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professor/student perception correlations of the MUSIC® Model components"

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professor/student perception correlations of the MUSIC® Model components"

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# Universitetet i Stavanger

“A study of academic motivation during COVID-19 in tourism and hospitality education:  
professor/student perception correlations of the MUSIC® Model components”

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# Abstract

The purpose of this study is to investigate correlations in perception of academic motivation between professors and students in a teaching setting affected by COVID-19. The components used to measure motivation are taken from the MUSIC<sup>®</sup> Model of Academic Motivation, which estimates motivation using five metrics: eMpowerment, Usefulness, Success, Interest and Caring. A quantitative design was used in this study utilising two surveys. One survey measured the perceptions of tourism and hospitality professors, the other measured the perceptions of the students attending the courses of the surveyed professors. Finally, results were compared to find differences in perception in the same class between professors and students. The main findings from this study suggest that there are some variations in the perceptions of the MUSIC-components. They showed overall higher perceptions of the MUSIC-components among the professors. The largest difference in perceptions between professors and students was found in the Caring and Usefulness components. These were also the two of the five components that was perceived the highest. These differences were argued to be affected by the rapid change of the Interest component. This change, initiated by COVID-19, was the transformation from classroom to online teaching. The Interest component, defined by a student's interest in the instructional methods used in teaching, was both perceived lowest and least different. This suggests that an improvement in the instructional methods professors' use can lead to a decreased gap in perception between professors and students in the Caring and Usefulness components.

# Foreword

In March 2020, half-way through my tourism management bachelor's degree, COVID-19 closed down the lecturing halls at the University of Stavanger. Since then, not only my university, but most universities across the globe faced a rapid change from classroom to online teaching. Suddenly, I went from seeing dozens of faces in the lecturing hall every day to a handful faces on Zoom accompanied by a crowd of black silent screens. While confronting my own declining motivation in digital-lecturing I wondered how this change impacted those around me, my fellow-students, my professors. Did we all perceive this situation the same, or were there clear areas of dissimilarities we could detect and improve?

I owe a lot of thank you's to the people who helped and supported me through this writing process. Mona Anita K. Olsen, my supervisor, and the most difference-making person I know. Thank you for your advice, guidance, and constant encouragement. Dr. Brett Jones, thank you for your responsiveness to my mails and insightful recommendations. I'm very grateful to you. A big thank you to all the professors agreeing to participate in the research and letting me survey their students. Thank you, Andrea, for your valuable feedback on my writing and uplifting conversations in difficult times. Thank you, Kristine, for not only helping me see straight through this writing process, but also for being in class with me every day for the last 3 years. My experience of this bachelor's degree would not have been the same without you. Thank you, Mother, for being my biggest cheerleader and making me believe I can do this. Thank you, Fabien and Chris, for help and support in the last days before delivering this thesis. Lastly, I would like to thank you Clément, for being the king of punctuation rules, and for your daily supporting reminders of "You're stronger than you think."

Elisa Day Svarstad, May 17<sup>th</sup>, 2021

# Content

<b>ABSTRACT.....</b>	<b>III</b>
<b>FOREWORD .....</b>	<b>IV</b>
<b>INDEX .....</b>	<b>VII</b>
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 DELIMITATION .....	2
1.2 PREVIOUS RESEARCH .....	3
<b>2. THEORY .....</b>	<b>5</b>
2.1 PERCEPTION THEORY .....	5
2.2 THE MUSIC® MODEL OF ACADEMIC MOTIVATION.....	7
2.2.1 <i>eMpowerment</i> .....	8
2.2.2 <i>Usefulness</i> .....	9
2.2.3 <i>Success</i> .....	9
2.2.4 <i>Interest</i> .....	10
2.2.5 <i>Caring</i> .....	11
<b>3. METHOD .....</b>	<b>12</b>
3.1 RESEARCH QUESTION.....	12
3.2 RESEARCH DESIGN .....	14
3.3 METHOD FOR DATA COLLECTION.....	14
3.4 SAMPLE SELECTION AND DATA COLLECTION .....	17
3.5 ANALYSE DATA.....	22
3.6 PRESENT RESULTS.....	23
<b>4. RESULTS .....</b>	<b>24</b>
<b>5. DISCUSSION.....</b>	<b>27</b>

5.1 HIGHER PROFESSOR PERCEPTIONS .....	27
5.2 CARING AND USEFULNESS COMPONENT DIFFERENCES .....	29
5.3 INTEREST COMPONENT.....	31
5.4 ADJUSTMENTS AND FUTURE RESEARCH .....	32
<b>6. CONCLUSION .....</b>	<b>34</b>
<b>REFERENCE LIST.....</b>	<b>35</b>
<b>APPENDIX.....</b>	<b>37</b>
<i>Appendix A Mail conversation with Dr. Jones.....</i>	<i>37</i>
<i>Appendix B Full table of results.....</i>	<i>39</i>
<i>Appendix C Paired Samples Correlations Test.....</i>	<i>40</i>
<i>Appendix D Professor Survey and Student Survey .....</i>	<i>40</i>

# Index

**Table 1:** Mean, Standard Deviation (SD) and Delta ( $\Delta$ ) results from the sample size. (Page 31)

**Figure 1:** Bar chart of average perceptions on the MUSIC-components by professors and students on a scale measuring: 1 = Strongly disagree. 2 = Disagree. 3 = Somewhat disagree. 4= Somewhat agree. 5 = Agree. 6 = Strongly agree. (Page 34)

# 1. Introduction

Academic motivation is a critical factor for a lot of young people's success in our society. Motivation to learn, engagement in learning, and ultimately good grades can open doors for further and higher education. This may lead to more opportunities in life. Each student perceives their journey through the school system differently. Some students experience higher motivation, and some students experience lower motivation. Research has shown that intrinsic motivation for school related activities declines over the years, which has been argued to occur due to schools not providing a motivational structure for the students (Ryan & Deci, 2020, p. 2). In other words, it may not be the capacity for motivation in students that is the problem with gradually lower academic motivation as children come of age, but rather how the environment for their learning is organized. It would seem logical to place students in an environment that would be resilient to this decline in intrinsic motivation. How does one determine such an environment?

The question is a complex one. Students have different ways of learning, different personalities, and triggers for motivation. Teachers have different methods for teaching. Unfortunately, there's no one-size fits all. The approach of a particular teacher might be unfit for a majority of the classroom. Even if the teacher tailor its approach to the class, the diversity of differences across a class often make the teacher unable to satisfy all of them. The unfortunate encounter can lead to dissatisfied and unmotivated students, and in worst case scenario, students dropping out of school.

Another dimension has recently added more complexity to the teaching scene: COVID-19. Working towards providing an optimal motivational structure in a rapidly digitalized classroom can promote more students to stay engaged in school.



This thesis will attempt to shine light on one of the many aspects regarding the complexity of the teaching environment, the correlation between two groups:

1. How students perceive five components tied to academic motivation in the classroom
2. How professors perceive those same five components for academic motivation in the same classrooms

The five components, taken from The MUSIC® Model of Academic Motivation, being: eMpowerment, Usefulness, Success, Interest and Caring (Jones, 2012/2021, p. 9).

This will allow to detect possible differences in perceptions from the different points of view and perhaps bring us one step closer to an answer to what decreases students' intrinsic motivations as they mature through the school system.

## **1.1 Delimitation**

This thesis is scrutinizing academic motivation through the lens of perception. Academic motivation is a wide field concerned with a line of different theories and models. The theoretical part of academic motivation in this thesis will be exclusively built on the The MUSIC® Model of Academic Motivation by Dr. Brett D. Jones and the theories the model has drawn theory foundation from (Jones, 2012/2021). Perception theory is also limited to two central theories, “Direct Perception Theory” and “Constructive Perception Theory”, which have contradictory standpoints on the processes of perception. The reason for choosing contradictory theories is to illustrate the spectrum of perception-theory within the size limitations of this project.

The project was also limited to preform data collection strictly online due to COVID-19. If the study were to be performed again, an in-person data collection would most likely have

increased answering rates and improved the quality of the study, and therefore would have been preferred.

In addition, the scope of the thesis: 20 STP, time frame, and word limitation, set the framework for size and depth. Due to this, the sample size was taken from a population with similar characteristics and the research design was limited to a quantitative design. Perhaps in the future a mixed design study with both quantitative and qualitative data would be useful to investigate this area further.

## **1.2 Previous research**

A pioneer within the field of academic motivation is Dr. Brett Jones. His progressive research and contribution to the field has led to the creation of “The MUSIC<sup>®</sup> Model of Academic Motivation” (Jones, 2009). This model, as previously mentioned, concerns the components eMpowerment, Usefulness, Success, Interest and Caring. Validation studies of the model have been conducted in several countries across the globe such as USA (Jones & Skaggs, 2016), China and Colombia (Jones, Li, & Cruz, 2017), Iceland (Schram, 2015) and Egypt (Mohamed, Soliman, & Jones, 2013). As well as over several age groups such as elementary school students (Sigmon & Jones, 2016), middle school students (Schram, 2015), high school students (Park, Jones, & Wilkins, 2015) and university students (Jones & Skaggs, 2016). Among the research conducted at university level there are validations studies across a variety of different university majors such as veterinary medicine students (Jones, Byrnes, & Jones, 2019), engineering students (Lee, Kajfez, & Matusovich, 2013) and pharmaceutical students (Pace, Ham, Poole, & Wahaib, 2016). These studies have shown that high perception of the components of the MUSIC<sup>®</sup> Model, were linked to high academic motivation, as well as low perception in the

components were linked to low academic motivation. The model has also been used for looking into the necessity of designing online courses differently for different genders (Jones, Monahan Watson, Rakes, & Akalin, 2012). However, as no need for different designs in online courses were detected in that study, it was decided to not retain gender as a focus area in this study.

A common procedure for the previous research has been looking into how students perceive the MUSIC-components in their courses, then tying the presence of the recognition of the components to academic motivation. The findings from the studies discussed above suggests that the presence of positively perceived components from the MUSIC® Model are co-existing with academic motivation in the classroom.

Putting aside the familiar research conducted on students, there seems to be a territory within the arena of the MUSIC® Model research yet to be discovered: The students in a selected class' perceptions measured up against the perceptions of the professor of that class. After an email exchange with Jones himself (Appendix A), it became clear that looking into professors and students' correlation in perceptions using the model were in fact still undiscovered territory and yet to be investigated. It is this area of student-professor perception correlations in academic motivation that this thesis will examine.

## 2. Theory

This chapter will begin by discussing two major theories of perception: “Direct Perception Theory” and “Constructive Perception Theory”. Moreover, it will be considered how these theories differ and in which situations each type of perception is relevant. Next, factors affecting perceptions will be presented. Finally, the theory behind the MUSIC-model will be explored with a brief examination of each component of the model.

### 2.1 Perception theory

Perception is important as it's through our own perceptions that we make sense of the world around us. If we are to make sense of how professors and students are experiencing academic motivation, we must first understand why they perceive their experiences the way they do.

Two central theories in the field of perception are Gibson's “Direct Perception Theory” and Gregory's “Constructive Perception Theory”. Gibson's take on perception, also known as ecological theory of perception, argues for how information observed exclusively through sensory input is enough to understand the environment one is present in. As a result it's not needed to draw assumptions or speculations about the surroundings to comprehend it fully, as the sensory input is considered sufficient (Learndojo.org, 2021). According to Gibson, the perception's origin is the stimulus itself. This accounts for a bottom-up processing, which is explained as *“carried out in one direction from the retina to the visual cortex, with each successive stage in the visual pathway carrying out ever more complex analysis of the input”* (McLeod, 2018). This means, the order of perception starts with being exposed to sensory

stimuli through the eyes, then signalling the information received from the stimuli to the brain where the signals are processed, and ultimately a perception is established. This way of interpreting sensory information can be described as “real-time” interpretation as it is based on the present sensory information as opposed to past knowledge or experiences (Rousay, 2021a).

Gregory’s Constructive Perception Theory on the other hand proclaims our perceptions originate from the past, using a top-down processing mechanism. This process has been described this way: “*Top-down processing involves the brain 'sending down' stored information to the sensory system as it receives information from the stimulus, enabling a plausible hypothesis to be made without the need to analyse every feature of the stimulus*» (Rousay, 2021b). In other words, it's critical to embody anticipation based on prior knowledge to grasp sensory stimuli completely. Gregory’s way of understanding perception processes argues that sensory stimuli on its own is not adequate to provide enough information to make sense of one’s surroundings.

One way to understand these theories in practice is to look at Gibson’s Direct Perception Theory as useful when exposed to new stimuli, as previous experiences might not be a utilitarian source for interpretation of the stimuli hence, the senses might be more applicable. Gregory’s Constructive Perception Theory has its utility to when one is exposed to already experienced stimuli as the mental processing already has an idea of what one is seeing and shortcut the analysing process of the stimuli.

Following the global COVID-19 pandemic, most teaching settings rapidly changed from in-classroom to online lectures for safety reasons. The high-speed development of the advancements within the realm of online teaching has created a new teaching setting to perceive for both students and teachers. Still, the prospect of teaching is familiar, however there is novelty

in how the teaching is conducted. Should Gibson's or Gregory's perception theory be used in our new teaching environments?

Four factors affecting our perceptions are culture, expectation, emotion, and motivation. Culture affects our perception by creating assumptions about reality in accordance with what we are taught the world is like by the environment we are raised in. Expectations play a role as we're more likely to perceive something if we expect that something to occur. These expectations are again affected by how we feel in the moment of perception, our emotions, and what we seek to encounter, our motivation (Learndojo.org, 2021).

## **2.2 The MUSIC® Model of Academic Motivation**

The MUSIC® Model of Academic Motivation was first presented in 2009, by Jones at Virginia Tech, as a tool to help teachers design their courses in a way that would increase motivation among their students (Jones, 2009). The model's three aspects are:

- “1. To design instruction that motivates students*
- 2. To diagnose motivational strengths and weaknesses of instruction*
- 3. To research relationships among factors critical to student motivation”* (Jones, 2012/2021, p. 3).

Jones defines motivation as *“the extent to which one intends to engage in an activity.”* (Jones, 2018, p. 5). In other words, motivation is how a person thinks about doing a particular action. Four critical aspects with his definition being extent, intent, engagement and activity, as they together, as Jones phrases it, *“succinctly capture the essence of what I believe that many*

*instructors mean when they refer to motivation*” (Jones, 2018, p. 6). As the field of motivation is quite broad and several researchers have approached this branch of study differently, it is important to underline that during this thesis the term motivation will be used by the definition provided by Jones.

The model consists of five components which are based on a line of different theories associated with motivation: eMpowerment, Usefulness, Success, Interest, Caring. They come together in an acronym as The MUSIC® Model (Jones, 2012/2021, p. 5). The next chapters will examine the components, one at a time.

### **2.2.1 eMpowerment**

The first component of the model is “eMpowerment”. Jones defines this component as *“The degree to which a student perceives that he or she has control of his or her learning environment in the course”* (Jones, 2012/2021, p. 5). By way of explanation, empowerment in this thesis refers to a student’s feeling of authority over how she or he wants to learn. The “M” in the model has roots in self-determination theory (SDT). The SDT is a framework for *“understanding factors that facilitate or undermine intrinsic motivation, autonomous extrinsic motivation, and psychological wellness, all issues of direct relevance to educational settings»* (Ryan & Deci, 2020, p. 1). In other words, it’s a theory that centres on what affects different kinds of motivations but also mental health in learning environments. This makes SDT closely related to the MUSIC® model. However, a noteworthy difference is that SDT goes in depth and tries to explain how and why students are impacted the way that they are, while the MUSIC® model uses findings from SDT, among other theories, and focuses on designing instructions relative to the theories to maximize motivation for students (Deci & Ryan, 2000).

Ryan and Deci states that, according to SDT, there are three universal psychological needs that human beings need to meet to preserve motivation and health:

1. Being competent at something
2. Have autonomy, meaning choices and control over our actions
3. Have relatedness, meaning connected to others through positive relationships (Ryan & Deci, 2020).

The autonomy from self-determination theory translates to eMpowerment in the MUSIC® Model, as well as competent to the Success-component and relatedness to the Caring-component. Both will be further explored in their respective chapters.

### **2.2.2 Usefulness**

The second component of the model is “Usefulness”. Jones defines this component as *“The degree to which a student perceives that the coursework is useful to his or her future”* (Jones, 2012/2021, p. 5). In other words, this refers to student’s recognition of the practical purpose of what they are learning in class. The “U” component is based on Expectancy-Value Theory. It origins from the value part of the theory classified as utility value, which refers to engagement in activities because one consider the activity useful in one’s life (Eccles & Wigfield, 2020). This can increase intrinsic motivation for students as they participate because they perceive that their involvement in learning will be directly beneficial to them.

### **2.2.3 Success**

The third component of the model is “Success”. Jones defines this component as *“The degree to which a student perceives that he or she can succeed at the coursework”* (Jones, 2012/2021, p. 5). Namely, this refers to a student’s possibility to achieve favourable outcomes in



courses which in return can produce a feeling of competence. This component is tied to self-determination theory (SDT), introduced in the eMpowerment chapter, as it relates to one of the three universal needs: being competent at something. The “S” component is also largely aligned with Csikszentmihalyi’s Flow theory as enjoying and creating the optimal experience for students can lead to a flow state which is described as “*The state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it*” (Csikszentmihalyi, 1990, p. 4). The importance related to the model is in designing a course that promotes the flow state. This can be done by consider that it occurs when a person’s skills are challenged within a framework for expectations, clear goals, and lack of distractions. By removing distractions and locking a student’s focus on one thing can develop into interest, which is the next component in the model.

#### **2.2.4 Interest**

The fourth component of the model is “interest”. Jones defines this component as “*The degree to which a student perceives that the instructional methods and coursework are interesting*” (Jones, 2012/2021, p. 5). In other words, this component is reliant on the teacher’s capability to capture the attention of his or her students. This is relevant as “*interest can be nurtured and supported to develop through interactions with others and/or the design of the learning environment*” (Hidi & Renninger, 2006, p. 180). Meaning, detaining the student’s interest by way of teaching method not only increases academic motivation, but it also fosters a domain for it to exist.

### **2.2.5 Caring**

The fifth component of the model is “caring”. Jones defines this component as “*The degree to which a student perceives that the instructor cares about whether the student succeeds in the coursework and cares about the student’s well-being*” (Jones, 2012/2021, p. 5). In other words, this applies to the level of concern students feel their teachers have for them. As discussed earlier this component is also based on the self-determination theory (SDT), like eMpowerment and Success. However, the “C” component comes from the relatedness aspect of SDT, where motivation is nurtured through positive relationship with others.

## 3. Method

A qualitative descriptive design was used in this research to determine the correlation between student and professor perceptions. The strategy for conducting the research followed these defined steps:

1. Defining research question
2. Determining research design
3. Choosing data collection method
4. Sample selection and data collection procedure
5. Analyse data
6. Present results, discuss and conclude.

The following chapters will go in depth of each step of the process.

### **3.1 Research question**

This thesis is investigating whether there is an occurring correlation in how different groups of people within a common setting perceive existing or non-existing motivation. This chapter will address how this research question was defined.

First, it had to be chosen which kind of setting was going to be used to look further into motivation correlations. As this bachelor thesis is conducted as part of a business administration bachelor's degree with a major in tourism management, the presumably optimal option would have been to contact the tourism sector and choose a setting relevant to the sector. However, due to extraordinary events in the world following the COVID-19 crisis, designing a research including collecting data from the tourism industry seemed farfetched considering the scarce

resources in the industry at the moment. In addition, the warning from the administration to staying clear from collecting data from the industry and the limited time available for conduction the thesis weighted against choosing a situational context from a company in the industry.

Instead, the author decided, with encouragement from the supervisor, to investigate a situation closer to home: the classroom. The reason for this decision relied on the possibility of collecting data in the online classrooms, as the approach of collection data online would not defy the limitations put upon the world following COVID-19. Moreover, the presumption that the thesis could present substantial value to the sample size, which could potentially engage the participates to partake in the project. The situation for the motivation correlation research would be the classroom and look specifically into academic motivation.

Following the situational decision, to expand knowledge on the topic, specify the concrete research question and gathering potential theory foundation for the thesis, the process of looking up previous research on motivation in the classroom began. The literature search was conducted in the online school library, Oria, and google scholar, which led to the discovery of relevant online journals to academic motivation such as Contemporary Educational Psychology (Alexander, 2021). Quickly, Dr. Jones' MUSIC® Model of Academic Motivation was brought to attention. The model presented five components: eMpowerment, Usefulness, Success, Interest, Caring. The components are based on a wide input of theories. When the components are measured according to the model, they indicate perceived academic motivation in individuals present in academic settings (Jones, 2012/2021). After a thorough search through previous research using the model's framework, no previous studies looking into the correlation between professor and student perceptions was discovered. The discovery of this gap in research was

further confirmed in a brief email exchange with Dr. Jones himself (Appendix A). This opening for future exploration lay the baseline for what this thesis will investigate.

This thesis will attempt to shine light on the correlation between two factors:

1. How students perceive the MUSIC components in the classroom.
2. How professors perceive the MUSIC components in the same classrooms.

### **3.2 Research design**

As this thesis aims to detect correlation between two variables, student's perception and professors' perceptions, a descriptive qualitative research design is used. The usage of the term "variables" during this thesis will always refer to the student variable and the professor variable, unless otherwise stated. In the pursuit of detecting a correlation between the variables the Persons correlation and covariance formulas was intended to be used on the sample size. Unfortunately, due to difficulty of gathering a large enough sample size the means and standard deviation will be used to draw meaningful information from the data collected that can be compared to one another. For future research it would be highly suggested to use a sample size large enough to perform a t-test on the correlation between the variables.

### **3.3 Method for data collection**

The method used for data collection is online questionnaires. There are two versions of the questionnaires, one survey version distributed to students and another survey version distributed to professors. The design will follow instructions from the MUSIC® Model of Academic Motivation in the form of how the data is collected and processed (Jones, 2012/2021).

How the data will be collected will be addressed first, then how to process what is collected will follow.

The data will be collected using two of the questionnaires developed by Dr. Jones, the “college student version present tense” for the students and the “professor version present tense” for the professors (Jones, 2012/2021, p. 2). The exact surveys presented to the sample can be found in the appendix (Appendix D). The purpose of having differentiated ones is simply to get the proper formulation from the different groups’ viewpoint. To illustrate, the 1st question in the survey is formulated like this in the professor version: “The coursework holds their attention.” While the student version is composing the question this way: “The coursework holds my attention.” The signification is paired in both the variations of the questionnaires as they both endeavour to measure the perceptions of the MUSIC® Model components which later will work as the baseline for the comparison analysis.

For the quality of the data to be as adequate as possible with previous conducted research using this model, it was strongly contemplated not to alter the surveys created by Jones in any form. The questions would stay the same, as well as the language (English) even though it would be mostly Norwegian natives as respondents as the sample size is from a Norwegian university. A different native language was not considered an issue as the respondents would be students and professors who are currently participants in higher education which for large parts are conducted in English. In addition, the benefit of keeping the English version would be the possibility of participants not being native in Norwegian, hence English would be more beneficial in those cases. The decision not to alternate the questionnaires was final by the comments made by Jones on previous research which both alternated the questions and translated the questionnaires from the model (Mohamed et al., 2013, p. 25).

The questionnaires would then be distributed to the sample size via an online survey platform. In choosing an online platform to create and distribute the surveys, the most important features were two attributes: anonymity for participants and easy distribution. Anonymity was an important attribute for the survey platform due to the laws regarding storing personal information for research purposes in Norway. One is required to apply for approval, a process that can take up to 30 days at first but also requires further approval for changes in research (NSD, 2021). As the available time for the research was roughly four months, it seemed relevant to be free from the application process considering no personal information needed to be stored for completing this study. The attribute of easy distribution can be characterised as the least possible friction in the distribution process of the survey. It was considered important firstly because we are in the middle of a world pandemic which limits in person distribution possibilities and secondly because higher friction in getting the survey distributed could lead to less willingness in participating candidates in the study. The choice fell on Surveyexact as it allowed for both anonymity and easy distribution.

The procedure of processing the data once collected follows, as previously mentioned, the directions provided by Jones. These instructions include processing the questionnaires in a way that will determine perceived perception of each of the five components. This is done by assessing the possible answer alternatives with numbers in the range of 1 to 6 to the associate descriptions like this:

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree

5. Agree
6. Strongly agree

Each question on the survey is related to one of the MUSIC<sup>®</sup>-components. To obtain a score from each individual component, the questions are summed and averaged for each individual component. To illustrate, there are four questions regarding the “Success” component. Case in point the scores for those questions are say 4, 5, 4 and 2. They sum at 15 and averages at 3.75. 3.75 is the final score for the component. A higher number as a final score indicates higher perception of the component in the teaching while a lower score indicates a lower perception of the component.

These scores will be used to explore the correlation in perception between the two groups in the study: professors and students.

### **3.4 Sample selection and data collection**

The sample size consists of 6, from a total of 11, classes held for tourism and hospitality bachelor students at a University in Norway. The 6 classes attribute to a sample size consisting of 6 professors and their perceptions of the 5 MUSIC<sup>®</sup> Model components in their teaching, totalling to 30 quantities of professor perceptions (6 professors x 5 perceptions). Each of the 30 quantities of professor perceptions is paired with quantities of the average perception from the students connected to the individual professor through class attendance. A total of 58 students participated in the study. In practise this would make an exemplified pair look like this: Professor Class X Interest perception: 4,7 and Average Student Class X Interest perception: 4,35. The paired quantity in this example is 4,7 and 4,35. The paring of variables is done to allow for comparison between the two, the reason for this will be discussed shortly. The collection of the



data transpired through contacting professors directly who completed the professor version of the survey, then distributed the student survey version to their course attending students via the school's social network. This chapter will further clarify the process of how the sample size was constructed and selected, but also the process of getting the data collected.

In deciding how the sample size would work in practice, it was first considered to simply distribute one questionnaire to all students in a bachelor program and one questionnaire to all professors in a bachelor program and for this to hold as a valid sample. Then the issue with comparability arose. If the purpose of this thesis is to investigate how set situations are perceived differently from two sides, then the data would have to be collected from specific situations. Collecting data from an overall bachelor program would not guarantee this as it would cause several weaknesses to the design. First, the students would probably think differently about the different classes in their program so the accuracy of their answers would decrease. Second, the students would have had different selective courses during their bachelor program, meaning they would not be referring to the same situation in their answers to the questionnaire. Thirdly, the professors might have different classes, hence which class would they answer for? Finally, there was the possibility that students would be compared to a professor they might have never been in the class of, and vice versa. A bundle of weaknesses with approaching this sample construction was identified. Despite the arising complexity around assembling a justifiable sample structure, the idea remained as the specific research territory is untouched, yet valuable as the possibility of detecting a pattern in academic motivation perceptions for different groups can lead to beneficial insights in how teaching is seen through different lenses.

For some clarification on the matter regarding building a valid sample structure, the next step was contacting Dr. Jones, the creator of the model, to discuss the idea further (Appendix A).

In the mail exchange the idea of comparing student's and professor's perceptions was explained with an emphasis on the struggle to manifest how this idea would be conducted in reckon to choosing a valid sample form for the research. The conversation was focused on how to strengthen the arrangements for the sample, in addition, Jones provided advice on how to process the data once collected. The mail exchange concluded with a different sample selection than originally imagined, as every comparison between professor and student had to be comparable values, as well as accurate ones (Appendix A). The way to make the sample more evidential and accurate would be to adjust the scope of the questionnaires. The adjustment would go from looking at a bachelor level, which in the pre-considered sample selection would account for an overall perception of a total of roughly 16 courses for the students, to have the questionnaires be directed at only one specific and current course. This may assumably increase the accuracy of the students' perceptions by far as the perceptions would be limiting in both time (one semester versus three years), size (one specific course versus roughly 16) and variability (one professor and his or hers teaching methods versus several different ones). It would also allow for the variables to be comparable as they would have been taken from the same situation, being one specific course. This would entail that only students attending a specific course would answer the questionnaire connected to that specific course and ultimately to the professor of the specific course, assuring that the professor and student could be compared as they did in fact value the same situation.

With a solution to the troubling sample size construction the next step was determining the rim of the sample size and contacting candidates to participate in the study. As this thesis is written as a part of a tourism management bachelor's degree and in addition there are no existing validation studies for the MUSIC<sup>®</sup> Model from tourism and hospitality students it was decided to

conduct this research on participants in the tourism and hospitality bachelor programs at a Norwegian university. Both programs are directed from the same faculty administration and are similar in subjects and instructional methods as they follow the same principles set by the administrative department. A notable characteristic with the sample size and it's teaching is how the instructional methods for the courses have shifted form an in-classroom teaching to online teaching through zoom following the COVID-19 epidemic. This directly affects the Interest-component of the MUSIC® Model. The characteristic of this shift is common for professors however, this characteristic might vary for students as some students began the bachelor programs before the shift while others began after.

A bias with the sample selection is the writer's attendance to one of the two programs therefore personal involvement and connection with several participating candidates which might lead to a bias in the responses collected for the thesis. Indeed, a better solution would have been to select a sample size unrelated to the writer to illuminate this bias. The reason for that option not being approached is how the rapid change from in-person to online teaching has increased the online communication between professors and students following COVID-19, assumably leading to more difficulty in getting a hold of professors via internet channels as personal meetings are limited in this time era. Also, the assumption that the willingness of professors to participate in additional studies are decreased because of COVID-19 weight in on the decision. Both assumptions were partly confirmed in the following procedure.

The 10 professors in the selected research population, who holds the 11 courses in the tourism and hospitality bachelor programs (one professors have two separate classes) during the research semester for this thesis, were reached out to by mail explaining the purpose of the data collection and how the data would be collected.

The idea for the collection process was to attend lectures held by the professors online, as all teaching is performed online following COVID-19, then to explain the purpose of the study to students live and distribute the surveys during real time to hopefully get the largest number of respondents. One of the 10 professors answered the mail positively acknowledging that of course I could survey the professor's students. Another professor answered the email and addressed the concern with loading students with additional surveys as following COVID-19 students have been pushed on with surveys regarding changes and impacts the pandemic. Following the concern, the method for collecting data got altered, according to second professor's suggestion, that a better way of distributing the questionnaires for everyone would be to send the link to the survey to the professors and have the professors post them to the students on the online media the University uses for communication and not use lecturing time on surveys. The worry with this approach was low response rates which is why this approach hadn't been considered from the start. However, to be able to get the survey distributed the suggested approach was used. Informing the professors of the change in collection method did not provoke more email responses. Following this each professor with a known office phone number was called for a response to the request. These calls added another five courses to the sample size and would to a degree confirm the assumption that professors are harder to reach via online media, then via phone, and of course in person meetings. The extra friction in professor availability could affect the Caring-component. Also, there were several professors who didn't have an available phone number and couldn't be reached which would not have been a problem if classes were held at the university as professors could be reached in person. In addition, the first person who agreed via email to participate in the research didn't follow through on the promise while every professor contacted by phone agreed and followed through on their promise. Which can add to the

assumption that COVID-19 have indeed limited the possibility of collecting the best possible data set for this thesis as there are put restrictions on today's communication and interaction.

The questionnaires remained open for students for two weeks. The response rates were unfortunately quite low. Only a total of 58 students answered the survey across six classes. In addition, one might question the sample of students answering as it could in fact not be a representative sample from the classes. Perhaps only motivated and engaged students would bother answering or perhaps only students frustrated with the courses would bother answering. It is impossible to know. If the study were to be redone it would be preferred to do an in-class data collection as the author believes this would produce higher answering rates for the study.

To summarize, the sample size consists of 6 professors and 58 students in tourism and hospitality studies at university level in Norway. A common characteristic for the professors is the recent change from in-classroom to online lectures, while this varies for the students as some started their studies before this change and some started after the change. The sample size participated in the study via online surveys distributed through survey exact.

### **3.5 Analyse data**

The data was converted into meaningful measures following instructions given from the MUSIC-model (Jones, 2012/2021), the full table can be found in the appendix (Appendix B). Thereafter it was analysed in SPSS. The original idea for the data analysis was to do a correlation test on each individual component to see if the perceptions correlated. Unfortunately, due to trouble gathering the sample size, the sample size didn't prove significant for this kind of test. Instead, the sample was tested for mean and standard deviation to extract information from

differences in perceptions between the two variables. Adjusting to the right method for analysing the data collected increased the validation in the findings in the study.

In addition, it was performed a correlation-test across all components. No correlation was detected in the sample size. This kind of test might not be applicable as different professors may be focusing on different components in their classes. However, every professor in the study operates from the same administration and presumably follow the same guidelines in their teaching. For this result to bear solid validation, a further investigation of professor use of methods should be undertaken.

### **3.6 Present results**

The results of the data collection will first be presented in the “Result” chapter. This chapter is kept short and precise, focusing solemnly on displaying the findings. Then the findings are further discussed in the “Discussion” part of the thesis. For the discussion part it was decided to focus on the areas of the data collection that showed the most interesting results.

## 4. Results

In this chapter the data from the questionnaires measuring perception of the MUSIC components will be presented. Further interpretations of the data will accompany in the following discussion chapter.

The dataset in this study consists of six paired samples of professors from a Norwegian university conducting classes in tourism and hospitality, paired with their affiliated class-attending students. The full table of results from each individual class can be found in the appendix (Appendix B).

Each component of the MUSIC-model was tested individually in SPSS for their mean and standard deviation. The results of the samples are presented in Table 1.

	Professor		Student		Delta (Professor; Student)	
	Mean	SD	Mean	SD	Mean	SD
<b>eMpowerment</b>	4,9	0,95	4,3	0,40	0,6	0,55
<b>Usefulness</b>	5,4	0,53	4,4	0,34	1,0	0,19
<b>Success</b>	4,9	0,47	4,2	0,65	0,7	-0,18
<b>Interest</b>	4,1	0,87	3,8	0,73	0,3	0,14
<b>Caring</b>	5,4	0,50	4,3	0,23	1,1	0,27
<b>Average</b>	4,9	0,66	4,2	0,47	0,7	0,19

Table 1: Mean, Standard Deviation (SD) and Delta ( $\Delta$ ) results from the sample size.

The mean is on a scale ranging from 1 to 6, where each number are assessed the following significance:

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree
5. Agree

## 6. Strongly agree

This would lead to a reading of table 1, as for instance, on Professor-Usefulness the score is 5,4 which indicates the professor perception of usefulness to lay between Agree and Strongly agree. Whereas the Student-Usefulness, at a score of 4,4, would lay between Somewhat agree and Agree.

A different variable ( $\Delta$ , delta) between professors and students was calculated to highlight the differences between the two groups. In the “Mean” column of  $\Delta$ , a positive  $\Delta$  reflects a higher perception among professors on the components and a negative  $\Delta$  reflects higher perception among the students. In the “Standard Deviation” (SD) column a positive  $\Delta$  reflects a higher deviation from the mean among professors in their answers in the survey, and a negative  $\Delta$  reflects higher deviation among the students.

If one looks at the eMpowerment component, one will see that the average mean for professors’ perceptions on eMpowerment in their classes was 4.9 which indicates that on average professors agree to the eMpowerment component being present in their classroom. The standard deviation for the professors was 0.95 which indicates that professors’ perceptions fell within the range of a perception of 3.95 and 5.85 in a 95% confidence interval. Compared to the student’s eMpowerment mean of 4.3 with a standard deviation of 0.4 this means that the students perceptions fell within the range of 3.9 and 4.7 in a 95% confidence interval. One can then look at the  $\Delta$  for the mean comparison which is a positive 0.6. This reads that the professor’s perception of eMpowerment in the classroom was higher than the students by 0.6. As can be seen in table 1, all  $\Delta$  means were positive which indicates that professors experienced every MUISC-component higher than the students, from the lowest difference in Interest (0.3) to the highest different in Caring (1.1).



Off table 1, one can read, in the  $\Delta$  Professor – Student SD column, that the  $\Delta$  deviation in the eMpowerment category was found to be 0.55. This indicates that there was more variation in perception among the professors than it was among the students, as the number is a positive. The only category where students have higher deviation from the mean on their perceptions is on the Success component (-0.18).

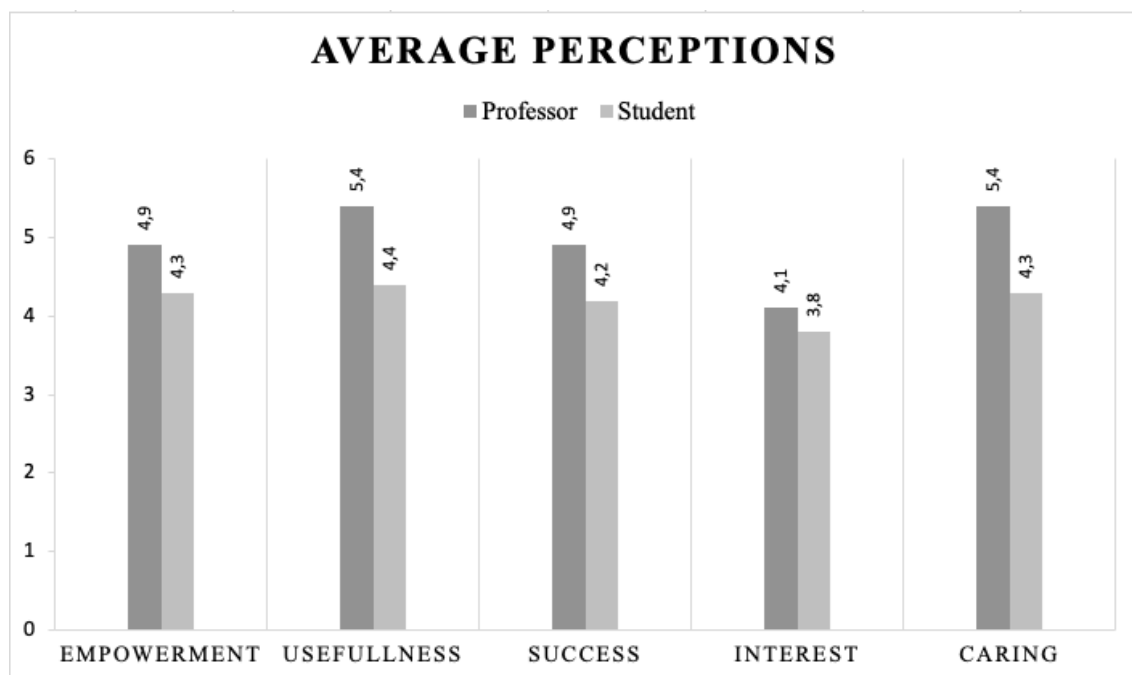
A paired sample t-test was done on the 30 pairs to explore correlation. On a 95-confidence interval the range went from lower 0.42 to an upper 1.06. The t value was 4.95, with a two tailed significant of 0.000 (Appendix C). As the t value is out of bound of the upper case, no correlation between the pairs was detected.

## 5. Discussion

This chapter will discuss the most interesting results from the previous chapter. First it will investigate why professors' perceptions are overall higher than the students' perceptions. Secondly, the large differences in perceptions between the variables in the Caring component (P=5,4 S=4,3  $\Delta = 1,1$ ) and Usefulness component (P=5,4 S=4,4  $\Delta = 1$ ) will be discussed. Thirdly, most similar perceived component Interest will be looked at (P=4,1 S=3,8  $\Delta=0,3$ ).

### 5.1 Higher professor perceptions

As can be seen in figure 1, professors scored overall higher than students in perception of the components in the MUSIC-model. Why can it be that one of the two group consistently perceived higher presence of the components than the other?



**Figure 1:** Bar chart of average perceptions on the MUSIC-components by professors and students on a scale measuring: 1 = Strongly disagree. 2 = Disagree. 3 = Somewhat disagree. 4= Somewhat agree. 5 = Agree. 6 = Strongly agree.

Firstly, it's worth to mention that the professor sample is notably smaller than the student sample, 6 professors compared to 58 students. This might create a bias in the results in this study.

Although, in most cases the reality is that classes consist of only one professor and plenty of accompanying students. Therefore, it's assumed that the results reflect reality of the sample in question, and this will be the foundation for this study's discussion.

To understand why the perceptions of professors are higher than the students we must first investigate how the different groups perceive the classroom and in which ways they might differ from one another. As our studied sample have experienced a shift from in-classroom to online-classroom teaching one factor that separates the groups is their generation. Relatively speaking most students belong in a younger generation than their professors. As a result, one can assume that students have been exposed to technology at an earlier age and are therefore more familiar with and adaptable to technology than the professors. This might lead to students adapting quicker towards online held courses and therefore their expectations might be different from those held by professors who presumably take longer to adapt. Adaptability among students can lead to openness in perceiving the online classroom with a direct, bottom-up processing. It can be assumed that professors might have a harder time with this adjustment. They may have more integrated expectation as their teaching-style has been developed through years of teaching, hence a sudden change like COVID-19 initiated might be challenging for the professors, and they might stick to a constructive, bottom-down processing which is based on experience. The problem here is how the innovation with online classes perhaps calls for a new perspective on teaching methods and sticking with methods working in an in-classroom environment might not be sufficient.

Another explanation for this gap might be explained by the difference in commitment from the two groups. Professors are likely more invested in the course they're holding, as it is their field in academia, they are employed by the university to hold these courses, and they've spent time creating lectures for students. Whereas students have many different courses during their bachelor programs, hence they might not be as invested in a single course as the professors are. The professor's answers are directed towards a specific course they've devoted time, effort, and energy in, while the students answers are directed towards one of many courses they're attending. It can be presupposed that professors' expectations, emotions, and motivations tied to a single course are therefore more evident than the students, leading to a higher perception of the components on the professors' part. In relation to the Usefulness component in the dataset it shows that professors are more aware of the importance for the specific courses than the students which might indicate that students might have different areas of interest.

## **5.2 Caring and Usefulness component differences**

A possible reason for the Caring component to be so differently perceived by students and professors (P=5.4, S=4.3) might be due to the restrictions with COVID-19 leading to online classes rather than in person classes. This physical distance between teachers and students creates a barrier for connection between the two groups which seems to affect students negatively. This could arguably have connection with what was discussed in perception theory, which concluded with how Gibson's theory is used when the stimuli are new, and Gregory's theory is used when stimuli is based on previous experience. A way to think about this could be that in online lectures they are experiencing a new stimulus, yet they might confuse it with interpreting the stimuli according to experienced stimuli, which in this case would be in

classroom teaching. Professors might think the way that they teach online can come across as being as caring as the way that they used to teach in classroom hence, they might not change their teaching styles. At the other end students might expect to feel the same care online as they did in the classroom when the professor was physically present. One way to control these findings would be to do another study looking into the differences in perception in the caring component in classes that have in-classroom teaching.

Another possible explanation could be linked to the different adaptation ability the groups embody as previously mentioned. Perhaps students have already adapted to the online environment and are waiting for the professors to adapt their teaching methods to the new environment, in consequence a gap is evident in the perceptions. This claim can be further explored by surveying students about specific aspects of the teaching methods they think could improve for better connection with their professor.

The other component with a large gap between professor and student perception is Usefulness. The gap can have different explanations. Firstly, it might be because professors have more practical experience with what is taught. Therefore, they might already have experienced the applicable sides of the curriculum first-hand. As students might be exposed to the curriculum for the first time, making the connection to the functional aspect of what is taught might be harder for them.

Another explanation might be that the students in the sample is studying tourism and hospitality which is a sector that has been hit hard by the pandemic. Due to travel restrictions implemented by governments there's currently decreased tourism and hospitality activities. Surely the industry will at one point pivot and open for travel again, yet the point in time for such

a turn is not certain. Hence, it might be difficult for students to see the usefulness of what they are learning, as what they learn in their courses might in fact not have utility today because of the restrictions COVID-19 brings.

### **5.3 Interest component**

The component with the closest perception between professor and student is the Interest component. The definition for the Interest component is: *“The degree to which a student perceives that the instructional methods and coursework are interesting”* (Jones, 2012/2021, p. 5). This indicates that professors and students perceive the interest students have in the instructional methods similar. However, it's noteworthy to point out that the Interest component is also the one that has lowest perception of the five components. The fact that the lowest perceived component is related to the students' interest in the instructional method of the courses could bring more validation to previous arguments claiming that the drastic switch in instructional methods might have had negative influence on the students in perceiving other components. Further studies investigating the effect and relationship between the components both from a student point of view, as well as from a professor point of view could give us a more complete understanding of what happens to the other components when one component is drastically changed. In this case it would be, what happens to the other components when the Interest component drastically changed? Several arguments in this study have revolved around the impacts the change in instructional methods have had for the perceptions of the teachers and students. The arguments have examined that this change might have created a perception gap between the two groups. Perhaps a focus area in the future could be more communication in periods of rapid change in the components. That more communication and understanding will

lead to professors and students have more similar perceptions on how they experience the classroom.

#### **5.4 Adjustments and future research**

If this research were to be conducted again there would be several changes that should be considered in the research design to make the results more valid. The first thing to be pointed out is the sample size as of the total sample consisted of only six samples which is too small a sample to do significant correlation tests. Furthermore, there is the question about sensitivity to outliers in the professor sample as each pair comes from only one professor compared with the average of several students in each class. Perhaps one way to do this could be to instead of looking at class level, one could collect data samples from different faculties then average the student and professor scores to then compare them to other faculties. At least increasing the sample size significantly would assure more accuracy in the data. In addition, it would be possible to undergo a correlation t-test and explore if correlation is evident or not.

Based on the findings from this study a further qualitative research could shine light on other interesting aspects. Another suggestion is to pair these questionnaires with in-dept interviews from selected groups within the sample. Meaning the research design would be a mixed method. This could provide more insight to the reasons for changes in the groups as they wouldn't be merely assumptions and speculations from the author.

Further research on this topic would then be suggested to try grasping the reasons for why the two groups don't match in their perceptions of the MUSIC-components.

Another way to research further using an experiment method could be to set up five different cases which are designed for each of the components, say one professor focuses on

eMpowerment, the next on Usefulness, et cetera, then at the end of the course one test the students to see if this implementation made a difference in the results. Then one can compare the eMpowerment class, to other classes that focuses on other components to see if there is a clear spike in the component that the eMpowerment class focused on in comparison to the other classes. This would have needed to be controlled with a control group.



## 6. Conclusion

This study has investigated correlation in perception of academic motivation between tourism and hospitality professors and students. The components used for measuring motivation was taken from the MUSIC<sup>®</sup> Model of Academic Motivation being eMpowerment, Usefulness, Success, Interest and Caring. These components are significant for academic motivation as their perceived presence in the classroom has proven to have a positive effect on students' motivation. Meaning a student that perceive that he can, for example, succeed (Success component) in class will have more motivation to engage to succeed than a student who doesn't perceive that he can be successful. The findings from the study showed overall higher perceptions of the MUSIC-components among the professors. Arguably this could be explained by a potential difference in perception processing by the two groups studied, professors and students. In addition, the groups different relation to technology could influence the gap in perceptions, as the teaching methods have changes to hugely rely on technology due to COVID-19. Finally, it could also be explained by the differences in commitment between the groups. The largest difference in perceptions between the two professors and students was found in the Caring and Usefulness component. These were also the two components that was perceived the highest of the five. These differences seemed to be affected by the rapid change of the Interest component due to COVID-19. The Interest component was found to have the least difference in perception. In addition, Interest was also the lowest perceived component in both groups. This can indicate a strong interdependence between the MUSIC-component where one rapid change in one component can lead to changes in perceptions of the other components. As the results of this study shows, the changes in perception does not move collectively between professors and students. No correlation between the groups have been detected in this study.

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# APPENDIX

## Appendix A

### Mail conversation with Dr. Jones

From: Elisa Day Svarstad <elisasva@icloud.com>  
Subject: Re: Research with the MUSIC model on travel management students  
Date: 5 March 2021 at 10:33:29 CET  
To: "Brett D. Jones" <brettdjones@gmail.com>

Thank you so much! Your input on this is of great value to me.

I'll look further into the possibility of collecting data from a larger number of classes and will discuss this further with my supervisor. I see what you mean with the preciseness of a program inventory vs the present tense college student version. Thank you for pointing that out! Indeed seeking out a statistician at my school would help a lot with processing the data properly.

I'll let you know if I have more questions and will keep you updated on what I do!

Thank you again for your time and thoughts on this. I appreciate it a lot and I will definitely let you know about the data.

Have a great rest of your week,

Elisa

On 5 Mar 2021, at 04:49, Brett D. Jones <brettdjones@gmail.com> wrote:  
You're asking a good question. Actually, what I told you to do is problematic for the reasons you noted. I didn't really think through it well enough. You really need to look at the class level so that you're comparing the teacher's response with a particular class with students' responses in that class. But if you do that, you're comparing one teacher to 30 students (or however many are in that class). With only 1 teacher, you can't do a statistical t-test between the teacher and the students, you would just show the means of each (for empowerment, teacher M = 4.2, students M = 5.1).

If you did that, you could report the difference between the teacher and the teacher's class of students for each class in a table. If you really wanted to do a statistical test, you could average the differences (if the classes were about the same size or you could weight the averages [number of students in the class over the total number of students surveyed]) and compare that average to 0. Does that make sense? You may try to seek out a statistician at your school if you want to go that route if you're not sure how to do it.

If you had 20 different classes, you could compare the average of 20 teachers to 600 students (30 students x 20 classes = 600) and do a t-test to compare means (for empowerment, teacher M = 4.1, student M = 4.8). In this case, you would want the class sizes to be about the same (you don't want a really large class or the results would be mostly based on that large class). But as you noted, then you're assuming that the differences between teachers and students will be the same/different regardless of the class, which may not be true, so this isn't a great option, I wouldn't do this.

You could do it at the program level, but then it starts to lose preciseness. You can imagine that if I ask you how interested you were in class x, your response would be much more accurate than if I asked you how interested you were in all of the classes you've had in tourism. So you get more error and the results tend to be not very accurate. This option isn't very good. Using the program inventory is OK, but it's more for gross comparisons across programs. I don't think it's your best option here. You're better off with present tense College Student version.

As for selecting a sample, it would be best to have at least 15 or 20 classes involved. And actually, if you get that many, let me know because I can probably use your data in another study for something else I'm doing and you could be listed as a co-author.

If you do this study, you could present the results at a teaching conference. Some are online now and free this year.

Good luck and let me know if you have any questions!  
Brett

On Thu, Mar 4, 2021 at 9:48 AM Elisa Day Svarstad <elisasva@icloud.com> wrote:  
Good afternoon again, Brett!

Thank you for your prompt reply!

I enjoyed watching your video – I'm convinced your work with research and resource creation on academic motivation is of great importance and will make an impact on a lot of lives. I'm really pleased I came across your work.

Thank you for the suggestions! The first one (with computing the averages of each component in both groups, with all professors, then compare) seems most appealing to me as the idea would be to see the differences between students and professors as a whole in the faculty.

Something I'm struggling with is knowing who to include in the research. We have two bachelor degree options in the faculty, "Tourism" and "Hotel". Both contain a lot of the same courses, yet they have a few different subjects, as one focus on tourism management and one focus on hotel management (about 2/3 of the degree is same courses and same professors). In addition during the 5th semester all bachelor students have chosen different electives resulting in students having different course experiences and different professors. The problem I see here is to compare students and professors who perhaps haven't had any contact with one another (example a tourism student being compared to a professor who only held a course in a hotel subject). I'm not sure that is comparable (?).

- Will it be possible to collect data from all students participating in either bachelor program and all professors having held at least one course in the bachelor degree's at the faculty – if I look at the MUSIC model components presence at the faculty as a whole? Or will this not be possible as there's several instances where student and professors aren't directly comparable?

- Would it be a more valid data collection if it was sure that all students who completed the survey have had the exact professors who also completed the survey? Or would this be less valid as the number of participants would decrease drastically? But also as students would be asked their overall perceptions from their bachelor degree which would include all courses – and they would have different basis on this, even if I only chose to focus on only one of the two degrees, due to the elective subjects in the 5th semester.

- Basically, how do I chose my participants for the most valid results in this study?

What I will be using for the students is the "MUSIC Inventory (College Student version, present tense, major/program level)". I was thinking of using the "MUSIC Inventory (Professor version, past tense)" for the professors, yet not sure as I came over this in the intro of the professor version:

"Validity Evidence

The Professor version of the MUSIC Inventory is intended to be used as a reflection tool by the professor and has not yet been validated for research purposes (although research is in process)."

- What are your thoughts on this? Can I use the professor version in my research or would you advice me not to?

I'm really exited to look furter into the correlation between students and professors. Thank you for making it so much more interesting with your work and also thank you for your help!

Hope you're having a good day,

Elisa

On 3 Mar 2021, at 17:07, Brett D. Jones <brettdjones@gmail.com> wrote:

Thanks for the message, I'm glad you're interested in using the MUSIC model. In fact, just a few minutes ago, I uploaded a 7 minute video with more information about it: <https://www.youtube.com/watch?v=0UvEGaJ9AK8>

I think your question is a good one. I collected some data to investigate that myself, but I've only looked at it quickly and I don't have anything I can share with you at this point. So I think it's a great idea for you to examine how students' and teachers' perceptions compare.

One way to do this would be to compute the average on the student version for each of the five MUSIC components (for example empowerment) and then compute the average for the professor version for each (for example empowerment). Then you would compute an average of all of the class averages for the student responses. Then you would average all of the professor scores and compare the student average to the professor average separately for each MUSIC component (for example student average empowerment to professor average empowerment). You could compare the averages using a t-test.

Another way would be to compare the average for only one class. So average the students in one class and then compare that average to the scale score (such as empowerment) for their one professor. You wouldn't be able to do a statistical test for this, because there's only 1 professor. You would just report these for each class and see if there was a pattern.

Let me know what questions you have!  
Brett

On Wed, Mar 3, 2021 at 8:51 AM Elisa Day Svarstad <elisasva@icloud.com> wrote:

Good afternoon Dr. Jones!

Hope you're well in these crazy times.

My name is Elisa Day Svarstad. I'm a student at the University of Stavanger and I'm currently in the process of writing my bachelor thesis. I decided to research academic motivation among my fellow students participating in the "Travel Management Bachelor" as it seems like a large part of the students have a lack of academic motivation despite engaging professors. This is where I came across your MUSIC model. It seems like a great model to base my thesis on. What I'm thinking is seeing if there's a statistically significant difference between the students and the professors perceptions on the five different components in the lectures.

I was wondering if I could ask you some questions regarding this, as your input would be of great value to me.

Have a great day,

Elisa Day Svarstad

## Appendix B

### Full table of results

	eMpowerment		Usefulness		Success		Interest		Caring	
	Professor	Student	Professor	Student	Professor	Student	Professor	Student	Professor	Student
Class 1	4	4,6	5,8	4,8	4,75	4,75	4,33	5	5,67	4,33
Class 2	5,8	4	6	4,16	5,75	4,73	4,83	3,81	6	4,22
Class 3	5,6	3,72	5	3,92	5	3,33	3,83	2,98	4,83	3,87
Class 4	5	4,2	5,6	4,22	4,5	3,65	4,83	3,07	5,83	4,33
Class 5	4	4,46	4,6	4,32	4,5	3,88	4,33	3,75	5,33	4,58
Class 6	5,8	4,8	5,2	4,72	4,75	4,8	2,5	3,9	4,83	4,37

Number of participants:

Class 1: Professor 1 – Students 10

Class 2: Professor 1 – Students 8

Class 3: Professor 1 – Students 6

Class 4: Professor 1 – Students 17

Class 5: Professor 1 – Students 5

Class 6: Professor 1 – Students 12

Total: Professors 6 – Students 58

## Appendix C

### Paired Samples Correlations Test

#### T-Test

##### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Professor	4.9263	30	.80395	.14678
	Student	4.1843	30	.52243	.09538

##### Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Professor & Student	30	.222	.239

##### Paired Samples Test

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Professor – Student	.74200	.85622	.15632	.42228	1.06172	4.747	29	.000

## Appendix D

### Professor Survey and Student Survey

#### Professor perception of course at NHS

Hello,

Thank you for participating in this survey. My name is Elisa Day Svarstad. I'm a final year student at the Tourism Management Bachelor program at NHS and currently in the process of writing my bachelor thesis. The theme of my thesis is the correlation of NHS-students perceptions and NHS-professors perceptions regarding the courses offered at NHS. The survey is anonymous and will take roughly 4 minutes to complete.

Please base your answers on your overall perception of the course you hold for students at NHS.

Note that coursework refers to anything the students have done in your course (assignments, activities, readings, etc.)

There is no right or wrong answers for the questions. Some might seem repetitive, but it is important that you answer all of them.

For any questions regarding the survey or access to the results of the research, please contact me at: [e.svarstad@stud.uis.no](mailto:e.svarstad@stud.uis.no)

**1. The coursework holds their attention.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**2. They have the opportunity to decide for themselves how to meet the course goals.**

- (1)  1. Strongly disagree
- (2)  2. Disagree



- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**3. In general, the coursework is useful to them.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**4. I am available to answer their questions about the coursework.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**5. The coursework is beneficial to them.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**6. The instructional methods used in this course hold their attention.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**7. They are confident that they can succeed in the coursework.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**8. They have the freedom to complete the coursework their own way.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**9. They enjoy the instructional methods used in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree

(6)  6. Strongly agree

**10. They can be successful in meeting the academic challenges in this course.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

(5)  5. Agree

(6)  6. Strongly agree

**11. The instructional methods engage them in the course.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

(5)  5. Agree

(6)  6. Strongly agree

**12. They have options in how to achieve the goals of the course.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

(5)  5. Agree

(6)  6. Strongly agree

**13. They enjoy completing the coursework.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**14. They are capable of getting a high grade in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**15. The coursework is interesting.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**16. I am willing to assist them if they need help in the course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**17. They have control over how they learn the course content.**

- (1)  1. Strongly disagree

- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**18. Throughout the course, they could be successful on the coursework.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**19. The coursework is relevant to their future.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**20. I care about how well they do in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**21. They will be able to use the knowledge they gain in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**22. I am respectful of them.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**23. The knowledge they gain in this course is important for their future.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**24. I am friendly.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree

(6)  6. Strongly agree

**25. I care about their feelings.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

(5)  5. Agree

(6)  6. Strongly agree

**26. They have flexibility in what they are allowed to do in this course.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

(5)  5. Agree

(6)  6. Strongly agree

Thank you for participating in the survey!

**Student perception of bachelor programs at NHS**

Hello,

Thank you for participating in this survey. My name is Elisa Day Svarstad. I'm a final year student at the Tourism Management Bachelor program at NHS and currently in the process of writing my bachelor thesis. The theme of my thesis is the correlation of NHS-students perceptions and NHS-professors perceptions regarding the bachelor programs at NHS. The

survey will take roughly 4 minutes to complete and is anonymous.

Please base your answers on your overall perception of the course so far.

Note that coursework refers to anything you have done in the course (assignments, activities, readings, etc.)

There is no right or wrong answers for the questions. Some might seem repetitive, but it is important that you answer all of them.

For any questions regarding the survey or access to the results of the research, please contact me at: [e.svarstad@stud.uis.no](mailto:e.svarstad@stud.uis.no)

### **1. The coursework holds my attention.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

### **2. I have the opportunity to decide for myself how to meet the course goals.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

### **3. In general, the coursework is useful to me.**

- (1)  1. Strongly disagree



- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**4. The instructor is available to answer my questions about the coursework.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**5. The coursework is beneficial to me.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**6. The instructional methods used in this course hold my attention.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**7. I am confident that I can succeed in the coursework.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**8. I have the freedom to complete the coursework my own way.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**9. I enjoy the instructional methods used in the courses.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**10. I feel that I can be successful in meeting the academic challenges in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree

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(3)  3. Somewhat disagree

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(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

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(6)  6. Strongly agree

**14. I am capable of getting a high grade in this course.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**15. The coursework is interesting to me.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**16. The instructor is willing to assist me if I need help in the course**

- (1)  1. Strongly disagree
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- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
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**18. Throughout the course, I have felt that I could be successful on the coursework.**

- (1)  1. Strongly disagree

- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**19. I find the coursework to be relevant to my future.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**20. The instructor cares about how well I do in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
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- (5)  5. Agree
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**21. I will be able to use the knowledge I gain in this course.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
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- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
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**24. The instructor is friendly.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree
- (6)  6. Strongly agree

**25. I believe that the instructor cares about my feelings.**

- (1)  1. Strongly disagree
- (2)  2. Disagree
- (3)  3. Somewhat disagree
- (4)  4. Somewhat agree
- (5)  5. Agree

(6)  6. Strongly agree

**26. I have flexibility in what I am allowed to do in this course.**

(1)  1. Strongly disagree

(2)  2. Disagree

(3)  3. Somewhat disagree

(4)  4. Somewhat agree

(5)  5. Agree

(6)  6. Strongly agree

Thank you for your participation!