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# STUDENT PERCEPTIONS OF MASTER TEACHER IN ESTONIAN UNIVERSITIES

Master's Thesis

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# Introduction

This thesis investigates student perceptions of master teacher in Estonian universities, helping to fill a gap in research as most of the teacher effectiveness studies in Estonia focus on teachers in primary and secondary education. In an era of increased public accountability universities need to monitor, develop and demonstrate the quality of their instruction (Matos-Diaz & Ragan, 2010; Türk & Roolaht, 2005). A master teacher has to be an effective classroom practitioner. A certain set of personality traits and specific skills and knowledge about classroom instruction is needed (Cranton, 2001; Keeley, Christopher, & Buskist, 2012).

The question of teacher effectiveness emerges both with summative and formative evaluation (Mills & Hyle, 1999; Schmelkin, Spenser, & Gellman, 1997); an intriguing question is the use of student evaluations (SET) and the effect academic disciplines have on student ratings (Kreber, 2009). Though the issue may never be conclusively settled, SET-s are widely adopted (McPherson, Jewell, & Kim, 2009; Kwan, 2009). The trend is also evident in Estonia (Türk & Roolaht, 2005). This thesis assumes that student ratings can be of use when determining teacher mastery (Benton & Cashin, 2012).

The study is conducted to provide a better understanding on how students perceive effective teaching. Research design is casual comparative. First student perceptions will be determined and then results compared between groups. The hypotheses are that age and academic discipline significantly discriminate student perceptions of master teacher. To secure psychometrically sound results Teacher Behaviour Checklist (Buskist et al. 2002) will be used as instrument. Findings should provide insightful information to all higher education practitioners who wish to elaborate their classroom instruction. The thesis rests on the idea that there are many different ways of being a good teacher (Cranton, 2001; Murray et al., 1990); the key to success is finding the right way for oneself.

There are four sections in the thesis. Theoretical aspects of teacher effectiveness, effectiveness evaluation and characteristics of academic disciplines are outlined in the first chapter. The thesis continues with a chapter on methodology, describing study participants, instrument and procedures. The next chapter presents the research findings followed by a discussion on the main findings where results are interpreted in light of theoretical background.

# 1. Theoretical background

## *1.1 Key concepts*

*1.1.1 Perception.* The concept has been extensively investigated in psychology and neuropsychology (Goldstein, 2001; Postman, Bruner, & McGinnies, 1948), defining perception as a construction of meaningful behavioural environment, through representation of the physical world of stimuli with which the organism has sensory interaction. What we see and observe is inevitably what we select from a near infinitude of potential perceptions. Perceptual selection therefore depends both on the primary determinants of attention and on personal interests, needs and values. In educational sciences, however, perceptions themselves are not the phenomena under investigation. The term is widely used in literature but quite seldom is a definition presented. In this thesis the term perception is defined as “an idea, a belief or an image you have as a result of how you see or understand something" (Perception, 2011, sect 3).

*1.1.2 Master teacher.* The term “master teacher” is not a concept with its own origin but is used rather as a synonym for effective teacher. As teacher effectiveness studies in general, using the definition “master teacher” origins in primary and secondary education (Doyle, 1985). A master teacher represents the ideal to be strived for when trying to bring about the best learning possible for each student; it should not be considered as an end point but rather as a benchmark for on-going efforts (Luthy, 2001). There are several lines of research within the concept of master teachers, concerning teaching outcomes (Gotlieb, 2009; Sonntag, Bassett, & Snyder, 2009), teacher personality (Cranton, 2011; Murray et al.,1990) and teacher classroom behaviour (Buskist, Sikorski, Buckley, & Saville, 2002; Schaeffer, Epting, Zinn, & Buskist, 2003). The last two will be further investigated within the context of current thesis. As the role of the master teacher can be looked at from different viewpoints (school heads, public administrators, colleagues, and students), this thesis will focus on students’ perspective.

## *1.2 Teacher effectiveness as a field of study*

Teaching outcomes, personality traits and behaviours are the most common indicators of effective teaching that have been studied. According to Alok (2011) learning outcomes are affected by student characteristics such as ability, attitude and motivation that are beyond the teacher’s control. As the focus in current thesis is on student perceptions of master teacher, student characteristics will not be investigated and therefore the teaching outcomes aspect will not be included. The following chapter will discuss teacher personality and behaviour.

*1.2.1 Teacher personality.* Teaching involves social interaction so it is reasonable to expect that teaching effectiveness correlates with teacher personality traits (Murray et al.,1990). Personality is considered to be an amorphous concept with much variance in how it is conceptualised and evaluated (Patrick, 2011) but it is present in all teachers, defining the way a person interacts, and therefore also effects teaching (Polk, 2006).

Murray et al. (1990) conducted a study with psychology teachers, investigating the relations between peer ratings of teacher personality traits and student ratings of teaching effectiveness. The research yielded in three significant results: (1) students' perceived teaching effectiveness varies substantially in different types of courses for the same teachers; (2) student ratings of teacher effectiveness strongly correlate with peer ratings of teacher personality traits; and (3) specific personality traits that contribute to effective teaching vary substantially for different types of courses. So it can be concluded that university teachers tend to be differentially suited to different types of courses and being effective (or ineffective) in all types of courses is rather an exception than a rule. It can be expected that only a few teachers will have the necessary range of personality traits to excel in all types of courses. As Cranton (2001) says "The literature presents us with a bewildering array of characteristics of good teaching. Any person trying to measure up to all of these qualities and traits will inevitably fall short on several dimensions" (p. 27). Cranton (2001) proposes that there are many different and often contradictory ways of being a good teacher and anyone practicing in higher education can become better by teaching in a way that is true to oneself. The key to success is in discovering the conditions most suitable to one self. The importance of understanding teacher personality has been addressed by several authors (Gilis, Clement, Laga, & Pauwels, 2008; Patrick, 2011) who argue that understanding one's own identity, beliefs and personal strengths is crucial to classroom instruction improvement.

At the same time there are authors who argue that personality traits are largely stable and therefore not suitable for evaluation for developmental purposes (Alok, 2011) and research based on personality traits has little utility as it provides little information on how to enact that characteristic (Buskist et al., 2002; Khandelwal, 2009). The favoured line of research according to those authors should seeks information about teacher behaviour in classroom as teacher characteristics can only be identified as far as they are manifested in behaviour.

*1.2.2 Teacher classroom behaviour.* According to Marsh (2007) general global student evaluation ratings are influenced by context, mood and other potential biases and do not present the multidimensionality of teaching adequately. Therefore specific items that are

closely tied to actual teaching behaviours and measure different components of teaching should be used to study teacher effectiveness. Studies about teacher characteristics can be found in very different subject fields (Findell, 2007; Polk, 2006; Scheetz & Martin, 2008). The combinations of characteristics and methods that teachers use to produce student achievement seem endless though there are behaviours and techniques that seem to constantly appear, such as thorough knowledge of the subject field, willingness to continuously learn and develop, good interpersonal skills, passion about teaching, and communication skills (Buskist et al., 2002; Keeley et al., 2012; Khandelwal, 2009; Polk, 2006; Schaeffer et al., 2003; Scheetz & Martin, 2008). Though some of the studies (Polk, 2006) also underline that the lists of master teacher characteristics are far from comprehensive to begin with and that the listed traits can interact with each other or then again do not necessarily have to be exercised together at all.

There is also a range of literature (Brown & Atkins, 2005; Cannon & Newble, 2003; Ramsden, 2005) available on generic guidelines of master teaching (e.g. using visual aids, preparing hand-outs). These principles are discussed under different learning environments from large class lectures up to laboratory teaching and private studies. Also competency models can be found both internationally (Gilis et al., 2008; Isaeva, 2007) and nationally (Õppeasutuse juhi kompetentsimudel, 2007; Õppejõu pädevusmudel, 2011).

The current thesis will take into account both the personality of the teacher as well as classroom behaviour, with regards to teacher effectiveness, resting on authors (Murray et al., 1990) who claim that teacher personality is expressed in specific classroom behaviours that effect teacher effectiveness. In other words, pre-existing personality traits influence the instructor's classroom teaching behaviour which in turn determines student achievement and teaching effectiveness.

### *1.3 Evaluation of teacher effectiveness*

Teacher evaluation is two-fold (Mills & Hyle, 1999; Schmelkin et al., 1997): On one hand it serves the need to judge past performance and distribute rewards accordingly (decisions about contract continuation, promotion and tenure; referred to as summative evaluation). On the other hand evaluation is used for instructional improvement to encourage growth and development as it enables to identify individual strengths and weaknesses in an effort to promote self-improvement and professional growth (referred to as formative evaluation). The different aims and conditions of summative and formative evaluation create different information needs and sources as well as conflicting expectations on how, when and

to whom the results are reported. Summative assessments need the justification of clear criteria and comprehensive and objective determinations of accomplishments to support decisions affecting pay and job status but formative assessments are dictated by the circumstances of the individual and rely on identifying the needed improvements, often by the very same person being evaluated (Mills & Hyle, 1999).

There are several means for measuring teacher effectiveness such as self-evaluations, peer evaluations, using evaluations of trained external observers, administrators or former or present students (Benton & Cashin, 2012; Marsh, 2007). As the focus in current thesis is on student perceptions, student evaluation of teaching (SET) will be given further attention. Though it is evident from research that SET-s cannot be the sole source of teacher effectiveness evaluation (Benton & Cashin, 2012; Burden, 2010; Kidd & Latif, 2004; Marsh, 2007) they do provide useful supplement to other kinds of data such as exam pass rates or citation levels, to support judgement on teacher effectiveness (Türk & Roolaht, 2005).

*1.3.1 Student evaluations of teaching (SET).* SET-s have been widely debated and researched so there are numerous studies available in the field (e.g., Alok, 2011; Bembenutty, 2009; Beran & Violato, 2005; Burden, 2010; Catano & Harvey, 2011; Culver, 2010; Darby, 2008; Denson, Loveday, & Dalton, 2010; Donnon, Delver, & Beran, 2010; Feldman, 2007; Khandelwal, 2009; Kidd & Latif, 2004; Matos-Diaz & Ragan, 2010; McCullough & Radson, 2011; McPherson et al., 2009; Patrick, 2011; Rahilly & Saroyan, 1997). Clayson's (2009) meta-analysis of SET-s argues that there are plenty of individual studies to support almost any conclusion and therefore it is relatively easy to select research that reinforces a specific point of view.

Student rating can serve at least five different purposes (Benton & Cashin, 2012; Marsh, 2007). SET-s can help: (1) faculty improve their teaching and courses, (2) administrators to make decisions about salary and promotion, (3) committee members to select teaching award winners, (4) institutions to conduct program reviews and (5) students to select courses.

A common criticism towards SET-s is the student ability to detect effective teaching. It is argued that students lack necessary experience, maturity and distance to evaluate teaching effectiveness and as a result SET-s are nothing more but a popularity contest, favouring warm, friendly and humorous teachers (Feldman, 2007; Marsh, 2007). Aleamoni (1999) in his meta-analysis of SET literature gives consideration to all of the above reprimands and declares them "myths". Aleamoni (1999) argues that student ratings demonstrate correlations over time and when different subscales are used, evidence is provided, that students discriminate their judgement of instructional effectiveness, praising and criticising different

teaching aspects of the same lecturers. Longitudinal research shows no difference in student ratings among students out of school and currently enrolled with studies. Another meta-analysis by Benton & Cashin (2012) reveals that studies have demonstrated consistent positive correlations between student evaluations and teacher self-evaluations. There is also research available (Buskist et al., 2002; Schaeffer et al., 2003) showing that student and teacher evaluations of teacher effectiveness are not that different. Feldman (2007) argues with reference to his meta-analysis of the literature, that student and teacher opinions on the importance of different instructional characteristics are not identical but generally similar. Schmelkin and his colleagues (1997) conducted a study of teacher perspectives on using SET-s for formative and summative evaluation. It was concluded that contradictory to the common beliefs, academic staff views student ratings of instruction useful for both summative and formative purposes though the problem of misinterpretation and misuse is present in teacher perceptions.

It seems that the debate about SET-s lays not so much in the need for evaluation but rather in the validity of its application as SET-s are often misinterpreted and misused (Aleamoni, 1999; Burden, 2010; Clayson, 2009; McCullough & Radson, 2011; McKeachie, 1997). Much of the debate stems from the fact that there is no universally agreed definition of "good" teaching or criteria for teacher effectiveness (Benton & Cashin, 2012; Clayson, 2009; Marsh, 2007). What is effective depends on the goals of teaching and effectiveness can be achieved in many ways (McKeachie, 1997). Teaching is a complex activity with multiple correlated components (Marsh, 2007). Input is perceived from immediate environment and utilised to generate appropriate instructional actions (Rahilly & Saroyan, 1997). In order to provide useful information about teaching also SET-s need to have a multidimensional structure (Schmelkin et al., 1997). As the concept of effective teaching is biased it is also difficult to provide a standard definition of good and poor teaching for evaluation means. Different individuals may have different perceptions and rate the teacher good or poor based on the same behavioural observation (Catano & Harvey, 2011).

The instrument for measuring student evaluations of teaching seems to be the key component of SET-s. A good instrument requires interplay between theory, research and practice, providing reliable evidence of what is being measured, but SET-s frequently lack psychometric evidence as they are often simply derived from practical and logical considerations (Marsh, 2007). Catano and Harvey (2011) further argue that almost every existing SET measure is generated from the perspective of teachers, neglecting aspects of teaching that are important from students' perspective. Instruments like that can often include

items students are not competent to evaluate (e.g. whether all the theoretical aspects of the material were covered). Aleamoni (1999) argues that if student ratings are gathered with instruments constructed with the aid of questionnaire design and scaling professionals, the resulting data and subsequent evaluations can be both reliable and valid, providing instructors with first-hand information on the accomplishment of particular educational goals and on the level of satisfaction and influence of various course elements. This information can benefit the teacher and the students through an improved teaching and learning environment as well as a more accurate representation of student judgments. Catano & Harvey (2011) suggest using behaviourally anchored scales that use empirically derived examples of good and poor behaviours to define psychometrically sound information. The use of behavioural anchors will foster consistency in responding and produce a high level of reliability. Only those aspects under control of the teacher should be included in SET-s, because this evaluation form has a teaching rather than a learning or curriculum focus (Alok, 2011; Denson et al., 2010). Catano and Harvey (2011) also reinforce that it is essential to involve students when developing SET instruments.

An exemplary sample of SET instruments when the above criteria are taken into consideration is the Teacher Behaviour Checklist by Buskist and his colleagues (2002). The instrument will be given further attention to in the following paragraph.

*1.3.2 The Teacher Behaviour Checklist (TBC) studies.* The Teacher Behaviour Checklist (TBC) is derived from critical incidents reported by students. The instrument identifies 28 master teacher characteristics and provides behavioural anchors for each characteristic. In addition to clear rating instructions this behaviour based approach yields useful information for teacher training purposes (Keeley et al., 2012). The instrument has been successfully used in order to survey both student and teacher perceptions of master teachers (Buskist et al., 2002; Schaeffer et al., 2003;) and also the international generalizability of the instrument has been tested (Keeley et al., 2012).

With regards to TBC research results it has been found (Buskist et al., 2002) that there is a 60% overlap in student and teacher ranking of teacher effectiveness behaviours. The divergent 40% of responses indicated that students favour interpersonal relationship characteristics whereas teachers' emphasis is on teaching technique characteristics that reflect specific classroom teaching behaviours. Similar results have also been attained by Schaeffer and colleagues (2003) in a replication of the original study. The difference in student and faculty opinions has been confirmed with further TBC analysis (Keeley, Smith, & Buskist, 2006) identifying two subscales in the instrument: (1) interpersonal caring and supportive

skills and (2) professional competency and communication skills. It has been found that students tend to favour characteristics concerning interpersonal skills, care and support whereas teachers tend to favour characteristics related to classroom instruction, professional competency and communication skills. With this further reassurance of SET validity the current thesis rests upon the following statement from Marsh:

> SETs are multidimensional, reliable and stable, primarily a function of the instructor who teaches a course rather than the course that is taught, relatively valid against a variety of indicators of effective teaching, relatively unaffected by a variety of potential biases, and are seen to be useful by faculty, students, and administrators (2007, p. 372).

While the issue of whether the SET-s should be used for evaluating teacher effectiveness may never be settled, the fact remains that SET scores are used for both summative and formative evaluation means both internationally (McPherson et al., 2009) and locally (Türk & Roolaht, 2005) therefore investigations into what constitutes for student ratings is a purposeful research objective. There is yet another bias to be discussed with regards to SET. It is the influence of academic discipline to student evaluations of teacher effectiveness that will be given further attention to in the following chapter.

### *1.4 Academic disciplines in perceptions of teacher effectiveness*

Disciplines play a profound role in academic lives as they have characterised higher education learning since the founding of first universities in the Middle Ages (Kreber, 2009). It would be hard for us to imagine a university today that was not organised by disciplines; the division of knowledge into defined disciplinary regimes is part of the post-industrial western university (Matthew & Pritchard, 2009). Given the central role of disciplines in academic life it should be assumed that academic disciplines influence teaching not only in terms of what is being taught but also by how it is being done. It is reasonable to assume that particular disciplines, due to the specific bodies of knowledge and methods of inquiry, invite certain pedagogies (Kreber, 2009).

Research has detected that there are quite consistent differences in student evaluations of teaching that are difficult to reason as coincidental strengths and weaknesses of teacher but rather seem to be resulting from epistemological and cultural factors (Neumann, Parry, & Becher, 2002). Kember and Leung (2011) found that when large samples of SET-s were compared the data demonstrated consistent disciplinary differences. Also Kwan (1999) demonstrated that academic discipline of the subject matter affects student ratings. Both Kember and Leung (2011) and Kwan (1999) as well as Feldman (2007) in his literature

review provided well-substantiated evidence that teachers in the arts, humanities, languages and social sciences tend to receive higher ratings than in engineering, mathematics, computer and physical sciences. Murray and Renaud (1995, as cited in Neumann, 2010) suggest that disciplinary differences in the perceived differences of teaching effectiveness are a results of different classroom teaching behaviours, as teachers from different academic disciplines differ in their frequency of using specific classroom teaching behaviours. The underlying nature of academic disciplines in teaching activities has also been noticed by Feldman (2007), Neumann and colleagues (2002), Paulsen and Wells (1998).

According to Paulsen and Wells (1998) academic disciplines constitute contexts within which a substantial portion of students' academic experiences take place. Research has shown both initial differences in student characteristics across disciplines as well as the accentuation of those differences over time. The concept of a discipline is not a straightforward one (Krishnan, 2009). The disciplines are so different from each other that it is hard to come up with a concise definition that would fit all of them to the same degree.

Referring to the works of Biglan (1973) several authors (Becher, 1994; Nelson Laird et al., 2008; Neumann et al., 2002; Smeby, 1996; Donald, 2009) have proposed classifications of academic disciplines. In current thesis the following synthesis will be used:

(1) Natural sciences ("hard-pure") employ subject fields such as physics, chemistry, mathematics, biology, botany, geology, environmental science. The discipline deals with universals, quantities and simplifications and results in discovery or explanation. It seeks to find new relationships between abstract concepts and develop new theories. The nature of knowledge is hierarchical and cumulative; knowledge is an evolving set of interrelated ideas with highly related concepts and principles. Teaching content is linear and straightforward, learning takes place gradually. Course content is tightly structured. The focus of student learning is on cognitive goals such as fact retention and learning principles. The discipline is often characterised by a single highly developed paradigm that clearly specifies and represents broad consensus about the content and methodology of the field. Instructional methods are mainly large lectures but as strong emphasis is on student research experience, time is dedicated to laboratory teaching, exercises and field-trips. Small group seminars and discussions, or teaching on an individual basis is rather uncommon as far as undergraduate teaching is concerned. The discipline tends to value knowledge more for its own sake as paradigms, models and methods of inquiry are developed but in order to solve logically structured problems also the ability to apply methods and principles is required.

(2) Humanities and pure social sciences ("soft-pure") employ subject fields such as history, sociology, psychology, anthropology, political science, ethnical and cultural studies, applied art and drama, music, linguistics and geography. The nature of knowledge is holistic, concerning with particulars, qualities and complication and results in understanding or interpretation. The discipline implies constant change. The ongoing pursuit of new knowledge about relationships among abstract concepts results in viewing knowledge as an evolving set of interrelated ideas. It is diverse, tentative and open for change. Again learning is something that takes place gradually. No single paradigm is exists, so the content of methodology tends to be idiosyncratic. Greater importance is on general knowledge, on student character development and on effective thinking skills, such as critical thinking. Students are expected to think laterally rather than linearly, express themselves with fluency, read rapidly and widely. The capability at mathematical manipulation counts for very little. It is important for such students in soft-pure disciplines to possess a critical facility, enabling them to interpret and evaluate theoretical perspectives in the literature of the relevant discipline. Teachers in soft disciplines that have a low consensus on defining paradigms tend to use more student-centred approaches. They are willing to discuss several variations besides their own point of view and include questions and analytical assignments that invite critical thinking both in studies and examinations. Due to the greater need of dialogue teaching methods include more face-to-face class meetings, seminars, discussions and debates. Class size in interpretative fields tends to be small to moderate, to facilitate discussion. Courses are more loosely organised and have an open structure, course content typically deals with controversial issues designed to engage students in a debate. Students are also encouraged to put forward their own ideas in the form of written essays or verbal presentations.

(3) Technologies ("hard-applied") employ subject fields such as engineering, computer science, medicine, veterinarian and agriculture, yielding in science based professions. The nature of knowledge is pragmatic, concerned with mastery of physical environment and resulting in products and techniques. As in hard-pure disciplines there is a high degree of consensus among scholars regarding the content and methods of the field. Knowledge is linear in sequence and based on factual understanding. Again cognitive goals such as learning facts, principles and concepts is emphasised but with student research experience underlined. Time is dedicated to laboratory teaching, exercises and field trips, much time on lectures and little on seminars. Students are expected to learn facts, but emphasis is on practical competencies and on the ability to apply theoretical ideas to professional contexts. The nature of the field is using knowledge therefore knowledge is seen as something certain and quickly

attainable. Students are expected to possess certain of the features of those in hard pure disciplines such as good memory and a competence in problem solving, however a greater emphasis is placed on practical competencies and on the ability to apply theoretical ideas. Students need to be able to organise knowledge trough hypothetical deductive reasoning.

(4) Applied social sciences ("soft-applied") employs subject fields such as education, journalism, communication, finance, economics, architecture, business and public administration, yielding in social professions sometimes also referred to as "people professions". As in soft-pure fields there is no single paradigm. The nature of knowledge is functional, concerned with enhancement of professional practice. Presenting students with most recent knowledge is an essence. As in hard-applied sciences putting knowledge into practice is important. A growing base of knowledge is the necessary condition for making meaning of professional experience. Emphasis is on student personal growth and development, oral and written communication skills and on effective thinking skills. Teaching methods are close to pure-soft disciplines. Most time is spent on lectures, seminars and tutorials. Again student-centred approaches are favoured, discussing a variety of points of views and asking questions that call for analysis and synthesis. Class size again is small to moderate to better facilitate discussion for as in humanities there is a greater need of dialogue, but more time is spent on supervision. Students exercise problem solving abilities but there is also a need to understand how actions shape events. This is facilitated trough field trips and case studies. A unique feature of soft-applied fields is the tendency to include experienced practitioners as a significant component in the teaching process.

Thorough knowledge of academic disciplines is a prerequisite to understanding variations in teacher mastery. The classification of academic disciplines derived from Biglan has been used in several previous studies (Donald, 2009; Hativa & Birdenbaum, 2000; Gunn, 2009; Krause, 2012; Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006; Pace, 2009; Paulsen & Wells, 1998; Pike & Killian, 2001; Schommer-Aikins, Duell, & Baker, 2003) and will also be employed in the current thesis.

### *1.5 Research in Estonia*

While teacher effectiveness has been extensively studied internationally, research about this topic in Estonia is rather limited. Keywords "teacher effectiveness", "teacher evaluation" and "professional teacher" combined with keyword "Estonia" result in very few articles (Anspal, Eisenschmidt, & Löfström, 2012; Irs, Türk, & Vadi, 2009; Krull, 2001; Oder, 2008; Taimalu & Õim, 2005; Timoštšuk & Normak, 2008; Türk & Roolaht, 2005) and most of the

materials have a primary or secondary education orientation. There are some instructive materials available via Archimedes Foundation Primus Programme (Karm, 2013; Lehtsaar, 2010; Õppejõu pädevusmudel, 2011) and while some collections of articles and conference materials are also available (Jõgi & Ristolainen, 2005; Lepik & Pandis, 2004), no research about Estonian university teachers with regards to teacher effectiveness can be found.

Educational sciences are taught in Tallinn University Institute of Educational Sciences and University of Tartu Institute of Education. Research by students at these two institutions available for past 10 years does not include any work involving student perceptions of effective teaching or higher education teaching effectiveness in general.

## 2. Methodology

The initial research design for this study was developed to conduct a large scale descriptive survey, collecting and analysing quantitative data on student perceptions of master teachers in Estonian universities. However, acquiring permission from the Estonian Data Protection Inspectorate was unsuccessful (official declination to the submitted application received 18.11.2012), therefore use of a simple random sample was not possible and the survey design had to be changed. It was decided that a casual comparative research design was applicable using quantitative data to investigate differences in student perceptions of master teacher within Estonian universities, using Teacher Behaviour Checklist (TBC) by Buskist and colleagues (2002) as the research instrument.

Age has been a factor in previous TBC studies (Keeley et al., 2006; Keeley, Furr, & Buskist, 2010) but results have not been presented according to respondents' age. As the author of current thesis strongly believes that age is a significant factor in students' perceptions of teacher mastery the first hypothesis is posed:

1. There is a statistically significant difference between student perceptions of master teachers by age.

Previous research on student evaluation of teaching (SET) have demonstrated that student ratings are affected by academic discipline (Benton & Cashin, 2012). Clayson (2009) concludes from his meta-analysis that "evaluations do not have equal validity across faculty, class topic matter and academic disciplines" (p. 27). Based on previous research the second hypothesis is posed:

2. There is a statistically significant difference in student perceptions of master teachers by academic disciplines.

*2.1 Participants*

Participants were 709 students from Estonian Universities who voluntarily filled in the online questionnaire. Due to limited resources, convenience sampling was used and potential participants reached via e-mail lists. Since an agreement to use student e-mail lists was not reached with one of the privately owned universities, Facebook was also used to attract respondents. Unfortunately, the return rate using Facebook was very low (6 respondents) and therefore the school was excluded from the sample, resulting in a final sample of 703 respondents. Twelve participants did not submit information about their school but the research procedures indicate that they are students in public universities and therefore the data they submitted is included in the study. Exact sample allocation among universities is provided in Table 1. As convenience sampling does not allow to generalize sample results to the entire population, a comparison is provided that shows both sample and population allocation among universities. Numbers for population are presented according to the statistics of the Estonian Ministry of Education (retrieved from its official website on April 4th, 2013, data fixed as of November 10th, 2012). The figures in Table 1 show that although convenience sampling was used, the sample is relatively representative and to some extent reflects the actual student population in Estonian universities.

Table 1. Population and sample allocation among universities

| | Population | Population % | Participants | Participants % |
|---|---|---|---|---|
| Estonian Academy of Arts | 1177 | 2% | 37 | 5% |
| Estonian University of Life Sciences | 4514 | 9% | 96 | 14% |
| Estonian Academy of Music and Theatre | 736 | 2% | 10 | 1% |
| Tallinn Technical University | 13926 | 29% | 105 | 15% |
| Tallinn University | 10330 | 22% | 148 | 21% |
| University of Tartu | 17200 | 36% | 295 | 42% |
| Not specified | 0 | 0% | 12 | 2% |
| Grand Total | 47883 | 100% | 703 | 100% |

Participants age ranged from 19 to 54 years (M=24.7; SD=6.5). For analytic purposes participants were divided into two groups: (1) participants aged 23 or younger (*n*=426), (2) participants aged 24 or over (*n*=276). Age split was based on the assumption that in most cases secondary school is finished at the age of 18 and after the implementation of Bologna declaration higher education studies take 3+2 years. Therefore 23 should indicate the end for continuous studies. One respondent did not provide information about age. Data submitted by him/her is used in analyses that do not require age information. Table 2 presents participant

numbers according to age groups with the supplementary information about participants' level of studies. Full list of ages is presented in Appendix 1.

Table 2. Sample allocation by agegroup and level of education

| | Not specified | 23 or younger | 24 or older | Grand total | Percentage |
|---|---|---|---|---|---|
| Bachelor | | 279 | 103 | 382 | 54% |
| Master | 1 | 43 | 127 | 171 | 24% |
| Integrated | | 87 | 25 | 112 | 16% |
| Doctor | | | 14 | 14 | 2% |
| Other | | 6 | 4 | 10 | 1% |
| Not specified | | 11 | 3 | 14 | 2% |
| Grand total | 1 | 426 | 276 | 703 | |
| Percentage | 0% | 61% | 39% | | |

Participants who chose "other" (*n*=10) or did not specify their level of studies (*n*=14) were excluded from the sample. Based on submitted respondent comments it can be assumed that they are students at schools operating under the university body that provide applied (professional) education programmes. The final sample is therefore 679 students (*n*=679).

Based on information the participants provided about their curriculum, the sample was divided into 5 categories, each representing a different academic discipline. The allocation of curricula into academic disciplines was conducted based on synthesis of Biglan's classification that was discussed in chapter 1.4. Students from educational sciences (applied social sciences according to Biglan's classification) were analysed independently in order to determine whether the nature of their studies distinguishes them from other disciplines. The same different treatment has been applied in previous studies (Hativa & Birdenbaum, 2000) that use Biglan's classification. Therefore participants were grouped into 5 disciplines as follows: (1) educational sciences (*n*=110; 16.2%), (2) applied social sciences (*n*=248; 36.5%), (3) humanities and pure social sciences (*n*=98; 14.4%), (4) natural sciences (*n*=68; 10%); (5) technologies (*n*= 154; 22.7%). Full list of curriculums is presented in Appendix 2. One participant did not submit curriculum information. Data submitted by him/her is used in analyses that do not require curriculum information.

The sample included students in both day and evening courses, distance learners and male and female participants. With respect to previous study findings and the scope of the current thesis, it was found unnecessary to analyse participants according to these characteristics, as Schaeffer and colleagues (2003) have found that participants answered similarly regardless of their age, sex and whether they held day or evening classes. The current study, however, included age as a criterion.

*2.2 Instrument*

TBC is a 28-item checklist that defines personality characteristics and behaviours that these characteristics incorporate, thereby providing behavioural anchors for ambiguous personality traits (Buskist et al., 2002). The original instruction for the instrument is to rate the 10 most important traits among the 28 describing effective teaching (Appendix 3). The instrument has been successfully replicated and used with students and teachers with the original design and with a Likert-type scale (Schaeffer et al., 2003; Keeley et al., 2012). Results have demonstrated that the instrument has potential to identify key teaching behaviours reflecting teaching quality.

Different psychometric analyses (Keeley et al., 2006) have demonstrated that TBC possesses excellent construct validity. In order to maintain instrument validity the cross-cultural adaption into Estonian was executed attentively. Guillemin, Bombardier and Beaton (1993) offer a range of guidelines for translating research instruments. Adapted from these guidelines the following procedures were implemented for current research:

1. First, two separate persons translated the questionnaire from English into Estonian. One was a professional translator with pedagogical background, the other person uses English daily but is not a qualified translator.
2. The two Estonian versions were compared and integrated by the author of the current thesis.
3. The integrated Estonian version of the questionnaire was tested within the pilot study. Items that received repeating comments about lack of clarity or uncertainty of meaning were reviewed and the wording altered.
4. The altered questionnaire was again translated by two separate translators back from Estonian info English. These two translators were different persons from the English to Estonian translation. Again one of the persons was a professional translator with pedagogical background and the other a person very familiar with both languages.
5. As a final step the back-to-back translations were reviewed by experts, including two of the original authors of the instrument William Buskist and Jared Keeley and the supervisors of current master thesis Mari Karm and James E. Groccia.

The pilot study sample included 3 teachers and 76 students from Tallinn University and University of Tartu, studying psychology, educational sciences and information science at both bachelor and master’s degree. Data was collected at four different times and locations, each time the author of current research was present to give instructions and answer questions. Questionnaires were filled on paper and collected immediately upon completion. In addition

to filling in the questionnaire, the pilot group was asked to make comments about the questionnaire items and add behavioural characteristics if something important seemed to be missing. Based on the pilot study results, some characteristics' descriptions were rephrased but none of the 28 items was excluded nor any added. It was also decided to add a Likert-type scale in addition to the original scale with instructions to pick 10 out of 28 characteristics. Data collected during the pilot study was not included in the following main research. .

The final research questionnaire (Appendix 4) was prepared as an online survey, using e-Formular survey environment. The questionnaire was divided into three sections.

In the first section, students were asked to provide demographic data about their studies and themselves (age, level of studies, curriculum and university). It is important to note with regards to ethical aspects of the research that respondents completed the surveys anonymously and even if students voluntarily provided their e-mail information to receive feedback about the study results, the data was not analysed or interpreted to identify any survey respondent.

In second section, the 28 characteristics with behaviour descriptions were presented and students asked to evaluate each item on a 5-point Likert scale, according to the importance of the characteristic in a master teacher. The anchors for the scale were: (1) totally unimportant; (2) not that important; (3) don't know; (4) relatively important; (5) very important.

In the last section, the 28 characteristics were again presented, without the behavioural descriptions (descriptions were available from section II) and students were asked to select the 10 most important qualities of a master teacher.

In order to determine the reliability for the instrument internal consistency was measured with Cronbach's alpha. The analyses produced an alpha of 0.829 so the overall consistency of the instrument was excellent. Also correlations between answers given on the two different scales (Appendix 5) were calculated which again demonstrated good correlation indicating reliability of the instrument.

*2.3 Procedure*

In order to distribute the letter in student e-mail lists, cooperation was requested from 50 different student representative bodies on 29th of January 2013. Individual action plans were executed based on their replies. If information about student e-mail lists was unavailable or monitoring the data collection showed no replies from expected respondents, members of academic staff were contacted in order to use official e-mail lists to distribute the invitation. On 9th of March 2013 after the initial analysis of the demographics of collected data, a second

query to academic staff was made in order to target a better representation of the original population with the sample. Data collection was finalised on 1st of April 2013.

Statistical analyses were conducted using IBM SPSS Statistics 21 and Microsoft Excel 2010. Analyses were limited to overall descriptive statistics and comparison between different age groups and academic disciplines. To determine the overall performance of each item on the TBC, descriptive statistics were calculated based on the scale where participants selected 10 items out of the 28 characteristics. Wilcoxon test was used to determine whether the differences in ranking were significant.

Comparative analyses among student groups were run using the Likert scale answers. The scale was re-coded for analysis and the middle value "don't know" excluded. In order to perform dispersion analysis and compare perceptions of master teacher in student groups according to academic disciplines, a one-way ANOVA test was used together with Tukey-b and "R-E-G-W-F" Post Hoc tests. Differences in age-groups were determined using T-test. For reliability, correlations between the two scales were determined using Pearson's correlation and also Cronbach's alpha for all instrument items was calculated.

## 3. Results

The current research investigated student perceptions of master teaching in Estonian universities. Descriptive statistics was used to determine general student perceptions of master teachers and then the results were compared among the sample according to age and academic discipline.

In order to determine the overall performance of each of the 28 master teacher characteristics a rank order list was made based on the questionnaire scale where students were asked to pick the 10 most important items out of the 28 characteristics describing a master teacher. The rank order list according to number of endorsements is presented in Table 3 (see next page).

The most important characteristic was "Knowledgeable About Topic" ($n$=534; 78.6%) which scored considerably higher than all of the other characteristics. The difference with the characteristic "Enthusiastic About Teaching" was significant ($p$=0.00). The next four items in the ranking scored quite close to each other in the range of 373 to 360 endorsements with no significant differences in the ranking. The lowest score according to number of endorsements was given to characteristic "Humble" ($n$=12; 1.8%) followed by characteristics "Good Listener" ($n$=85; 12.5%) and "Rapport" ($n$=94; 13.8%). Also characteristic "Strives to Be a Better Teacher" scored relatively low ($n$=109; 16.1%)

Table 3. Overall rank order of characteristics based on number of endorsements

| Characteristics | n (number of endorsements) | % (percentage of endorsements) | Rank (order based on endorsements) |
|---|---|---|---|
| Knowledgeable About Topic | 534 | 78.6 | 1 |
| Enthusiastic about Teaching | 373 | 54.9 | 2 |
| Provides Constructive Feedback | 367 | 54.1 | 3 |
| Approachable/Personable | 362 | 53.3 | 4 |
| Creative/Interesting | 360 | 53 | 5 |
| Professional | 327 | 48.2 | 6 |
| Realistic Expectations/Fair | 309 | 45.5 | 7 |
| Presents Current Information | 308 | 45.4 | 8 |
| Prepared | 306 | 45.1 | 9 |
| Flexible/Open-minded | 285 | 42 | 10 |
| Encourages/Cares for Students | 283 | 41.7 | 11 |
| Respectful | 263 | 38.7 | 12 |
| Promotes Critical Thinking | 255 | 37.6 | 13 |
| Confident | 246 | 36.2 | 14 |
| Authoritative | 244 | 35.9 | 15 |
| Sensitive/Persistent | 223 | 32.8 | 16 |
| Happy/Positive/Humorous | 217 | 32 | 17 |
| Accessible | 213 | 31.4 | 18 |
| Effective Communicator | 213 | 31.4 | 19 |
| Understanding | 207 | 30.5 | 20 |
| Promotes Class Discussion | 187 | 27.5 | 21 |
| Manages Class Time | 137 | 20.2 | 22 |
| Establishes Goals | 134 | 19.7 | 23 |
| Technologically Competent | 113 | 16.6 | 24 |
| Strives to Be a Better Teacher | 109 | 16.1 | 25 |
| Rapport | 94 | 13.8 | 26 |
| Good Listener | 85 | 12.5 | 27 |
| Humble | 12 | 1.8 | 28 |

Pearson's correlation was used to determine whether the answers given on two different TBC scales correlated. No negative correlations appeared so the characteristics that received high scores on the Likert scale were also chosen as the 10 most important characteristics. All characteristics were correlated ($p$<0,05), characteristic "Humble" demonstrated the smallest correlation 0.048. A full list of correlations is presented in Appendix 5. For the following comparative analyses Likert scale answers were used.

T-test was used to determine whether student perceptions of master teacher differ significantly according to age. Results are presented in Table 4 (see next page).

Table 4 shows that with student data split in two: (1) students aged 23 or younger ($n$=426; 61%), (2) students aged 24 or over ($n$=276; 39%) statistically significant differences ($p$<0,05) in student perceptions were detected for 6 master teacher characteristics. Items "Happy/ Positive/ Humorous", "Rapport" and "Realistic Expectations / Fair" received higher

scores from younger students and lower scores from older students and characteristics "Establishes Goals", "Promotes Class Discussion" "Promotes Critical Thinking" received lower scores from younger students and higher scores from older students.

Table 4. Master teacher perceptions according to age

| | | 23 or younger | | | 24 or older | | |
|---|---|---|---|---|---|---|---|
| | *t* | M | *n* | Std.dev | M | *n* | Std.dev |
| Accessible | 0,977 | 3,3 | 496 | 0,925 | 3,22 | 180 | 0,97 |
| Approachable/Personable | -0,53 | 3,58 | 491 | 0,842 | 3,62 | 179 | 0,727 |
| Authoritative | 0,892 | 3,06 | 493 | 1,255 | 2,96 | 176 | 1,168 |
| Confident | 1,874 | 3,57 | 493 | 0,835 | 3,42 | 178 | 0,96 |
| Creative/Interesting | -0,095 | 3,51 | 493 | 1,025 | 3,52 | 179 | 0,968 |
| Effective Communicator | 0,095 | 3,66 | 489 | 0,797 | 3,65 | 180 | 0,713 |
| Encourages/Cares for Students | -0,122 | 3,08 | 484 | 1,213 | 3,1 | 178 | 1,173 |
| Enthusiastic about Teaching | -1,438 | 3,26 | 494 | 1,107 | 3,39 | 179 | 1,018 |
| Establishes Goals | -3,84** | 2,77 | 490 | 1,332 | 3,15 | 178 | 1,076 |
| Flexible/Open-minded | 1,777 | 3,26 | 493 | 1,128 | 3,08 | 179 | 1,234 |
| Good Listener | 0,432 | 3,23 | 492 | 1,078 | 3,19 | 177 | 1,115 |
| Happy/Positive/Humorous | 4,694** | 2,62 | 488 | 1,4 | 2,02 | 180 | 1,498 |
| Humble | -1,911 | 2,08 | 490 | 1,455 | 2,32 | 178 | 1,439 |
| Knowledgeable About Topic | -0,229 | 3,6 | 493 | 0,832 | 3,62 | 180 | 0,772 |
| Prepared | -1,9 | 3,4 | 491 | 0,969 | 3,54 | 176 | 0,792 |
| Presents Current Information | -1,473 | 3,32 | 491 | 1,088 | 3,46 | 179 | 0,913 |
| Professional | -1,254 | 2,59 | 487 | 1,352 | 2,74 | 176 | 1,361 |
| Promotes Class Discussion | -3,166** | 2,56 | 489 | 1,382 | 2,92 | 180 | 1,277 |
| Promotes Critical Thinking | -4,21** | 2,52 | 488 | 1,448 | 3,01 | 177 | 1,275 |
| Provides Constructive Feedback | -0,863 | 3,52 | 492 | 0,85 | 3,58 | 178 | 0,937 |
| Manages Class Time | -0,689 | 3,15 | 492 | 1,189 | 3,22 | 179 | 1,061 |
| Rapport | 2,241* | 2,56 | 491 | 1,396 | 2,28 | 179 | 1,435 |
| Realistic Expectations/Fair | 3,064** | 3,34 | 490 | 1,113 | 3,03 | 179 | 1,24 |
| Respectful | -1,087 | 3,59 | 491 | 0,879 | 3,67 | 180 | 0,811 |
| Sensitive/Persistent | 1,016 | 2,71 | 493 | 1,387 | 2,58 | 179 | 1,468 |
| Strives to Be a Better Teacher | 0,44 | 2,74 | 489 | 1,382 | 2,69 | 179 | 1,387 |
| Technologically Competent | 0,544 | 2,59 | 485 | 1,429 | 2,53 | 179 | 1,485 |
| Understanding | 0,892 | 3,24 | 490 | 1,166 | 3,16 | 179 | 1,048 |

*Notes: * indicates p< 0.05; ** indicates p<0.01; M - mean value; Std. D - standard deviation*

To determine whether academic disciplines discriminate meaningfully among student perceptions of master teachers a one-way ANOVA test was used. When group mean values were compared, statistically significant differences ($p$<0,05) appeared in 13 characteristics, for 15 characteristics no meaningful differences appeared. A full list of results is presented in Appendix 6. The mean values according to disciplines for the 15 characteristics that did not discriminate between groups are presented in Figure 1 (see next page). Statistically significant ($p$<0,05) differences were not detected for characteristics "Authoritative" (item 1), "Confident" (item 2), "Effective communicator" (item 3), "Flexible/ Open minded" (item 4),

"Happy/ Positive/ Humorous" (item 5), "Humble" (item 6), "Knowledgeable about Topic" (item 7), "Professional" (item 8), "Manages Class Time" (item 9), "Rapport" (item 10), "Realistic Expectations/ Fair" (item 11), "Sensitive/ Persistent" (item 12), "Strives to Be a Better Teacher" (item 13), "Technologically competent" (item 14) and "Understanding" (item 15).

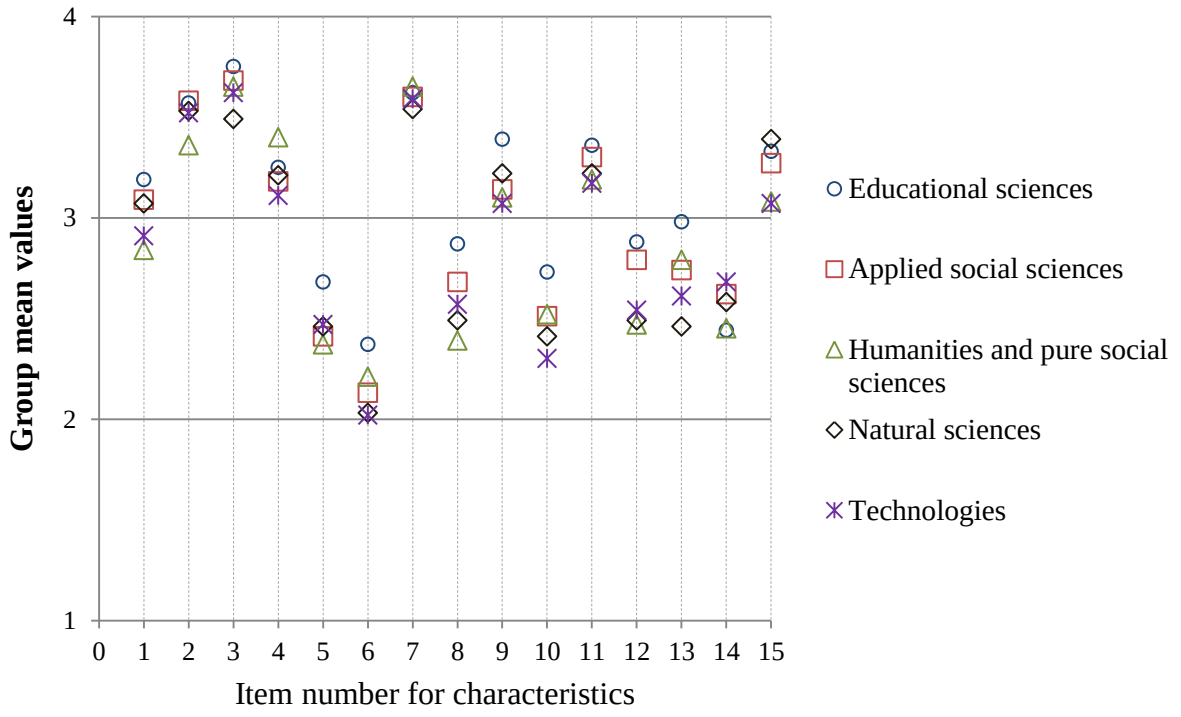


Figure 1. Group mean values for characteristics where no statistically significant differences were detected (item numbers are referred to in the text above).

The 13 characteristics that demonstrated significant differences were further analysed with Tukey-B tests and the multiple stepdown range test by Ryan, Einot, Gabriel and Welsch (R-E-G-W-F). ANOVA results were confirmed and the following disparities appeared.

For 7 characteristics educational sciences differentiated with a higher group mean value. The mean values according to discipline for those 7 characteristics are presented in Figure 2 (see next page). Characteristic "Approachable/personable" (item 1) scored relatively high in all groups but significant difference was detected between educational sciences (M=3.82) and technologies (M=3.49). For characteristic "Creative/ Interesting" (item 2) results discriminated educational sciences (M=3.72) and applied social sciences (M=3.62) from technologies (M=3.24). For characteristic "Encourages/ Cares for Students" (item 3) results discriminated educational sciences (M=3.32) and humanities (M=3.29) from technologies (M=2.86). For characteristic "Enthusiastic About Teaching" (item 4) results distinguished educational sciences (M=3.59) and technologies (M=3.06). For characteristic

"Establishes Goals" (item 5) results distinguished between educational sciences (M=3.17) and natural sciences (M=2.57). For characteristic "Good Listener" (item 6) results discriminated educational sciences (M=3.47) and humanities (M=3.41) from natural sciences (M=2.97). For characteristic "Prepared" (item 7) results distinguished between educational sciences (M=3.64) and technologies (M=3.21).

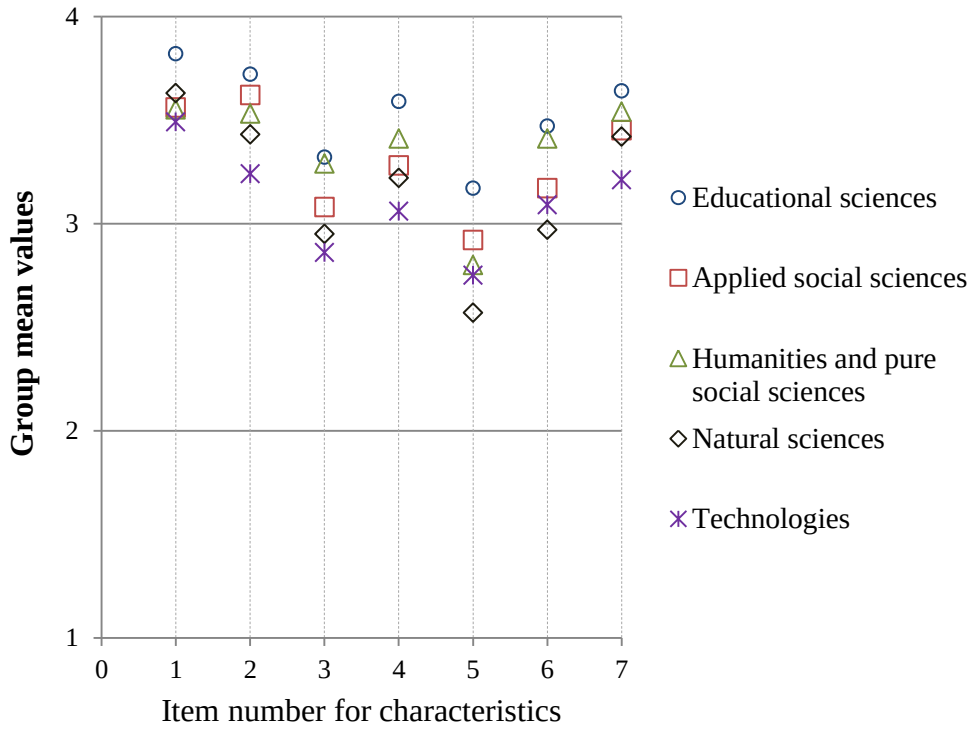


Figure 2. Group mean values for characteristics that discriminated meaningfully between educational sciences and other student groups (item numbers are referred to in the text above).

For other characteristics no general tendencies can be identified as meaningful differences appeared between several disciplines. The mean values according to disciplines for those remaining 6 characteristics are presented in Figure 3 (see next page). For characteristic "Accessible" (item 1) the results distinguished natural sciences (M=3.57) from educational sciences (M=3.11), technologies (M=3.15) and humanities (M=3.20). For characteristic "Presents Current Information" (item 2) results distinguished applied social sciences (M=3.49) from technologies (M=3.17). For characteristic "Promotes Class Discussion" (item 3) results discriminated between applied social sciences (M=2.83) and technologies (M=2.38). For characteristic "Promotes Critical Thinking" (item 4) the widest disparity appeared. The results distinguished humanities and pure social sciences (M=3.08), educational sciences (M=2.79) and applied social sciences (M=2.73) from natural sciences (M=2.09) and technologies (M=2.40). For characteristic "Provides Constructive Feedback"

(item 5) natural sciences (M=3.25) differentiated from other groups with a lower score. The same disparity appeared for characteristic “Respectful” (item 6) with natural sciences (M=3.21) distinguished from other student groups with a lower score.

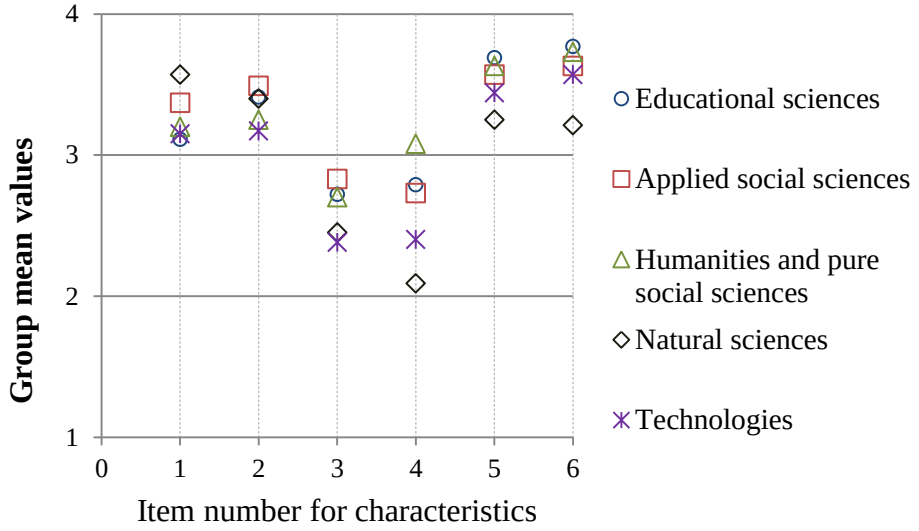


Figure 3. Group mean values for characteristics that discriminated meaningfully between disciplines other than educational sciences (item numbers are referred to in the text above).

## 4. Discussion

The current thesis studied student perceptions of master teaching in Estonian universities in order to determine the overall understanding of teacher mastery the students hold and compare those perceptions among different student groups. The first tested hypothesis was that age significantly differentiates student perceptions of master teachers. The findings support the hypothesis. Analysis detected statistically significant differences in 6 out of the 28 characteristics according to student age. According to the results younger students value interpersonal skills, care and support orientated characteristics, whereas more mature students place higher value in teacher professional skills. It seems reasonable that students with a fuller personal experience both in studies and life in general consider critical thinking and discussion as an integral part of the teaching and learning. For younger students exercising these tasks might be difficult which might explain why these characteristics are not present in their master teacher perceptions. It is also expected that younger students need more support from the teacher in their studies, therefore placing a higher value in behaviours like knowing student names, interacting with students before and after class, adjusting the level of teaching according to majority of the students and curving grades when appropriate. It should still be kept in mind that out of 28 master teacher characteristics only 6 discriminated

meaningfully among students when age was a determinant and out of these 6 characteristics only one characteristic “Realistic Expectations/ Fair” ranked in the top ten of the general rank order of importance of master teacher characteristics. Therefore, although differences according to age are evident, for the majority of characteristics and for the most important characteristics, students share the same perception of master teacher regardless of age.

The second hypothesis was that academic disciplines differentiate student perceptions of master teachers significantly. Again the findings support the hypothesis with 13characteristics discriminating meaningfully among student perceptions in different disciplines.

Out of these 13 characteristics educational sciences was involved in 7 cases differentiating with scores on the higher end of the scale. In several cases the difference for educational studies appeared in contrast with technologies students. It is interesting as both of the fields represent applied sciences with high emphasis on implementing knowledge in the practice (Nelson Laird et al., 2008; Neumann et al., 2002). The difference in student perceptions therefore must result from the hard-soft duality. For some reason, contrary to students in educational studies, technologies’ students (computer science, engineering, medicine, veterinary and agriculture) place less importance in the fact that a teacher is enthusiastic, creative and interesting, experiments with teaching methods and devices, creates engaging activities and provides colourful examples. They also do not see a master teacher necessarily as being emotional and caring. The high scores of educational students were expected as due to the nature of their studies they are most likely to experience and benefit from the above mentioned teaching behaviours (Hativa & Birdenbaum, 2000).

Technologies differentiated also from other applied social sciences besides education with their lower score to characteristic “Presents Current Information”. The disparities must be explained with the differences in the nature of knowledge in those fields (Neumann et al., 2002; Smeby, 1996) that is probably also influencing student perceptions of teacher mastery. Applied social sciences can be characterised as ill-structured with highly abstract concepts and incomplete or multiple solutions (Donald, 2009; Schommer-Aikins et al., 2003). Technologies on the other hand often have a single highly developed paradigm that defines the content and methodology of the field and knowledge is therefore seen as absolute, certain and unchanging (Paulsen & Wells, 1998). This statement would also explain why students in technologies do not emphasise that presented information is up-to-date.

In natural sciences (physics, chemistry, mathematics, biology, geology and environmental science) the focus is on fact retention and the ability to solve logically structured problems; teaching content is linear and straightforward with well-structured

concepts that can be organized sequentially (Schommer-Aikins et al., 2003). It is contraversial that students majoring in natural sciences put little importance into the fact that a teacher prepares and follows a syllabus and outlines clear goals. At the same time they put quite high importance into the fact that a teacher posts office hours, gives out the phone number and e-mail address which was considered relatively less important in other disciplines. The disparity is difficult to explain with information available from current research.

Natural sciences were also distinguished with lower scores suggesting that a master teacher does not necessarily have to maintain eye-contact, have the appreciation or even urge for student comments or habit of providing feedback. All of this indicates that from students' perspective there is little to discuss or comment in natural sciences' studies. The ratings are probably again explained by the nature of knowledge and classroom instruction. The nature of teaching in natural sciences is highly didactic. Students are supposed to apply hard facts and resolve problems based on reliable data. The subject has a well-established body of knowledge which provides little opportunity for active learning experiences and student opinion has little or no place in the process (Kember & Leung; 2011; Neumann et al., 2002).

The widest disparity in the study appeared for characteristic "Promotes Critical Thinking" with highest scores from humanities followed by educational and applied social sciences. The lowest ratings were scored from natural sciences followed by technologies. A high score from humanities and pure social sciences is expected as previous studies (Kember & Leung, 2011) have demonstrated noticeably higher ratings of critical thinking for humanities than any other student group. The pure-soft discipline is best characterised with the uncertainty of its nature (Donald, 2009; Pace, 2009). There is no objective reality and conclusions are always somewhat tentative and open to further considerations. Since knowledge is most contested in humanities, teaching involves a lot of discussion, making promotion of critical thinking inevitably an essential characteristic of master teachers. An intriguing aspect is the relatively low score the characteristic received from technologies' students as critical thinking skills are considered to be essential in applied hard sciences. According to Donald (2009) uncertainty is what defines the context where engineers perform. The discipline requires estimating risk and taking responsibility for decisions, the required thinking processes are characterised by problem solving and design. In addition to theoretical structure also procedures and strategies to apply them are needed. So from one side the discipline requires thorough theoretical knowledge but on the other hand, being an applied science, also the skill to implement the knowledge are essential. It has been found that lecturing is the main source of schooling in technologies (Donald, 2009; Neumann et al.,

2002). This is probably due to curriculum demands where finding the time for all that has to be taught is rather limited. It is still controversial that classroom instruction does not relate to the skills required in the discipline as it is very difficult to develop critical thinking and problem solving skills in lectures. The nature of current thesis does not allow making such conclusions but the findings suggest that the same controversial situation might be present in Estonia. Students are required to acquire problem solving and critical thinking skills but the means for them to practice those skills are rather limited and students themselves do not even consider these aspects important in the teaching process.

The results can be summarised as showing significant differences in the way students perceive effective teaching in different disciplines resulting in confirmation to the fact that there might be both initial differences in student characteristics across disciplines as well as the nature of knowledge and classroom instruction might contribute in accentuation of those differences (Paulsen & Wells, 1998).

The following discussion will focus on the general description of student perceptions of master teacher in Estonian universities. Characteristics such as “Happy/ Positive/ Humorous” are often characterised as being the central item in SET-s that define how well an instructor is rated (Aleamoni, 1999; Feldman 2007). These arguments are not confirmed with current research. The importance of whether a teacher smiles, tells jokes and funny stories scored relatively low as well as characteristic “Rapport” described as “makes class laugh through jokes and funny stories, initiates and maintains class discussions, knows student names, interacts with students before and after class”. Although younger students favoured the two characteristics as was discussed above, with regards to academic discipline the vote was unitary as no statistical differences appeared. The characteristics ranked in the bottom third of the general importance rank order of characteristics. As Aleamoni (1999) argued it seems that when students are presented several different subscales to evaluate instructional effectiveness they do discriminate their judgement.

Characteristic “Knowledgeable About Topic” was unitarily agreed upon as the most important characteristic for teacher mastery and scored significantly higher than other teacher qualities. Previous studies have also shown the importance of this characteristic in student perception but the rate of endorsement has not been as high and the difference between first and second ranking as significant. According to Ramsden (2005) teachers in higher education generally have subject matter expertise rather than training in teaching. It seems that this statement is supported by student perceptions seeing master teacher as someone highly knowledgeable in the subject field. It is however interesting that “Strives To Be a Better

Teacher" only came up as 26th in the rank order as being orientated towards continuous development should be related to being knowledgeable about topic (Polk, 2006; Scheetz & Martin, 2008).

The second characteristic that appeared in Estonian students' ranking was "Enthusiastic About Teaching". In none of the TBC studies has this characteristic scored as high in student perceptions, ranking only between 6th and 10th place (Keeley et al., 2012). An interesting observation can be made that the top two characteristics of Estonian students are identical to faculty perceptions in previous studies (Buskist et al., 2002; Schaeffer et al., 2003). If previous studies have demonstrated that students tend to favour characteristics related to care and support in teacher-student relations and teachers value characteristics referring to teacher competency and communication skills in classroom instruction then it seems that Estonian students do not value interpersonal skills as highly and associate teacher mastery with teacher skills and competencies. Although there is evidence in literature that teacher's attitude towards students during the teaching process is a significant factor in teaching effectiveness and learning outcomes (Scheetz & Martin, 2008) only two characteristic in the top 10 of the rank order refer to interpersonal skills ("Approachable/ Personable" and "Realistic Expectations/ Fair"). All the other characteristics in the top 10 are more inclined towards professional competency and communication skills. Communication skills are considered together with professional competency rather than interpersonal skills because although content is the key component of teacher effectiveness the delivery has to be effective as well in order to consume the information and its quality (Polk, 2006).

The overall lowest score was attained by characteristic "Humble". Inevitably the fact that a teacher admits mistakes, never brags, does not take credit for others' successes is not an issue for students, at least it is not as important as the other master teacher characteristic presented. The characteristic was followed by "Good listener" and "Rapport" indicating that relationships within the group and with the teacher are not identified as relating to teacher mastery in Estonian student perceptions.

There are several ways to interpret all of these findings. Is the perception of master teacher that the students hold a cause or a reason? Do these perceptions indicate the reality of classroom instruction or posit a student ideal to be strived for? Hativa & Birdenbaum (2000) in their study found that students tend to prefer those teaching approaches that they perceived as beneficial and helpful for learning but that they do not often encounter. The collective idea of a discipline has the power to influence how we think learning should occur (Gunn, 2009). The fact that a master teacher is perceived differently across disciplines provides potentially

helpful information to convey better instruction (Pace, 2009). On the other hand just because a subject has been taught in a certain way does not mean that this way is the best (Matthew & Pritchard, 2009)

There are common well-known aspects in universities that are rarely subjected to systematic analysis and the significance of those issues for policy makers and practices are therefore often overlooked (Neumann et al., 2002). Both student evaluations of teaching and differences in the instruction of different academic disciplines can easily fall under this category. Therefore it is important to draw attention to differences in effective teaching considerations and evaluation practices. The potential benefit of the thesis is also in facilitating a better understanding of student perceptions of teacher mastery to all higher education practitioners. The results should enable to identify possibilities for personal enhancement as far as classroom behaviour is concerned.

With regards to future studies it would be interesting to include teacher perspective and side student perceptions with teacher self-efficacy beliefs (Taimalu & Õim, 2005). As efficacy beliefs are situational reflecting the ability to accomplish in a specific situation classroom instruction is the perfect surrounding for considering teacher efficacy beliefs.

Although results of the current thesis are interesting, there are some limitations to the study that must be considered. Using nonprobability convenience sample might have created the possibility that respondents are not typical Estonian university students and the sample is therefore not representative of the entire student population.

With regards to the theoretical aspect of the thesis student and course characteristics such as sex, grade expectation, class size, required amount of independent work etc were excluded from the current study. However these factors have been found to influence teacher effectiveness evaluations (Sonntag et al., 2009; Gotlieb, 2009; Bembenutty, 2009; Beran & Violato, 2005; Donnon et al. 2010; Kidd & Latif, 2004; Matos-Diaz & Ragan, 2010; McPherson et al., 2009). It should also be noted that as this thesis is a student work with limited resources some of the essential articles and books remained unattainable as access required additional charges.

There are also limitations with regards to the instrument. Even though cross-cultural adaption was given special attention to, comments made by respondents indicate that the questionnaire was still confusing to some of the students. One of the key factors in the TBC is that the 28-item checklist also defines key teacher behaviours for the listed traits. The behavioural descriptions are supposed to aid selection by decreasing ambiguity but it seems however that the behaviours listed under a single characteristic were contradictory to some

students and caused controversy. Also some of the characteristics might have not summarised the listed behaviours precisely (e.g.” professional” with a focus on physical appearance rather than skills and knowledge).

Student Perceptions of Master Teacher in Estonian Universities

Summary

Teacher effectiveness research indicates that the behaviours a teacher exhibits in classroom are an integral part of teacher mastery determining student achievement and teaching effectiveness (Keeley et al., 2012; Marsh, 2007). Student voice in defining a teacher's mastery should not be overlooked although the use of SET-s is an ongoing debate (Benton & Cashin, 2012).

This thesis compared student perceptions of the relative importance of master teacher's characteristics by age and discipline. All of the 6 public universities in Estonia participated in the research. Students were presented with a list of 28 characteristics that underscore effective university teaching and asked to evaluate the importance of those characteristics in order to determine which in their perspective contribute most to effective teaching. Following data collection all participants' responses were categorized and analysed for differences.

The results clearly demonstrated that academic discipline is an important factor that distinguishes between student perceptions of master teacher; results also demonstrated some differences in student perceptions according to age. Contrary to previous TBC findings (Buskist et al., 2002; Keeley et al., 2012; Scaeffer et al., 2003) Estonian students relate teacher mastery to knowledge about the subject matter and skills concerning classroom instruction. Characteristics representing interpersonal skills, care and support are not considered as important. There are several ways to interpret these findings, but it seems they reflect the reality of classroom instruction. It should be still considered that just because something has been taught in a certain way and students have adopted this approach, does not mean that it is necessarily the best way for teaching (Gunn, 2009; Matthew & Pritchard, 2009).

While the issue of whether SET-s are valid to measure teacher effectiveness may never be conclusively settled a better understanding on what constitutes for student ratings is a worthwhile goal (McPherson et al., 2009), especially since Estonian universities implement SET-s to evaluate teaching quality (Türk & Roolaht, 2005). The study findings are also a resource to all higher educator practitioners who wish to elaborate their classroom teaching. There are many and often contradictory ways of being a good teacher, the key to success is finding the way true to oneself (Cranton, 2001; Murray et al., 1990).

*Keywords:* teacher effectiveness, master teacher, student evaluation of teaching, higher education

Meisterõppejõu kuvand Eesti ülikoolides üliõpilaste vaates

Resümee

Uuringud näitavad, et õppejõu käitumine klassiruumis mõjutab nii üliõpilaste saavutusi kui õpetamise efektiivsust (Keeley et al., 2012; Marsh, 2007). Kuigi üliõpilaste tagasisidehinnangute kasutamine on seotud paljude vastuoludega ning debatt kestab, ei tohiks üliõpilaste nägemust meisterlikust õppejõust tähelepanuta jätta (Benton & Cashin, 2012).

Käesolev magistritöö võrdles üliõpilaste olulisuse hinnanguid erinevatele meisterõppejõu karakteristikutele, lähtudes üliõpilaste vanusest ja õpingute akadeemilisest distsipliinist. Uurimusse olid kaasatud kõik kuus Eesti avalik-õiguslikku ülikooli. Üliõpilastele esitati küsimustik 28 meisterõppejõudu kirjeldava karakteristikuga ning paluti omadusi hinnata, lähtudes nende olulisusest õpetamise efektiivsusele. Kogutud andmed grupeeriti ja analüüsiti sarnasuste ja erisuste leidmiseks.

Tulemustest selgus, et üliõpilaste nägemus meisterõppejõust erineb sõltuvalt nende õpingute akadeemilisest distsipliinist ning samuti vanusest. Erinevalt sama uurimisinstrumendi varasematest tulemustest (Buskist et al., 2002; Keeley et al., 2012; Scaeffer et al., 2003) selgus, et Eesti üliõpilased seostavad meisterõppejõudu eelkõige ainealaste teadmiste ja tehniliste õpetamisoskustega, pöörates vähem tähelepanu sellistele omadustele nagu hoolimine, toetus jt suhetele orienteeritud karakteristikud.

Uurimuse tulemusi annab mitmeti tõlgendada, kuid tundub et üliõpilaste hinnangud väljendavad kehtivaid õpetamispraktikaid. Kuid see, et midagi teatud viisil õpetatakse ning üliõpilased on selle lähenemise omaks võtnud, ei pruugi tähendada, et tegemist on ühtlasi parima võimaliku õpetamisviisiga (Gunn, 2009; Matthew & Pritchard, 2009).

Kuigi vaidlus üliõpilaste hinnangute kasutamise üle ei pruugi kunagi jõuda konsensusele, on mõistlik püüda luua paremat arusaamist sellest, mis mõjutab üliõpilaste hinnanguid (McPherson et al., 2009), eriti arvestades, et Eesti ülikoolid kasutavad tagasisidehinnanguid õpetamise kvaliteedi hindamiseks (Türk & Roolaht, 2005). Uurimustulemused on samuti abiks kõigile õppejõududele, kes soovivad oma õpetamiskäitumist täiustada. On palju erinevaid võimalusi kuidas olla hea õppejõud, edu aluseks on oskus tunda ära enda jaoks õige lähenemine (Murray et al., 1990; Cranton, 2001).

*Märksõnad:* õppejõu efektiivsus, meisterõppejõud, üliõpilaste tagasisidehinnangud, kõrgharidus

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## Declaration of authenticity

I hereby confirm that the present thesis has been written independently and all reference to other authors and contributors is provided. The thesis complies with the regulations of the Institute of Education of Tartu University and meets the accepted academic practice.

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Appendix 1. Sample allocation according to age and level of studies

| Row Labels | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 50 | 51 | 52 | 53 | 54 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bachelor | 44 | 94 | 69 | 50 | 22 | 22 | 13 | 8 | 3 | 5 | 7 | 6 | 1 | 3 | 3 | 1 | 4 | 2 | 7 | 1 | 3 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 382 |
| Doctor | | | | | | 1 | | 4 | | 2 | 3 | | | 1 | | | 1 | 1 | | | | | | | | | | | | 1 | | | | | | 14 |
| Integrated | 6 | 12 | 32 | 18 | 19 | 10 | 5 | 2 | 1 | 2 | | 1 | | 2 | 1 | | | | | 1 | | | | | | | | | | | | | | | | 112 |
| Master | | 1 | 1 | 10 | 31 | 22 | 16 | 14 | 14 | 4 | 7 | 4 | 2 | 6 | 5 | 2 | 5 | 2 | 2 | 1 | 2 | 1 | 2 | 6 | | 1 | 3 | 1 | | | | | 2 | 2 | 1 | 170 |
| Other | | 3 | | 3 | | 1 | | | 1 | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | 10 |
| Not specified | 1 | 5 | 3 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 14 |
| Grand Total | 51 | 115 | 105 | 82 | 73 | 57 | 35 | 28 | 19 | 13 | 17 | 11 | 3 | 12 | 9 | 3 | 10 | 5 | 9 | 3 | 5 | 3 | 3 | 7 | 4 | 3 | 4 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 702 |

Appendix 2. Sample allocation according to disciplines

| Academic discipline | Curriculum | Participants | Percentage |
|---|---|---|---|
| Applied social sciences | | 248 | 36,52% |
| | Architecture and design | 20 | 2,95% |
| | Business | 24 | 3,53% |
| | Economics | 60 | 8,84% |
| | Journalism, media studies and communication | 39 | 5,74% |
| | Law | 40 | 5,89% |
| | Public administration | 42 | 6,19% |
| | Social work | 23 | 3,39% |
| Educational sciences | | 110 | 16,20% |
| | Education | 110 | 16,20% |
| Humanities and pure social sciences | | 98 | 14,43% |
| | Culture studies | 3 | 0,44% |
| | Geography | 1 | 0,15% |
| | History | 7 | 1,03% |
| | Humanities | 2 | 0,29% |
| | Linguistics | 12 | 1,77% |
| | Performing arts | 7 | 1,03% |
| | Philosophy | 11 | 1,62% |
| | Political science | 2 | 0,29% |
| | Psychology | 4 | 0,59% |
| | Religion | 4 | 0,59% |
| | Sociology | 24 | 3,53% |
| | Visual arts | 21 | 3,09% |
| Natural sciences | | 68 | 10,01% |
| | Earth science | 6 | 0,88% |
| | Environmental studies and Forestry | 35 | 5,15% |
| | Life science | 19 | 2,80% |
| | Mathematics | 2 | 0,29% |
| | Physics | 6 | 0,88% |
| Technologies | | 154 | 22,68% |
| | Agriculture | 12 | 1,77% |
| | Computer sciences | 24 | 3,53% |
| | Engineering | 31 | 4,57% |
| | Medicine | 65 | 9,57% |
| | Veterinary medicine | 22 | 3,24% |
| (blank) | | 1 | 0,15% |
| | (blank) | 1 | 0,15% |
| Grand Total | | 679 | 100,00% |

Appendix 3. Teacher Behaviour Checklist Questionnaire

| | |
|---|---|
| | *Accessible* (Posts office hours, gives out phone number and e-mail information) |
| | *Approachable/Personable* (Smiles, greets students, initiates conversations, invites questions, responds respectfully to student comments) |
| | *Authoritative* (Establishes clear course rules, maintains classroom order, speaks in a loud, strong voice) |
| | *Confident* (Speaks clearly and loudly, makes eye contact, and answers questions correctly) |
| | *Creative and Interesting* (Experiments with teaching methods; uses technological devices to support/enhance lecture; uses interesting, relevant, and personal examples; not monotone) |
| | *Effective Communicator* (Speaks clearly/loudly, uses precise English, gives clear, compelling examples) |
| | *Encourages and Cares for Students* (Provides praise for good student work, helps students who need it, offers bonus points and extra credit, and knows student names) |
| | *Enthusiastic about Teaching and about Topic* (Smiles during class, prepares interesting class activities, uses gestures and expressions of emotion to emphasis important points, and arrives on time for class) |
| | *Establishes Daily and Academic Term Goals* (Prepares and follows a syllabus, outlines goals for each class meeting at beginning of period) |
| | *Flexible/Open-Minded* (Changes calendar of course events when necessary, will meet at hours outside of office, hours pays attention to students when they state their opinions, accepts criticisms from others, allows students to do make up work where appropriate) |
| | *Good Listener* (Doesn't interrupt students while they are talking, maintains eye, contact replies respectfully to student comments, asks questions about points that students are making) |
| | *Happy/Positive Attitude/Humorous* (Smiles, tells jokes and funny stories, laughs with students) |
| | *Humble* (Admits mistakes, never brags, doesn't take credit for others' successes) |
| | *Knowledgeable About Subject Matter* (Easily answers students' questions, does not read straight from book or notes, uses clear and understandable examples) |
| | *Prepared* (Brings necessary materials to class, is never late for class, provides outlines of class discussion or states goals for the day) |
| | *Presents Current Information* (Relates topic to current, real life situations; uses recent videos, magazines, newspapers to demonstrate points; talks about current topics; uses new or recent texts) |
| | *Professional* (Dresses nicely [neat and clean shoes, slacks, blouses, dresses, shirts, ties], no profanity, arrives to class on time) |
| | *Promotes Class Discussion* (Asks controversial or challenging questions during class, gives points for class participation, involves students in group activities during class) |
| | *Promotes Critical Thinking/Intellectually Stimulating* (Asks thoughtful questions during class, uses essay questions on tests and quizzes, assigns homework, holds group discussions/activities) |
| | *Provides Constructive Feedback* (Writes comments on returned work, answers students' questions, gives advice on test-taking) |
| | *Punctuality/Manages Class Time* (Arrives to class on time/early, dismisses class on time, presents relevant materials in class, leaves time for questions, keeps appointments, returns work in a timely way) |
| | *Rapport* (Makes class laugh through jokes and funny stories, initiates and maintains class discussions, knows student names, interacts with students before and after class) |
| | *Realistic Expectations of Students/Fair Testing and Grading* (Covers material to be tested during class, writes relevant test questions, does not overload students with reading, teaches at an appropriate level for the majority of students in the course, curves grades when appropriate, provides extra credit work) |
| | *Respectful* (Does not humiliate or embarrass students in class, is polite to students [says thank you and please, etc.], does not interrupt students while they are talking, does not talk down to students) |
| | *Sensitive and Persistent* (Makes sure students understand material before moving to new material, holds extra study sessions, repeats information when necessary, asks questions to check student understanding) |
| | *Strives to Be a Better Teacher* (Requests feedback on his/her teaching ability from students, continues learning [attends workshops, etc. on teaching], uses new teaching methods) |
| | Technologically Competent (Knows now to use a computer, knows how to use e-mail with students, knows how to use overheads during class, has a web-page for classes) |
| | *Understanding* (Accepts legitimate excuses for missing class or coursework, is available before/after class to answer questions, does not lose temper at students, takes extra time to discuss difficult concepts) |

Appendix 4. The research instrument

Tänan, et oled otsustanud anda oma panuse, et selgitada välja milline on Eesti üliõpilaste jaoks ideaalne õppejõud. Sinu ees on 3-osaline valikvastustega küsimustik, mille täitmiseks ei tohiks kuluda üle 10 minutit.

Esimeses osas küsitakse sult infot sinu enda ja sinu õpingute kohta. Neid andmeid kasutatakse, et kontrollida hüpoteese, grupeerides vastanuid nt teadusharude ja vanusegruppide kaupa. Sinu isikut nende vastuste põhjal keegi tuvastada ei püüa, igale vastajale on tagatud anonüümsus.

Teises osas saad hinnata 28 õppejõu käitumist kirjeldavat väidet 5-pallisel Likerti skaalal, lähtudes sellest, kui oluliseks pead iga kirjeldatud omadust hea õppejõu juures just sina. Hinnangutes ei pea sa lähtuma ühest kindlast õppejõust (sa ei hinda konkreetset õppejõudu ega ainet, mis sul hetkel käsil on). Mõtle parimatele õppejõududele, keda sa tead.

Kolmandas osas on vaja eelnevalt hinnatud 28 väitest valida välja 10 sinu meelest kõige olulisemat. Neid 10 omadust ei ole vaja reastada olulisuse alusel, kuid on väga oluline, et valiksid välja täpselt 10 tegurit.

Jõudu tööle!

**I osa - demograafilised andmed**

*Kirjuta tekstiväljale oma vanus: ☐

Vali loetelust ülikool, kus hetkel kõrgharidust omandad

| | |
|---|---|
| Eesti Kunstiakadeemia | ☐ |
| Eesti Maaülikool | ☐ |
| Eesti Muusika-ja Teatriakadeemia | ☐ |
| Tallinna Tehnikaülikool | ☐ |
| Tallinna Ülikool | ☐ |
| Tartu Ülikool | ☐ |
| Estonian Business School | ☐ |

*Kirjuta tekstiväljale oma õppekava või eriala nimetu: ☐

*Vali haridustase, mida hetkel omandad

| | |
|---|---|
| Bakalaureus | ☐ |
| Magister | ☐ |
| Doktor | ☐ |
| Muu | ☐ |

*Kui midagi eelnevates vastustes vajab täpsustamist, siis kirjuta see siia:

.....

**II osa - õppejõu käitumist kirjeldavate väidete hindamine Likert skaalal**
**Hinda iga kirjeldatud omaduse olulisust heale õppejõule lähtudes järgnevast skaalast: 1-täiesti ebaoluline /2-suhteliselt vähe oluline / 3-ei oska hinnata / 4-pigem oluline / 5-väga oluline.**

.....

*1. Kergesti kättesaadav - Paneb välja vastuvõtuajad, annab oma telefoninumbri ning e-posti aadressi

1. □ 2. □ 3. □ 4. □ 5. □_____

*2. Avatud/meeldiv - Naeratab, tervitab õpilasi, algatab vestlusi, on avatud küsimustele, reageerib õpilaste kommentaaridele lugupidavalt

1. □ 2. □ 3. □ 4. □ 5. □_____

*3. Autoriteetne - Kehtestab selged kursusereeglid, hoiab tunnis korda

1. □ 2. □ 3. □ 4. □ 5. □_____

*4. Enesekindel - Räägib valju häälega, loob silmside ning vastab küsimustele korrektselt

1. □ 2. □ 3. □ 4. □ 5. _____

*5. Loominguline/ huvitav - Eksperimenteerib õpetamismeetoditega, kasutab tehnilisi vahendeid tunni rikastamiseks, kasutab huvitavaid, teemakohaseid ja isiklikke näiteid, ei ole monotoonne

1. □ 2. □ 3. □ 4. □ 5. □_____

*6. Efektiivne suhtleja - Räägib selgelt, kasutab korrektset eesti/inglise keelt, toob selgeid, veenvaid näiteid

1. □ 2. □ 3. □ 4. □ 5. □_____

*7. Julgustav/ õpilastest hooliv - Jagab kiitust hea töö eest, aitab õpilasi, kes seda vajavad, võimaldab teenida lisapunkte, teab õpilaste nimesid

1. □ 2. □ 3. □ 4. □ 5. □_____

*8. Entusiastlik õpetamise ja aine suhtes - Naeratab tunni ajal, valmistab loenguks ette huvitavaid tegevusi, tundideks ette huvitavaid tegevusi, kasutab oluliste teemade rõhutamiseks žeste ning emotsionaalset väljendusviisi, saabub loengusse õigel ajal

1. □ 2. □ 3. □ 4. □ 5. □_____

*9. Eesmärke seadev - Valmistab ette aineprogrammi ning peab sellest kinni, sõnastab perioodi alguses eesmärgid igaks järgnevaks loenguks

1. □ 2. □ 3. □ 4. □ 5. □_____

*10. Paindlik/ eelarvamustevaba - Muudab vajadusel kursuste kalenderplaani, on valmis kohtuma ka väljaspool regulaarseid vastuvõtuaegu, pöörab tähelepanu õpilaste arvamustele, aktsepteerib kriitikat, võimaldab järelvastamist, kui see põhjendatud on

1. □ 2. □ 3. □ 4. □ 5. □_____

*11. Hea kuulaja - Ei katkesta õpilasi poole jutu pealt, hoiab silmsidet, vastab õpilaste kommentaaridele lugupidavalt, küsib õpilaste kommentaaride kohta täiendavaid küsimusi

1. □ 2. □ 3. □ 4. □ 5. □_____

*12. Rõõmus/positiivne/humoorikas - Naeratab, räägib nalju ja lõbusaid lugusid, naerab koos õpilastega

1. □ 2. □ 3. □ 4. □ 5. □_____

*13. Tagasihoidlik - Tunnistab eksimusi, ei kiitle kunagi, ei võta endale au teiste saavutuste eest

1. □ 2. □ 3. □ 4. □ 5. □_____

*14. Teemat valdav - Vastab raskusteta õpilaste küsimustele, ei loe maha raamatust ega märkmetest, kasutab selgeid ning arusaadavaid näiteid

1. □ 2. □ 3. □ 4. □ 5. □_____

*15. Ettevalmistunud - Toob loengusse kaasa vajalikud materjalid, on õigel ajal kohal, loob raamistiku loengus toimuvatele aruteludele ja sõnastab kohtumise eesmärgid

1. □ 2. □ 3. □ 4. □ 5. □_____

*16. Esitab ajakohast informatsiooni - Seostab teemat ajakohaste ja eluliste situatsioonidega, kasutab värskeid videoid, ajakirju ning ajalehti sõnumi väljatoomiseks, räägib aktuaalsetest teemadest, kasutab uusi või hiljutisi tekste

1. □ 2. □ 3. □ 4. □ 5. □_____

*17. Professionaalne - Riietub viisakalt (korrektsed ja puhtad kingad, püksid, pluusid, kleidid, särgid, lipsud), ei ole vulgaarne/ebatsensuurne, saabub tundi õigeaegselt

1. □ 2. □ 3. □ 4. □ 5. □_____

*18. Diskussiooni soosiv - Küsib loengus vastuolulisi või väljakutsuvaid küsimusi, annab lisapunkte aktiivse kaasatöötamise eest, kaasab õpilasi loengus rühmatöödesse

1. □ 2. □ 3. □ 4. □ 5. □_____

*19. Kriitilist mõtlemist julgustav - Küsib loengus mõtlemapanevaid küsimusi, kasutab testides ning tunnikontrollides essee-tüüpi ülesandeid, annab koduseid ülesandeid, korraldab grupidiskussioone/tegevusi

1. □ 2. □ 3. □ 4. □ 5. □_____

*20. Annab konstruktiivset tagasisidet - Kirjutab tagastatavatele töödele kommentaare, vastab õpilaste küsimustele, annab nõuandeid testimise kohta

1. □ 2. □ 3. □ 4. □ 5. □_____

*21. Hea ajajuhtija - Jõuab loengusse õigeaegselt või varem, lõpetab loengu õigel ajal, esitab loengus teemakohast materjali, jätab aega küsimusteks, peab kinni kokkulepitud kohtumistest, annab tööd tagasi õigeaegselt

1. □ 2. □ 3. □ 4. □ 5. □_____

*22. Empaatiline/ühtekuuluvustunnet tekitav - Ajab grupi naljade ja lõbusate lugude abil naerma, algatab ning hoiab üleval diskussioone, teab õpilaste nimesid, suhtleb õpilastega enne ja pärast tundi

1. □ 2. □ 3. □ 4. □ 5. □_____

*23. Realistlike ootustega/ õiglane - Võtab testimisel küsitava materjali läbi loengutes, koostab teemakohased testiküsimused, ei koorma õpilasi üle lisalugemisega, õpetab tasemel, mis on sobilik enamusele kursusel osalejatest, on hindamisel paindlik, kui see on põhjendatud, loob võimalusi teenida lisapunkte täiendavate ülesannete eest.

1. □ 2. □ 3. □ 4. □ 5. □_____

*24. Lugupidav - Ei alanda ega häbista õpilasi loengus, on õpilaste vastu viisakas (ütleb palun, tänan jne), ei sega vahele õpilaste jutule, ei suhtu õpilastesse ülalt alla

1. □ 2. □ 3. □ 4. □ 5. □_____

*25. Vastutulelik/ järjekindel - Veendub et õpilased on materjali omandanud enne uue teema juurde liikumist, annab järeleaitamistunde, vajadusel kordab informatsiooni, esitab kontrollküsimusi veendumaks, et õpilased on teemast aru saanud

1. □ 2. □ 3. □ 4. □ 5. □_____

*26. Püüab olla parem õpetaja - Küsib enda õpetamisoskuste kohta õpilastelt tagasisidet, jätkab õppimist (osaleb õpetamisteemalistes töötubades jmt), kasutab uusi õpetamismeetodeid

1. □ 2. □ 3. □ 4. □ 5. □_____

*27. Tehnoloogiliselt kompetentne - Oskab kasutada arvutit, e-posti kasutada, oskab tunnis tehnilisi vahendeid kasutada, on tundide tarbeks veebilehe koostanud

1. □ 2. □ 3. □ 4. □ 5. □_____

*28. Mõistev- Aktsepteerib põhjusega tunnist puudumist või kursusetöö esitamatajätmist, on valmis enne/pärast tundi küsimustele vastama, ei kaota enesevalitsemist, leiab lisaaja keeruliste kontseptsioonide arutamiseks

1. □ 2. □ 3. □ 4. □ 5. □_____

*Kui midagi eelnevates vastustes vajab täpsustamist, siis kirjuta see siia:

.....

**III osa - vali eelnevalt hinnatud omadustest välja 10 kõige olulisemat**

.....

*Kümme kõige olulisemat omadust hea õppejõu puhul on minu hinnangul (märgi linnukesega, valida saad täpselt 10 omadust):

- ☐ 1_kergesti kättesaadav
- ☐ 2_avatud/meeldiv
- ☐ 3_autoriteetne
- ☐ 4_enesekindel
- ☐ 5_loominguline/huvitav
- ☐ 6_efektiivne suhtleja
- ☐ 7_julgustav/õpilastest hooliv
- ☐ 8_entusiastlik õpetamise ja aine suhtes
- ☐ 9_eesmärke seadev
- ☐ 10_paindlik/eelarvamustevaba
- ☐ 11_hea kuulaja
- ☐ 12_rõõmus/ positiivne/ humoorikas
- ☐ 13_tagasihoidlik
- ☐ 14_teemat valdav
- ☐ 15_ettevalmistunud

- ☐ 16_esitab asjakohast informatsiooni
- ☐ 17_professionaalne
- ☐ 18_diskussiooni soosiv
- ☐ 19_kriitilist_mõtlemist_julgustav
- ☐ 20_annab konstruktiivset tagasisidet
- ☐ 21_hea ajajuhtija
- ☐ 22_empaatiline/ühtekuuluvustunnet_tekitav
- ☐ 23_realistlike ootustega /õiglane
- ☐ 24_lugupidav
- ☐ 25_vastutulelik /järjekindel
- ☐ 26_püüab olla parem õpetaja
- ☐ 27_tehnoloogiliselt kompetentne
- ☐ 28_mõistev

*Kui midagi eelnevates vastustes vajab täpsustamist, siis kirjuta see siia:

Elektrooniline link uurimisküsimustikule: http://www.eformular.com/tbc/tbc.html

Appendix 5. Correlation between the scales

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Pearson | ,367** | ,030 | ,033 | -,026 | -,042 | -,010 | -,060 | -,013 | -,004 | -,003 | -,028 | -,036 | -,045 | -,003 | -,008 | ,009 | ,037 | -,059 | -,101** | -,022 | ,083* | -,011 | ,051 | ,021 | -,010 | -,058 | ,182** | ,066 |
| | Sig. (2-tailed) | ,000 | ,436 | ,388 | ,496 | ,279 | ,792 | ,126 | ,733 | ,914 | ,945 | ,463 | ,352 | ,249 | ,948 | ,831 | ,806 | ,341 | ,130 | ,009 | ,572 | ,031 | ,770 | ,185 | ,585 | ,788 | ,134 | ,000 | ,090 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 2 | Pearson | ,025 | ,189** | -,042 | ,057 | ,037 | -,021 | ,117** | ,091* | -,067 | ,084* | ,042 | ,200** | ,071 | -,058 | -,066 | ,008 | ,014 | -,049 | -,105** | ,031 | ,005 | ,170** | ,163** | ,051 | ,055 | ,039 | -,025 | ,086* |
| | Sig. (2-tailed) | ,518 | ,000 | ,280 | ,137 | ,344 | ,580 | ,003 | ,019 | ,085 | ,029 | ,282 | ,000 | ,065 | ,132 | ,091 | ,831 | ,728 | ,208 | ,007 | ,426 | ,903 | ,000 | ,000 | ,188 | ,158 | ,320 | ,526 | ,026 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 3 | Pearson | -,026 | -,110** | ,367** | ,102** | -,071 | ,027 | -,061 | -,046 | -,001 | -,019 | ,005 | -,037 | ,009 | ,060 | ,048 | -,021 | ,086* | -,025 | ,008 | -,007 | ,054 | -,036 | -,060 | -,047 | -,095* | -,143** | -,058 | -,078* |
| | Sig. (2-tailed) | ,495 | ,004 | ,000 | ,008 | ,066 | ,481 | ,118 | ,233 | ,977 | ,620 | ,907 | ,342 | ,816 | ,120 | ,220 | ,581 | ,027 | ,526 | ,840 | ,851 | ,162 | ,349 | ,122 | ,221 | ,014 | ,000 | ,136 | ,044 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 4 | Pearson | -,048 | -,067 | ,048 | ,245** | -,019 | ,004 | -,067 | -,060 | -,084* | -,040 | -,003 | -,041 | -,106** | -,009 | -,049 | -,001 | ,030 | ,028 | ,047 | -,021 | -,022 | -,068 | -,064 | -,120** | -,067 | -,072 | -,070 | -,078* |
| | Sig. (2-tailed) | ,209 | ,085 | ,214 | ,000 | ,622 | ,911 | ,087 | ,117 | ,030 | ,298 | ,935 | ,293 | ,006 | ,808 | ,202 | ,972 | ,435 | ,463 | ,224 | ,589 | ,577 | ,078 | ,099 | ,002 | ,083 | ,062 | ,073 | ,044 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 5 | Pearson | -,010 | ,033 | -,098* | -,053 | ,268** | ,020 | ,038 | ,137** | ,040 | ,037 | -,008 | ,073 | ,054 | ,052 | -,013 | ,051 | -,082* | ,033 | ,063 | ,035 | -,034 | ,086* | -,005 | -,012 | -,004 | ,083* | -,035 | ,003 |
| | Sig. (2-tailed) | ,786 | ,400 | ,011 | ,171 | ,000 | ,607 | ,333 | ,000 | ,303 | ,332 | ,837 | ,058 | ,167 | ,182 | ,741 | ,189 | ,035 | ,392 | ,106 | ,362 | ,379 | ,026 | ,896 | ,763 | ,920 | ,032 | ,362 | ,938 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 6 | Pearson | -,078* | -,053 | -,020 | ,012 | -,016 | ,143** | -,036 | -,002 | -,100** | -,028 | -,086* | ,003 | -,076 | -,001 | -,039 | ,042 | -,046 | -,022 | -,006 | -,010 | -,077* | ,006 | -,071 | -,061 | -,066 | -,099* | -,048 | -,080* |
| | Sig. (2-tailed) | ,044 | ,171 | ,609 | ,752 | ,685 | ,000 | ,352 | ,959 | ,010 | ,464 | ,027 | ,941 | ,051 | ,986 | ,313 | ,283 | ,235 | ,568 | ,879 | ,790 | ,046 | ,874 | ,068 | ,113 | ,089 | ,010 | ,215 | ,039 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 7 | Pearson | ,031 | ,148** | -,025 | -,037 | ,091* | ,019 | ,280** | ,128** | ,050 | ,124** | ,122** | ,142** | ,091* | -,075 | ,031 | -,037 | ,016 | ,094* | ,044 | ,146** | ,058 | ,162** | ,113** | ,103** | ,151** | ,091* | -,022 | ,178** |
| | Sig. (2-tailed) | ,424 | ,000 | ,525 | ,340 | ,018 | ,629 | ,000 | ,001 | ,200 | ,001 | ,002 | ,000 | ,019 | ,052 | ,429 | ,338 | ,681 | ,015 | ,252 | ,000 | ,131 | ,000 | ,003 | ,008 | ,000 | ,018 | ,578 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 8 | Pearson | -,093* | ,012 | -,005 | -,030 | ,040 | -,023 | -,010 | ,164** | -,034 | -,040 | ,040 | -,037 | -,040 | ,076* | -,033 | ,028 | -,016 | ,060 | ,067 | -,005 | -,051 | -,035 | -,131** | -,080* | -,099* | ,022 | -,013 | -,080* |
| | Sig. (2-tailed) | ,015 | ,763 | ,904 | ,436 | ,302 | ,549 | ,789 | ,000 | ,376 | ,305 | ,306 | ,345 | ,298 | ,049 | ,396 | ,466 | ,680 | ,123 | ,085 | ,890 | ,191 | ,361 | ,001 | ,039 | ,010 | ,564 | ,743 | ,038 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 9 | Pearson | -,015 | -,097* | ,074 | ,001 | -,127** | -,054 | -,036 | -,096* | ,240** | -,087* | -,027 | -,169** | -,017 | -,068 | ,095* | -,029 | ,019 | -,015 | -,002 | -,022 | ,005 | -,127** | -,088* | -,078* | -,091* | -,103** | ,064 | -,168** |
| | Sig. (2-tailed) | ,693 | ,012 | ,055 | ,986 | ,001 | ,164 | ,353 | ,013 | ,000 | ,024 | ,484 | ,000 | ,654 | ,079 | ,014 | ,453 | ,632 | ,703 | ,962 | ,565 | ,904 | ,001 | ,023 | ,044 | ,019 | ,008 | ,097 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 10 | Pearson | ,017 | ,006 | -,107** | -,030 | ,065 | -,036 | -,042 | -,024 | -,109** | ,186** | ,033 | ,068 | -,007 | -,038 | -,103** | -,045 | -,087* | -,117** | -,139** | -,073 | -,024 | ,017 | ,063 | ,046 | ,022 | -,002 | ,002 | ,149** |
| | Sig. (2-tailed) | ,661 | ,872 | ,006 | ,438 | ,093 | ,350 | ,283 | ,531 | ,005 | ,000 | ,390 | ,080 | ,866 | ,320 | ,008 | ,242 | ,026 | ,002 | ,000 | ,058 | ,541 | ,667 | ,103 | ,235 | ,570 | ,967 | ,966 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Pearson | ,003 | ,051 | -,039 | -,012 | -,046 | -,081* | ,065 | -,041 | -,080* | ,007 | ,133** | ,052 | ,052 | -,059 | -,058 | -,141** | -,041 | ,002 | ,047 | -,050 | -,058 | ,097* | ,023 | ,033 | -,018 | ,045 | -,081* | ,011 |
| | Sig. (2-tailed) | ,931 | ,192 | ,314 | ,760 | ,231 | ,035 | ,094 | ,291 | ,038 | ,853 | ,001 | ,182 | ,179 | ,123 | ,132 | ,000 | ,289 | ,962 | ,229 | ,197 | ,133 | ,012 | ,561 | ,388 | ,646 | ,246 | ,037 | ,780 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 12 | Pearson | ,081* | ,137** | ,027 | ,096* | ,111** | ,058 | ,130** | ,076* | ,037 | ,043 | ,037 | ,460** | ,050 | -,015 | -,039 | ,083* | ,084* | -,006 | -,077* | -,024 | ,072 | ,358** | ,158** | ,070 | ,104** | ,093* | ,098* | ,101** |
| | Sig. (2-tailed) | ,035 | ,000 | ,492 | ,013 | ,004 | ,133 | ,001 | ,049 | ,340 | ,271 | ,342 | ,000 | ,193 | ,690 | ,318 | ,032 | ,031 | ,880 | ,049 | ,529 | ,063 | ,000 | ,000 | ,072 | ,007 | ,016 | ,012 | ,009 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 13 | Pearson | -,055 | -,048 | -,043 | -,109** | -,010 | -,010 | -,034 | -,011 | ,000 | -,005 | -,040 | -,067 | ,048 | ,039 | ,057 | ,004 | -,024 | -,004 | ,046 | -,019 | -,028 | -,037 | -,020 | -,055 | ,008 | -,005 | -,005 | -,044 |
| | Sig. (2-tailed) | ,151 | ,214 | ,267 | ,005 | ,796 | ,801 | ,381 | ,784 | ,996 | ,900 | ,297 | ,085 | ,213 | ,312 | ,144 | ,923 | ,535 | ,920 | ,234 | ,626 | ,472 | ,339 | ,612 | ,158 | ,828 | ,902 | ,896 | ,260 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 14 | Pearson | -,021 | -,065 | ,039 | -,002 | -,031 | -,015 | -,152** | -,071 | -,054 | -,036 | -,095* | -,056 | -,051 | ,236** | -,001 | ,035 | -,011 | -,026 | -,030 | -,031 | ,010 | -,089* | -,041 | -,042 | -,047 | -,083* | ,006 | -,065 |
| | Sig. (2-tailed) | ,585 | ,095 | ,308 | ,958 | ,427 | ,696 | ,000 | ,065 | ,164 | ,345 | ,014 | ,151 | ,190 | ,000 | ,976 | ,363 | ,780 | ,498 | ,440 | ,428 | ,789 | ,021 | ,293 | ,276 | ,224 | ,032 | ,887 | ,092 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 15 | Pearson | -,111** | -,083* | ,048 | -,012 | -,108** | ,006 | -,068 | ,016 | ,037 | -,167** | -,036 | -,251** | ,011 | ,087* | ,228** | ,006 | ,107** | -,030 | ,024 | ,022 | ,075 | -,185** | -,092* | -,026 | -,093* | -,037 | -,024 | -,125** |
| | Sig. (2-tailed) | ,004 | ,032 | ,214 | ,748 | ,005 | ,869 | ,082 | ,674 | ,336 | ,000 | ,355 | ,000 | ,780 | ,023 | ,000 | ,879 | ,006 | ,443 | ,542 | ,564 | ,051 | ,000 | ,018 | ,508 | ,016 | ,336 | ,541 | ,001 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 16 | Pearson | -,052 | -,087* | -,008 | -,006 | -,036 | ,027 | -,067 | -,048 | ,005 | -,135** | -,089* | -,091* | -,107** | ,106** | ,063 | ,219** | -,001 | ,049 | ,013 | -,027 | -,012 | -,131** | -,013 | -,062 | -,016 | -,007 | ,029 | -,225** |
| | Sig. (2-tailed) | ,178 | ,024 | ,829 | ,881 | ,346 | ,482 | ,085 | ,213 | ,906 | ,000 | ,021 | ,019 | ,006 | ,006 | ,101 | ,000 | ,972 | ,203 | ,745 | ,490 | ,749 | ,001 | ,730 | ,110 | ,675 | ,851 | ,458 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 17 | Pearson | ,018 | -,008 | ,130** | ,018 | ,031 | ,009 | ,006 | -,018 | ,158** | -,088* | ,049 | -,074 | ,009 | ,043 | ,137** | ,033 | ,255** | ,025 | ,026 | -,036 | ,094* | -,035 | ,009 | ,046 | -,040 | ,001 | ,043 | -,053 |
| | Sig. (2-tailed) | ,633 | ,840 | ,001 | ,639 | ,430 | ,822 | ,876 | ,638 | ,000 | ,023 | ,205 | ,056 | ,821 | ,268 | ,000 | ,394 | ,000 | ,515 | ,502 | ,355 | ,014 | ,365 | ,810 | ,237 | ,297 | ,974 | ,263 | ,170 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 18 | Pearson | -,081* | -,018 | -,083* | -,047 | ,086* | ,027 | -,019 | ,050 | ,059 | ,010 | ,065 | -,025 | -,048 | ,022 | -,005 | ,038 | -,082* | ,350** | ,340** | ,102** | -,098* | -,021 | -,190** | -,024 | ,025 | ,119** | -,045 | -,080* |
| | Sig. (2-tailed) | ,034 | ,646 | ,032 | ,228 | ,025 | ,488 | ,632 | ,193 | ,130 | ,787 | ,094 | ,517 | ,217 | ,567 | ,902 | ,321 | ,034 | ,000 | ,000 | ,009 | ,011 | ,592 | ,000 | ,531 | ,522 | ,002 | ,243 | ,039 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 19 | Pearson | -,137** | -,089* | -,087* | -,093* | -,028 | -,046 | -,057 | -,062 | -,026 | -,099** | -,035 | -,160** | -,024 | -,036 | -,053 | -,048 | -,111** | ,136** | ,347** | -,011 | -,163** | -,138** | -,197** | -,081* | -,086* | -,022 | -,153** | -,196** |
| | Sig. (2-tailed) | ,000 | ,021 | ,025 | ,016 | ,476 | ,238 | ,144 | ,107 | ,510 | ,010 | ,368 | ,000 | ,531 | ,354 | ,169 | ,210 | ,004 | ,000 | ,000 | ,766 | ,000 | ,000 | ,000 | ,036 | ,025 | ,578 | ,000 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 20 | Pearson | -,095* | ,017 | -,100** | -,072 | -,020 | -,001 | ,099* | ,043 | ,025 | -,034 | -,031 | -,096* | ,019 | -,039 | ,036 | ,020 | -,068 | ,067 | ,108** | ,273** | -,045 | ,011 | -,052 | ,040 | -,042 | -,002 | -,029 | -,053 |
| | Sig. (2-tailed) | ,014 | ,653 | ,010 | ,063 | ,604 | ,974 | ,011 | ,268 | ,517 | ,378 | ,418 | ,013 | ,615 | ,308 | ,351 | ,614 | ,081 | ,084 | ,005 | ,000 | ,249 | ,782 | ,179 | ,303 | ,278 | ,960 | ,458 | ,170 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 21 | Pearson | ,001 | -,037 | ,042 | ,037 | -,094* | -,016 | -,077* | -,066 | ,099* | -,034 | -,035 | -,092* | ,009 | -,001 | ,069 | -,023 | ,054 | -,070 | -,135** | -,010 | ,205** | -,105** | -,039 | ,024 | -,022 | -,002 | ,080* | ,011 |
| | Sig. (2-tailed) | ,986 | ,341 | ,273 | ,340 | ,015 | ,673 | ,049 | ,089 | ,011 | ,382 | ,372 | ,018 | ,825 | ,974 | ,075 | ,552 | ,166 | ,071 | ,000 | ,799 | ,000 | ,006 | ,310 | ,539 | ,573 | ,963 | ,039 | ,778 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | Pearson | -,009 | ,086* | -,063 | -,091* | ,005 | -,037 | ,135** | ,091* | -,030 | ,016 | ,035 | ,200** | ,001 | -,032 | -,112** | -,066 | -,130** | -,031 | ,011 | ,009 | -,058 | ,239** | ,042 | -,027 | ,104** | ,019 | -,056 | ,078* |
| | Sig. (2-tailed) | ,812 | ,026 | ,106 | ,018 | ,905 | ,342 | ,001 | ,018 | ,433 | ,672 | ,370 | ,000 | ,972 | ,412 | ,004 | ,089 | ,001 | ,417 | ,768 | ,822 | ,136 | ,000 | ,274 | ,484 | ,007 | ,624 | ,147 | ,044 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 23 | Pearson | ,037 | ,015 | -,062 | -,059 | -,028 | -,079* | ,007 | -,069 | -,052 | ,072 | -,018 | ,061 | ,009 | -,064 | -,024 | ,008 | -,007 | -,104** | -,162** | -,082* | ,024 | -,039 | ,271** | ,009 | ,054 | -,064 | -,071 | ,074 |
| | Sig. (2-tailed) | ,341 | ,690 | ,109 | ,124 | ,464 | ,042 | ,858 | ,072 | ,181 | ,062 | ,635 | ,117 | ,821 | ,099 | ,536 | ,831 | ,860 | ,007 | ,000 | ,034 | ,538 | ,310 | ,000 | ,822 | ,163 | ,099 | ,066 | ,056 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 24 | Pearson | ,036 | ,041 | ,012 | ,002 | -,065 | ,012 | -,017 | -,021 | -,077* | ,025 | ,098* | -,026 | ,073 | -,023 | -,028 | -,109** | -,035 | -,046 | -,023 | -,036 | -,057 | -,011 | ,038 | ,188** | -,019 | -,002 | -,134** | ,050 |
| | Sig. (2-tailed) | ,356 | ,288 | ,764 | ,959 | ,092 | ,758 | ,668 | ,588 | ,047 | ,524 | ,011 | ,495 | ,061 | ,548 | ,477 | ,005 | ,372 | ,234 | ,557 | ,355 | ,139 | ,780 | ,325 | ,000 | ,621 | ,963 | ,001 | ,198 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 25 | Pearson | ,065 | ,031 | ,037 | ,003 | ,003 | ,003 | ,025 | -,061 | ,018 | ,131** | -,012 | ,089* | ,005 | -,152** | -,068 | -,049 | ,044 | -,069 | -,173** | -,057 | ,054 | ,023 | ,100** | ,039 | ,201** | -,007 | ,049 | ,181** |
| | Sig. (2-tailed) | ,094 | ,424 | ,333 | ,932 | ,943 | ,932 | ,528 | ,111 | ,645 | ,001 | ,757 | ,022 | ,899 | ,000 | ,078 | ,210 | ,262 | ,076 | ,000 | ,139 | ,163 | ,560 | ,010 | ,314 | ,000 | ,847 | ,211 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 26 | Pearson | ,021 | -,013 | -,128** | -,028 | ,079* | -,039 | -,057 | -,014 | -,061 | ,010 | -,032 | -,017 | -,028 | -,011 | -,076* | -,031 | -,076 | ,040 | ,048 | ,029 | -,117** | -,014 | -,073 | -,013 | ,064 | ,292** | ,000 | -,025 |
| | Sig. (2-tailed) | ,577 | ,735 | ,001 | ,468 | ,040 | ,314 | ,146 | ,712 | ,113 | ,796 | ,403 | ,659 | ,471 | ,779 | ,049 | ,417 | ,051 | ,304 | ,215 | ,450 | ,002 | ,727 | ,059 | ,731 | ,096 | ,000 | ,998 | ,517 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 27 | Pearson | ,060 | -,088* | -,015 | ,010 | -,029 | ,035 | -,054 | -,063 | ,095* | -,058 | -,102** | -,104** | ,014 | -,018 | ,055 | -,008 | ,018 | -,046 | -,104** | -,065 | ,048 | -,071 | ,001 | -,045 | -,033 | -,046 | ,325** | -,006 |
| | Sig. (2-tailed) | ,117 | ,023 | ,699 | ,790 | ,452 | ,373 | ,168 | ,102 | ,014 | ,131 | ,008 | ,007 | ,713 | ,648 | ,157 | ,843 | ,636 | ,230 | ,007 | ,092 | ,217 | ,067 | ,982 | ,249 | ,395 | ,232 | ,000 | ,883 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |
| 28 | Pearson | ,017 | ,012 | ,011 | -,014 | -,038 | -,003 | -,054 | -,093* | -,098* | ,079* | -,021 | -,004 | ,022 | -,040 | -,090* | -,074 | -,051 | -,189** | -,145** | -,076* | -,032 | -,015 | ,068 | ,025 | ,058 | -,036 | ,003 | ,311** |
| | Sig. (2-tailed) | ,652 | ,754 | ,769 | ,712 | ,322 | ,937 | ,162 | ,016 | ,012 | ,041 | ,591 | ,919 | ,577 | ,304 | ,020 | ,056 | ,188 | ,000 | ,000 | ,050 | ,403 | ,701 | ,081 | ,519 | ,135 | ,353 | ,942 | ,000 |
| | N | 676 | 670 | 669 | 671 | 672 | 669 | 662 | 673 | 668 | 672 | 669 | 668 | 668 | 673 | 667 | 670 | 663 | 669 | 665 | 670 | 671 | 670 | 669 | 671 | 672 | 668 | 664 | 669 |

Appendix 6. Differences in student group perceptions according to academic discipline

| | Educational sciences | | | Applied social science | | | Humanities | | | Natural sciences | | | Technologies | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | *n* | Std. D | M | *n* | Std. Dev | M | *n* | Std. D | M | *n* | Std. D | M | *n* | Std. D | F |
| Accessible | 3,11 | 109 | 0,875 | 3,37 | 248 | 0,853 | 3,2 | 98 | 0,984 | 3,57 | 67 | 0,529 | 3,15 | 154 | 1,153 | 4,028** |
| Approachable/Personable | 3,82 | 109 | 0,389 | 3,56 | 245 | 0,845 | 3,55 | 97 | 0,958 | 3,63 | 65 | 0,651 | 3,49 | 154 | 0,916 | 2,867* |
| Authoritative | 3,19 | 109 | 1,058 | 3,09 | 245 | 1,205 | 2,84 | 96 | 1,292 | 3,07 | 68 | 1,069 | 2,91 | 151 | 1,4 | 1,53 |
| Confident | 3,57 | 106 | 0,793 | 3,58 | 246 | 0,833 | 3,36 | 98 | 1,077 | 3,53 | 68 | 0,559 | 3,52 | 153 | 0,946 | 1,224 |
| Creative/Interesting | 3,72 | 109 | 0,668 | 3,62 | 247 | 0,894 | 3,53 | 95 | 0,955 | 3,43 | 68 | 1,15 | 3,24 | 153 | 1,271 | 4,865** |
| Effective Communicator | 3,75 | 107 | 0,568 | 3,68 | 247 | 0,753 | 3,65 | 97 | 0,791 | 3,49 | 67 | 0,927 | 3,62 | 151 | 0,847 | 1,306 |
| Encourages/Cares for Students | 3,32 | 108 | 1,022 | 3,08 | 240 | 1,163 | 3,29 | 96 | 1,025 | 2,95 | 66 | 1,208 | 2,86 | 152 | 1,421 | 3,414** |
| Enthusiastic about Teaching | 3,59 | 109 | 0,76 | 3,28 | 247 | 1,096 | 3,41 | 97 | 1,058 | 3,22 | 67 | 0,982 | 3,06 | 153 | 1,263 | 4,244** |
| Establishes Goals | 3,17 | 108 | 1,081 | 2,92 | 243 | 1,242 | 2,8 | 98 | 1,316 | 2,57 | 68 | 1,489 | 2,75 | 151 | 1,313 | 2,919* |
| Flexible/Open-minded | 3,25 | 110 | 1,151 | 3,18 | 246 | 1,183 | 3,4 | 97 | 0,909 | 3,21 | 68 | 1,153 | 3,11 | 151 | 1,268 | 0,991 |
| Good Listener | 3,47 | 109 | 0,8 | 3,17 | 243 | 1,166 | 3,41 | 97 | 0,91 | 2,97 | 68 | 1,197 | 3,09 | 153 | 1,143 | 3,785** |
| Happy/Positive/Humorous | 2,68 | 109 | 1,367 | 2,41 | 242 | 1,509 | 2,37 | 96 | 1,394 | 2,46 | 68 | 1,419 | 2,47 | 153 | 1,46 | 0,763 |
| Humble | 2,37 | 107 | 1,411 | 2,13 | 245 | 1,398 | 2,21 | 97 | 1,507 | 2,03 | 66 | 1,519 | 2,02 | 153 | 1,498 | 1,1 |
| Knowledgeable About Topic | 3,62 | 109 | 0,767 | 3,6 | 247 | 0,829 | 3,65 | 96 | 0,794 | 3,54 | 68 | 0,8 | 3,59 | 153 | 0,854 | 0,175 |
| Prepared | 3,64 | 110 | 0,631 | 3,45 | 243 | 0,941 | 3,54 | 93 | 0,841 | 3,42 | 67 | 0,631 | 3,21 | 154 | 1,171 | 3,86** |
| Presents Current Information | 3,41 | 110 | 0,912 | 3,49 | 244 | 0,9 | 3,25 | 96 | 1,152 | 3,4 | 67 | 0,986 | 3,17 | 153 | 1,261 | 2,556* |
| Professional | 2,87 | 110 | 1,307 | 2,68 | 241 | 1,324 | 2,39 | 95 | 1,355 | 2,49 | 65 | 1,404 | 2,57 | 152 | 1,393 | 1,966 |
| Promotes Class Discussion | 2,72 | 110 | 1,389 | 2,83 | 246 | 1,289 | 2,7 | 94 | 1,302 | 2,45 | 67 | 1,407 | 2,38 | 152 | 1,442 | 3,044* |
| Promotes Critical Thinking | 2,79 | 107 | 1,36 | 2,73 | 244 | 1,396 | 3,08 | 97 | 1,239 | 2,09 | 66 | 1,465 | 2,4 | 151 | 1,484 | 6,676** |
| Provides Constructive Feedback | 3,69 | 108 | 0,757 | 3,57 | 245 | 0,915 | 3,63 | 98 | 0,694 | 3,25 | 65 | 1 | 3,44 | 154 | 0,9 | 3,454** |
| Manages Class Time | 3,39 | 110 | 0,968 | 3,14 | 245 | 1,23 | 3,1 | 96 | 1,147 | 3,22 | 68 | 0,861 | 3,07 | 152 | 1,264 | 1,471 |
| Rapport | 2,73 | 108 | 1,28 | 2,51 | 244 | 1,444 | 2,52 | 98 | 1,394 | 2,41 | 68 | 1,468 | 2,3 | 152 | 1,423 | 1,586 |
| Realistic Expectations/Fair | 3,36 | 110 | 1,038 | 3,3 | 243 | 1,126 | 3,19 | 98 | 1,198 | 3,22 | 67 | 1,098 | 3,17 | 151 | 1,279 | 0,608 |
| Respectful | 3,77 | 108 | 0,65 | 3,63 | 246 | 0,892 | 3,73 | 97 | 0,49 | 3,21 | 67 | 1,286 | 3,57 | 153 | 0,849 | 5,298** |
| Sensitive/Persistent | 2,88 | 110 | 1,225 | 2,79 | 243 | 1,369 | 2,47 | 98 | 1,452 | 2,49 | 67 | 1,561 | 2,54 | 154 | 1,474 | 2,205 |
| Strives to Be a Better Teacher | 2,98 | 108 | 1,26 | 2,74 | 243 | 1,413 | 2,79 | 97 | 1,282 | 2,46 | 68 | 1,429 | 2,61 | 152 | 1,438 | 1,934 |
| Technologically Competent | 2,44 | 107 | 1,468 | 2,62 | 242 | 1,479 | 2,45 | 97 | 1,422 | 2,58 | 67 | 1,448 | 2,68 | 151 | 1,387 | 0,663 |
| Understanding | 3,33 | 107 | 0,988 | 3,27 | 248 | 1,09 | 3,08 | 96 | 1,279 | 3,39 | 66 | 0,742 | 3,07 | 152 | 1,323 | 1,764 |

**Lihtlitsents lõputöö reprodutseerimiseks ja lõputöö üldsusele kättesaadavaks tegemiseks**

Mina Karina Jõemaa (sünnikuupäev: 03.04.1982)

1. annan Tartu Ülikoolile tasuta loa (lihtlitsentsi) enda loodud teose „Student Perceptions of Master Teacher“, mille juhendajad on Mari Karm, Piret Luik ja James Groccia

   1.1. reprodutseerimiseks säilitamise ja üldsusele kättesaadavaks tegemise eesmärgil, sealhulgas digitaalarhiivi DSpace-is lisamise eesmärgil kuni autoriõiguse kehtivuse tähtaja lõppemiseni;
   1.2. üldsusele kättesaadavaks tegemiseks Tartu Ülikooli veebikeskkonna kaudu, sealhulgas digitaalarhiivi DSpace´i kaudu kuni autoriõiguse kehtivuse tähtaja lõppemiseni.

2. olen teadlik, et punktis 1 nimetatud õigused jäävad alles ka autorile.

3. kinnitan, et lihtlitsentsi andmisega ei rikuta teiste isikute intellektuaalomandi ega isikuandmete kaitse seadusest tulenevaid õigusi.

Tartus 20.05.2013