award-winning teachers place a high importance on student feedback (Duncan and Precians, 1992). An excellent book by Bain (2004) conducts thorough interviews with excellent teachers, also finding a sophisticated view of learning, assessment, and teaching.

Much work has focused on the attributes of great teachers, but not on why those attributes are important to the student. The consequence of a teacher possessing one of these attributes is important because it addresses the outcome students seek. Do they want to be entertained or to understand the material better? Understanding attribute consequences allows teachers who have difficulty manifesting a particular attribute to achieve the same outcome in a manner more amenable to their personality. Using the laddering interview process described below, this study identifies both the attributes and attribute-consequences of great teachers. It goes even further by connecting these two features with the core goals motivating the students.

In the pursuit of the great teacher, it is also useful to delineate different descriptions of “great.” Through the analysis of questionnaires, this study explores the attributes of great teachers defined as (a) students' favorite teachers and (b) teachers that best facilitate learning, from the students' perspective. The questionnaire is then extended to answer other questions, such as how perceptions differ across disciplines

and how attribute-consequences vary under different definitions of great teachers.

CHAPTER III

PERSONAL INTERVIEWS

Students have preferences for certain teacher-attributes because those attributes lead to consequences that the students desire. The desire for these consequences is driven by the terminal—or, core—values of the individual. To understand the primary attributes of great teachers, the attribute-consequences, and the terminal values motivating the whole process, a trained interviewer conducts personal interviews with students, where each student is asked to explore and articulate their preferences in their own words. This laddering interview technique was pioneered by marketing researchers who sought to thoroughly understand what consumers seek in retail products, and why. This study closely follows the methods outlined in the marketing and food marketing literature (Kambua, *et. al.*, 2006; Makatouni, 2002; Miele and Parisi, 2000; Reynolds and Olson, 2001; Russell, *et. al.*, 2004) in regards to both how the interview is conducted and how the results are summarized. The technique is often referred to as means-end-chain analysis, as it seeks to understand the end goals the consumer is pursuing, and the means (attributes) by which these ends are obtained.

PERSONAL INTERVIEWS – METHODOLOGY

Data are collected using the “soft-laddering” technique, whereby face-to-face interviews are conducted. The interviews consist of two main sections. First the interviewer asks the student to think about their favorite and least-favorite teachers they have experienced during their tenure at Oklahoma State University. They are asked to consider what the good teachers did that the other teachers did not, including the differences in teacher personalities and their teaching style. The student is then asked to think of three to seven attributes that describe their favorite college teachers. Each attribute is written on a separate index card, and it is on this card that the interviewer will record all the consequences and values emanating from that attribute. After the student has finished listing attributes, they are asked to take the index cards and order the attributes from the most to least important attributes. The interviewer then begins exploring the consequences of these attributes by taking the highest ranked attribute and asking a series of questions of the form: *“Why is the attribute <insert attribute> important to you? What are the consequences of a college teacher possessing <insert attribute> that you value?”*

After the student provides a consequence, they are asked to name a second consequence resulting from the prior consequence that is important to them. This line of questioning continues, seeking to add consequence on top of consequence. The student will eventually reach a point where they reach a consequence that has no subsequent consequence that comes to mind. At this point, they are asked to identify one or more terminal values, which represent the driving motivation of their answers. Attributes and

consequences are concepts easily grasped and described without prompting by the researcher, but most students have no exposure to the concept of terminal values, and find articulation of such values daunting. To aid the identification of values students are provided with a list of sixteen specific terminal values taken from Rokeach (1973). These values are listed in Appendix A.

Consider an example, where the student states that *dynamic presenter* and *cares students learn* are two attributes for their favorite teachers. If *cares students learn* is the more important attribute the interviewer will begin conducting a means-end-chain analysis of the attribute. They might find that *cares students learn* has the consequence of *keeps me motivated*, which has its own consequence of *understand material better*, which has a third consequence of *higher salary*. If no more consequences are easily conjured, the student may then state that their terminal values driving the desire for a higher salary are *a comfortable life* and *sense of accomplishment*. The interviewer will then go back to the attribute or one of the initial consequences to explore other consequences. They ask questions such as, “Are there any other consequences of ‘cares students learn’ that are important to you,” or, “are there any other consequences of ‘keeps me motivated’ that are important to you.” After a thorough means-end-chain analysis of the attribute *cares students learn* is obtained, the researcher then turns to the other attribute, *dynamic presenter*, and follows the same process.

This technique is referred to as *soft-laddering*. The *soft* adjective refers to the fact that students describe their preferences in their own words, and except for the terminal values, no attempt is made by the researcher to encourage the use of specific

terminologies. All interviews are performed by a trained interviewer (one of the authors), who follows the same general instructions for each subject, but is allowed freedom in how many attributes to explore in the attribute-consequence-value chain and how to help the interviewee make attribute-consequence-value connections. The interviewer is trained not to put words in the students' mouth, but at the same time an informative interview requires some adaptive interaction between the interviewer and interviewee.

While each interview is interesting and contains unique information, reporting the results of each interview in a single article would make for a tedious read and would fail to highlight the most prominent themes. Consequently, soft-laddering transcripts must be summarized and reported in a more succinct fashion. The conventional method in the marketing and food marketing literature is to group attributes and consequences into similar categories, and then use a Hierarchical Value Map to communicate the most important categories. The authors held numerous meetings where we reviewed the transcript pertaining to each interview (interviews were audio-taped), designed category labels to describe repeating themes, and used these labels to denote attributes and consequences of the same spirit. These labels are shown in Appendix A, as well as the comments recorded during the interview pertaining to that label.

The interview results can be reported in various formats. For example, a list of the most frequently mentioned attributes can be listed along with the most frequently mentioned consequences associated with those attributes. The identification of consequences is more complex than the attributes, due to the existence of direct and

indirect consequences. For example, a student may state *entertaining lectures* as an attribute of great teachers. When asked the consequence of *entertaining lectures*, the student may state *keeps you awake*, and when asked the consequence of *keeps you awake* may state *understand material better*. The consequence *keeps you awake* is a direct consequence because it follows directly from the attribute with no intermediary consequence. Conversely, the consequence, *understand material better* is an indirect consequence because the *keeps you awake* attribute is an intermediary variable between the consequence and attribute. Although *understand material better* may be an indirect consequence it is obviously a consequence resulting from entertaining lectures. Consequently, the reporting of consequences requires some decision about whether only direct or both direct and indirect consequences are used.

Hierarchal Value Maps (HVM) are created to summarize the interviews, which are flow diagrams illustrating the most important attributes (at the bottom), arrows pointing to their subsequent consequences (and consequences of the consequences), and (at the top, signifying their importance in determining everything below) finally the terminal values. Attributes share many direct and indirect consequences, and the number of times a consequence is mentioned signifies its importance. The HVM's are designed to describe the details communicated in the personal interview. Unless the HVM's are parsed to reveal only the most important attributes and attribute-consequence-value connections, the arrows will more resemble a cacophony of lines than a succinct description of the interviews. This is typically performed by reducing the number of attributes to a manageable number, counting the number of times a consequence is

mentioned (directly or indirectly), and reporting only those consequences mentioned a certain number of times--this number being referred as a *cutoff point*. The researcher then experiments with higher and lower cutoff points, choosing the value that best describes the details of the interview without exhausting the reader with details. The cutoff point is then a subjective decision, one that is determined in both the scientific and the aesthetic spirit.

PERSONAL INTERVIEWS – PARTICIPANTS

The interviews are conducted using students majoring in agricultural economics or agribusiness (hereafter, agricultural economics) in the College of Agricultural Sciences and Natural Resources (CASNR) at Oklahoma State University. Recruitment is limited to this discipline because we possess the contact information allowing us to selectively target certain students, with the goal of ensuring all genders, class distinctions, and GPAs are represented. As the descriptive statistics in Table 1 show, the sample is represented equally by males and females and possesses similar ratios for students of different class distinction and [reported] grades.

Recruitment was initially performed through email invitations by the trained interviewer, who was also a student in the department.¹ The low response rate required

1 The first ten interviews are conducted by a teacher, Bailey Norwood, only with students he felt would feel comfortable and forthright with him. The other thirty-five interviews are conducted by Carol Cook, who was an undergraduate student at the time. It was thought that students would be more forthright in the presence of a fellow student than a teacher or professional staff. Dr. Norwood mentored Ms. Cook during several his ten interviews and several of her own interviews, only allowing her to work independently when he felt confident she was fully trained.

the interviewer to contact students directly in class, through personal emails or phone calls, or at student organizational events. This more personal invitation, along with a ten-dollar-cash compensation, proved effective, allowing us to reach our targeted sample size in a few months.

The interviewer follows a consistent script to begin the process, where the purpose and format of the interview is described. Students are told their participation is voluntary and they may exit the interview at any time and still receive their ten dollar payment (no student did). They are encouraged to provide truthful answers that reflect their personal preferences, and not to be influenced by a desire to provide answers that are socially desirable but not consistent with their preferences.

PERSONAL INTERVIEWS – RESULTS

The interview conversations are categorized to reflect fifteen different attributes of students' favorite teachers and twenty-four consequences. Recall the list of sixteen values is provided for the student to choose among, and hence require no categorizations. The most frequently mentioned attributes (and the percentage of times they are mentioned) are (1) *dynamic lecturer*—58% (2) *personable*--49% (3) *clear communicator*--36% (4) *gets to know students*--36% and (5) *cares students learn*--36%. A great teacher is thus one who cares enough that students learn the material that they show a personal interest in the student and a commitment to providing interesting lectures that clearly communicate the material concepts. This is perhaps not surprising, so this ideal teacher can perhaps be further described by mentioning the attributes that

did not make the top-five list: *challenging*, *hands out grades often*, *knowledgeable*, *organized*, *respectful*, and *real-world experience*. One could imagine ways in which some of these attributes overlap. It may be hard to imagine a teacher that is a clear communicator but disorganized, or one that is personable but not respectful. To help the reader understand why these attributes are separated, the appendix provides a list of verbatim comments by the student which are grouped under various categories. To illustrate, the appendix shows that the comment, “*good attitude towards students*” is listed under the *personable* attribute and the comments, “*trusts the class and treats them maturely*” and “*not politically biased, respects others’ opinion*” is grouped under the *respectful* attribute. These judgments are often difficult to make and it is possible a different research team would have made different decisions. Consequently, the appendix is provided as a layer of transparency to the research methodology.

To describe the most prominent attributes and attribute-consequence connections across the interviews, Figure 1 provides a Hierarchal Value Map (HVM) where consequences are only shown if they directly follow from an attribute — meaning there is no intermediary consequence – a minimum of three times. Figure 2 is another HVM, that differs in that it allows both direct and indirect links, and only shows such links that occur a minimum of seven times. These figures suggest the following concept of students' favorite teachers, which is taken largely from Figure 2. Teachers who provide dynamic lectures and communicate clearly help students focus on and better understand the materials, which translates into higher grades, better career opportunities, and higher salaries – ultimately leading to life happiness and a sense of accomplishment.

Instructors who get to know the students, exhibit a personable demeanor, and extend a personal commitment to learning helps the students commit to class and understand the material, both of which lead to higher grades, which as before has the consequence of better career opportunities and higher salaries.

A personable instructor also nourishes student-teacher relationships which (bypassing higher grades, somewhat) improves career opportunities. This is not surprising within the agricultural economics major, where professors are sometimes directly responsible for job interviews. In addition to improving career opportunities and salaries, higher grades and improved class focus encourage a valuable education and knowledge, with knowledge being one of the terminal values alongside happiness and sense of accomplishment.

It is our opinion that Figure 2 provides a more salient and logical conceptual model of preferences for teachers than Figure 1. Readers should not take these results to imply that all instructors should strive to match the description in Figure 2 exactly. While clear communication should be present throughout any class, not everyone has the personality or teach topics amenable to dynamic lectures. It is also difficult to get to know students in classes with large enrollments. When possession of some teacher attributes is difficult, instructors can instead find creative strategies for achieving the same consequences. For example, students desire teachers who get to know students because it helps them commit to the class. Instructors of large classes can then place greater emphasis on communicating their desire for students to learn, which also encourages class-commitment.

Or, instructors can find ways to show they would like to know the student better without having to know each student intimately. One of the authors teaches a large class, and begins each lecture with a *Know Your Classmates* session where one student is singled out (based on a student information sheet completed by the student). The students' career interest is discussed and used to show how the impending lecture can be used in their desire occupation. This achieves the objective of showing a personal interest in the student which encourages student commitment. This example illustrates the advantage of means-end-chain analysis; by understanding the motivation for attribute preferences one can find innovative strategies for meeting students' desires in a manner friendly to the particular instructor's personality and the particular course.

CHAPTER IV

IN – PERSON QUESTIONNAIRES

Questionnaires are developed to delve further into student preferences in ways personal interviews cannot. The method of using a paper and pencil format to elicit responses is also known as “hard-laddering.” It is similar to the “soft-laddering” method used in the interviews, however, instead of asking students to state attributes and consequences in their own words, students are provided a list of attributes and consequences to choose among—the list developed from the personal interviews. While there is currently less research on “hard-laddering,” studies have begun to compare the two forms of laddering techniques to determine if the form used affects responses; no tenable conclusion has yet to be found (Phillips and Reynolds, 1998 ; Russell, *et. al.* 2004).

In reality, there is probably no such thing as the “true preferences for teacher”, but a number of truths that depend on how the preferences are elicited. The questionnaires used here have the disadvantage of forcing students to utilize pre-determined attributes and consequences, they have the advantage of allowing one to discover more accurately how preferences change across discipline and descriptions of great teachers.

The attributes and consequences used in the questionnaire are borrowed from

the responses given by interviewed students. The twenty-four consequences inferred from the interview responses, are consolidated to fifteen, in order to create a more user-friendly questionnaire. Some of the consequence-categories are combined, while others that are seldom mentioned in the interviews have been removed. The reader can compare the consequences listed in Appendix A for the personal interviews with the questionnaire provided in Appendix B to better understand how consequences between the two research methods are treated.

IN – PERSON QUESTIONNAIRES – METHODOLOGY

The questionnaire is administered using a gray background with white response categories throughout. The questionnaire consists of four main sections, and a sample copy is provided in Appendix B. The first section contains a question asking students to choose the four most important attributes that their favorite teachers exhibit. This is followed by a question asking them to state which of those four is in fact the most important, and what four consequences from the list of fifteen represent why that attribute is indeed the most important. The next section is formatted in the same manner, however asks students about the teachers that are best at facilitating learning, or in other words, teachers that students learn the most from. In order to account for any form of bias based on the order of questions, in half of the surveys the favorite-teacher question is asked first, while the most-facilitating-teacher question is asked first in the other half. Also, for both of these sections mail merge is used to randomize the order in which the attributes and consequences are listed—to avoid anchoring bias. Each version

of the questionnaire is distributed equally among all students in the sample.

The next section of the questionnaire contains a series of scale questions where statements are made and students must choose the extent to which they agree or disagree with each statement using a scale of one representing *strongly disagree* and seven for *strongly agree*. Examples of statements are: *"I learn the most from the more entertaining teachers,"* and, *"Teachers must decide whether the students are going to learn or have fun, because you can't do both."* This section also asks students for the percentages of teachers they have been enrolled in courses with that were good or bad at facilitating learning, and the percentage that held exciting or boring lectures. The fourth and final section of the questionnaire contains six demographic questions regarding the respondents' age, gender, major, grade, GPA, and state and country of origin.

IN – PERSON QUESTIONNAIRES – PARTICIPANTS

Respondents for the questionnaire are students who are currently enrolled in either Engineering or Agricultural Economics courses. Instructors are notified of the research project through emails, and are asked if they would be willing to provide fifteen to twenty minutes of their class time to let their students participate in the research. A very positive response was received from both majors.

Students are informed at the time of completing the questionnaire that participation is voluntary and will not affect their grade in the course. Also, all questionnaire responses are obtained anonymously—subjects are identified by identification number only. Table 1 provides descriptive statistics of the sample, illustrating that only sophomores, juniors,

or seniors completed the questionnaire. The disproportionate number of males compared to females in engineering classes is reflective of the actual gender profile of engineering majors, not an artifact of how the sample is obtained. Five students are dropped from the analysis because they were either a graduate student or because they failed to answer all of the questions.

IN – PERSON QUESTIONNAIRES – RESULTS

Questionnaire responses are first parsed by major to determine how preferences for teachers vary across the two majors. When describing their favorite teacher (see Table 2) the two majors differ little in their most preferred attributes, as shown in Table 2. The favorite teachers of Agricultural Economics students are those who possess the following attributes: (1) *cares that students learn* (2) *personable* (3) *clear communicator* and (4) *possess real-world experience*. Engineering students concurred on the three most important attributes, but replaced *possess real-world experience* with *knowledgeable* for their fourth most important attributes.

The idea behind measuring preferences across majors is to explore whether descriptions of great teachers are influenced by the subject matter of the course. Preference differences could also be influenced by the type of student that self-selects into each major—including demographics. Males constitute a much larger portion of the engineering sample, and if an idea of what constitutes a great teacher differs between males and females the results in Table 2 might be less influenced by the subject matter and more influenced by the demographic profiles of the majors. To isolate the

influence of demographics, the percentages in Table 2 are adjusted to reflect the predicted results for engineering students, if their demographic profile matched that of the Agricultural Economics students. These results are shown in the fourth column of Table 2, and a description of the method used is articulated in the Table 2 notes. Although the exact percentages change it is only a slight change and the top four attributes for engineering students are unchanged. It is not gender or class distinction that drives the slight differences between majors. What does cause engineers to place more value on the teacher's knowledge than their real-world experience is either the subject matter or some other student characteristic than gender and their time until graduation.

While Table 2 articulates what constitutes students' favorite teachers, Table 3 concerns descriptions of teachers who are most adept at facilitating learning. Differences in the percentages across Tables 2 and 3 then describe differences in the characteristics of teachers who are popular and teachers who best facilitate learning. For both majors, *cares that students learn* and *clear communicators* remain among the most important attributes. A teacher who is personable remains within the top four attributes among agricultural economics students. The attribute *organized* makes its first appearance within the top four attributes, at least for engineering students. The numeric difference between the percentages indicates the degree to which the attribute is important for one definition of great teachers and less important is another. The percentage that experiences the largest change pertains to the attribute *personable*; for engineering students, the percentage for this attribute had a larger decrease when

moving from *favorite teacher* to *teacher that best facilitates learning* than any other. Being a personable instructor is integral for being a popular teacher, but less so for achieving learning—in students' opinions.

Although this paper concerns the issue of what constitutes a great teacher, there is probably no one single answer. Descriptions of great teachers may vary not only according to the course topic and the definition of “great”, but even in the particular manner in which the question is asked. The personal interview and the questionnaire described previously may yield different preferences, and if they do, it is not clear which preferences are more “accurate.” The personal interview has the quality that student statements are phrased in their own words and are not anchored to a particular questionnaire design. However, a student may provide an unprompted description of their favorite teacher, but when given a list of teacher attributes may realize they neglected a particularly important aspect of teaching. While the questionnaire has the drawback that student answers may be anchored to the particular phrasing of attributes, the list of attributes helps the student consider the wide range of ways in which teachers differ.

Although results from the questionnaires and personal interviews are largely similar, they depart on the importance of the teacher being a *dynamic lecturer*. As shown in Table 4, *dynamic lecturer* was the most important attribute of [agricultural economics] students' favorite teachers based on interview responses, but the attribute did not even make the list of top five attributes in the questionnaire. Conversely, possessing *real-world experience* was an integral feature of favorite teachers in the questionnaire but not the

personal interview. It is unclear why these differences exist, and it is our assertion that both the personal interviews and the questionnaires are equally accurate measurements. What constitutes a great teacher does partially depend on how the question is asked. However, regardless of how the question is asked, students consistently describe great teachers as those who are personable, clear communicators, care that students learn, and make an effort to personally know the student.

The unique contribution of this study is the focus on why students prefer teachers with certain attributes. What is it about those attributes that the students value? This answer also depends on whether it is obtained through structure questionnaires or more loosely-structured interviews. A desire to focus in class, understand the material, and develop a relationship with the professor is robust across research methodologies. In fact, *understand material* is an important consequence of every attribute in both the questionnaires and interviews. The consequence *improve class focus* arises for all top-five attributes in the questionnaires but only one in the personal interviews. It is not surprising that *high GPA* is prevalent in the interviews but not the questionnaires, as the questionnaires allow only one consequence following an attribute, whereas the interviews allow a sequence of consequences. Achieving a high GPA is more likely to result from understanding the material and focusing in class—acting as an indirect consequence of an attribute--as opposed to attributes directly. Despite these differences, the general theme in Table 4 is that students want teachers who help them understand the material and commit to focus in class. This helps them achieve high grades and enhance their future career.

The questionnaire employed different definitions of a great teacher because of the possibility that achieving popularity may come at the expense of achieving learning outcomes. To what extent can these outcomes be achieved simultaneously? Attitudinal questions embedded within the questionnaire can help answer this question. The questions and descriptive statistics of answers are shown in Table 5, and it is evident that students believe both popularity and learning can both be obtained by the same teacher. Across both majors, students insist that they learn the most from their favorite teachers—an inspiring result for ambitious teachers. Not all teachers do achieve both outcomes though. Between 39-49% of the students' teachers were adept at facilitating learning but held boring lectures; roughly 17% of teachers were the opposite. Students felt that approximately one-third of their teachers were able to both encourage learning and hold exciting lectures. It is our hope that the results of this study will help increase the percentage of teachers who obtain both worthy outcomes.

CHAPTER V

IMPLICATIONS AND CONCLUSIONS

Although there are many valid definitions of a *great teacher*, all definitions should be partially informed by student preferences for teachers. However much one may abhor the idea of teaching being a popularity contest, in some facets, popularity should be sought not for popularity itself, but as a medium to inspire and encourage students. Indeed, students themselves assert they prefer a teacher who cares that they learn, gets to know students, and is personable; such teachers help students achieve their goals of focusing in class, understanding the material, and developing a personal relationship with the teacher. These are but intermediary goals, which help students enhance their grades, improve their careers, increase their salary -- ultimately achieving happiness, financial success, and a sense of accomplishment. Though it may not be surprising that students also prefer teachers who communicate well and provide dynamic lectures, the strong evidence supporting this notion may help instructors commit to clarity and variety in the classroom.

Measured student preferences for teachers in this study are largely similar across major, how great teachers are defined, and how preferences are measured. This should not be interpreted to imply that all teachers must act and instruct the same way for students to

consider them great teachers. The attributes of great teachers are defined rather vaguely, so that instructors of myriad personalities, class sizes, and class topics can achieve greatness in different manners. It is not required for teachers to obtain *all* the important attributes of a great teacher to be a great teacher. Moreover, the similarity of desired consequences for teacher-attributes suggests that ambitious teachers may focus on the goals of improving class focus, understanding of the material, and commitment to the class in whatever fashion is best suited for their personality and class.

For teachers who are struggling to acquire the approval of their students, this study points to a few suggestions which are, fortunately, relatively easy to execute. Getting to know students personally, demonstrating a concern for student learning, and exhibiting personable character traits are simple notions that do not require an overhaul of a course structure, nor do they require a change in teaching style. Yet, these simple notions are among the most important characteristics when students describe great teachers.

Instructors of large classes should not bemoan the importance students place on getting to know the students. Discovering creative ways of connecting to students in a large class demonstrate more powerfully the instructor's desire for personal connections. One of the authors teaches a large class and begins each lecture with a *Know Your Classmates* activity, where one student is singled out (based on a student information sheet completed by the student) for discussion. The student's career interest is discussed and used to show how the impending lecture can be used in their desired occupation. This activity demonstrates a desire to know the students, and by demonstrating the

usefulness of the course content, it relays a sincere concern for student learning and gives them the motivation to commit to the class—recall that committing to the class is a consequence of getting to know students, which helps compensate for the inability to personally know each student in a large class. *Know Your Classmates* is a wildly popular activity, one that students promptly note if the instructor fails to do at the start of class.

Although becoming a dynamic lecturer may be difficult for some personalities, one can instead focus on the consequences of dynamic lecturers that students value: understanding and retaining the material and focusing in class. The fact that dynamic lecturer is far less important in the questionnaire than the personal interview suggests an instructor who faces significant personal challenges in acquiring a “dynamic” trait may still become a great teacher through other means.

Acquiring the approval and respect of the class—one might even add, admiration—should not be thought of as a conflict to class learning. It is clear from the students that learning is a consequence of a caring, dynamic, and articulate teacher that students strongly desire. A set of attitudinal questions within the questionnaire supports this notion. A large majority of the agricultural economics and engineering students claim that their favorite teachers are also the teachers that impart the most learning. Students reject the notion that teachers must decide between having fun or learning in class, and state that they learn the most from their most entertaining teachers.

The most encouraging result from this study is that, among the various outcomes students seek in a class, learning the material is among the highest. To a large extent,

students and teachers share the same goal. Learning can be measured, and the intricate assessment programs being developed at most universities and colleges seek to gauge and enhance learning. A teacher who achieves high levels of learning is no doubt a great teacher, but we assert that instructors should go one step further, and also seek the label of *greatness* from the students. Hopefully, this study will aide in this noble pursuit.

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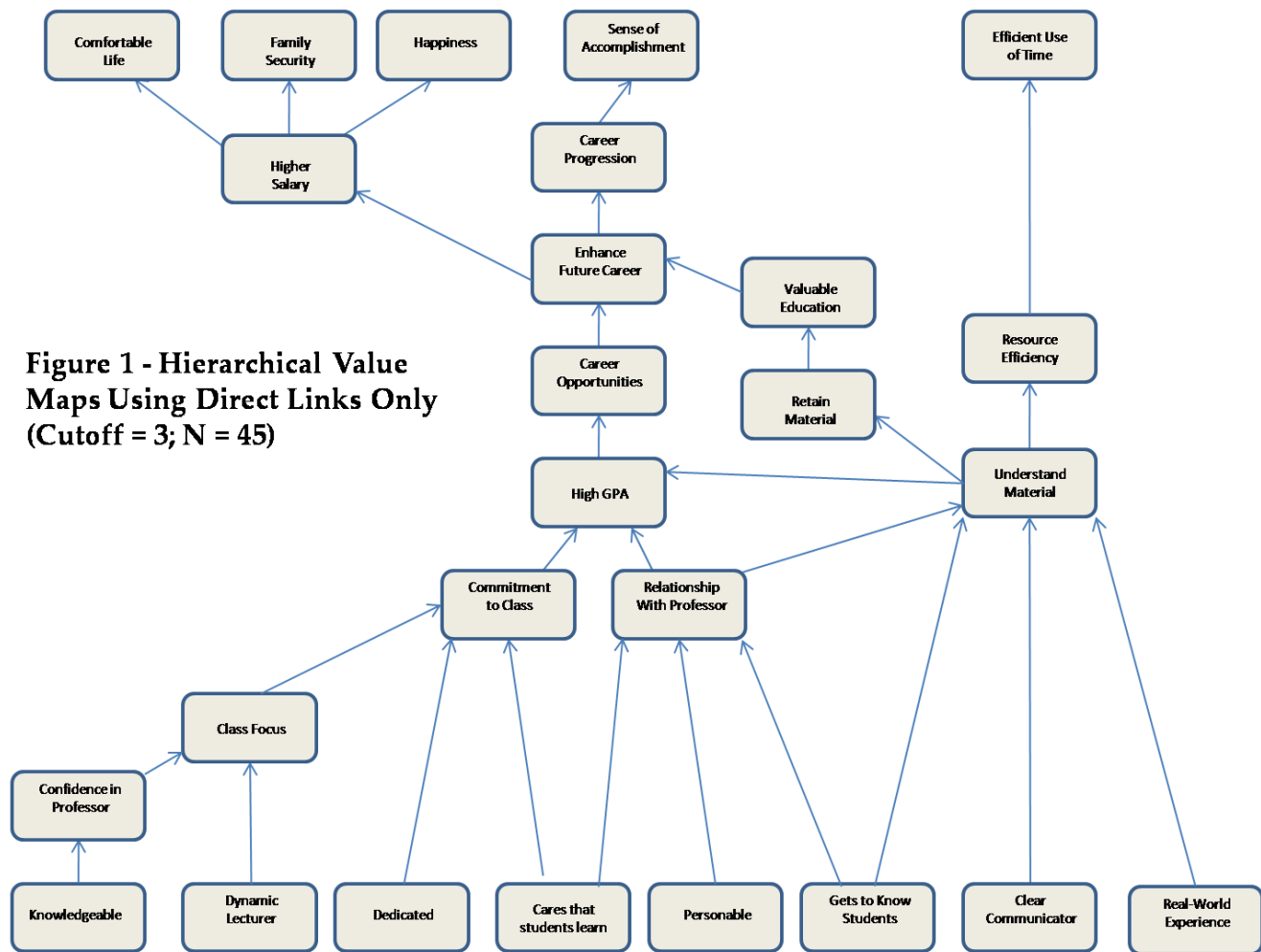


Figure 1 - Hierarchical Value Maps Using Direct Links Only (Cutoff = 3; N = 45)

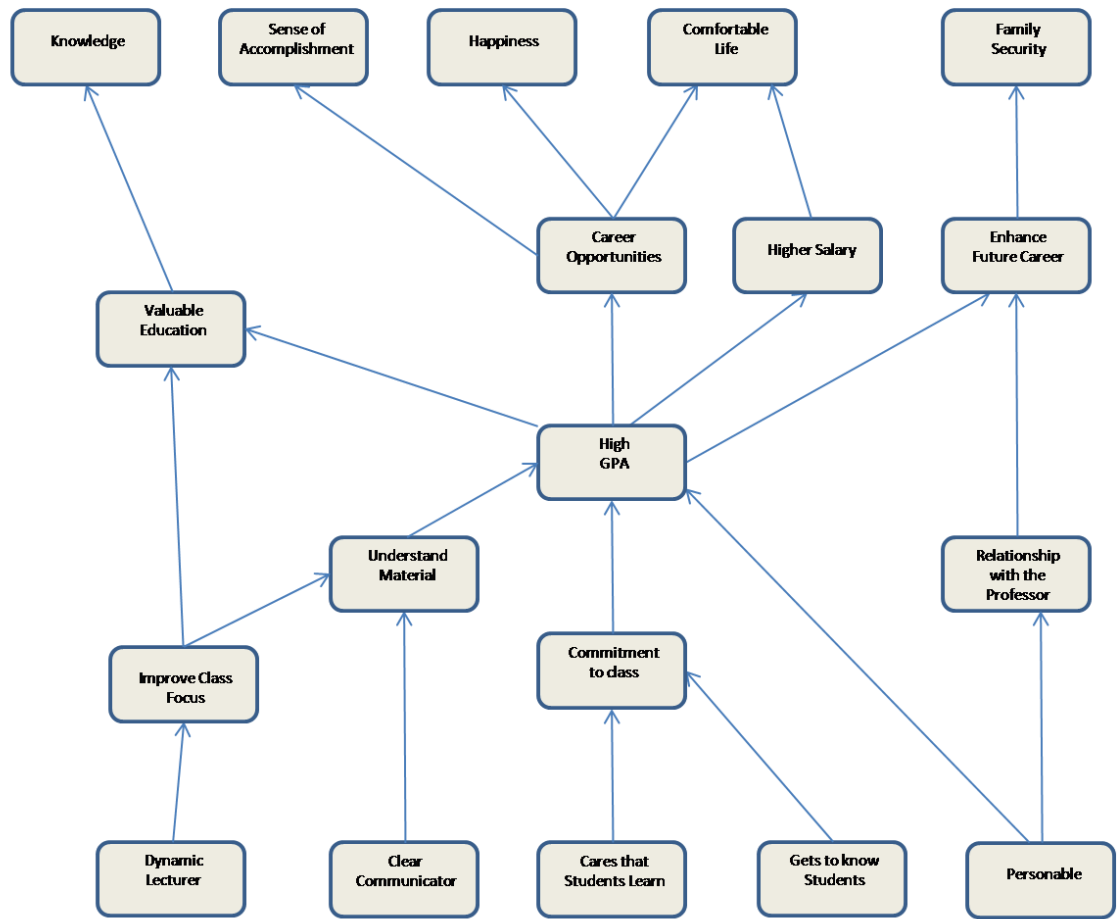


Figure 2 - Hierarchical Value Maps Using Direct and Indirect Link (Cutoff = 7; N = 45)

Table 1 – Demographic Profile of Students Participating in Interview and Questionnaires

	Agricultural Economics Students in Personal Interview	Agricultural Economics Students Taking Questionnaire	Engineering Students Taking Questionnaire
Gender			
Male	48.89%	59.26%	78.47%
Female	51.11%	40.74%	21.53%
Class Distinctions			
Freshman	22.22%	0.0%	0.0%
Sophomore	15.56%	14.81%	11.00%
Junior	37.78%	51.85%	27.75%
Senior	24.44%	33.33%	61.24%
Reported GPA			
4.00-3.50	44.44%	33.58%	31.40%
3.49-3.00	31.11%	29.10%	46.38%
2.99-2.50	20.00%	29.85%	19.81%
2.49-2.00	2.22%	6.72%	2.42%
1.99 and less	2.22%	0.75%	0.0%
Average Age	20.38 years	21.07 years	21.69 years
Sample Size	45	135	209

Table 2 – Percent of Times Attribute Was Selected Among Top Four Attributes Describing Students' Favorite College Teachers (using questionnaire)

Attributes of Students' Favorite College Teachers	Agricultural Economics Students (N = 135)	Engineering Students (N = 209)	Engineering Students - Adjusted (N = 209)	Agricultural Economics & Engineering Students (N = 334)
Hands Out Grades Often	4.25%	2.25%	3.00%	3.00%
Challenging	2.00%	3.25%	3.50%	2.75%
Have Clear Expectations	5.25%	7.25%	7.00%	6.50%
Respectful	7.50%	5.25%	5.25%	6.00%
Involve Students in the Class	4.75%	4.75%	5.00%	4.75%
Organized	7.50%	7.25%	6.75%	7.25%
Possess Real-World Experience	8.75%	7.25%	5.75%	7.75%
Connects Class Activities	2.50%	3.25%	2.75%	3.00%
Dedicated	4.75%	5.50%	4.75%	5.25%
Knowledgeable	6.75%	9.50%	8.00%	8.50%
Cares that Students Learn	11.75%	12.50%	14.25%	12.25%
Clear Communicators	9.75%	11.00%	11.00%	10.50%
Gets to Know Students	8.25%	4.75%	5.50%	6.00%
Personable	11.75%	10.25%	12.25%	11.00%
Dynamic Lecturers	4.25%	6.00%	5.75%	5.25%

Notes: The numbers are calculated as the number of times an attribute was chosen as the top four attributes, divided by the number of subjects completing the questionnaire, divided by four. Results of questionnaire administered to students pursuing agricultural economics and engineering degrees. The fourth column adjusts the percentages of engineering student responses to reflect the predicted responses if their demographic profile (gender and class distinction) matched the profile of the agricultural economics students. This is achieved by calculating the percent of students and the percentage of students selecting each attribute in each gender / class distinction, and for each major. To weight the engineering students' responses, the percent of times an attribute is chosen for each gender / class distinction for engineers is multiplied by the percent of students in each gender / class distinction combination for the agricultural economics students. The final column combines the answers for both majors, where no answers are weighted. The total for each column sums to 4, because students were asked to select their top four choices.

Table 3 – Percent of Times Attribute Was Selected Among Top Four Attributes Describing College Teachers Who Best Facilitate Learning (using questionnaire)

Attributes of College Teachers Who Best Facilitate Learning	Agricultural Economics Students (N = 135)	Engineering Students (N = 209)	Engineering Students - Adjusted (N = 209)	Agricultural Economics & Engineering Students (N = 334)
Hands Out Grades Often	2.50%	1.25%	2.00%	1.75%
Challenging	3.25%	3.75%	3.75%	3.75%
Have Clear Expectations	6.75%	7.25%	7.75%	7.00%
Respectful	4.00%	3.25%	3.25%	3.50%
Involve Students in the Class	7.00%	5.00%	6.25%	5.75%
Organized	7.50%	9.75%	9.50%	9.00%
Possess Real-World Experience	8.25%	8.25%	6.75%	8.25%
Connects Class Activities	4.25%	3.75%	3.75%	4.00%
Dedicated	4.00%	5.75%	6.00%	5.00%
Knowledgeable	10.75%	11.50%	11.25%	11.25%
Cares that Students Learn	10.50%	12.00%	13.50%	11.50%
Clear Communicators	9.75%	12.25%	12.00%	11.25%
Gets to Know Students	7.00%	3.50%	3.25%	5.00%
Personable	9.00%	6.00%	5.00%	7.25%
Dynamic Lecturers	5.25%	6.75%	5.75%	6.25%

Notes: The numbers are calculated as the number of times an attribute was chosen as the top four attributes, divided by the number of subjects completing the questionnaire, divided by four. Results of questionnaire administered to students pursuing agricultural economics and engineering degrees. The fourth column adjusts the percentages of engineering student responses to reflect the predicted responses if their demographic profile (gender and classification) matched the profile of the agricultural economics students. This is achieved by calculating the percent of students and the percentage of students selecting each attribute in each gender / classification, and for each major. To weight the engineering students' responses, the percent of times an attribute is chosen for each gender / classification for engineers is multiplied by the percent of students in each gender / classification combination for the agricultural economics students. The final column combines the answers for both majors, where no answers are weighted. The total for each column sums to 4, because students were asked to select their top four choices.

Table 4 – Top Five Attributes and Their Related Consequences for Favorite Teachers from Personal Interview and Questionnaire (Agricultural Economics Students Only; N = 135)

Top Five Attributes From Personal Interview	Top Four Consequences of Left Attribute	Top Five Attributes From Questionnaire	Top Four Consequences of Left Attribute
Dynamic Lecturer (58%)^a	Understand Material Class Focus Retain Material Valuable Education	Personable (47%)	Improve Class Focus Commitment To Class Understand Material Relationship With Professor
Personable (49%)	High GPA Relationship With Professor Career Opportunities Understand Material	Cares Students Learn (47%)	Understand Material Retain Material Improve Class Focus Valuable Education
Clear Communicator (36%)	Understand Material High GPA Enhance Future Career Higher Salary	Clear Communicator (39%)	Understand Material Retain Material Commitment To Class Improve Class Focus
Gets To Know Students (36%)	Relationship With Professor Commitment To Class Understand Material Enhance Future Career	Real-World Experience (35%)	Understand Material Confidence In Professor Improve Class Focus Relationship With Professor
Cares Students Learn (36%)	High GPA Commitment To Class Understand Material Enhance Future Career	Gets To Know Students (33%)	Improve Class Focus Commitment To Class Confidence In Professor Understand Material

^a Number in parenthesis indicates the percent of times the attribute was chosen among top four attributes in personal interviews or questionnaire. The consequences pertaining to each attribute in the personal interviews refer to both direct and indirect consequences, whereas the questionnaire contains only direct consequences. For this reason, percentages referring to the frequency of the consequences are not provided, as comparisons of the consequences across the interview and questionnaire could be misleading.

Table 5 – The Degree of Entertainment Desired by Students in Their Courses

	Agricultural Economics Students	Engineering Students
My favorite teachers are also the ones I learn the most from	6.36 (0.8849)	6.22 (0.9453)
I tend to learn the most from the teachers who are my least favorite	1.87 (1.0280)	2.01 (1.1560)
I learn the most from the more entertaining teachers	5.85 (0.9185)	5.30 (1.0911)
I learn the least from the more entertaining teachers	2.28 (1.2617)	2.65 (1.2931)
Teachers must decide whether the students are going to learn or have fun	1.84 (1.2107)	1.94 (1.2659)
You can learn a lot from classes that are also fun	6.63 (0.6883)	6.42 (0.7493)
Percent of OSU teachers that were good at facilitating learning but held boring lectures	39.49%	48.49%
Percent of OSU teachers that were bad at facilitating learning but held exciting lectures	18.79%	16.23%
Percent of OSU teachers that were good at facilitating learning and held exciting lectures	37.96%	30.12%

Notes: The first six rows used a scale of 1 to 7, where 1 represented strongly disagree, 7 represented strongly agree. The number in parentheses below the average response is the standard deviation. The final three rows show the percentage of teachers respondents have taken classes with in their time at Oklahoma State University.

APPENDICES

Appendix A

Categorization of Attributes and Consequences with Examples of Verbatim Statements

Attributes

Cares students learn
examples from data:

Sincerely cares that their students learn the material
Understanding of and use of different learning styles (3)
Sincerely cares that students learn (5)
Doesn't play favorites, such as treating people in the front or those who talk aloud differently (9)
Wants the student to succeed, doesn't try to trip them up, makes sure they know what will be on test (10)
Really cares about students, not just tenure (13)
They care about the students; will talk with them (15)
Ability to be flexible and think on their feet in regards to teaching styles (16)
Ability to work with students when they're struggling (20)
Cares about the success of the student (28)
Cares about the class, makes sure they understand and succeed (30)
Personable; want to see students succeed (34)
Cares about the students; remembers what it was like to be in a student's position (35)
Adjust teaching style to fit the students (39)
Care about the students (42)
Care about what students actually learn (43)

Challenging
examples from data:

Challenges the students without making it too difficult
Challenge the student reasonably (6)
Challenges students, but doesn't leave them in the dark (13)
Encouraging, promote one's own thinking, innovative (15)
Makes the tests challenging but passable (24)

Clear communicator
examples from data:

Speaks with a clear accent and can effectively get their point across to students
Ability to communicate in a lecture (4)
Ability to clearly communicate, including English speaking abilities (5)
How thoroughly they can communicate their knowledge (6)
Good at explaining topics (8)
Good presentation skills (10)
Goes over past exams to better explain things (11)
Ability to break down and simplify the material in the book (18)
Takes their time explaining things (24)
Clear presentation of material (25)
Give presentations effectively that students understand (29)
Has the ability to explain the material well (30)
Communication skills; speaks clearly and loudly so that you can hear them (35)
Accent and volume of their voice (38)
Break stuff down and make it understandable (43)
Articulate; a clear accent (44)
Good communication skills with their students and good public speaking skills (44)

Connects class functions
examples from data:

There is a good connection between lectures, assignments, & exams
Lectures are consistent with the textbook (1)
Good connection between lectures, assignments, and exams (2)
Good communication about what will be on test (3)
Makes sure homework pertains to the exam (4)
Teach what they will test (6)
Consistency in how they grade and lecture so you know what to expect (7)
Consistency between lectures and tests; testing what they teach (10)

	<p>Appropriate workload that pertains to the material (17)</p> <p>Gives relevant homework; relates to test, good practice, etc. (24)</p> <p>Fair in grading, tests, extra credit, etc (26)</p> <p>Extra credit and homework count for your grade, not just tests (42)</p>
Dedicated examples from data:	<p>Is passionate and dedicated towards the subject, material, and teaching</p> <p>Understand their job is to teach; have enthusiasm; don't pawn off on a TA (3)</p> <p>Enthusiasm; motivation (7)</p> <p>Extra effort, hard work on the part of the teacher; spend extra time out of class working on class (10)</p> <p>Have a passion for what they're teaching and want to share their excitement (12)</p> <p>Has a desire to teach and do a good job (16)</p> <p>Self-motivated; wants to teach (22)</p> <p>Take the time and effort to devote to class (23)</p> <p>Enthusiasm; passion for teaching (28)</p> <p>Put in extra effort and time to provide resources to students (31)</p> <p>Dedication to teaching, not just research (34)</p> <p>Dedication to teaching and the class (42)</p>
Dynamic lecturer examples from data:	<p>Gives an interesting and entertaining presentation</p> <p>Provides good examples in class (1)</p> <p>Provides good examples in class, real life and timely (2)</p> <p>Lectures are relevant and interesting (5)</p> <p>Make the class interesting by doing something other than lecturing all the time (6)</p> <p>Fun; Descriptive; explaining why they are doing things in class; motivating the subject matter (7)</p> <p>Witty / funny (8)</p> <p>Tries to keep students entertained during lectures (10)</p> <p>Relate to students, give personal examples of themselves (11)</p> <p>Goes in depth to explain things in their lecture (11)</p> <p>Relate the class material to stuff you're familiar with (13)</p> <p>Have a dynamic presentation style; not monotone (13)</p> <p>Entertaining, keep the students attention (14)</p> <p>Apply the information to things that students are familiar with (14)</p> <p>Entertaining, funny (15)</p> <p>Entertaining, not monotone; keep students' attention (16)</p> <p>Enthusiasm; presenting their information with a good personality and sense of humor (17)</p> <p>Ability to lead and control the class (19)</p> <p>Sense of humor; entertaining (19)</p> <p>Funny, light-hearted personality (21)</p> <p>Interaction with the class / Entertaining (23)</p> <p>Give interesting presentations; activities, personal stories, etc (27)</p> <p>Not monotone in their presentation (27)</p> <p>Entertaining; tell jokes and stories (29)</p> <p>Keeps the lecture relevant and appropriate (31)</p> <p>Good flow in their lecture; don't jump around (32)</p> <p>Keep the attention of the class; funny; entertaining (33)</p> <p>Sociable; talk about other things besides material; relate subject to students (33)</p> <p>Good personality; entertaining enough to keep students attention (35)</p> <p>Keep the class's attention; entertaining (37)</p> <p>Have voice fluctuation, not monotone (39)</p> <p>Humorous (39)</p>

	<p>Keep the mood light; not serious all the time (42)</p> <p>Sense of humor; connects with their students (44)</p>
Expectations are clear examples from data:	<p>Lets students know their expectations and deadlines from the beginning</p> <p>Let students know their expectations and deadlines (28)</p> <p>Good scheduling; a very detailed syllabus (32)</p> <p>Give the student a clear understanding of what is expected of them (38)</p> <p>Stick with their syllabus and don't frequently change dates (44)</p>
Hands out grades often examples from data:	<p>Frequently passes grades out to the students and informs them of how they're doing in the class</p> <p>Hands out grades often (41)</p>
Involves students examples from data:	<p>Gets students involved in the lecture with hands-on activities</p> <p>Active activities in class (8)</p> <p>Interacts with students not only in lectures, but in discussion, asking questions, and creating active assignments (10)</p> <p>Go outside of the classroom to a lab, computer lab, or outside (16)</p> <p>Getting the class involved in lecture or discussion (20)</p> <p>Can break the ice and get students interacted in the class (27)</p> <p>Interactive with the class (31)</p> <p>Have students actually write out the notes, not just look at handouts (41)</p>
Knowledge examples from data:	<p>Overall knowledge of the subject and material is very high</p> <p>Knowledgeable about subject (2)</p> <p>Knowledge of subject (5)</p> <p>Knowledge in general (8)</p> <p>Know the material (14)</p> <p>Knowledge of the subject (19)</p> <p>Actual knowledge of subject (25)</p> <p>Know their material (29)</p> <p>Smart; knows their material (30)</p> <p>Knowledgeable about material (33)</p> <p>Has a deep interest & understanding of the material and gets excited about it (35)</p> <p>Knowledge of the subject (36)</p> <p>Teach facts, not opinions (37)</p> <p>Knowledgeable and credible (39)</p> <p>Knowledge of the subject (44)</p>
Knows students examples from data:	<p>Gets to know students personally in and out of class</p> <p>Availability to students (1)</p> <p>Availability to help students in and outside of class (4)</p> <p>Willing to help students anytime (5)</p> <p>Nice; easy to relate to; tries to get to know students (7)</p> <p>Developing good personal relationships with students (8)</p> <p>Calling students by their name, getting to know students personally (9)</p> <p>Give individual attention to students, learn their names (11)</p> <p>Interaction with the class; talking before, during, and after (12)</p> <p>Getting to know students outside and inside the classroom (20)</p> <p>Being able to understand students time constraints (20)</p> <p>Takes time to get to know the students (21)</p> <p>Interacts with students (22)</p>

	<p>Like to work with the students (25)</p> <p>Cares about students; learns their names, personable (27)</p> <p>Interaction with students (32)</p> <p>Interested in students enough to learn their names (36)</p> <p>Know the students by name (41)</p>
Organized examples from data:	<p>Keep their materials organized and don't waste time getting class started</p> <p>Organization (2)</p> <p>Good preparation (6)</p> <p>Organized with respect to materials and flow of thoughts (12)</p> <p>Organized with their materials and lectures; don't waste time (18)</p> <p>Has a plan, but can be flexible (21)</p> <p>Organized with their presentation and staying on schedule (28)</p> <p>Organized with their material and lectures (34)</p> <p>Organized with their classes and grading (44)</p>
Personable examples from data:	<p>Approachable, nice, in a good mood</p> <p>Creates a relaxed environment (1)</p> <p>Receptive to students; personable (2)</p> <p>Personable, nice (6)</p> <p>How they make you feel like you can ask questions; patience (7)</p> <p>Good attitude towards students (8)</p> <p>Always in a good mood, never grouchy (11)</p> <p>Have an open-door policy with students (12)</p> <p>Approachability (13)</p> <p>Open-door policy, encourages students to come by their office (13)</p> <p>They're personable; share personal information that relates to material (15)</p> <p>Approachable; not intimidating; welcomes students into their office (18)</p> <p>Available; respond to emails (18)</p> <p>Positive attitude in class (22)</p> <p>Approachable; cares about their students (23)</p> <p>Easy to get along with; flexible (24)</p> <p>Personable; care about the students (25)</p> <p>Personable; cares about the students (26)</p> <p>Caring' open-office policy (26)</p> <p>Open-door policy (27)</p> <p>Reliable with their office hours, response to emails, etc. (28)</p> <p>Joyful; all-around happy (30)</p> <p>Cares about their students; approachable; feel comfortable talking to them (31)</p> <p>Wide range of flexible office hours (36)</p> <p>Approachable in class and office hours (39)</p> <p>Good personality, approachable; funny (44)</p>
Real-world experience examples from data:	<p>Has experienced working in their field of study</p> <p>Tell stories and relate material to personal experiences (14)</p> <p>Experience in their field of study (17)</p> <p>Involved in their field of study (21)</p> <p>Relate material to real-world applications (31)</p> <p>Real-world experience (37)</p> <p>Teach stuff that applies to the real world (37)</p>

	<p>Relate material back to personal experiences (38)</p> <p>Have real-world examples that pertain to students (39)</p> <p>Relate the material to real-world examples (41)</p> <p>Real-world work experience (42)</p> <p>Give real-world examples (42)</p> <p>Use everyday examples in class (43)</p>
Respectful examples from data:	<p>Has respect for the students; treats them maturely</p> <p>Non-threatening, doesn't undermine the students; makes the students feel important (3)</p> <p>Trust the class and treat them maturely (33)</p> <p>Not politically biased; respect other's opinions (37)</p> <p>Have respect for the students; don't cut them off mid-sentence (39)</p>
Consequences	
Career opportunities examples from data:	<p>Student feels that their options for careers are widened; they could get a job in many different fields.</p> <p>Greater opportunities and choices in life (2)</p> <p>Better career opportunities (5)</p> <p>She can stand out in a crowd (6)</p> <p>Get a better job (17)</p> <p>She can get the job she wants (18)</p> <p>He will be versatile in his career options (19)</p> <p>Better job (20)</p> <p>find a career that fits her better (21)</p> <p>They'll compete better in the job market (22)</p> <p>Helps you find a job you like (23)</p> <p>Better job (25)</p> <p>Have a better future job (26)</p> <p>Better chance at getting a job you really want (27)</p> <p>Get a good job (29)</p> <p>Broaden his career options (34)</p> <p>Gives him a competitive edge in the job market (35)</p> <p>Competitive in the job market (36)</p> <p>Broadens his options for career opportunities (37)</p> <p>Get the job she wants (38)</p>
Career progression examples from data:	<p>begin career early on and climb the career ladder more quickly</p> <p>get a promotion (6)</p> <p>Start career as quickly as possible (11)</p> <p>Success in job; help her climb the career ladder (33)</p> <p>climb the career ladder faster (38)</p> <p>Be successful; climb the career ladder (43)</p>
Class focus examples from data:	<p>Easier to stay focused and interested in class</p> <p>More likely to participate in lectures (2)</p> <p>Want to learn (6)</p> <p>Easier to pay attention (7)</p> <p>Student stays focused (12)</p> <p>Student will want to learn their material (14)</p> <p>The higher end of the class will do better (16)</p>

	<p>Student will have a better attitude toward the class and attend class more often (17)</p> <p>Student will pay attention (19)</p> <p>Students ask more questions (20)</p> <p>Peaks the student's interest (21)</p> <p>Students participate in class (22)</p> <p>Keeps students awake and paying attention (23)</p> <p>Class discussion and interaction will increase (25)</p> <p>Student focuses on class more (27)</p> <p>Students will pay attention (28)</p> <p>The lesson will be easier to follow (29)</p> <p>She'll pay better attention (32)</p> <p>Student will pay attention (35)</p> <p>student will complete all of the assignments (38)</p> <p>The student's attention will be captured (39)</p> <p>There is order and focus in the classroom (40)</p> <p>Student will be more involved and focused on class (41)</p> <p>Students are more motivated to go to class (44)</p> <p>She'll attend class more often (45)</p>
Commitment to class examples from data:	<p>Student feels a personal commitment to the class, doesn't want to let the professor down so they will try (1)</p> <p>Makes student willing to go to class and do well (1)</p> <p>Student wants to go to class (2)</p> <p>Student feels a lot more motivated and will go the extra mile with the professor (3)</p> <p>Student will want to go to class; "I'll work hard for you if you care" (5)</p> <p>more willing to learn (8)</p> <p>student feels accountable to attend class (9)</p> <p>student works harder; boosts productivity(10)</p> <p>Student will work harder in class (12)</p> <p>Student will want to attend class and not just feel obligated to go (14)</p> <p>Helps him work harder and go to class more often (16)</p> <p>Makes her care about the material (21)</p> <p>He will show up for class (22)</p> <p>Student will want to be involved in and care about the class; attend class more often (23)</p> <p>students want to learn and study more (23)</p> <p>Student will want to try harder in the class (27)</p> <p>Student will be willing to put out extra effort (28)</p> <p>She'll want to learn more (32)</p> <p>Makes the student want to attend class (33)</p> <p>He will want to go to class and learn; try harder and put forth more effort (34)</p> <p>Makes the student work harder to learn the material (35)</p> <p>If the professor is willing to work hard, she will work harder (39)</p>
Confidence in professor examples from data:	<p>Feel confident in the professor and in what they're teaching</p> <p>Student gains confidence in the knowledge she gains (6)</p> <p>Get the impression that no one is the favorite; consistent grading (7)</p> <p>respects what the teacher has to say (8)</p> <p>She can feel confident in what they're teaching (14)</p> <p>Makes the student believe what the professor says (15)</p> <p>Both professor and student will be more credible with information (17)</p> <p>The student will have confidence in the professor (35)</p>

	<p>Students are confident in the professor's ability to teach (36)</p> <p>He will respect the professor (40)</p> <p>Student will have more confidence in the professor (45)</p>
Educated society examples from data:	<p>Our society as a whole is more educated</p> <p>Student can contribute more to society (8)</p> <p>Add to society, bring up the country's average knowledge (12)</p> <p>Uniformity within degree recipients; everyone has a chance at a good job (16)</p> <p>More intelligent society; America can be more competitive with other nations (28)</p>
Enhance future career examples from data:	<p>Students feels that what they are doing will help them in their future career</p> <p>Good job (1)</p> <p>Enhance career (2)</p> <p>Better resume; good job (3)</p> <p>Job satisfaction (4)</p> <p>Will work harder for the company (6)</p> <p>Better job (9)</p> <p>enhance career; earn respect from future supervisors (10)</p> <p>Will help her in her future career (12)</p> <p>makes him better at his future career (13)</p> <p>Be better at future job (17)</p> <p>Communicate well at job (18)</p> <p>He'll get the job he wants (19)</p> <p>Help you learn to work thorough work-related problems; make you a better employee (19)</p> <p>Do something you like to do (20)</p> <p>Helps her have a future career; will like her future job and try harder (21)</p> <p>Do better in future career (24)</p> <p>Do something you like (25)</p> <p>Will perform better at job (31)</p> <p>Could help you in your career (33)</p> <p>Become successful in job after college (34)</p> <p>Enhance his future career and gives him a firm foundation to stand on (37)</p> <p>He will gain respect from his future employers (40)</p> <p>Enhance future career (41)</p> <p>Will use it in his future career (42)</p> <p>Enhance her future career (43)</p>
Graduate examples from data:	<p>Earn a college degree, graduate from OSU</p> <p>Student wants to graduate (4)</p> <p>Will attain degree in the shortest amount of time (11)</p> <p>Can take more hours and graduate faster (16)</p> <p>Earn his degree (19)</p> <p>Graduate college (33)</p> <p>Graduate with honors (41)</p> <p>Graduate; attend vet school (45)</p>
High GPA examples from data:	<p>Make a good grade in the class, keep your GPA high or even increase it.</p> <p>Make good grades (1)</p> <p>Student will make better grades in the class (3)</p> <p>Get good grades (6)</p>

Better grades (9)
 higher grades (10)
 get better grades (11)
 Will help her do better in future classes (12)
 better grades (13)
 Help him get a better grade; increase his gpa (17)
 Do better on exams and in class; keep high gpa (18)
 better gpa (19)
 Helps her do better on tests (20)
 get a better grade in the class (22)
 better grades (23)
 Students will have more success in the class; better grades (24)
 Better grades (25)
 Will do better academically (26)
 Make better grades (27)
 Good grades (29)
 The student will get a good grade (30)
 Will perform better/ make better grades (31)
 Get a good grade in the class (33)
 Make better grades (34)
 Good grades (36)
 Keep a high gpa (38)
 keep a high gpa (41)
 Professor might be more lenient with his grade because they respect that he's working hard (42)
 Do well on tests, keep high gpa (44)

Higher grades, retention
 examples from data:

The entire class does well; acknowledging the success of the class as a whole.
 Students will do better, have greater class success, and increase retention (12)
 Helps students with different learning styles and helps the lower end of the class to excel (16)
 Everyone learns more (20)
 Everyone has the same opportunity (26)
 Retention rates are greater (28)
 Everyone gets the grade they want (31)

Higher salary
 examples from data:

The student would like to have a job with a high paying salary.
 Money and a house (1)
 More money (2)
 Money (3)
 money (4)
 Money (5)
 Money (6)
 more money; better benefits (9)
 higher salary in future job (10)
 Have a high paying career; earn money quicker (11)
 Be more successful (14)
 Make more money (24)
 Better pay (25)
 make money (29)
 Make money (31)
 Get a higher paying job (34)

	Higher-paying job (38) Be successful; higher salary (44)
Internship examples from data:	Work in the career field your interested in as in intern or assistant. Better opportunities like internships and things to boost your resume (5) Internship (23) Internship (27) Help her find an internship; internships equal jobs (33)
Obtain job examples from data:	Enter the work force in a full-time position Get a job in field I enjoy (4) Get a job she enjoys (6) Get a good job (24) Get a job (31) Get a job and support herself (33) Obligaated to have a job (36) Get a good job (43) Get a job (44) Get a job (45)
Professor as reference examples from data:	Student feels that the professor would serve as a reference for them when they applied for a job or inter Will help her in the future as a reference (18) Could be a future reference (19) Professors could be a good contact in the future (internships, scholarships, etc.) (23) Relationship with professor is a good networking tool; letter of recommendation (31) Professor is a good networking tool (33) Professor will be a good networking contact (45)
Reduce stress examples from data:	Not as worried or pressured about schoolwork Reduces anxiety and panic about the class (1) Student avoids anger and frustration (3) Reduces student's confusion (6) Gives student extra self-confidence (10) He won't stress out over tests and homeworks (16) Will take away stress at graduation (31) Reduce stress (32) Not as stressed out (43) Reduce stress (44) Keeps the student from stressing out (45)
Reduce study time examples from data:	Student feels that they will not spend as much personal time studying Reduces her time needed to study (6) Won't need to study as hard (27) Doesn't have to work as hard to study for tests (41) Don't spend as much time studying (43)
Relationship with professor examples from data:	Developing a friendship with the professor; feeling comfortable going to talk with him in his office or after The professor will be a friend to the students (1) Less scared to ask questions and seek help (7) Reciprocity from professor (9)

	<p>Student feels that they can go to the professor for help (11)</p> <p>Student feels more welcome in class (12)</p> <p>he gets to know the professor better (13)</p> <p>Feel more comfortable talking to them and asking for help (18)</p> <p>Makes it easier to talk with the professor (19)</p> <p>The professor will be able to relate to the student on a more personal level (20)</p> <p>Students will go to visit the professor and check on their grades (23)</p> <p>The professor will seem more approachable (23)</p> <p>Students will feel comfortable talking with the professors (24)</p> <p>Would feel more comfortable going to talk with the professor and could get help with class work when n</p> <p>Student will form a beneficial relationship (27)</p> <p>Build a better relationship with the professor (31)</p> <p>Student and professor build a relationships (33)</p> <p>The student will mutually respect the professor (35)</p> <p>Student is more comfortable talking with the professor (36)</p> <p>The professor is getting to know her (39)</p> <p>Student will feel comfortable asking the professor questions (40)</p> <p>The student feels comfortable talking to the professor; can get help solving problems with the class (41)</p> <p>Feel more comfortable going to talk to them and getting help with the class (44)</p> <p>Student will develop a relationship with the professor (45)</p>
Resource efficiency examples from data:	<p>Getting the most of one's time, money, and resources</p> <p>More efficient note taking, listening, and studying (1)</p> <p>Allows me to plan and schedule things better (2)</p> <p>He can think of more efficient ways of doing things (15)</p> <p>Students aren't wasting time (20)</p> <p>use time management with classes (24)</p> <p>Get the most out of her time and money (28)</p> <p>student gets more out of the material / lecture; gets the most out of her money (33)</p> <p>Student will get the most out of their time here (34)</p> <p>Get the most out of his time at college (35)</p> <p>Be efficient with their time and money (36)</p> <p>You can accomplish more and make the most of your money (40)</p> <p>Be efficient with his time and resources (42)</p> <p>Can be efficient with her time (43)</p>
Retain material examples from data:	<p>Student feels that they will be able to retain the material later on in life.</p> <p>material will help on the job and practical things; aide career (7)</p> <p>She can remember what she learns (14)</p> <p>Retain information better and use it later in life (17)</p> <p>Students will like the material and can use it better (21)</p> <p>Student will relate the lesson to real life applications and could use the lesson in the future (29)</p> <p>Absorb more information (32)</p> <p>Will be able to recall the material later on in life (33)</p> <p>He'll be able to recall the information when needed in the workforce (35)</p> <p>Student will know the information is real and he can recall it later (37)</p> <p>Student will be able to recall information later on (38)</p> <p>Information will be useful to her in the future (39)</p> <p>He will be credible with the information in the future (40)</p> <p>Remember the material for a longer amount of time (43)</p>

Satisfy parents examples from data:	Achieve goals that parents have set for them; live up to parent's expectations. Fulfill goals of her and her family (18) Will follow parent's example (32)
Scholarships examples from data:	Earn new scholarships or keep current ones. Retain scholarships (18) scholarships (23) Scholarships/ internships (24) Scholarship money (31) keep scholarships, don't incur a lot of debt in college (41)
Student networking examples from data:	Form friendships with other students during class Put student in a positive mood and make him more friendly and approachable (17) Get to know other students/build network develop friends and expand network (32) Brings the class together, lightens the mood, and makes it more casual (39)
Understand material examples from data:	Learn more from the class and grow personally and intellectually because of it. Helps me understand material better (2) I'll have a greater knowledge and skill set (2) The students feels like he is learning (4) Students can understand material and get missing notes (5) Easier to learn and remember more (7) Students are able to learn more (8) Learn more (10) Helps the student understand the material (11) Understand material better (12) He learns the material (13) she will better understand the material (14) Makes it easier to learn; helps him achieve his goal of understanding the material (15) It makes the material easier (16) He will understand the material better (17) Will not be confused about material; makes it more understandable later when doing homework or studying (18) Learn the material better (19) Helps her learn better and easier (21) learn material better (22) learn more (24) Won't get confused about the material; understand it better (25) Learn the material better (27) Will learn more (28) They will understand the material better (29) Student understands the reason for the material (31) Won't fall behind; makes learning easier (32) Understand material (33) student will learn and understand the material better (34) Student will understand and learn the material (35) She can understand the material better (36) The student won't miss any notes or details of the material (38) The concept will make sense to the student (39)

	It would help him understand the material (40)
	Student will learn more (41)
	Learn the material better (42)
	Makes the material easier to remember (43)
	Gives the student a good understanding of the subject (44)
	Helps her learn more (45)
Valuable education examples from data:	<p>Having a college education has a great significance to the student</p> <p>Increased well-being of self and family from personal development (2)</p> <p>Better understanding of the world (7)</p> <p>Better yourself; well-rounded (8)</p> <p>Learn how to get your point across in life (10)</p> <p>Continual learning and growth (12)</p> <p>She'll have a more valuable education (14)</p> <p>He can gain knowledge from the class; have a valuable education (15)</p> <p>He'll get a more valuable education and a more respectable degree (16)</p> <p>Get an education (18)</p> <p>Get a quality education (19)</p> <p>Get a quality education (22)</p> <p>Broader perspective on life and in workplace (27)</p> <p>Feel more intelligent (28)</p> <p>Student will know that they're getting a quality education (29)</p> <p>Learn as much as you can (33)</p> <p>He'll learn to constantly learn and contribute in his company (34)</p> <p>Will gain a quality education and continue learning (35)</p> <p>Will be confident in the university's reputation and ability (36)</p> <p>Student will not be deprived of the real facts in class (37)</p> <p>Get an education (39)</p> <p>Learn more, better yourself (40)</p>

Values

A Comfortable Life	Being prosperous in life
An Exciting Life	Having a stimulating, active life
Efficient Use of Time	Could refer to good time management skills, not wasting time, or simply being efficient.
Equality	Brotherhood, equal opportunities for all
Family Security	Ability to take care of loved ones; financial security
Freedom	Independence, having the freedom of choice
Happiness	Being content with life
Inner Harmony	Freedom from inner conflict
Knowledge/Wisdom	A mature understanding of life
National Security	Ability to protect ourselves from attacks
Pleasure	An enjoyable, leisurely life
Self-Respect	Having respect for yourself and self-esteem
Sense of Accomplishment	Making a lasting contribution
Social Recognition	Being recognized by those one holds in esteem as being trustworthy;
True Friendship	Close companionship with another
World Peace	

Appendix B

Sample Questionnaire Administered To Students

(Note: the ordering of the attributes and consequences and ordering of *favorite teacher* versus *teacher that best facilitates learning* varies across students to prevent anchoring bias)

CONSENT TO PARTICIPATE IN A RESEARCH

STUDY OKLAHOMA STATE UNIVERSITY

PROJECT TITLE: Student Preferences for College Instructors

INVESTIGATORS: Bailey Norwood, Ph.D, Mary Wilson, B.S.

PURPOSE: Thank you for agreeing to participate in the present study. This is an Oklahoma State University research project whose goal is to better understand what students perceive constitutes a great teacher. Your participation is purely voluntary. You may cease participating at any time without penalty.

PROCEDURES: The project will involve completion of a survey, which will be handed to you shortly. Note that at no point does the survey ask for your contact information. Thus, your answers are held strictly confidential. The survey should take approximately ten minutes to complete.

RISKS OF PARTICIPATION: There are no risks associated with this project, including stress, psychological, social, physical, or legal risk which is greater, considering probability and magnitude, than those ordinarily encountered in daily life. If, however, you begin to experience discomfort or stress in this project, you may end your participation at any time without penalty.

BENEFITS OF PARTICIPATION: By providing the researchers with thoughtful, honest answers, you help us improve as teachers and place better teachers in the classroom.

CONFIDENTIALITY: As stated above, at no point during the survey are you asked for your personal information. Thus, all of your answers will be held strictly confidential. Data will be kept in Ag Hall room 506 which is only accessible with a key until responses have been entered into a computer program, at which time surveys will be destroyed

CONTACTS: You understand that you may contact any of the researchers at the following addresses and phone numbers, should you desire to discuss my participation in the study and/or request information about the results of the study: Bailey Norwood, Ph.D., Agricultural Hall, Dept. of Agricultural Economics, Oklahoma State University, Stillwater, OK 74078, (405) 744-9820. You may also contact Dr. Sheila Kennison, IRB Chair., Institutional Review Board, 219 Cordell North, Oklahoma State University, Stillwater, OK 74078, (405) 744-1676 or irb@okstate.edu with any questions concerning participant's rights.

PARTICIPANT RIGHTS: You understand that your participation is voluntary, that there is no penalty for refusal to participate, and that you are free to withdraw your consent and participation in this project at any time, without penalty.

PAGE 1

For this question, think of all the teachers you have taken at Oklahoma State University. Think of your favorite teachers and you least favorite teachers. In this question, we want you to tell us how your favorite teachers were different than your least favorite teachers.

(1) What are the FOUR attributes that best describe your favorite teachers?

My favorite teachers are those who (check FOUR attributes)

<input type="checkbox"/>	Hand out grades often.
<input type="checkbox"/>	Are challenging.
<input type="checkbox"/>	Have clear expectations.
<input type="checkbox"/>	Are respectful.
<input type="checkbox"/>	Involve students in the class.
<input type="checkbox"/>	Are organized.
<input type="checkbox"/>	Have real-world experience.
<input type="checkbox"/>	Connect class activities.
<input type="checkbox"/>	Are dedicated.
<input type="checkbox"/>	Are knowledgeable.
<input type="checkbox"/>	Care that students learn.
<input type="checkbox"/>	Are clear communicators.
<input type="checkbox"/>	Get to know students in class
<input type="checkbox"/>	Are personable.
<input type="checkbox"/>	Are dynamic lecturers.

PAGE 2

(2) Please refer back to Page 1, and write down the ONE attribute you checked which you feel is the most important attribute.

My most important attribute from Page 1 is

(3) What are the consequences of this attribute that caused you to value it so highly? That is, what are the consequences for you personally that makes this particular attribute important for teachers to possess? Basically, why is this teacher attribute important to you? What does it cause for you, for you personally in class, for you personally outside of class, for your performance in class, for anything? Please check the 4 most important consequences.

The four most important consequences are (check FOUR consequences)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
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<input type="checkbox"/>

Enhance career opportunities

Improve class focus

Commitment to class

Confidence in professor

Graduate from college

Obtain a high GPA

Receive a higher salary

Obtain an internship

Reduce study time

Relationship with professor

Retain material

Satisfy parents

Receive scholarships

Understand material

Valuable education

PAGE 3

For this question, think of all the teachers you have taken at Oklahoma State University. Think of the teachers you learned the most from and the teachers you learned the least from. In this question, we want you to tell us how the teachers who taught you the most differed from the teachers who taught you the least. That is, what attributes best describe the teachers who are **most effective at facilitating learning**?

(4) Please pick FOUR attributes from the list below that best describe the teachers who taught you the most. Your answers to this question may be different from or the same as your answers to the previous question.

The teachers who are best at facilitating learning are those who (check FOUR attributes)

[illegible]

Hand out grades often.

Are challenging.

Have clear expectations.

Are respectful.

Involve students in the class.

Are organized.

Have real-world experience.

Connect class activities.

Are dedicated.

Are knowledgeable.

Care that students learn.

Are clear communicators.

Get to know students in class

Are personable.

Are dynamic lecturers.

PAGE 4

(2) Please refer back to Page 3, and write down the ONE attribute you checked which you feel is the most important attribute.

My most important attribute from Page 3 is

(3) What are the consequences of this attribute that caused you to value it so highly? That is, what are the consequences for you personally that makes this particular attribute important for teachers to possess? Basically, why is this teacher attribute important to you? What does it cause for you, for you personally in class, for you personally outside of class, for your performance in class, for anything? Please check the 4 most important consequences.

The four most important consequences are (check FOUR consequences)

<input type="checkbox"/>
<input type="checkbox"/>
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<input type="checkbox"/>

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Satisfy parents

Receive scholarships

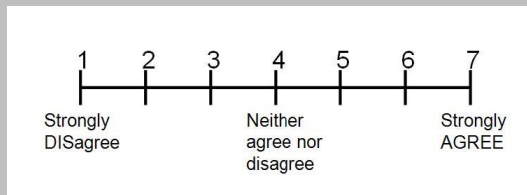
Understand material

Valuable education

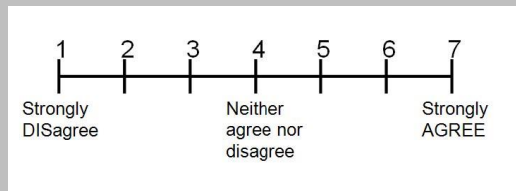
PAGE 5

Please indicate the extent to which you agree or disagree with the following statements by circling the appropriate number.

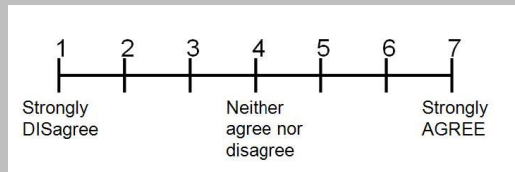
(7) My favorite teachers are also the ones I learn the most from.



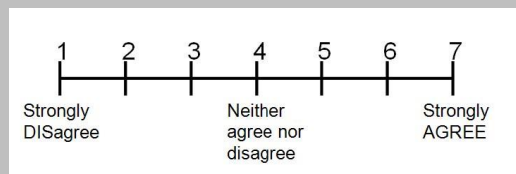
(8) I tend to learn the most from the teachers who are my least favorite.



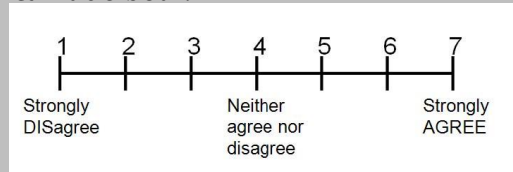
(9) I learn the most from the more entertaining teachers.



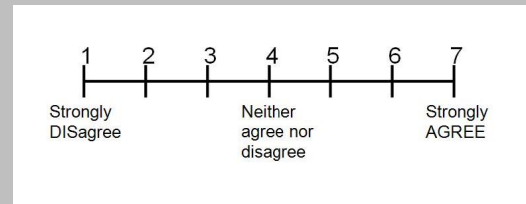
(10) I learn the least from the more entertaining teachers.



(11) Teachers must decide whether students are going to learn or have fun, because you can't do both.



(12) You can learn a lot from classes that are also fun.



(13) If you had to choose a class, of the following, which ONE would you most prefer to take

- ☐ Very entertaining but won't learn very much.
- ☐ Somewhat entertaining, and learn a small amount.
- ☐ Not very entertaining and learn a fair amount.
- ☐ Boring but learn a lot.

Of all the teachers you have taken at Oklahoma State University,

(14) What percent were good at facilitating learning but held boring lectures?

_____ %

(15) What percent were bad at facilitating learning but held exciting lectures?

_____ %

(16) What percent were good at facilitating learning and held exciting lectures?

_____ %

PAGE 6

The following page asks for demographic information which will be used when comparing results across different categories.

(17) What is your major?

(18) What is your current age?

(19) What is your home state and country?

(20) What is your grade classification?

Freshman

Sophomore

Junior

Senior

Graduate Student

(21) What is your gender?

Male

Female

(22) What is your cumulative GPA?

4.00-3.50

3.49-3.00

2.99-2.50

2.49-2.00

1.99-1.50

1.49 and below

Appendix C
IRB Approval

Oklahoma State University Institutional Review Board

Date: Wednesday, May 06, 2009

IRS Application No AG0921

Proposal Title: Student Preferences for Teachers

Reviewed and
Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 5/5/2010

Principal Investigator(s):

F. Bailey Norwood	Mary Wilson
426 Ag Hall	506 Ag Hall
Stillwater, OK 74078	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,
Sheila Kennison, Chair
Institutional Review Board

VITA

Mary Wilson

Candidate for the Degree of

Master of Science/Arts

Thesis: THE ATTRIBUTES AND ATTRIBUTE-CONSEQUENCES OF GREAT
COLLEGE TEACHERS

Major Field: Agricultural Economics

Biographical:

Personal Data: Born in Santa Maria, California, on June 5, 1986, The daughter
of Allen and Rosana Wilson

Education: Graduated from Arroyo Grande High School, Arroyo Grande,
California, June 2004; received an Associates of Science degree in
Agribusiness from Northeastern Oklahoma A&M, Miami, Oklahoma,
May 2006; received a Bachelor of Science degree in Agribusiness
from Oklahoma State University, Stillwater, Oklahoma, May 2008;
completed the requirements for the Master of Science degree at Oklahoma
State University in May, 2010.

Experience: Graduate Research Assistant, Oklahoma State University
Department of Agricultural Economics, August 2008 to May 2010.

Professional Memberships: Who's Who Among American Junior College
Students
Who's Who Among American College Students

Name: Mary Wilson

Date of Degree: May, 2010

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE ATTRIBUTES AND ATTRIBUTE-CONSEQUENCES OF GREAT
COLLEGE TEACHERS

Pages in Study: 70

Candidate for the Degree of Master of Science

Major Field: Agricultural Economics

Scope and Method of Study:

Higher education is a very important topic to many people, which is evidenced in part by the number of people involved, the money spent, and the research which has been conducted in this area. While many studies have been completed aiming to determine the attributes that constitute a "great teacher," this is where most studies have ended. This paper looks to further people's knowledge in this area by taking a deeper look into these questions.

Using the soft-laddering interview technique this research further examines what attributes students prefer in their college professors. It also examines the basis behind their attribute choices by determining both the consequences and values that motivate their choices. The research then further examines these issues through the use of in-person questionnaires, and also studies whether different attribute-consequence choices are made for students' favorite teachers and those who are best at facilitating learning, along with whether there are differences based on major, demographics, etc.

Findings and Conclusions:

Results indicate that while there are some differences between majors, how great teachers are defined, and data collection methods, primarily, students prefer teachers who take a sincere interest in students' learning, make courses interesting, and show a commitment to the class. These attributes are important, as students are primarily concerned with developing a true understanding of the material being taught in class.

ADVISER'S APPROVAL: Dr. F Bailey Norwood
